

This appendix contains all of the drill logs generated from the 2015 drilling program, which includes resource definition, exploration, metallurgical, hydrogeological and geotechnical holes. Drill logs are placed in alpha-numeric order with the first page of each log starting on the page number indicated below in Table L-1.

Table L-1: Table of contents for 2015 diamond drill hole logs in this appendix

Hole Number	Length (m)	Target	Purpose	Core Storage Location	Page Number
K15-200	211.5	ABM	Resource/hydrogeological	KZK Camp	1
K15-201	35	ABM	Metallurgical twin	KZK Camp	15
K15-202	71	ABM	Resource/metallurgical/hydrogeological	KZK Camp	18
K15-203	173	ABM	Resource/metallurgical	KZK Camp	22
K15-204	149	ABM	Resource/hydrogeological	KZK Camp	31
K15-205	146	ABM	Metallurgical twin	KZK Camp	37
K15-206	237	ABM	Resource/hydrogeological	KZK Camp	44
K15-207	112	ABM	Resource definition	KZK Camp	52
K15-208	42	Infrastructure	Hydrogeological	KZK Camp	58
K15-209	54	ABM	Metallurgical	KZK Camp	59
K15-210	36	Infrastructure	Hydrogeological	KZK Camp	63
K15-211	20	Infrastructure	Hydrogeological	KZK Camp	65
K15-212	36	Infrastructure	Hydrogeological	KZK Camp	67
K15-213	99	ABM	Metallurgical	KZK Camp	69
K15-214	32	Infrastructure	Hydrogeological	KZK Camp	75
K15-215	33	Infrastructure	Hydrogeological	KZK Camp	77
K15-216	233	ABM	Resource/metallurgical	KZK Camp	79
K15-216W1	182	ABM	Metallurgical wedge	KZK Camp	87
K15-217	10	Infrastructure	Hydrogeological	KZK Camp	91
K15-218	81	ABM	Resource/metallurgical	KZK Camp	92
K15-219	30	Infrastructure	Hydrogeological	KZK Camp	96
K15-220	33	Infrastructure	Hydrogeological	KZK Camp	97
K15-221	44	ABM	Metallurgical twin	KZK Camp	99
K15-222	18	Infrastructure	Hydrogeological	KZK Camp	102
K15-223	71	ABM	Resource/metallurgical	KZK Camp	104
K15-224	351	GP4F	Resource definition	KZK Camp	107
K15-225	25	ABM	Metallurgical twin	KZK Camp	117
K15-226	230	ABM	Resource/metallurgical	KZK Camp	119
K15-226W1	182	ABM	Metallurgical wedge	KZK Camp	127
K15-227	86	ABM	Resource/metallurgical	KZK Camp	132
K15-228	95	ABM	Resource confirmation	KZK Camp	136
K15-229	110	ABM	Resource definition	KZK Camp	139
K15-230	41	ABM	Metallurgical twin	KZK Camp	144
K15-231	176	ABM	Resource definition	KZK Camp	147
K15-232	209	ABM	Resource definition	KZK Camp	154
K15-233	224	ABM	Resource definition	KZK Camp	161

Hole Number	Length (m)	Target	Purpose	Core Storage Location	Page Number
K15-234	393	GP4F	Resource definition	KZK Camp	168
K15-235	47	ABM	Resource definition	KZK Camp	178
K15-235R	176	ABM	Resource definition	KZK Camp	181
K15-236	149	ABM	Resource/metallurgical	KZK Camp	188
K15-237	119	ABM	Metallurgical twin	KZK Camp	195
K15-238	245	ABM	Resource/metallurgical	KZK Camp	200
K15-238W1	194	ABM	Metallurgical wedge	KZK Camp	207
K15-239	192	ABM	Resource confirmation	KZK Camp	211
K15-240	110	ABM	Resource/metallurgical	KZK Camp	219
K15-241	35	ABM	Metallurgical twin	KZK Camp	225
K15-241R	65	ABM	Metallurgical twin	KZK Camp	226
K15-242	161	ABM	Resource/metallurgical/hydrogeological	KZK Camp	230
K15-243	221	ABM	Resource/metallurgical	KZK Camp	237
K15-243W1	200	ABM	Metallurgical wedge	KZK Camp	246
K15-244	119	ABM	Resource/metallurgical	KZK Camp	250
K15-245	70	ABM	Metallurgical twin	KZK Camp	254
K15-246	129	ABM	Metallurgical twin	KZK Camp	256
K15-247	414	GP4F	Exploration	KZK Camp	262
K15-248	278.5	ABM	Resource/hydrogeological	KZK Camp	276
K15-249	68	ABM	Resource definition	KZK Camp	284
K15-250	251	ABM	Resource definition	KZK Camp	287
K15-251	86	ABM	Resource/metallurgical	KZK Camp	295
K15-252	41	ABM	Metallurgical twin	KZK Camp	299
K15-253	230	ABM	Resource definition	KZK Camp	302
K15-254	100	ABM	Resource definition	KZK Camp	309
K15-255	80	ABM	Resource/metallurgical	KZK Camp	315
K15-256	32	ABM	Metallurgical twin	KZK Camp	318
K15-257	218	ABM	Resource definition	KZK Camp	321
K15-258	299	Krakatoa	Exploration	KZK Camp	328
K15-259	120	ABM	Geotechnical	KZK Camp	336
K15-260	227	ABM	Resource/metallurgical	KZK Camp	342
K15-260W1	196	ABM	Metallurgical wedge	KZK Camp	349
K15-261	302	GP4F	Exploration	KZK Camp	354
K15-262	348	ABM	Geotechnical	KZK Camp	365
K15-263	254	ABM	Resource definition	KZK Camp	377
K15-264	218	ABM	Resource/metallurgical	KZK Camp	385
K15-264W1	176.7	ABM	Metallurgical wedge	KZK Camp	397
K15-265	285	ABM	Resource/hydrogeological	KZK Camp	402
K15-266	110	ABM	Metallurgical twin	KZK Camp	412
K15-267	218	ABM	Resource/metallurgical	KZK Camp	419
K15-268	355	GP4F	Exploration	KZK Camp	428
K15-269	72.72	ABM	Resource/metallurgical	KZK Camp	440

Hole Number	Length (m)	Target	Purpose	Core Storage Location	Page Number
K15-270	170	ABM	Metallurgical twin	KZK Camp	444
K15-271	258	ABM	Resource definition	KZK Camp	452
K15-272	128	ABM	Resource/metallurgical	KZK Camp	461
K15-273	149	ABM	Resource/metallurgical	KZK Camp	469
K15-274	128	ABM	Resource/metallurgical	KZK Camp	474
K15-275	122	ABM	Metallurgical twin	KZK Camp	481
K15-276	110	ABM	Metallurgical twin	KZK Camp	487
K15-277	357.8	Krakatoa	Exploration	KZK Camp	494
K15-278	197.26	ABM	Resource/metallurgical	KZK Camp	509
K15-278W1	161	ABM	Metallurgical wedge	KZK Camp	518
K15-279	275	ABM	Resource/metallurgical	KZK Camp	523
K15-280	408	GP4F	Exploration	KZK Camp	532
K15-281	260	ABM	Resource/metallurgical	KZK Camp	547
K15-281W1	199.6	ABM	Metallurgical wedge	KZK Camp	559
K15-282	340	Krakatoa	Exploration	KZK Camp	563
K15-283	190.7	ABM	Metallurgical twin	KZK Camp	572
K15-284	224	ABM	Resource/metallurgical	KZK Camp	581
K15-284W1	191	ABM	Metallurgical wedge	KZK Camp	591
K15-285	306	GP4F	Exploration	KZK Camp	595
K15-286	200	ABM	Resource definition	KZK Camp	605
K15-287	131	ABM	Resource/metallurgical	KZK Camp	611
K15-288	86	ABM	Metallurgical twin	KZK Camp	619
K15-289	236	ABM	Resource definition	KZK Camp	624
K15-290	142	ABM	Resource definition	KZK Camp	632
K15-291	242	ABM	Resource definition	KZK Camp	637
K15-292	312	Krakatoa	Exploration	KZK Camp	644
K15-293	239	ABM	Resource definition	KZK Camp	655
K15-294	306	GP4F	Resource definition	KZK Camp	664
K15-295	201.5	ABM	Resource definition	KZK Camp	674
K15-296	62	ABM	Resource definition	KZK Camp	680
K15-297	350	Krakatoa	Exploration	KZK Camp	684
K15-298	114	ABM	Resource definition	KZK Camp	698
K15-299	170	ABM	Resource confirmation	KZK Camp	702
K15-300	200.1	ABM	Geotechnical	KZK Camp	708
K15-301	140.1	ABM	Resource definition	KZK Camp	716
K15-302	210	GP4F	Resource definition	KZK Camp	721
K15-303	247.8	Krakatoa	Exploration	KZK Camp	727
K15-304	254	Krakatoa	Exploration	KZK Camp	745
K15-305	300	Krakatoa	Exploration	KZK Camp	756
K15-306	246	GP4F	Resource definition	KZK Camp	769
K15-307	277	Krakatoa	Resource definition	KZK Camp	776
K15-308	194	Krakatoa	Resource definition	KZK Camp	791

Hole Number	Length (m)	Target	Purpose	Core Storage Location	Page Number
K15-309	306	Krakatoa	Resource definition	KZK Camp	797
K15-310	191	Krakatoa	Resource definition	KZK Camp	809
K15-311	263	Krakatoa	Resource definition	KZK Camp	817
K15-312	110	Krakatoa	Resource definition	KZK Camp	824
K15-313	153	Krakatoa	Resource definition	KZK Camp	831
K15-314	195	Krakatoa	Resource definition	KZK Camp	838
K15-315	210	Krakatoa	Resource definition	KZK Camp	849
K15-316	181	Krakatoa	Resource definition	KZK Camp	860
K15-317	170.6	Krakatoa	Resource definition	KZK Camp	868
K15-318	35	Krakatoa	Hydrogeological	KZK Camp	878
K15-319	254	Krakatoa	Exploration	KZK Camp	880
K15-320	269	Krakatoa	Resource definition	KZK Camp	889
K15-321	308	Krakatoa	Resource definition	KZK Camp	900
K15-322	197	Krakatoa	Resource definition	KZK Camp	914
K15-323	229.8	Krakatoa	Resource definition	KZK camp	926
K15-324	362	ABM	Exploration	KZK camp	934
K15-325	404.1	Krakatoa	Exploration	KZK Camp	951
K15-326	443	Krakatoa	Exploration	KZK Camp	966
K15-327	221	Santorini	Exploration	KZK camp	977
K15-328	236	Santorini	Exploration	KZK camp	989
K15-329	200	FCZ	Exploration	KZK Camp	1002
K15-330	50.95	ABM	Geotechnical	KZK Camp	1011
K15-331	32	ABM	Geotechnical	KZK Camp	1014
K15-332	182	FCZ	Exploration	KZK Camp	1017
K15-333	71	ABM	Geotechnical	KZK Camp	1024
K15-334	50.5	ABM	Geotechnical	KZK Camp	1026
K15-335	32.33	ABM	Geotechnical	KZK Camp	1028
K15-336	50.5	ABM	Geotechnical	KZK Camp	1030
<i>Total: 148 Holes</i>	25966.06				

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-200

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	01-Aug-15
UTM Easting	414748.527	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	04-Aug-15
UTM Northing:	6815599.239	Casing Pulled?:	Yes	Dip:	-70	Drill Company:	Geotech
UTM Elev. (m):	1408.934	Casing Depth (m):	6	Length (m):	211.5	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	30-Jul-15
Local Northing:		Cemented?:	VWP	Core Storage Loc.:	KZK Camp	Drill Completed:	03-Aug-15
Local Elev. (m):						Purpose:	Resource/Hydro
Comments:						Parent Hole:	

K15-200 was drilled to twin a sulphide intercept in historic hole K94-008. Packer testing was completed and a vibrating wire piezometer was installed at completion of the hole. The hanging wall sequence consists of a felsic package of volcanics and two mudstone horizons from 6-140.6 m. MU alteration increases in intensity from 97.4-142.5 m as well as stronger CL and CI alteration in proximity to the MSXS. MSXS occurs from 140.6-159.5 m, consisting of OJ, OB, OD, OA, OC, and OG ore types. The footwall package consists of CL-altered volcanoclastic rocks from 159.5-161.7 m, CL-BI mafic sill from 161.7-186.6 m with a 4.7 m zone of MU and SI alteration believed to be associated with the RHYi. A second package of felsic volcanic rocks occurs to the end of the hole at 211.5 m.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-70	180	0	180	APS	Trent Newkirk	30-Jul-15		<input type="checkbox"/>	Planned
36	-70.1	154.9	22.5	177.4	ReflexEVS	Geotech	31-Jul-15	5702	<input checked="" type="checkbox"/>	
61.5	-70.1	156.2	22.5	178.7	ReflexEVS	Geotech	31-Jul-15	5731	<input checked="" type="checkbox"/>	
87	-69.3	156	22.5	178.5	ReflexEVS	Geotech	01-Jul-15	5718	<input checked="" type="checkbox"/>	
114	-69.2	162	22.5	184.5	ReflexEVS	Geotech	01-Jul-15	5700	<input checked="" type="checkbox"/>	
139.5	-68.4	155.2	22.5	177.7	ReflexEVS	Geotech	02-Jul-15	5557	<input checked="" type="checkbox"/>	
172.5	-68.4	159.7	22.5	182.2	ReflexEVS	Geotech	02-Jul-15	5979	<input checked="" type="checkbox"/>	
202.5	-68.8	161.3	22.5	183.8	ReflexEVS	Geotech	03-Jul-15	5769	<input checked="" type="checkbox"/>	
211.5	-68.5	160.1	22.5	182.6	ReflexEVS	Geotech	04-Jul-15	5779	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	6.00	OVBN Overburden									
6.00	8.80	RHYva Coarse grained to ash tuff									
<<Min: 6 - 9.28 2% Min: Pyrite>>											
<<Alt: 6 - 87.8 Weak (Alt) Muscovite>> Regional metamorphism of rhyolite											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-200

From (m)		To (m)		Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
8.80		13.30		RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
<<Min: 9.28 - 12.36 2% Min: Pyrite>>													
<<Min: 12.36 - 15.57 2% Min: Pyrite>>													
<<Min: 12.36 - 15.57 4% Min: Pyrrhotite>>													
13.30		15.00		RHYvl	Lapilli tuff								
15.00		24.00		RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
<<Min: 15.57 - 18.96 1% Min: Pyrite>>													
<<Min: 15.57 - 18.96 4% Min: Pyrrhotite>>													
<<Min: 18.96 - 22.25 1% Min: Pyrite>>													
<<Min: 18.96 - 22.25 3% Min: Pyrrhotite>>													
<<Min: 18.96 - 22.25 1% Min: Calcite>>													
<<Min: 22.25 - 25.5 2% Min: Pyrite>>													
<<Min: 22.25 - 25.5 2% Min: Pyrrhotite>>													
<<Min: 22.25 - 25.5 0.5% Min: Calcite>>													
<<Vein: 19.8 - 20.6 5% Quartz-Carbonate>> Minor Calcite+Biotite+Tourmaline veins													
24.00		31.50		RHYvx	Quartz and/or feldspar crystal tuff								
24 - 31.5: Contains many lapilli sized Qz and feldspar cystals? Also has lapilli sized lithic fragments. All lapilli sized material is stretched and deformed.													
<<Min: 25.5 - 28.65 1% Min: Pyrite>>													
<<Min: 25.5 - 28.65 3% Min: Pyrrhotite>>													
<<Min: 25.5 - 28.65 0.5% Min: Calcite>>													
<<Min: 28.65 - 31.95 2% Min: Pyrrhotite>>													
<<Struc: 24 - 24.7 Moderate (Alt) Fault>> moderate fault gouge zone													
31.50		40.40		RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
<<Min: 31.95 - 35.22 1% Min: Pyrite>>													
<<Min: 31.95 - 35.22 3% Min: Pyrrhotite>>													
<<Min: 35.22 - 38.5 1% Min: Pyrite>>													
<<Min: 35.22 - 38.5 2% Min: Pyrrhotite>>													
<<Min: 38.5 - 41.79 2% Min: Pyrite>>													

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-200

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %									
<<Min: 38.5 - 41.79 3% Min: Pyrrhotite>>																				
40.40	43.50	RHYvl Lapilli tuff																		
<<Min: 41.79 - 45.48 1% Min: Pyrrhotite>>																				
<<Min: 41.79 - 45.48 0.5% Min: Calcite>>																				
43.50	62.20	RHYcw Curdy textured-flow banded (flows, subvolcanics)																		
43.5 - 62.2: Mafic dyke from 46.5-47m. Texture is dominantly curdy or flow banded. From ~51-56 m texture is obscured by spaced cleavage.																				
<<Min: 45.48 - 48.62 2% Min: Pyrite>>																				
<<Min: 45.48 - 48.62 2% Min: Pyrrhotite>>																				
<<Min: 48.62 - 51.72 2% Min: Pyrite>>																				
<<Min: 48.62 - 51.72 2% Min: Pyrrhotite>>																				
<<Min: 51.72 - 54.82 1% Min: Pyrite>>																				
<<Min: 51.72 - 54.82 2% Min: Pyrrhotite>>																				
<<Min: 54.82 - 58.12 2% Min: Pyrite>>																				
<<Min: 54.82 - 58.12 2% Min: Pyrrhotite>>																				
<<Min: 58.12 - 61.62 2% Min: Pyrite>>																				
<<Min: 58.12 - 61.62 2% Min: Pyrrhotite>>																				
<<Min: 61.62 - 64.81 1% Min: Pyrite>>																				
<<Min: 61.62 - 64.81 2% Min: Pyrrhotite>>																				
62.20	72.00	RHYvl Lapilli tuff																		
<<Min: 64.81 - 69.28 1% Min: Pyrite>>																				
<<Min: 64.81 - 69.28 1% Min: Pyrrhotite>>																				
<<Min: 69.28 - 72.35 1% Min: Pyrite>>																				
<<Vein: 68 - 68.1 50% Quartz-Carbonate>> Qz-ankerite vein																				
<<Struc: 67 - 69 Strong (Alt) Fault>> moderate fault gouge zone																				
<<Struc: 70.5 - 71 Weak (Alt) Fault>> moderate-strong fault gouge zone																				
72.00	77.20	RHYva Coarse grained to ash tuff																		
<<Min: 72.35 - 75.66 1% Min: Pyrite>>																				
<<Min: 72.35 - 75.66 1% Min: Pyrrhotite>>																				
<<Min: 75.66 - 78.86 1% Min: Pyrite>>																				
<<Vein: 76.1 - 76.15 20% Quartz-Carbonate>> Qz-ankerite vein																				
<<Struc: 74 - 74.1 Weak (Alt) Fault>> weak fault gouge zone																				



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-200

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 76.3 - 77.2 Strong (Alt) Fault>> moderate fault gouge zone											
77.20	85.40	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
<<Min: 78.86 - 81.91 2% Min: Pyrite>>											
<<Min: 78.86 - 81.91 2% Min: Pyrrhotite>>											
<<Min: 81.91 - 85.43 2% Min: Pyrite>>											
<<Min: 81.91 - 85.43 2% Min: Pyrrhotite>>											
<<Struc: 81.9 - 82.7 Moderate (Alt) Fault>> weak-moderate fault gouge zone											
85.40	87.00	RHYvl Lapilli tuff									
85.4 - 87: ~5% carbonaceous material											
<<Min: 85.43 - 88.56 1% Min: Pyrite>>											
<<Min: 85.43 - 88.56 1% Min: Pyrrhotite>>											
87.00	97.00	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
87 - 97: Spaced cleavage from 87 to 90 disturbs coherent rhyolite textures. Qz-eyes in unit. ~5% carbonaceous material.											
<<Min: 88.56 - 91.95 1% Min: Pyrrhotite>>											
<<Min: 91.95 - 95.16 1% Min: Pyrite>>											
<<Min: 91.95 - 95.16 1% Min: Pyrrhotite>>											
<<Min: 95.16 - 98.39 1% Min: Pyrite>>											
<<Min: 95.16 - 98.39 2% Min: Pyrrhotite>>											
<<Alt: 87.8 - 97.4 Trace (Alt) Muscovite>> Regional metamorphism of rhyolite											
<<Struc: 87.5 - 87.6 Weak (Alt) Fault>> weak fault gouge zone											
97.00	103.80	RHYvl Lapilli tuff									
<<Min: 98.39 - 101.58 2% Min: Pyrrhotite>>											
<<Min: 101.58 - 105.06 2% Min: Pyrite>>											
<<Min: 101.58 - 105.06 2% Min: Pyrrhotite>>											
<<Alt: 97.4 - 98.4 Moderate (Alt) Muscovite>> Stronger alteration related to hydrothermal altration subsequently overprinted by metamorphism?											
<<Alt: 98.4 - 101 Weak (Alt) Muscovite>> Stronger alteration related to hydrothermal altration subsequently overprinted by metamorphism?											
<<Alt: 101 - 103.8 Moderate (Alt) Muscovite>> Stronger alteration related to hydrothermal altration subsequently overprinted by metamorphism?											
<<Struc: 97.5 - 98.4 Moderate (Alt) Fault>> weak-moderate fault gouge zone											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-200

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 100.3 - 100.35 Weak (Alt) Fault>> weak fault gouge zone											
103.80	106.70	MDSc Carbonaceous dominant mudstone									
103.8 - 106.7: ~30% carbonaceous material											
<<Min: 105.06 - 108.33 1% Min: Pyrite>>											
<<Min: 105.06 - 108.33 2% Min: Pyrrhotite>>											
<<Alt: 103.8 - 109.1 Weak (Alt) Muscovite>> Stronger alteration related to hydrothermal altration subsequently overprinted by metamorphism?											
<<Struc: 104.52 - 104.53 Trace (Alt) >>											
<<Struc: 104.7 - 105 Strong (Alt) Fault>> strong fault gouge zone											
<<Struc: 104.8 - 104.81 Trace (Alt) >>											
<<Struc: 106 - 106.3 Moderate (Alt) Fault>> weak-moderate fault gouge zone											
106.70	107.60	MDSt Rhyolite tuff dominant mudstone									
106.7 - 107.6: ~5% carbonaceous material											
<<Struc: 107.5 - 107.51 Trace (Alt) >>											
107.60	109.10	MDSt Rhyolite tuff dominant mudstone									
107.6 - 109.1: ~20% carbonaceous material											
<<Min: 108.33 - 111.39 1% Min: Pyrrhotite>>											
<<Min: 108.33 - 111.39 0.5% Min: Calcite>>											
<<Struc: 107.9 - 107.91 Trace (Alt) >>											
109.10	116.00	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
<<Min: 111.39 - 114.55 1% Min: Pyrrhotite>>											
<<Min: 114.55 - 117.88 3% Min: Pyrite>>											
<<Min: 114.55 - 117.88 3% Min: Pyrrhotite>>											
<<Alt: 109.1 - 116 Moderate-Strong (Alt) Muscovite>> Stronger alteration related to hydrothermal altration subsequently overprinted by metamorphism?											
<<Struc: 109.1 - 109.15 Weak (Alt) Fault>> weak fault gouge zone											
<<Struc: 109.9 - 109.91 Trace (Alt) >>											
<<Struc: 110.9 - 110.91 Trace (Alt) >>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-200

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 115.35 - 115.36 Trace (Alt) >>											
116.00	117.20	MDSw Coherent rhyolite flow with carbonaceous content									
116 - 117.2: ~15% carbonaceous material											
<<Alt: 116 - 142.5 Strong (Alt) Muscovite>> Stronger alteration related to hydrothermal altration subsequently overprinted by metamorphism?											
<<Struc: 116.5 - 116.51 Trace (Alt) >>											
<<Struc: 116.54 - 116.55 Trace (Alt) >>											
<<Struc: 116.74 - 116.75 Trace (Alt) >>											
117.20	140.60	RHYcw Curdy textured-flow banded (flows, subvolcanics)	136.20	137.70	1.50	B00264501	3.2	0.01	-0.01	0.21	0.32
117.2 - 140.6: Rhyolite flow continues to ~133.3 m but has a much higher sulphide content after 140.7. Flow texture is fairly consistent throughout the unit.											
<<Min: 117.88 - 121.18 3% Min: Pyrite>>											
<<Min: 117.88 - 121.18 1% Min: Pyrrhotite>>											
<<Min: 121.18 - 124.5 2% Min: Ankerite>> Carbonate mineral in Qz-vein that lightly fizzes with HCl when scratched											
<<Min: 121.18 - 124.5 1% Min: Pyrrhotite>>											
<<Min: 121.18 - 124.5 1% Min: Pyrite>>											
<<Min: 124.5 - 127.61 2% Min: Pyrrhotite>>											
<<Min: 124.5 - 127.61 3% Min: Pyrite>>											
<<Min: 127.61 - 130.76 2% Min: Pyrite>>											
<<Min: 127.61 - 130.76 2% Min: Pyrrhotite>>											
<<Min: 130.76 - 134.42 1% Min: Pyrrhotite>>											
<<Min: 134.42 - 137.31 1% Min: Pyrite>>											
<<Min: 134.42 - 137.31 1% Min: Sphalerite>>											
<<Min: 137.31 - 140.6 1% Min: Sphalerite>>											
<<Min: 137.31 - 140.6 0.5% Min: Chalcopyrite>>											
<<Min: 137.31 - 140.6 0.5% Min: Galena>>											
<<Min: 137.31 - 140.6 1% Min: Pyrrhotite>>											
<<Min: 137.31 - 140.6 2% Min: Pyrite>>											
<<Alt: 126.2 - 128 Moderate (Alt) Chlorite>> Stronger alteration related to hydrothermal altration subsequently overprinted by metamorphism?											
<<Alt: 132.6 - 140.6 Moderate-Strong (Alt) Chlorite>> Stronger alteration related to hydrothermal altration subsequently overprinted by metamorphism?											
<<Alt: 132.6 - 140.6 Moderate-Strong (Alt) Chlorite>> Stronger alteration related to hydrothermal altration subsequently overprinted by metamorphism?											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-200

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %	
<<Alt: 138.6 - 140.6 Moderate (Alt) Cordierite>> Stronger alteration related to hydrothermal altration subsequently overprinted by metamorphism?												
<<Vein: 123.4 - 124.6 75% Quartz-Carbonate>> Massive Qz-carbonate veining												
<<Struc: 125.5 - 125.51 Trace (Alt) >> folds box 34 to 37												
<<Struc: 125.56 - 125.57 Trace (Alt) >>												
<<Struc: 127.25 - 127.26 Trace (Alt) >>												
<<Struc: 128.85 - 128.86 Trace (Alt) >>												
<<Struc: 129.9 - 129.91 Trace (Alt) >>												
<<Struc: 130.32 - 130.33 Trace (Alt) >>												
<<Struc: 132 - 133.5 Moderate (Alt) Fault>> weak faulted zone with minor gouge												
<<Struc: 134.18 - 134.19 Trace (Alt) >>												
<<Struc: 134.2 - 134.21 Trace (Alt) >> Secondary foliation												
<<Struc: 134.3 - 134.31 Trace (Alt) >>												
<<Struc: 134.5 - 134.51 Trace (Alt) >>												
<<Struc: 134.6 - 134.61 Trace (Alt) >>												
<<Struc: 136.4 - 136.41 Trace (Alt) >>												
<<Struc: 136.6 - 136.61 Trace (Alt) >>												
<<Struc: 136.8 - 136.81 Trace (Alt) >>												
<<Struc: 136.95 - 136.96 Trace (Alt) >>												
<<Struc: 137 - 137.01 Trace (Alt) >>												
<<Struc: 137.3 - 137.31 Trace (Alt) >>												
<<Struc: 137.35 - 137.36 Trace (Alt) >>												
<<Struc: 139.65 - 139.66 Trace (Alt) >>												
<<Struc: 139.75 - 139.76 Trace (Alt) >>												
140.60	144.00	OJ Heavilly disseminated sulphides in proximal altered rock	MCG	140.60	141.30	0.70	B00264504	43.5	0.411	1.27	0.06	0.25
140.6 - 144: strongly patchy and disseminated sulphide minerals within RHYcw. Massive sulphie from 142-142.2. RHYcw is strogly CL+CI altered (restricted alteration).												
<<Min: 140.6 - 144 3% Min: Sphalerite>>												
<<Min: 140.6 - 144 25% Min: Pyrite>>												
<<Min: 140.6 - 144 7% Min: Pyrrhotite>>												
<<Min: 140.6 - 144 1% Min: Galena>>												
<<Min: 140.6 - 144 2% Min: Chalcopyrite>>												

141.30	142.00	0.70	B00264505	4.2	0.02	0.08	0.02	0.04
142.00	143.00	1.00	B00264506	179	0.981	0.36	2.03	5.68
143.00	144.00	1.00	B00264507	74.9	0.76	0.22	0.73	4.47



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-200

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 140.6 - 144 Strong (Alt) Chlorite>> Stronger alteration related to hydrothermal altration subsequently overprinted by metamorphism?											
<<Alt: 140.6 - 144 Strong (Alt) Cordierite>> Stronger alteration related to hydrothermal altration subsequently overprinted by metamorphism?											
<<Struc: 140.95 - 140.96 Trace (Alt) >>											
144.00	146.40	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	144.00	144.80	0.80	B00264508	106	0.468	0.16	1.91	8.18
144 - 146.4: Wispy laminated massive sulphide that is predominantly PY+SP+GL+/-CP. Locally 1-5 cm bands of Qz+CL.											
<<Min: 144 - 146.4 7% Min: Sphalerite>>			144.80	145.60	0.80	B00264509	124	1.54	0.34	1.81	8.34
<<Min: 144 - 146.4 70% Min: Pyrite>>			145.60	146.40	0.80	B00264511	113	0.373	0.3	1.79	8.17
<<Min: 144 - 146.4 0.5% Min: Magnetite>>											
<<Min: 144 - 146.4 3% Min: Galena>>											
<<Min: 144 - 146.4 0.5% Min: Chalcopyrite>>											
<<Min: 144 - 146.4 5% Min: Calcite>>											
146.40	146.90	OD Brecciated sulphides	146.40	146.90	0.50	B00264512	71.4	1.29	0.41	1.83	6.43
146.4 - 146.9: Brecciated massive sulphide (PY+SP+GL+/-CP) with a CA+PY matrix.											
<<Min: 146.4 - 146.9 5% Min: Sphalerite>>											
<<Min: 146.4 - 146.9 70% Min: Pyrite>>											
<<Min: 146.4 - 146.9 2% Min: Galena>>											
<<Min: 146.4 - 146.9 1% Min: Chalcopyrite>>											
<<Min: 146.4 - 146.9 15% Min: Calcite>>											
146.90	148.40	OA Magnetite bearing sulphides	146.90	147.70	0.80	B00264513	70.9	0.547	1.17	1.78	9.82
146.9 - 148.4: Limited MG rich massive sulphide (PY+SP+GL+MG+/-CP). Local buckshot texture with Vcg pyrite.											
<<Min: 146.9 - 148.4 5% Min: Sphalerite>>			147.70	148.40	0.70	B00264514	131	0.704	0.15	3.85	9.55
<<Min: 146.9 - 148.4 70% Min: Pyrite>>											
148.40	152.00	OC Chalcopyrite-pyrrhotite net textured sulphides	148.40	149.00	0.60	B00264515	15.8	0.056	0.42	0.14	1.41
148.4 - 152: PO+CP net texture, with MG+/-PY+/-CL matrix.											
<<Min: 148.4 - 152 20% Min: Pyrite>>			149.00	150.00	1.00	B00264516	119	1.21	3.6	0.19	3.65
<<Min: 148.4 - 152 40% Min: Pyrrhotite>>			150.00	151.00	1.00	B00264517	70.9	0.56	1.74	0.35	2.08



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-200

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 148.4 - 152 20% Min: Magnetite>>			151.00	152.00	1.00	B00264518	31.8	0.11	0.3	0.7	2.6
<<Min: 148.4 - 152 10% Min: Chalcopryite>>											
<<Alt: 148.4 - 152 Moderate (Alt) Chlorite>>		Stronger alteration related to hydrothermal altration subsequently overprinted by metamorphism?									
<<Alt: 148.4 - 152 Weak-Moderate (Alt) Cordierite>>		Stronger alteration related to hydrothermal altration subsequently overprinted by metamorphism?									
152.00 154.00 OA		Magnetite bearing sulphides	152.00	153.00	1.00	B00264519	67.7	0.384	0.57	0.64	4.08
152 - 154: MG-bearing massive sulphide (PY+PO+/-SP+/-GL+/-CP) with local cg-vcg PY buckshot texture.											
<<Min: 152 - 154 5% Min: Sphalerite>>			153.00	154.00	1.00	B00264521	61.1	0.323	0.78	1.05	7.86
<<Min: 152 - 154 60% Min: Pyrite>>											
<<Min: 152 - 154 5% Min: Pyrrhotite>>											
<<Min: 152 - 154 15% Min: Magnetite>>											
<<Min: 152 - 154 5% Min: Galena>>											
<<Min: 152 - 154 5% Min: Chalcopryite>>											
154.00 155.10 OB		Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	154.00	154.50	0.50	B00264522	137	0.696	0.29	1.46	6.66
154 - 155.1: Wispy lamed PY+SP+GL with local AK? (soft but doesn't fizz) matrix.											
<<Min: 154 - 155.1 15% Min: Sphalerite>>			154.50	155.10	0.60	B00264523	204	1.24	0.35	2.65	10.5
<<Min: 154 - 155.1 50% Min: Pyrite>>											
<<Min: 154 - 155.1 1% Min: Magnetite>>											
<<Min: 154 - 155.1 5% Min: Galena>>											
<<Min: 154 - 155.1 1% Min: Chalcopryite>>											
<<Min: 154 - 155.1 20% Min: Ankerite>>		Ankerite or dolomite? Soft carbonate mineral that lightly fizzes with HCl when scratched. Makes up majority of Massive sulphide matrix.									
155.10 156.90 OA		Magnetite bearing sulphides	155.10	156.00	0.90	B00264524	110	0.649	1.19	1.28	12.2
155.1 - 156.9: MG-bearing massive sulphide (PY+SP+GL+/-CP). Fine laminated texture.											
<<Min: 155.1 - 156.9 10% Min: Sphalerite>>			156.00	156.85	0.85	B00264525	117	0.746	1.08	1.79	10.7
<<Min: 155.1 - 156.9 70% Min: Pyrite>>			156.85	157.35	0.50	B00264526	320	5.73	5.49	0.96	5.6
<<Min: 155.1 - 156.9 15% Min: Magnetite>>											
<<Min: 155.1 - 156.9 1% Min: Galena>>											
<<Min: 155.1 - 156.9 1% Min: Chalcopryite>>											
<<Min: 155.1 - 156.9 1% Min: Calcite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-200

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
156.90	157.30	OG Chalcopyrite rich sulphides	MG								
156.9 - 157.3: CP-rich (~30%) massive sulphide (PY+CP+PO) with minor CL matrix. Non-laminated.											
<<Min: 156.9 - 157.3 30% Min: Chalcopyrite>>											
157.30	158.90	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FG								
157.3 - 158.9: 157.3-157.6 is OA (magnetite-bearing). Fine laminated massive sulphide (PO+/-SP+/-CP+/-GL) with local CA matrix.											
<<Min: 157.3 - 158.9 10% Min: Sphalerite>>											
<<Min: 157.3 - 158.9 70% Min: Pyrite>>											
<<Min: 157.3 - 158.9 5% Min: Magnetite>>											
<<Min: 157.3 - 158.9 5% Min: Galena>>											
<<Min: 157.3 - 158.9 0.5% Min: Chalcopyrite>>											
<<Min: 157.3 - 158.9 5% Min: Calcite>>											
158.90	159.50	OJ Heavilly disseminated sulphides in proximal altered rock	MG								
158.9 - 159.5: Heavily disseminated PY+SP+GL+CP in CL+QZ+CA schist											
<<Min: 158.9 - 159.5 8% Min: Sphalerite>>											
<<Min: 158.9 - 159.5 30% Min: Pyrite>>											
<<Min: 158.9 - 159.5 2% Min: Pyrrhotite>>											
<<Min: 158.9 - 159.5 7% Min: Galena>>											
<<Min: 158.9 - 159.5 2% Min: Chalcopyrite>>											
<<Min: 158.9 - 159.5 10% Min: Ankerite>> Ankerite or dolomite? Soft carbonate mineral that lightly fizzes with HCl when scratched.											
<<Alt: 158.9 - 161.7 Intense (Alt) Chlorite>> Related to PY+PO+CP+SP+/-GL stringers in RHYvl unit.											
159.50	161.70	RHYvl Lapilli tuff green									
159.5 - 161.7: 159.5-160.1 is dominantly Qz-vein. The unit is intensely CL-altered with PY+PO+CP+SP+/-GL stringers. Large (~10cm) blob of albite? at 161-161.1 m.											
<<Min: 159.5 - 161.7 1% Min: Sphalerite>>											
<<Min: 159.5 - 161.7 3% Min: Pyrite>>											
<<Min: 159.5 - 161.7 2% Min: Pyrrhotite>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-200

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 159.5 - 161.7 0.5% Min: Galena>>											
<<Min: 159.5 - 161.7 2% Min: Chalcopryrite>>											
<<Min: 159.5 - 161.7 2% Min: Calcite>>											
<<Vein: 159.5 - 160.1 80% Quartz-Carbonate>>			Massive Qz-ankerite vein in CL altered schist								
<<Struc: 160.3 - 160.31 Trace (Alt) >>			Calcite								
<<Struc: 161.4 - 161.5 Weak (Alt) Fault>>			weak fractured zone								
161.70	186.60	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	161.70	163.20	1.50	B00264534	0.9	0.007	-0.01	-0.01	0.02
161.7 - 186.6: CL-CA-BI mafic schist. Locally intensely altered to bright-green mica. Also contains Leucosome (Ti-oxide mineral?).											
<<Min: 161.7 - 165.5 0.5% Min: Pyrite>>											
<<Min: 161.7 - 165.5 0.5% Min: Pyrrhotite>>											
<<Min: 161.7 - 165.5 20% Min: Calcite>>											
<<Min: 165.5 - 167.2 3% Min: Pyrite>>											
<<Min: 165.5 - 167.2 5% Min: Calcite>>											
<<Min: 167.2 - 186.6 0.5% Min: Pyrite>>											
<<Min: 167.2 - 186.6 20% Min: Calcite>>											
<<Alt: 161.7 - 163.5 Strong (Alt) Chlorite>>											
<<Alt: 161.7 - 163.5 Moderate-Strong (Alt) Biotite>>											
<<Alt: 163.5 - 169.5 Weak (Alt) Silicification>>											
Alteration of mafic sill by aphanitic rhyolite dyke? Zone is defined by an inner core of intense silicification with a rind of BI-alteration, surrounded by bright-green mica alteration and green-grey muscovite alteration.											
<<Alt: 163.5 - 169.5 Strong (Alt) Muscovite>>											
Alteration of mafic sill by aphanitic rhyolite dyke? Zone is defined by an inner core of intense silicification with a rind of BI-alteration, surrounded by bright-green mica alteration and green-grey muscovite alteration.											
<<Alt: 165.5 - 167.2 Intense (Alt) Silicification>>											
Alteration of mafic sill by aphanitic rhyolite dyke? Zone is defined by an inner core of intense silicification with a rind of BI-alteration, surrounded by bright-green mica alteration and green-grey muscovite alteration.											
<<Alt: 169.5 - 186.6 Strong (Alt) Chlorite>>											
<<Alt: 169.5 - 186.6 Moderate-Strong (Alt) Biotite>>											
<<Vein: 177.3 - 178 80% Quartz-Carbonate>>											
CA-QZ vein in mafic sill											
<<Struc: 161.9 - 161.91 Trace (Alt) >>											
No Beta angle											
<<Struc: 163.5 - 163.51 Trace (Alt) >>											
<<Struc: 164.8 - 164.81 Trace (Alt) >>											
<<Struc: 167.4 - 167.41 Trace (Alt) >>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-200

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 168.7 - 168.71 Trace (Alt) >>											
<<Struc: 168.8 - 168.81 Trace (Alt) >>											
<<Struc: 170.1 - 170.11 Trace (Alt) >> Beta angle close to 90											
<<Struc: 170.4 - 170.41 Trace (Alt) >>											
<<Struc: 172.2 - 172.21 Trace (Alt) >>											
<<Struc: 172.4 - 172.41 Trace (Alt) >>											
<<Struc: 174.05 - 174.06 Trace (Alt) >>											
<<Struc: 174.2 - 174.21 Trace (Alt) >>											
<<Struc: 176.3 - 178.5 Weak (Alt) Fault>> weak fractured zone with minor fault gouge											
<<Struc: 179.75 - 179.76 Trace (Alt) >> QZ/Calcite											
<<Struc: 179.9 - 179.91 Trace (Alt) >>											
<<Struc: 180.2 - 180.21 Trace (Alt) >>											
<<Struc: 180.4 - 180.41 Trace (Alt) >>											
<<Struc: 183.23 - 183.24 Trace (Alt) >>											
<<Struc: 183.43 - 183.44 Trace (Alt) >>											
<<Struc: 184.2 - 184.21 Trace (Alt) >>											
<<Struc: 184.25 - 184.26 Trace (Alt) >>											
186.60 188.60 RHYva Coarse grained to ash tuff											
186.6 - 188.6: Dark green CL-schist next to Mafic intrusion. Protolith of rhyolite ash tuff? No strong textures.											
<<Min: 186.6 - 188.53 2% Min: Pyrrhotite>>											
<<Min: 188.53 - 191.91 2% Min: Pyrrhotite>>											
<<Alt: 186.6 - 188.6 Strong (Alt) Chlorite>> Alteration of RHYva from mafic sill?											
<<Alt: 186.6 - 188.6 Moderate (Alt) Biotite>> Alteration of RHYva from mafic sill?											
<<Struc: 187.33 - 187.34 Trace (Alt) >>											
<<Struc: 187.37 - 187.38 Trace (Alt) >>											
<<Struc: 187.68 - 187.69 Trace (Alt) >>											
<<Struc: 187.94 - 187.95 Trace (Alt) >>											
188.60 193.30 RHYcw Curdy textured-flow banded (flows, subvolcanics)											
188.6 - 193.3: Qz-eye rich Rhyolite coherent flow? Texture becomes a bit obscured due to deformation near the bottom of the unit.											
<<Min: 191.91 - 195 1% Min: Pyrite>>											
<<Min: 191.91 - 195 1% Min: Pyrrhotite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-200

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 188.6 - 211.5		Weak (Alt) Muscovite>> Regional metamorphism of rhyolite									
<<Struc: 189.05 - 189.06		Trace (Alt) >>									
<<Struc: 189.13 - 189.14		Trace (Alt) >>									
<<Struc: 190.26 - 190.27		Trace (Alt) >>									
<<Struc: 191.59 - 191.6		Trace (Alt) >>									
<<Struc: 191.82 - 191.83		Trace (Alt) >>									
193.30	197.50	RHYvx Quartz and/or feldspar crystal tuff									
193.3 - 197.5: Qz-eye rich crystal tuff? Maybe a coherent rhyolite but the texture is not obvious.											
<<Min: 195 - 198.24		2% Min: Pyrite>>									
<<Min: 195 - 198.24		4% Min: Pyrrhotite>>									
<<Alt: 193.3 - 197.5		Weak (Alt) Chlorite>> Alteration of RHYva from mafic sill?									
<<Struc: 194.84 - 194.85		Trace (Alt) >>									
<<Struc: 194.98 - 194.99		Trace (Alt) >>									
<<Struc: 195.2 - 196.7		Strong (Alt) Fault>> moderate multiple fault gouge zones									
197.50	199.70	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
197.5 - 199.7: Coherent rhyolite flow with well defined flow banded texture											
<<Min: 198.24 - 201.57		2% Min: Pyrite>>									
<<Min: 198.24 - 201.57		1% Min: Pyrrhotite>>									
<<Struc: 197.75 - 197.76		Trace (Alt) >>									
<<Struc: 197.96 - 197.97		Trace (Alt) >>									
<<Struc: 199.29 - 199.3		Trace (Alt) >>									
<<Struc: 199.49 - 199.5		Trace (Alt) >>									
<<Struc: 199.54 - 199.55		Trace (Alt) >>									
199.70	211.50	RHYvl Lapilli tuff									
<<Min: 201.57 - 204.76		1% Min: Pyrite>>									
<<Min: 201.57 - 204.76		1% Min: Pyrrhotite>>									
<<Min: 203.2 - 207.9		10% Min: Calcite>>									
<<Min: 204.76 - 208.31		1% Min: Pyrite>>									
<<Min: 204.76 - 208.31		2% Min: Pyrrhotite>>									
<<Min: 208.31 - 211.5		1% Min: Pyrite>>									

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-200

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 208.31 - 211.5 1% Min: Pyrrhotite>>											
<<Vein: 203.2 - 207.9 30% Quartz-Chlorite-Tourmaline>> QZ-TR (tourmaline) veining along fractures. Runs ~parallel to core axis. Radiating TR radiates from the fractures outward.											
<<Struc: 200.3 - 200.4 Weak (Alt) Fault>> weak-moderate fault gouge zone											
<<Struc: 200.53 - 200.54 Trace (Alt) >>											
<<Struc: 200.67 - 200.68 Trace (Alt) >>											
<<Struc: 200.89 - 200.9 Trace (Alt) >>											
<<Struc: 202.7 - 203.2 Moderate (Alt) Fault>> weak fault gouge zone											
<<Struc: 203.08 - 203.09 Trace (Alt) >>											
<<Struc: 203.37 - 203.38 Trace (Alt) >>											
<<Struc: 203.75 - 203.76 Trace (Alt) >>											
<<Struc: 205.18 - 205.19 Trace (Alt) >>											
<<Struc: 205.28 - 205.29 Trace (Alt) >>											
<<Struc: 205.71 - 205.72 Trace (Alt) >>											
<<Struc: 206.37 - 206.38 Trace (Alt) >>											
<<Struc: 206.61 - 206.62 Trace (Alt) >>											
<<Struc: 206.91 - 206.92 Trace (Alt) >>											
<<Struc: 208.23 - 208.24 Trace (Alt) >>											
<<Struc: 208.37 - 208.38 Trace (Alt) >>											
<<Struc: 208.57 - 208.58 Trace (Alt) >>											
<<Struc: 208.77 - 208.78 Trace (Alt) >>											
<<Struc: 209.95 - 209.96 Trace (Alt) >>											
<<Struc: 211.18 - 211.19 Trace (Alt) >>											
<<Struc: 211.38 - 211.39 Trace (Alt) >>											
End of Hole @ 211.5											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-201

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Mark Baknes
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	31-Jul-15
UTM Easting:	414795.321	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	02-Aug-15
UTM Northing:	6815362.914	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1400.253	Casing Depth (m):	6	Length (m):	35	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title:		Drill Started:	31-Jul-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	01-Aug-15
Local Elev. (m):						Purpose:	Metallurgical Twin
Comments:						Parent Hole:	K15-202

K15-201 was drilled as twin of K15-202 to collect potentially oxidized samples of the MET3 and MET7 domains. Overburden occurs to 10.2 m. MSXS occurs from 10.20 - 20.00 m, consisting of OB and OA ore types followed by a strongly MU-altered felsic volcanoclastic unit from 20.00 - 21.50 m. From 21.50 - 23.00 m a second intersection of MSXS occurs, comprising the OB ore type. From 23.00 - 26.00 m moderate-strongly MU-altered felsic volcanoclastics occur. An intrusive rhyolite dyke cuts the volcanics from 26.00 m to the end of the hole at 35.00 m.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	180	0	180	APS	Geotech	31-Jul-15		<input checked="" type="checkbox"/>	
26	-59.7	159.6	22.5	182.1	ReflexEVS	Geotech	31-Jul-15	5786	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	6.00	CASN Casing									
<<Min: 0 - 16.8 0% Min: Calcite>>											
6.00	10.20	OVBN Overburden									
6 - 10.2: may be ground core quartz vein and mav sx											
10.20	14.20	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	10.20	10.90	0.70						
<<Min: 10.2 - 10.9 25% Min: Sphalerite>>											
<<Min: 10.2 - 10.9 40% Min: Pyrite>>											
<<Min: 10.2 - 10.9 5% Min: Galena>>											
<<Min: 10.2 - 10.9 1% Min: Chalcopryrite>>											
<<Min: 10.9 - 14.2 5% Min: Sphalerite>>											
<<Min: 10.9 - 14.2 70% Min: Pyrite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-201

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 10.9 - 14.2 3% Min: Magnetite>>											
<<Min: 10.9 - 14.2 2% Min: Galena>>											
<<Min: 10.9 - 14.2 1% Min: Chalcopryite>>											
14.20	15.80	OA Magnetite bearing sulphides	14.20	15.00	0.80						
<<Min: 14.2 - 15.8 7% Min: Sphalerite>>			15.00	15.80	0.80						
<<Min: 14.2 - 15.8 60% Min: Pyrite>>											
<<Min: 14.2 - 15.8 20% Min: Magnetite>>											
<<Min: 14.2 - 15.8 1% Min: Galena>>											
<<Min: 14.2 - 15.8 2% Min: Chalcopryite>>											
15.80	20.00	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	15.80	16.80	1.00						
15.8 - 20: indistinct texture, conformable contact with underlying mxsx, hangingwall cnt faulted											
<<Min: 15.8 - 20 15% Min: Sphalerite>>			16.80	17.80	1.00						
<<Min: 15.8 - 20 50% Min: Pyrite>>			17.80	20.00	2.20						
<<Min: 15.8 - 20 3% Min: Magnetite>>											
<<Min: 15.8 - 20 1% Min: Galena>>											
<<Min: 15.8 - 20 2% Min: Chalcopryite>>											
<<Min: 16.8 - 23 1% Min: Calcite>>											
<<Vein: 18.6 - 20.2 50% Quartz>> ground core fault?											
<<Struc: 17.4 - 17.5 Foliation>> strong banding mxsx											
<<Struc: 18.6 - 20 Fault>> ground core possible fault											
20.00	21.50	RHYva Coarse grained to ash tuff	20.00	21.50	1.50						
20 - 21.5: indistinct volcanoclastic texture, lower cnt conformable lower cnt faulted											
<<Min: 20 - 21.5 5% Min: Pyrite>>											
<<Min: 20 - 21.5 1% Min: Galena>>											
<<Alt: 20 - 21.5 Strong (Alt) Muscovite>>											
<<Struc: 20 - 20.1 Foliation>> strong dominant fol											
<<Struc: 20.2 - 20.3 Fault>> ground core possible fault											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-201
From (m) **To (m)** **Rocktype & Description**

**21.50 23.00 OB Wispy laminate, fine
buckshot textured, non-
magnetite bearing sulphides**

21.5 - 23: 21.7-21.9 15% interstitial CP; 22.3-22.5 10% interstitial MG

<<Min: 21.5 - 23 7% Min: Sphalerite>>

<<Min: 21.5 - 23 60% Min: Pyrite>>

<<Min: 21.5 - 23 5% Min: Magnetite>>

<<Min: 21.5 - 23 3% Min: Galena>>

<<Min: 21.5 - 23 5% Min: Chalcopyrite>>

<<Struc: 21.5 - 21.6 >> moderate contact between tuff and mxsx

**23.00 26.00 RHYvx Quartz and/or feldspar crystal
tuff**

23 - 26: could be alt/deformed RHYi, thin banded with mm quart crystals in fine mtx

<<Min: 23 - 26 4% Min: Sphalerite>> concentrated 25.5-26

<<Min: 23 - 26 8% Min: Pyrite>>

<<Min: 23 - 26 1% Min: Calcite>>

<<Alt: 23 - 26 Moderate-Strong (Alt) Muscovite>> may be gy-gn assemblage

26.00 35.00 RHYi Aphanitic Rhyolite (intrusion)

26 - 35: typical, brittle fracture quartz stringers, patchy gngy alteration

<<Min: 26 - 35 3% Min: Pyrite>>

<<Min: 26 - 35 1% Min: Galena>>

<<Min: 26 - 35 3% Min: Calcite>>

<<Alt: 26 - 32.3 Weak (Alt) Silicification>>

<<Alt: 26 - 32.3 Weak (Alt) Muscovite>> patchy and prv gy-gn-style sericite-silica

<<Alt: 32.3 - 35 Trace (Alt) Silicification>>

<<Alt: 32.3 - 35 Trace (Alt) Muscovite>>

<<Vein: 26 - 35 7% Quartz>> typical brittle veining in rhyi

<<Struc: 26 - 26.1 Foliation>> strong

End of Hole @ 35

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
21.50	23.00	1.50						

FG

23.00	24.00	1.00
-------	-------	------

24.00	25.00	1.00
-------	-------	------

25.00	26.00	1.00
-------	-------	------

26.00	27.00	1.00
-------	-------	------

27.00	28.00	1.00
-------	-------	------

GeoSpark Logger ~ Drill Log

Project:	KZK	Hole Number:	K15-202
Prospect:	ABM	Hole Type:	DD
Grid:	NAD83_Z9	Hole Diameter:	96
UTM Easting	414795.491	Core Size:	HQ3
UTM Northing:	6815365.198	Casing Pulled?:	Yes
UTM Elev. (m):	1400.217	Casing Depth (m):	8
Local Easting:		Stored?:	Yes
Local Northing:		Cemented?:	Yes
Local Elev. (m):			
Comments:			
		Survey Type:	RTK DGPS
		Survey By:	Challenger_Survey
		Azimuth:	180
		Dip:	-60
		Length (m):	71
		Claims Title	
		Core Storage Loc.:	KZK Camp
		Logged By:	Mark Baknes
		Date Logging Start:	02-Aug-15
		Date Logging Complete:	03-Aug-15
		Drill Company:	Geotech
		Drill Rig:	Zinex A5
		Drill Started:	01-Aug-15
		Drill Completed:	03-Aug-15
		Purpose:	Resource/Met/Hydro
		Parent Hole:	

K15-202 was drilled to define the shallow resource extension of the massive sulphide lens. K15-201 was drilled as a twin of K15-202 to collect core to test the metallurgical properties of MET3 and MET7 domains. Packer testing was completed on K15-202 as the hole was advanced.

K15-202 collared into overburden followed by MSXS occurring from 8.00 - 8.90 m consisting of the OB ore type. Strongly MU-altered felsic volcanics were intersected from 8.90 - 9.50 m followed by a second MSXS intercept from 9.5-18.3 m comprising OB and OA ore types. From 18.30 - 20.80 m another strongly MU-altered felsic volcanoclastic unit occurs. A third MSXS intercept occurs from 20.00 - 23.00 m, consisting of the OB ore type. The footwall package comprises felsic volcanics from 23.00 - 24.20 m, an aphanitic intrusive rhyolite dyke (RHYi) from 24.20 - 44.30 m, and a CL-BI mafic sill (MAFi) from 44.30 - 71.00 m. The MAFi displays MU and SI alteration near the contact with the RHYi unit.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	180.02	0	180.02	APS	Chris Hughes	02-Aug-15		<input checked="" type="checkbox"/>	
26	-60.5	161.4	22.5	183.9	ReflexEVS	Geotech	01-Aug-15	5791	<input checked="" type="checkbox"/>	
50	-60.5	159.4	22.5	181.9	ReflexEVS	Geotech	02-Aug-15	5777	<input checked="" type="checkbox"/>	
71	-61	162	22.5	184.5	ReflexEVS	Geotech	02-Aug-15	5724	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	8.00	CASN									
8.00	8.90	OB	8.00	8.90	0.90	B00264016	303	3.05	0.58	4.36	16.9
<p>Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides</p> <p><<Min: 8 - 8.9 15% Min: Sphalerite>> mg</p> <p><<Min: 8 - 8.9 60% Min: Pyrite>> mg</p> <p><<Min: 8 - 8.9 2% Min: Galena>> mg</p>											
8.90	9.50	RHYv	8.90	9.50	0.60	B00264017	1.7	0.015	-0.01	0.03	0.05
<p>Rhyolite volcanoclastic</p> <p><<Min: 8.9 - 9.5 1% Min: Pyrite>></p> <p><<Alt: 8.9 - 9.5 Strong (Alt) Muscovite>></p>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-202

From (m) To (m) Rocktype & Description

9.50 15.30 OB Wispy laminate, fine
buckshot textured, non-
magnetite bearing sulphides

<<Min: 9.5 - 15.3 5% Min: Sphalerite>> fg
<<Min: 9.5 - 15.3 70% Min: Pyrite>> fg
<<Min: 9.5 - 15.3 3% Min: Magnetite>> fg
<<Min: 9.5 - 15.3 2% Min: Galena>> fg
<<Min: 9.5 - 15.3 1% Min: Chalcopryrite>> fg
<<Struc: 14.5 - 14.6 Foliation>> moderate mxsx banding

15.30 17.00 OA Magnetite bearing sulphides

<<Min: 15.3 - 17 7% Min: Sphalerite>> mg
<<Min: 15.3 - 17 60% Min: Pyrite>> mg
<<Min: 15.3 - 17 20% Min: Magnetite>> mg
<<Min: 15.3 - 17 1% Min: Galena>> mg
<<Min: 15.3 - 17 2% Min: Chalcopryrite>> mg

17.00 18.30 OB Wispy laminate, fine
buckshot textured, non-
magnetite bearing sulphides

17 - 18.3: indistinct texture, conformable contact with underlying mxsx, hangingwall cnt faulted

<<Min: 17 - 18.3 15% Min: Sphalerite>>
<<Min: 17 - 18.3 50% Min: Pyrite>>
<<Min: 17 - 18.3 3% Min: Magnetite>>
<<Min: 17 - 18.3 1% Min: Galena>>
<<Min: 17 - 18.3 2% Min: Chalcopryrite>>

18.30 20.00 RHYva Coarse grained to ash tuff

18.3 - 20: indistinct volcanoclastic texture, lower cont conformable lower cnt faulted

<<Min: 18.3 - 20 5% Min: Pyrite>>
<<Min: 18.3 - 20 1% Min: Chalcopryrite>>
<<Alt: 18.3 - 20 Strong (Alt) Muscovite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
9.50	10.30	0.80	B00264018	141	2.49	1.24	2.19	6.79

10.30	11.30	1.00	B00264019	91.5	1.53	0.82	1.58	6.03
11.30	12.30	1.00	B00264021	104	1.67	0.53	1.63	5.42
12.30	13.30	1.00	B00264022	129	1.02	0.5	2.28	7.14
13.30	14.30	1.00	B00264023	75.4	0.839	0.21	0.89	6.61
14.30	15.30	1.00	B00264024	84.7	0.836	0.21	1.32	10.9

15.30	16.20	0.90	B00264025	128	2	1.54	2.11	11.5
16.20	17.00	0.80	B00264026	105	0.755	0.77	1.6	11

17.00	18.30	1.30	B00264027	273	0.684	0.21	2.78	8.52
-------	-------	------	-----------	-----	-------	------	------	------

18.30	19.30	1.00	B00264028	4.7	0.054	0.02	0.06	0.13
-------	-------	------	-----------	-----	-------	------	------	------

19.30	20.00	0.70	B00264029	1.5	0.01	0.02	0.02	0.14
-------	-------	------	-----------	-----	------	------	------	------

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-202

From (m) To (m) Rocktype & Description

20.00 23.00 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

20 - 23: 21.7-21.9 15% interstitial CP; 22.3-22.5 10% interstitial MG

<<Min: 20 - 23 8% Min: Sphalerite>> cg

<<Min: 20 - 23 45% Min: Pyrite>> cg

<<Min: 20 - 23 5% Min: Magnetite>> cg

<<Min: 20 - 23 5% Min: Galena>> cg

<<Min: 20 - 23 4% Min: Chalcopyrite>> cg

23.00 24.20 RHYvx Quartz and/or feldspar crystal tuff

23 - 24.2: could be alt/deformed RHYi, thin banded with mm quart crystals in fine mtx

<<Min: 23 - 41 4% Min: Calcite>>

<<Min: 23 - 44.3 0.5% Min: Sphalerite>>

<<Min: 23 - 44.3 4% Min: Pyrite>> cg

<<Alt: 23 - 24.2 Moderate-Strong (Alt) Muscovite>> may be gy-gn assemblage

<<Struc: 23 - 24 Fault>> ground core possible fault

24.20 44.30 RHYi Aphanitic Rhyolite (intrusion)

24.2 - 44.3: typical, brittle fracture quartz stringers, patchy gngy alteration

<<Min: 41 - 45 1% Min: Calcite>>

<<Alt: 24.2 - 44.3 Moderate (Alt) Muscovite>> gr-gn alt associated with RHYi

<<Vein: 26 - 27 50% Quartz-Carbonate>>

<<Vein: 27 - 44.3 7% Quartz-Carbonate>>

44.30 54.50 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

<<Min: 45 - 71 7% Min: Calcite>>

<<Alt: 44.3 - 46.4 Weak (Alt) Silicification>>

<<Alt: 44.3 - 46.4 Weak (Alt) Muscovite>> gr-gn alt of MAFi

<<Alt: 46.4 - 47.7 Weak (Alt) Silicification>>

<<Alt: 46.4 - 47.7 Trace (Alt) Muscovite>> gr-gn alt of mafic

<<Alt: 47.7 - 54.5 Moderate (Alt) Silicification>>

<<Alt: 47.7 - 54.5 Moderate (Alt) Muscovite>> gr-gn alt of mafic

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
20.00	21.00	1.00	B00264031	68.7	0.086	0.14	3.07	8.58

21.00	22.00	1.00	B00264032	576	0.844	2.47	7.52	13.8
22.00	23.00	1.00	B00264033	64.5	0.272	0.09	1.55	10.9

FG

23.00	24.50	1.50	B00264034	2	-0.005	-0.01	0.01	0.12
-------	-------	------	-----------	---	--------	-------	------	------

24.50	26.00	1.50	B00264035	1.4	0.006	-0.01	-0.01	0.01
-------	-------	------	-----------	-----	-------	-------	-------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-202

From (m) To (m) Rocktype & Description

**54.50 64.80 MAFi Mafic Intrusions (primarily
footwall mafic intrusion)**

<<Alt: 54.5 - 64.8 Moderate (Alt) Silicification>>

<<Alt: 54.5 - 64.8 Moderate (Alt) Chlorite>> typical MAFi CL-BI

**64.80 71.00 MAFi Mafic Intrusions (primarily
footwall mafic intrusion)**

<<Alt: 64.8 - 71 Moderate (Alt) Silicification>>

<<Alt: 64.8 - 71 Moderate-Strong (Alt) Muscovite>> gr-gn alt of mafic

<<Struc: 70.1 - 70.15 Fault>> moderate narrow gouge zone

End of Hole @ 71

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-203

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Mark Baknes
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	03-Aug-15
UTM Easting	414849.911	Core Size:	NQ3	Azimuth:	180	Date Logging Complete:	06-Aug-15
UTM Northing:	6815544.492	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1395.382	Casing Depth (m):	4.6	Length (m):	173	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	03-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	05-Aug-15
Local Elev. (m):						Purpose:	Resource/Met
Comments:						Parent Hole:	

K15-203 was drilled as resource infill hole between historic holes K94-009 and K94-047. K15-205 was drilled as a twin of K15-203 to test the metallurgical properties of MET8, MET6, and MET7 domains.

The hanging wall package (4.6-100.9 m) consists of mixed felsic volcanics with some mudstone horizons. MU-alteration begins at 70 m and increases in intensity toward the first MSXS interval, CL and CI-alteration also increase in intensity proximal to the MSXS. The first MSXS interval occurs at 100.9-109.3 m, consisting of OG, OA, OJ, and OH ore types respectively. From 109.3-119.2 coherent rhyolites occur, with CL and CI-alteration increasing intensity toward 119.2 m. A second interval of MSXS occurs from 119.2-125.6 m, consisting of OB, OA, and OI ore types respectively. From 125.6-126.9 m CL-altered coherent rhyolite occurs. From 126.9-127.3 m a small intersection of MSXS occurs, consisting of OB ore type. From 127.3-134.3 a package of CL-altered felsic volcanics occurs. From 134.3-135 m a small intersect of MSXS occurs consisting of OH ore type. From 135-136.6 m MU-altered coherent rhyolite occurs. From 136.6-139.7 m another MSXS interval occurs, consisting of OH ore type. From 139.7-164.1 a CL-BI mafic sill occurs, with an intrusive aphanitic rhyolite between 145.1-147.2 m. From 147.2-173 a package of felsic volcanics occurs, with a 40 cm MSXS intercept from 164.5-164.9 m, consisting of OB ore type.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	180.9	0	180.9	APS	Geotech	05-Aug-15		<input checked="" type="checkbox"/>	
26	-63	162.6	22.5	185.1	ReflexEVS	Geotech	03-Aug-15	5094	<input checked="" type="checkbox"/>	
50	-63	162.6	22.5	185.1	ReflexEVS	Geotech	04-Aug-15	5714	<input checked="" type="checkbox"/>	
74	-62.8	163.5	22.5	186	ReflexEVS	Geotech	04-Aug-15	5681	<input checked="" type="checkbox"/>	
101	-62.5	167.8	22.5	190.3	ReflexEVS	Geotech	04-Aug-15	5102	<input checked="" type="checkbox"/>	
126	-62.9	168.3	22.5	190.8	ReflexEVS	Geotech	04-Aug-15	6052	<input checked="" type="checkbox"/>	
170	-62.3	201.7	22.5	224.2	ReflexEVS	Geotech	05-Aug-15	5775	<input type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	4.60	CASN									
4.60	5.80	RHYcf									
<p>Casing</p> <p>Feldspar & feldspar quartz porphyry</p> <p><<Min: 4.6 - 11 4% Min: Pyrrhotite>></p> <p><<Min: 4.6 - 25 1% Min: Calcite>></p>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-203

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
5.80	20.20	RHYvl Lapilli tuff									
5.8 - 20.2: indistinct lapilli rare QE											
<<Min: 11 - 20.5 2% Min: Pyrrhotite>>											
<<Struc: 11.29 - 11.3 Trace (Alt) >>											
<<Struc: 11.34 - 11.35 Trace (Alt) >>											
<<Struc: 12.79 - 12.8 Trace (Alt) >> QZ banded											
<<Struc: 13.09 - 13.1 Trace (Alt) >> QZ banded											
<<Struc: 13.36 - 13.37 Trace (Alt) >>											
20.20	27.40	RHYvx Quartz and/or feldspar crystal tuff									
20.2 - 27.4: distinct unit medium grey with minor dusting of BI,5% 1-3mm silica replaced? FD. Could be porph, note bxx sized RHYcw frags											
<<Min: 20.5 - 24.7 5% Min: Pyrrhotite>>											
<<Min: 24.7 - 29.5 1% Min: Pyrite>>											
<<Min: 24.7 - 29.5 2% Min: Pyrrhotite>>											
<<Min: 25 - 27.4 4% Min: Calcite>>											
<<Struc: 20.29 - 20.3 Trace (Alt) >> PY-PO stringer											
<<Struc: 20.48 - 20.49 Trace (Alt) >> PY-PO stringer											
<<Struc: 20.66 - 20.67 Trace (Alt) >> PY-PO stringer											
<<Struc: 22.92 - 22.93 Trace (Alt) >> QZ-lpl elongated											
<<Struc: 23.27 - 23.28 Trace (Alt) >> QZ-lpl elongated											
<<Struc: 23.37 - 23.38 Trace (Alt) >> PY-PO stringer											
27.40	32.70	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
27.4 - 32.7: well developed curdy texture											
<<Min: 27.4 - 139.7 0.5% Min: Calcite>>											
<<Min: 29.5 - 43.5 1% Min: Pyrite>>											
<<Min: 29.5 - 43.5 3% Min: Pyrrhotite>>											
<<Struc: 28.61 - 28.62 Trace (Alt) >> flow banded											
<<Struc: 28.87 - 28.88 Trace (Alt) >> flow banded											
<<Struc: 31.83 - 31.84 Trace (Alt) >> mica banded											
<<Struc: 32.16 - 32.17 Trace (Alt) >> mica banded											

Project:
KZK
Hole Number:
K15-203

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
32.70	39.20	RHYvl Lapilli tuff									
32.7 - 39.2: distinct unit medium grey with minor dusting of BI,5% 1-3mm silica replaced? FD. Could be porph											
<<Struc: 35.02 - 35.03 Trace (Alt) >> CL banded											
<<Struc: 35.55 - 35.56 Trace (Alt) >> QZ-lpl elongated											
<<Struc: 36.05 - 36.06 Trace (Alt) >> elongated lpl											
<<Struc: 36.24 - 36.25 Trace (Alt) >> elongated lpl											
39.20	42.40	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
39.2 - 42.4: good curdy texture											
<<Struc: 40.52 - 40.53 Trace (Alt) >> mica banded											
<<Struc: 41.13 - 41.14 Trace (Alt) >> CL banded											
42.40	48.30	RHYvl Lapilli tuff									
42.4 - 48.3: distinct unit medium grey with minor dusting of BI,5% 1-3mm silica replaced? FD. Could be porph, patchy TO replacement of lapilli											
<<Min: 43.5 - 47.3 2% Min: Pyrite>>											
<<Min: 43.5 - 47.3 3% Min: Pyrrhotite>>											
<<Min: 47.3 - 58 0.5% Min: Pyrite>>											
<<Min: 47.3 - 58 2% Min: Pyrrhotite>>											
48.30	55.80	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
48.3 - 55.8: from 53.5-66.2 very well developed curdy texture											
55.80	60.20	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
55.8 - 60.2: from 53.5-66.2 very well developed curdy texture, very weakly carbonaceous											
<<Min: 58 - 71 3% Min: Pyrrhotite>>											
60.20	68.50	RHYvl Lapilli tuff									
60.2 - 68.5: indistinct lapilli several possible >4cm curdy RHYcw fragments											
<<Struc: 62.29 - 62.3 Trace (Alt) >> mica banded											
<<Struc: 62.31 - 62.32 Trace (Alt) >> PY-PO stringer											
<<Struc: 65.73 - 65.74 Trace (Alt) >> mica banded											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-203

From (m)		To (m)		Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 66.19 - 66.2 Trace (Alt) >> elongated lpl														
68.50		71.00		MDS		Rhyolite tuff dominant mudstone								
68.5 - 71: best described as RHYcw carbonaceous														
<<Alt: 70 - 81.4 Weak (Alt) Muscovite>>														
71.00		74.20		RHYcw		Curdy textured-flow banded (flows, subvolcanics)								
71 - 74.2: abundant QE														
<<Min: 71 - 74 1% Min: Pyrite>>														
<<Min: 74 - 75.3 5% Min: Pyrite>>														
74.20		75.30		MDS		Rhyolite tuff dominant mudstone								
74.2 - 75.3: better termed RHYcw crb														
75.30		81.40		RHYcw		Curdy textured-flow banded (flows, subvolcanics)								
75.3 - 81.4: QZ eyes top of interval														
<<Min: 75.3 - 78.5 1% Min: Pyrite>>														
<<Min: 78.5 - 81.4 6% Min: Pyrite>>														
<<Min: 81 - 99.5 2% Min: Pyrite>>														
<<Min: 81 - 99.5 1% Min: Pyrrhotite>>														
<<Struc: 79.84 - 79.85 Trace (Alt) >> mica banded														
<<Struc: 80.49 - 80.5 Trace (Alt) >> PY-PO stringer														
<<Struc: 81.21 - 81.22 Trace (Alt) >> mica banded														
81.40		84.40		RHYcw		Curdy textured-flow banded (flows, subvolcanics)								
<<Alt: 81.4 - 83.6 Moderate (Alt) Chlorite>>														
<<Alt: 83.6 - 99 Weak-Moderate (Alt) Muscovite>>														
<<Vein: 83.8 - 86 15% Quartz>>														
84.40		85.40		MDS		Carbonaceous dominant mudstone								

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-203

From (m) To (m) Rocktype & Description

85.40 99.00 RHYcw Curdy textured-flow banded (flows, subvolcanics)

85.4 - 99: weakly to moderately crb increasing dwn hole

<<Struc: 86.8 - 86.81 Trace (Alt) >> mica banded
<<Struc: 87.24 - 87.25 Trace (Alt) >> mica banded
<<Struc: 88.46 - 88.47 Trace (Alt) >> mica banded
<<Struc: 88.84 - 88.85 Trace (Alt) >> mica banded
<<Struc: 89.55 - 89.56 Trace (Alt) >> anastozing CL band
<<Struc: 91.4 - 91.41 Trace (Alt) >> QZ banded
<<Struc: 91.41 - 91.42 Trace (Alt) >> mica banded
<<Struc: 92.23 - 92.24 Trace (Alt) >> mica banded
<<Struc: 92.74 - 92.75 Trace (Alt) >> mica banded
<<Struc: 93.34 - 93.35 Trace (Alt) >> mica banded
<<Struc: 93.66 - 93.67 Trace (Alt) >> QZ banded
<<Struc: 97.97 - 97.98 Trace (Alt) >> carbonaceous band

99.00 100.90 RHYvl Lapilli tuff

99 - 100.9: strong MU and CL alt difficult to ident protolith

<<Min: 99.5 - 100.9 4% Min: Pyrite>>
<<Min: 99.5 - 100.9 1% Min: Chalcopyrite>>
<<Min: 99.5 - 100.9 1% Min: Arsenopyrite>>
<<Alt: 99 - 100.9 Strong (Alt) Muscovite>>
<<Alt: 99 - 100.9 Moderate-Strong (Alt) Chlorite>>

100.90 103.20 OG Chalcopyrite rich sulphides

<<Min: 100.9 - 103.2 20% Min: Sphalerite>>
<<Min: 100.9 - 103.2 15% Min: Pyrite>>
<<Min: 100.9 - 103.2 15% Min: Magnetite>>
<<Min: 100.9 - 103.2 5% Min: Galena>>
<<Min: 100.9 - 103.2 25% Min: Chalcopyrite>>
<<Alt: 100.9 - 105.9 Strong (Alt) Cordierite>> within mxsx

103.20 104.70 OA Magnetite bearing sulphides

<<Min: 103.2 - 104.7 20% Min: Sphalerite>>
<<Min: 103.2 - 104.7 15% Min: Pyrite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
96.40	97.90	1.50	B00264036	1.8	0.007	-0.01	0.04	0.06

97.90	99.40	1.50	B00264037	1.3	-0.005	-0.01	0.03	0.04
-------	-------	------	-----------	-----	--------	-------	------	------

99.40	100.90	1.50	B00264038	11.3	0.059	0.32	0.02	0.19
-------	--------	------	-----------	------	-------	------	------	------

MG

100.90	101.90	1.00	B00264039	142	1.92	7.84	0.29	1.19
101.90	102.50	0.60	B00264042	158	2.38	8.59	0.36	15
102.50	103.20	0.70	B00264043	185	1.58	6.54	0.6	29.6

MG

103.20	104.00	0.80	B00264044	73.6	0.357	1.43	0.91	15.6
104.00	104.70	0.70	B00264045	90.6	0.997	4.22	0.32	16.6



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-203

From (m) To (m) Rocktype & Description

<<Min: 103.2 - 104.7 20% Min: Magnetite>>

<<Min: 103.2 - 104.7 4% Min: Galena>>

<<Min: 103.2 - 104.7 4% Min: Chalcopryrite>>

104.70 105.90 OJ Heavilly disseminated sulphides in proximal altered rock

<<Min: 104.7 - 105.9 1% Min: Sphalerite>>

<<Min: 104.7 - 105.9 10% Min: Pyrite>>

<<Min: 104.7 - 105.9 4% Min: Magnetite>>

<<Min: 104.7 - 105.9 0.5% Min: Galena>>

<<Min: 104.7 - 105.9 4% Min: Chalcopryrite>>

105.90 109.30 OH Fine grained, megascopically homogeneous pyrite rock

<<Min: 105.9 - 106.5 40% Min: Pyrite>>

<<Min: 105.9 - 106.5 20% Min: Magnetite>>

<<Min: 105.9 - 106.5 3% Min: Galena>>

<<Min: 105.9 - 106.5 0.5% Min: Chalcopryrite>>

<<Min: 106 - 109.3 7% Min: Sphalerite>>

<<Min: 106 - 109.3 75% Min: Pyrite>>

<<Min: 106 - 109.3 0.5% Min: Magnetite>>

<<Min: 106 - 109.3 0.5% Min: Chalcopryrite>>

109.30 113.20 RHYcw Curdy textured-flow banded (flows, subvolcanics)

109.3 - 113.2: alt partly destroyed by alt

<<Min: 110 - 116.2 5% Min: Pyrite>>

<<Min: 110 - 116.2 5% Min: Pyrrhotite>>

<<Min: 110 - 116.2 2% Min: Chalcopryrite>>

<<Alt: 109.3 - 113.2 Moderate (Alt) Muscovite>>

<<Alt: 109.3 - 113.2 Weak (Alt) Chlorite>>

<<Struc: 112.85 - 112.86 Trace (Alt) >> mica banded

<<Struc: 113.17 - 113.18 Trace (Alt) >> mica banded

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

104.70	105.90	1.20	B00264046	43.3	0.483	2.02	0.11	4.79
--------	--------	------	-----------	------	-------	------	------	------

MG

105.90	106.50	0.60	B00264047	228	1.73	0.32	4.89	7.94
--------	--------	------	-----------	-----	------	------	------	------

106.50	107.50	1.00	B00264048	339	1.4	0.43	6.22	9.87
--------	--------	------	-----------	-----	-----	------	------	------

107.50	108.50	1.00	B00264049	245	1.52	0.47	3.38	6.84
--------	--------	------	-----------	-----	------	------	------	------

108.50	109.30	0.80	B00264051	132	1.8	0.6	0.08	0.28
--------	--------	------	-----------	-----	-----	-----	------	------

109.30	110.80	1.50	B00264052	8	0.079	0.03	0.02	0.14
--------	--------	------	-----------	---	-------	------	------	------

110.80	112.30	1.50	B00264053	25.3	0.051	0.2	0.23	1.96
--------	--------	------	-----------	------	-------	-----	------	------

112.30	113.80	1.50	B00264054	114	0.631	0.71	0.25	4.06
--------	--------	------	-----------	-----	-------	------	------	------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-203

From (m)	To (m)	Rocktype & Description
113.20	116.20	RHYcw Curdy textured-flow banded (flows, subvolcanics)
113.2 - 116.2: intense alt		
<<Alt: 113.2 - 116.2 Strong (Alt) Chlorite>>		
<<Struc: 113.21 - 113.22 Trace (Alt) >> CL banded		
116.20	119.20	RHYcw Curdy textured-flow banded (flows, subvolcanics)
116.2 - 119.2: intense alt protolith invisible		
<<Min: 116.2 - 119.2 2% Min: Pyrite>>		
<<Min: 116.2 - 119.2 7% Min: Pyrrhotite>>		
<<Alt: 116.2 - 119.2 Intense (Alt) Cordierite>>		
119.20	121.80	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides
<<Min: 119.2 - 121.8 7% Min: Sphalerite>>		
121.80	125.00	OA Magnetite bearing sulphides
<<Min: 121.8 - 125 15% Min: Sphalerite>>		
<<Struc: 124.95 - 124.96 Trace (Alt) >> Sulphide lamination		
125.00	125.60	OI Heavily disseminated sulphides in host schist
125.60	126.90	RHYcw Curdy textured-flow banded (flows, subvolcanics)
<<Alt: 125.6 - 126.9 Moderate (Alt) Chlorite>>		
126.90	127.30	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides
127.30	131.80	RHYvl Lapilli tuff
<<Min: 127.3 - 131.1 3% Min: Pyrrhotite>>		
<<Min: 131.1 - 136.6 12% Min: Pyrite>>		
<<Alt: 127.3 - 131.1 Strong (Alt) Chlorite>>		

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
113.80	115.30	1.50	B00264055	7.2	0.08	0.08	0.06	0.16
115.30	116.20	0.90	B00264056	9.1	0.027	0.06	0.19	0.36
116.20	117.70	1.50	B00264057	6.6	0.016	0.03	0.05	0.12
117.70	119.20	1.50	B00264058	37.8	0.162	0.15	0.19	0.72
119.20	120.20	1.00	B00264059	121	0.939	0.33	2.71	10
120.20	121.00	0.80	B00264061	77.6	0.639	0.08	2.29	7.06
121.00	121.80	0.80	B00264062	69.5	0.737	0.15	1.46	8.17
121.80	122.40	0.60	B00264063	113	1.3	1.19	1.36	9.47
122.40	123.00	0.60	B00264064	63.7	0.767	0.25	0.97	9.35
123.00	124.00	1.00	B00264065	70.5	0.347	0.13	2.1	12.1
124.00	125.00	1.00	B00264066	60.5	0.714	0.31	1.35	11.1
125.00	126.00	1.00	B00264067	27.3	0.122	0.06	0.69	1.52
126.00	126.90	0.90	B00264068	3.2	0.026	0.02	0.04	0.24
126.90	127.30	0.40	B00264069	140	1.57	0.22	1.52	8.38
127.30	128.80	1.50	B00264071	2.5	-0.005	-0.01	0.01	0.13
128.80	130.30	1.50	B00264072	4.6	0.022	0.01	0.03	0.15
130.30	131.80	1.50	B00264073	11.3	0.056	0.06	0.11	0.57

FMG
FMG
FG
FMG

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-203

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 131.1 - 136.6 Strong (Alt) Muscovite>>											
<<Vein: 131.5 - 136.6 15% Quartz-Carbonate>>											
<<Struc: 128.01 - 128.02 Trace (Alt) >> CL banded											
<<Struc: 130.85 - 130.86 Trace (Alt) >> CL banded											
131.80	134.30	RHYcw Curdy textured-flow banded (flows, subvolcanics)	131.80	133.30	1.50	B00264074	1.2	0.01	-0.01	-0.01	0.03
			133.30	134.30	1.00	B00264075	13.6	0.086	0.01	0.05	0.12
134.30	135.00	OH Fine grained, megascopically homogeneous pyrite rock	134.30	135.00	0.70	B00264076	365	1.05	-0.01	3.85	5.88
135.00	136.60	RHYcw Curdy textured-flow banded (flows, subvolcanics)	135.00	136.60	1.60	B00264077	37.7	0.269	0.03	0.36	1.06
135 - 136.6: SX along flow bands in RHY											
<<Struc: 135.95 - 135.96 Trace (Alt) >> mica banded											
136.60	139.70	OH Fine grained, megascopically homogeneous pyrite rock	136.60	137.60	1.00	B00264078	133	1.34	0.2	2.03	7.02
			137.60	138.60	1.00	B00264079	74.8	0.781	0.11	1.21	5.66
			138.60	139.70	1.10	B00264081	111	0.68	0.18	2.49	7.63
139.70	145.10	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	139.70	141.20	1.50	B00264082	31.4	0.101	0.19	0.17	0.35
<<Min: 139.7 - 147.2 5% Min: Calcite>>			141.20	142.70	1.50	B00264083	1.4	-0.005	-0.01	-0.01	0.02
<<Min: 139.7 - 164.5 2% Min: Pyrite>>			142.70	144.20	1.50	B00264084	1.1	0.015	-0.01	-0.01	-0.01
<<Alt: 139.7 - 162.3 Moderate (Alt) Silicification>> typical green Cr-V alt of MAFi											
<<Alt: 139.7 - 162.3 Moderate (Alt) Muscovite>>											
<<Alt: 139.7 - 164.1 Moderate (Alt) Chlorite>>											
<<Struc: 144 - 144.1 Moderate (Alt) Fault>> moderate narrow gouge along kink band											
145.10	147.20	RHYi Aphanitic Rhyolite (intrusion)									
145.1 - 147.2: very uncertain could be RHYv or c											
147.20	164.10	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<<Min: 147.2 - 164.5 15% Min: Calcite>>											
<<Struc: 152.8 - 154.3 Moderate (Alt) Fault>> moderate-strong contorted zone, faulting along kink bands along with strong green MU-Si alteration											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-203

From (m) To (m) Rocktype & Description

<<Struc: 160.98 - 160.99 Trace (Alt) >> CA banded

<<Struc: 162.2 - 162.25 Strong (Alt) Fault>> weak narrow gouge zone

164.10 164.50 RHYva Coarse grained to ash tuff

**164.50 164.90 OB Wispy laminate, fine
buckshot textured, non-
magnetite bearing sulphides**

<<Min: 164.5 - 173 5% Min: Pyrite>>

**164.90 167.70 RHYcw Curdy textured-flow banded
(flows, subvolcanics)**

164.9 - 167.7: alteration intense

**167.70 173.00 RHYcw Curdy textured-flow banded
(flows, subvolcanics)**

<<Vein: 169.8 - 173 20% Quartz>> minor bleby SP-GL

End of Hole @ 173

FG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
164.50	164.90	0.40	B00264085	36.9	0.323	0.27	0.87	8.67

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-204

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	07-Aug-15
UTM Easting	414549.469	Core Size:	NQ3	Azimuth:	180	Date Logging Complete:	08-Aug-15
UTM Northing:	6815464.484	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1457.23	Casing Depth (m):	6	Length (m):	149	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	05-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	08-Aug-15
Local Elev. (m):						Purpose:	Resource/Hydro
Comments:						Parent Hole:	

K15-204 was drilled to test the western extension of the massive sulphide lens. Packer testing was completed as the hole advanced. The hanging wall package (6.00 - 111.90 m) consists of felsic volcanics and intermittent mudstone horizons. A weak MU-alteration zone occurs from 50.20 - 58.00 m and again at 73.00 m where it increases in intensity with proximity to the MSXS. CL-alteration occurs from 95.60 - 102.60 m, with a strong-intense CL-CI-alteration zone between 100.20 - 102.60 m. MSXS occurs between 111.9 - 118.1 m, consisting of OI, OD, and OA ore types. The footwall package consists of MU-CI altered felsic volcanics from 118.1-139.1, an aphanitic rhyolite intrusion from 132.7-136.7 m, and a CL-BI altered mafic sill from 136.7-149 m.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	181.27	0	181.27	APS	Geotech	08-Aug-15		<input checked="" type="checkbox"/>	
32	-61	180.7	22.5	203.2	ReflexEVS	Geotech	05-Aug-15	2692	<input type="checkbox"/>	Magnetic field is low, and corrected azimuth incorrect
62	-61	154.4	22.5	176.9	ReflexEVS	Geotech	05-Aug-15	5783	<input checked="" type="checkbox"/>	
86	-61	155.4	22.5	177.9	ReflexEVS	Geotech	06-Aug-15	5779	<input checked="" type="checkbox"/>	
113	-60.9	164.4	22.5	186.9	ReflexEVS	Geotech	06-Aug-15	6119	<input checked="" type="checkbox"/>	
149	-60.6	161.8	22.5	184.3	ReflexEVS	Geotech	08-Aug-15	5731	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	6.00	CASN Casing									
6.00	14.10	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
<<Min: 6 - 23.6 1% Min: Pyrite>>											
<<Alt: 6 - 50.2 Trace (Alt) Muscovite>>											
14.10	16.70	MDSw Coherent rhyolite flow with carbonaceous content									
<<Min: 14.1 - 80.6 0.5% Min: Calcite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-204

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
16.70	22.20	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
<<Vein: 20.9 - 21.4 80% Quartz-Carbonate>>											
22.20	23.20	MDSw Coherent rhyolite flow with carbonaceous content									
23.20	40.00	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
23.2 - 40: Two locally tuffaceous intervals ~20cm each.											
<<Min: 23.6 - 26 3% Min: Pyrite>>											
<<Min: 26 - 35.7 1% Min: Pyrite>>											
<<Min: 35.7 - 39.4 5% Min: Pyrite>>											
<<Min: 39.4 - 50.2 2% Min: Pyrite>>											
<<Min: 39.4 - 50.2 2% Min: Pyrrhotite>>											
40.00	41.60	MDSw Coherent rhyolite flow with carbonaceous content									
<<Struc: 40 - 40.1 Strong (Alt) Fault>> weak-moderate fault guoge zone											
41.60	43.90	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
43.90	48.50	RHYvl Lapilli tuff									
<<Min: 47 - 50.2 0.5% Min: Chalcopyrite>>											
48.50	50.20	MDSt Rhyolite tuff dominant mudstone									
50.20	52.50	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
<<Min: 50.2 - 58 3% Min: Sphalerite>>											
<<Min: 50.2 - 58 5% Min: Pyrite>>											
<<Min: 50.2 - 58 3% Min: Pyrrhotite>>											
<<Min: 50.2 - 58 2% Min: Chalcopyrite>>											
<<Alt: 50.2 - 58 Weak (Alt) Muscovite>>											
<<Vein: 51.3 - 52.8 10% Quartz>>											
<<Struc: 51.35 - 51.4 Moderate (Alt) Fault>> weak-moderate											
52.50	56.20	RHYvl Lapilli tuff									

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-204

From (m)		To (m)		Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
56.20	58.00	RHYcw	Curdy textured-flow banded (flows, subvolcanics)										
58.00	65.90	MDS	Carbonaceous dominant mudstone										
<<Min: 58 - 73 3% Min: Pyrite>>													
<<Min: 58 - 73 3% Min: Pyrrhotite>>													
<<Alt: 58 - 73 Trace (Alt) Muscovite>>													
65.90	68.80	RHYv	Lapilli tuff										
68.80	73.00	MDS	Carbonaceous dominant mudstone										
<<Vein: 71.3 - 71.6 100% Quartz>>													
73.00	80.60	RHYv	Quartz and/or feldspar crystal tuff										
<<Min: 73 - 80.6 5% Min: Pyrite>>													
<<Alt: 73 - 84.8 Weak (Alt) Muscovite>>													
<<Struc: 76.6 - 76.7 Strong (Alt) Fault>> moderate micro-faults extendind 60cm on either side of gouge.													
80.60	95.60	MDS	Coherent rhyolite flow with carbonaceous content										
<<Min: 80.6 - 81.4 1% Min: Calcite>>													
<<Min: 80.6 - 84 1% Min: Pyrite>>													
<<Min: 80.6 - 91 1% Min: Pyrite>>													
<<Min: 81.4 - 101.1 0.01% Min: Calcite>>													
<<Min: 91 - 100.2 2% Min: Pyrite>>													
<<Min: 91 - 100.2 2% Min: Pyrrhotite>>													
<<Alt: 84.8 - 95.6 Moderate (Alt) Muscovite>>													
<<Struc: 94.05 - 94.06 Trace (Alt) >> QZ band													
<<Struc: 95.2 - 95.25 Weak (Alt) Fault>> weak-moderate													
95.60	101.10	RHYcw	Curdy textured-flow banded (flows, subvolcanics)										
95.6 - 101.1: Cordeirite alteration beginning at 100.7m.													
<<Min: 100.2 - 101.9 3% Min: Sphalerite>>													
<<Min: 100.2 - 101.9 5% Min: Pyrite>>													

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-204

From (m) To (m) Rocktype & Description

<<Min: 100.2 - 101.9 10% Min: Pyrrhotite>>
<<Min: 100.2 - 101.9 5% Min: Chalcopyrite>>
<<Alt: 95.6 - 98.3 Weak (Alt) Chlorite>>
<<Alt: 95.6 - 100.2 Strong (Alt) Muscovite>>
<<Alt: 98.3 - 100.2 Moderate (Alt) Chlorite>>
<<Alt: 100.2 - 102.6 Strong (Alt) Chlorite>>
<<Alt: 100.2 - 102.6 Moderate (Alt) Cordierite>>
<<Alt: 100.2 - 114.3 Strong (Alt) Muscovite>>
<<Struc: 98.54 - 98.55 Trace (Alt) >> QZ band
<<Struc: 100.95 - 100.96 Trace (Alt) >> CL band

101.10 111.90 RHYvl Lapilli tuff

<<Min: 101.1 - 110.6 1% Min: Calcite>>
<<Min: 101.9 - 102.6 5% Min: Pyrite>>
<<Min: 101.9 - 102.6 5% Min: Pyrrhotite>>
<<Min: 101.9 - 102.6 0.5% Min: Chalcopyrite>>
<<Min: 102.6 - 108 1% Min: Pyrite>>
<<Min: 102.6 - 108 1% Min: Pyrrhotite>>
<<Min: 108 - 111.9 5% Min: Pyrite>>
<<Min: 108 - 111.9 5% Min: Pyrrhotite>>
<<Min: 108 - 111.9 1% Min: Chalcopyrite>>
<<Min: 110.6 - 112.2 15% Min: Calcite>>
<<Alt: 102.6 - 114.3 Moderate-Strong (Alt) Chlorite>>
<<Struc: 106.79 - 106.8 Trace (Alt) >> MU band
<<Struc: 111.3 - 111.4 Moderate (Alt) Fault>> weak

111.90 114.30 OI Heavily disseminated sulphides in host schist

111.9 - 114.3: Brecciated host rock.

<<Min: 111.9 - 114.3 8% Min: Chalcopyrite>>
<<Min: 112.2 - 116.2 1% Min: Calcite>> Calcite in veinlets within massive sulphide zone.

114.30 116.20 OD Brecciated sulphides

<<Alt: 114.3 - 118.1 Moderate (Alt) Muscovite>>
<<Alt: 114.3 - 118.1 Weak-Moderate (Alt) Chlorite>>

116.20 117.20 OA Magnetite bearing sulphides

FMG

FCG

FG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
101.10	101.90	0.80	B00264536	2.4	0.008	0.08	0.01	0.51
101.90	102.60	0.70	B00264537	1.5	-0.005	0.03	0.03	0.46
107.40	108.90	1.50	B00264538	1.3	-0.005	0.01	-0.01	0.16
108.90	110.40	1.50	B00264539	1.3	-0.005	0.08	-0.01	0.09
110.40	111.90	1.50	B00264541	3	0.035	0.39	-0.01	0.22
111.90	112.70	0.80	B00264542	27.2	0.468	3.75	0.03	0.18
112.70	113.50	0.80	B00264543	45.7	0.805	6.33	0.05	0.28
113.50	114.30	0.80	B00264544	14.3	0.192	2.16	0.01	0.1
114.30	115.30	1.00	B00264545	5	0.188	0.7	0.01	0.05
115.30	116.20	0.90	B00264546	20.1	0.535	2.68	0.03	4.47
116.20	117.20	1.00	B00264547	8.9	0.145	0.24	0.08	6.3



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-204

From (m) To (m) Rocktype & Description

117.20 118.10 OI Heavily disseminated sulphides in host schist
118.10 129.40 RHYcw Curdy textured-flow banded (flows, subvolcanics)

<<Min: 119.6 - 132.7 1% Min: Pyrite>>

<<Min: 119.6 - 132.7 1% Min: Pyrrhotite>>

<<Alt: 118.1 - 132.7 Moderate-Strong (Alt) Muscovite>>

<<Alt: 123 - 132.7 Moderate (Alt) Chlorite>>

<<Struc: 119 - 120 Strong (Alt) Fault>> strong heavily faulted section; core missing in section.

<<Struc: 121.91 - 121.92 Trace (Alt) >> Elongated lpl

<<Struc: 124.93 - 124.95 Trace (Alt) >> Elongated lpl

129.40 132.70 RHYva Coarse grained to ash tuff

<<Struc: 130.88 - 130.89 Trace (Alt) >> MU band

132.70 136.70 RHYi Aphanitic Rhyolite (intrusion)

<<Min: 132.7 - 136.7 1% Min: Pyrite>>

<<Min: 132.7 - 136.7 3% Min: Pyrrhotite>>

<<Min: 132.7 - 136.7 0.5% Min: Chalcopyrite>>

<<Alt: 136.2 - 139.1 Moderate (Alt) Silicification>>

<<Alt: 136.2 - 139.1 Moderate (Alt) Chlorite>>

<<Vein: 134.2 - 135.3 75% Quartz-Carbonate>>

136.70 139.10 RHYvl Lapilli tuff

<<Min: 136.7 - 139.1 2% Min: Pyrite>>

<<Struc: 137.93 - 137.94 Trace (Alt) >> MU band

139.10 149.00 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

<<Min: 139.1 - 149 1% Min: Pyrite>>

<<Min: 139.1 - 149 20% Min: Calcite>>

<<Alt: 139.1 - 149 Strong (Alt) Chlorite>>

<<Alt: 139.1 - 149 Strong (Alt) Biotite>>

<<Struc: 142.03 - 142.04 Trace (Alt) >> CA band

<<Struc: 145.9 - 145.91 Trace (Alt) >> CA band

<<Struc: 148.94 - 148.95 Trace (Alt) >> CA band

FCG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
117.20	118.10	0.90	B00264548	8.6	0.128	0.51	0.05	1.99
118.10	119.60	1.50	B00264549	6.5	0.024	0.3	0.02	0.73
119.60	121.10	1.50	B00264551	-0.3	-0.005	-0.01	-0.01	0.03
121.10	122.60	1.50	B00264552	0.3	0.006	-0.01	-0.01	-0.01



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-204

From (m) To (m)

Rocktype & Description

From (m)

To (m)

Width

Sample

Ag PPM

Au PPM

Cu %

Pb %

Zn %

End of Hole @ 149

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-205

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	06-Aug-15
UTM Easting	414849.957	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	07-Aug-15
UTM Northing:	6815542.83	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1395.479	Casing Depth (m):	3	Length (m):	146	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	05-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	06-Aug-15
Local Elev. (m):						Purpose:	Metallurgical Twin
Comments:						Parent Hole:	K15-203

K15-205 was drilled as a twin of K15-203 to test the metallurgical properties of MET8, MET6, and MET7 domains. The hanging wall package (3.0 - 100.6 m) consists of felsic volcanics and mudstone horizons. MU-alteration begins at 71.3 m and increases in intensity towards the MSXS horizon. CL-alteration occurs proximal and grading into the MSXS in association with CI. The first MSXS lens occurs from 100.6-109.3 m, consisting of OG, OA, OJ, and OH ore types respectively. Coherent rhyolite occurs from 109.3 - 119.0 m with increasing CL alteration grading into CL-CI-alteration down hole. MSXS intervals occur from 119-125.7 m, consisting of OB, OA, and OI ore types with OB occurring from 126.8 - 127.2 m. MU and CL-altered felsic volcanics occur from 127.2 - 134.9 m followed by a 30 cm OH MSXS interval. A MU-altered coherent rhyolite unit occurs from 135.2 - 136.3 m followed by a final MSXS interval from 136.3-139.3 m. The footwall package includes a CL-BI mafic sill and aphanitic rhyolite intrusion.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	178.62	0	178.62	APS	Geotech	06-Aug-15		<input checked="" type="checkbox"/>	
26	-62.4	158.6	22.5	181.1	ReflexEVS	Geotech	05-Aug-15	5719	<input checked="" type="checkbox"/>	
50	-62.6	158.7	22.5	181.2	ReflexEVS	Geotech	07-Aug-15	5732	<input checked="" type="checkbox"/>	
77	-62.4	180.3	22.5	202.8	ReflexEVS	Geotech	06-Aug-15	5440	<input type="checkbox"/>	Azimuth is incorrect
101	-62.5	159.5	22.5	182	ReflexEVS	Geotech	06-Aug-15	5426	<input checked="" type="checkbox"/>	
125	-62.4	151	22.5	173.5	ReflexEVS	Geotech	06-Aug-15	4865	<input type="checkbox"/>	Magnetic field is low, incorrect calculated azimuth
145	-63	161.6	22.5	184.1	ReflexEVS	Geotech	06-Aug-15	5818	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	3.00	CASN Casing									
<<Min: 0 - 21.16 3% Min: Calcite>>											
3.00	8.10	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
<<Min: 3 - 100.6 2% Min: Pyrite>>											
<<Min: 3 - 100.6 2% Min: Pyrrhotite>>											
8.10	19.80	RHYvl Lapilli tuff									

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-205

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Vein: 11.1 - 12.2 20% Quartz-Tourmaline>> QZ-TR (tourmaline) veining along fractures. Runs ~parallel to core axis. Radiating TR radiates from the fractures outward.											
<<Vein: 18.1 - 19.4 20% Quartz-Tourmaline>> QZ-TR (tourmaline) veining along fractures. Runs ~parallel to core axis. Radiating TR radiates from the fractures outward.											
<<Struc: 11.2 - 12.3 Moderate (Alt) Fault>> weak-moderate fractured core											
19.80	27.90	RHYv Rhyolite volcaniclastic									
19.8 - 27.9: large blocks of coherent rhyolite from 19.8-22.8 within a crystal lapilli matrix. From 22.8-27.9 the blocks and crystals are not as apparent.											
<<Min: 21.16 - 28.08 5% Min: Calcite>>											
<<Vein: 25.05 - 25.1 80% Quartz>>											
27.90	31.00	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
27.9 - 31: Greenish-grey curdy and flow banded rhyolite. Two ~20cm mafic dyke intrusions.											
<<Min: 28.08 - 31.5 3% Min: Calcite>>											
<<Struc: 27.9 - 27.95 Moderate (Alt) Fault>> weak-moderate fault gouge zone											
31.00	38.90	RHYvl Lapilli tuff									
31 - 38.9: distinct unit medium grey with minor dusting of BI,5% 1-3mm silica replaced? FD. Could be porph. Strained with elongated lpl.											
<<Struc: 38.2 - 38.3 Moderate (Alt) Fault>> weak fault gouge											
38.90	42.50	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
38.9 - 42.5: good curdy texture											
42.50	47.80	RHYvl Lapilli tuff									
42.5 - 47.8: distinct unit medium grey with minor dusting of BI,5% 1-3mm silica replaced? FD. Could be porph, patchy TO replacement of lapilli											
<<Struc: 44.95 - 45.2 Weak (Alt) Fault>> moderate fault gouge zone											
47.80	54.50	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
47.8 - 54.5: very well developed curdy texture											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-205

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
54.50	60.20	MDSt Rhyolite tuff dominant mudstone									
54.5 - 60.2: Better described as RHYcw crb. Very well developed curdy texture, very weakly carbonaceous											
<<Vein: 59.2 - 59.3 80% Quartz-Tourmaline>> QZ-TR-AK vein that is parasitically (S/Z) folded											
60.20	64.40	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
64.40	68.10	RHYvl Lapilli tuff									
64.4 - 68.1: FD crystal lapilli tuff											
<<Struc: 67.2 - 67.3 Moderate (Alt) Fault>> moderate fault gouge zone											
68.10	71.30	MDSt Rhyolite tuff dominant mudstone									
68.1 - 71.3: Better described as RHYcw crb. Carbonaceous material ~20%											
<<Vein: 70.9 - 71 90% Quartz>>											
71.30	78.50	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
71.3 - 78.5: abundant QE											
<<Alt: 71.3 - 81.5 Weak (Alt) Muscovite>>											
78.50	79.30	MDSt Rhyolite tuff dominant mudstone									
78.5 - 79.3: Better described as RHYcw crb. ~15-20% carbonaceous content											
79.30	81.50	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
79.3 - 81.5: QZ eyes top of interval											
81.50	84.30	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
<<Alt: 81.5 - 83.2 Moderate (Alt) Chlorite>>											
<<Alt: 83.2 - 98.3 Weak-Moderate (Alt) Muscovite>>											
<<Vein: 84.1 - 86.2 20% Quartz-Carbonate>>											
<<Struc: 81.5 - 81.7 Weak (Alt) Fault>> trace fault gouge zone											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-205

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
84.30	86.60	MDS _c Carbonaceous dominant mudstone									
84.3 - 86.6: RHY _{cw} crb but with >30-40% carbonaceous material											
86.60	91.30	RHY _{cw} Curdy textured-flow banded (flows, subvolcanics)									
86.6 - 91.3: weakly to moderately crb increasing dwn hole											
91.30	99.00	MDS _w Coherent rhyolite flow with carbonaceous content	95.60	96.60	1.00						
91.3 - 99: strong MU and CL alt difficult to ident protolith											
<<Min: 98.3 - 100.6 1% Min: Arsenopyrite>>											
<<Alt: 98.3 - 100.6 Strong (Alt) Muscovite>>											
<<Alt: 98.3 - 100.6 Moderate-Strong (Alt) Chlorite>>											
<<Vein: 95.3 - 95.9 5% Quartz>>											
99.00	100.60	RHY undifferentiated rhyolite	99.60	100.60	1.00						
99 - 100.6: strong MU and CL alt difficult to ident protolith											
<<Vein: 99.8 - 99.9 60% Quartz>>											
100.60	102.90	OG Chalcopyrite rich sulphides	100.60	101.40	0.80						
<<Min: 100.6 - 102.9 30% Min: Chalcopyrite>> CP-rich massive sulphide											
<<Alt: 100.9 - 105.2 Strong (Alt) Cordierite>> within mxsx											
102.90	104.90	OA Magnetite bearing sulphides	102.20	102.90	0.70						
<<Min: 102.9 - 104.9 10% Min: Sphalerite>>											
<<Min: 102.9 - 104.9 5% Min: Chalcopyrite>>											
104.90	105.20	OJ Heavily disseminated sulphides in proximal altered rock	103.90	104.90	1.00						
<<Min: 105.2 - 109.3 85% Min: Pyrite>>											
105.20	109.30	OH Fine grained, megascopically homogeneous pyrite rock	104.90	105.20	0.30						
<<Min: 105.2 - 109.3 85% Min: Pyrite>>											
			105.20	106.20	1.00						
			106.20	107.20	1.00						
			107.20	108.20	1.00						
			108.20	109.30	1.10						



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-205
From (m) To (m) Rocktype & Description
**109.30 110.20 RHYcw Curdy textured-flow banded
(flows, subvolcanics)**

109.3 - 110.2: alt partly destroyed by alt

<<Min: 109.3 - 112 2% Min: Pyrrhotite>>

<<Alt: 109.3 - 115.2 Moderate (Alt) Muscovite>>

<<Alt: 109.3 - 115.2 Weak (Alt) Chlorite>>

<<Struc: 109.8 - 114 Moderate (Alt) Fault>> weak-moderate fractured zone with a few discrete gouge zones

**110.20 116.10 RHYcw Curdy textured-flow banded
(flows, subvolcanics)**

110.2 - 116.1: intense alt

<<Min: 112 - 113 7% Min: Sphalerite>>

<<Min: 112 - 113 20% Min: Pyrite>>

<<Min: 112 - 113 3% Min: Chalcopryrite>>

<<Min: 113 - 115.2 2% Min: Pyrite>>

<<Min: 113 - 115.2 1% Min: Pyrrhotite>>

<<Min: 115.2 - 119 2% Min: Pyrite>>

<<Min: 115.2 - 119 5% Min: Pyrrhotite>>

<<Min: 115.2 - 119 0.5% Min: Chalcopryrite>>

<<Min: 115.2 - 119 0.5% Min: Arsenopyrite>>

<<Alt: 115.2 - 119 Strong (Alt) Chlorite>>

**116.10 119.00 RHYcw Curdy textured-flow banded
(flows, subvolcanics)**

116.1 - 119: intense alt protolith invisible

<<Alt: 116.1 - 119 Intense (Alt) Cordierite>>

**119.00 121.80 OB Wispy laminate, fine
buckshot textured, non-
magnetite bearing sulphides**

<<Min: 119 - 119.8 5% Min: Sphalerite>>

<<Min: 119 - 119.8 4% Min: Galena>>

<<Min: 119.8 - 124.5 5% Min: Sphalerite>>

121.80 124.50 OA Magnetite bearing sulphides

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
109.30	110.20	0.90						

110.20	111.20	1.00
--------	--------	------

111.20	112.20	1.00
112.20	113.20	1.00
113.20	114.20	1.00
114.20	115.20	1.00
115.20	116.10	0.90

116.10	117.10	1.00
--------	--------	------

117.10	118.10	1.00
118.10	119.00	0.90
119.00	119.80	0.80

119.80	120.80	1.00
120.80	121.80	1.00

121.80	122.80	1.00
--------	--------	------

FG
FMG

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-205

From (m) To (m) Rocktype & Description

124.50 125.70 OI Heavily disseminated sulphides in host schist

<<Min: 124.5 - 125.7 50% Min: Pyrite>>

<<Alt: 124.5 - 131.6 Strong (Alt) Chlorite>>

125.70 126.80 RHYcw Curdy textured-flow banded (flows, subvolcanics)

<<Min: 125.7 - 126.8 3% Min: Pyrite>>

<<Min: 125.7 - 126.8 7% Min: Pyrrhotite>>

126.80 127.20 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Min: 126.8 - 127.2 6% Min: Sphalerite>>

127.20 131.60 RHYvl Lapilli tuff

<<Min: 127.2 - 131.3 2% Min: Sphalerite>>

<<Min: 127.2 - 131.3 2% Min: Pyrite>>

<<Min: 127.2 - 131.3 5% Min: Pyrrhotite>>

<<Min: 127.2 - 131.3 0.5% Min: Chalcopyrite>>

<<Min: 131.3 - 131.6 5% Min: Sphalerite>>

131.60 134.90 RHYcw Curdy textured-flow banded (flows, subvolcanics)

<<Min: 131.6 - 134.9 2% Min: Pyrite>>

<<Min: 131.6 - 134.9 3% Min: Pyrrhotite>>

<<Alt: 131.6 - 136.3 Strong (Alt) Muscovite>>

<<Vein: 134.5 - 135.8 35% Quartz>> folded Qz-veins in strong MU-altered rhyolite flow with massive sulphide in the flow

134.90 135.20 OH Fine grained, megascopically homogeneous pyrite rock

134.9 - 135.2: Massive pyrite rock in the folded and flow banded rhyolite. ~40% of the interval is msxs

<<Min: 134.9 - 135.2 30% Min: Pyrite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
122.80	123.80	1.00						
123.80	124.50	0.70						
124.50	125.10	0.60						
125.10	125.70	0.60						
125.70	126.80	1.10						
126.80	127.20	0.40						
127.20	128.20	1.00						
128.20	129.20	1.00						
129.20	130.20	1.00						
130.20	131.30	1.10						
131.30	132.20	0.90						
132.20	133.20	1.00						
133.20	134.20	1.00						
134.20	134.90	0.70						
134.90	135.20	0.30						



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-205

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
135.20	136.30	RHYcw Curdy textured-flow banded (flows, subvolcanics)	135.20	136.30	1.10						
135.2 - 136.3: SX along flow bands in RHY											
<<Min: 135.2 - 136.3 10% Min: Pyrite>>											
136.30	139.30	OH Fine grained, megascopically homogeneous pyrite rock	136.30	137.30	1.00						
<<Min: 136.3 - 139.3 90% Min: Pyrite>>											
<<Vein: 138.9 - 142.6 20% Quartz-Carbonate>> Deformed Qz-carbonate vein zone											
139.30	144.70	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	139.30	140.30	1.00						
<<Min: 139.3 - 142 1% Min: Sphalerite>>											
<<Min: 139.3 - 142.1 3% Min: Chalcopryite>>											
<<Min: 139.3 - 142.6 2% Min: Pyrite>>											
<<Min: 139.3 - 142.6 4% Min: Pyrrhotite>>											
<<Min: 139.3 - 144.7 10% Min: Calcite>>											
<<Min: 142.6 - 144.7 2% Min: Pyrite>>											
<<Alt: 139.3 - 146 Moderate (Alt) Silicification>>											
<<Alt: 139.3 - 146 Moderate (Alt) Muscovite>>											
<<Alt: 139.3 - 146 Moderate (Alt) Chlorite>>											
144.70	146.00	RHYi Aphanitic Rhyolite (intrusion)	140.30	141.30	1.00						
144.7 - 146: Rhyolite intrusion??? Mafic around has Fuchsite alteration. This unit is very silica rich but has many MU domains. Diss PY+GL+SP+CP.											
<<Min: 144.7 - 146 3% Min: Sphalerite>>											
<<Min: 144.7 - 146 3% Min: Pyrite>>											
<<Min: 144.7 - 146 3% Min: Galena>>											
<<Min: 144.7 - 146 1% Min: Chalcopryite>>											
End of Hole @ 146											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-206

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	09-Aug-15
UTM Easting	414651.702	Core Size:	NQ3	Azimuth:	180	Date Logging Complete:	11-Aug-15
UTM Northing:	6815747.356	Casing Pulled?:	Yes	Dip:	-65	Drill Company:	Geotech
UTM Elev. (m):	1430.473	Casing Depth (m):	9	Length (m):	237	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	08-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	10-Aug-15
Local Elev. (m):						Purpose:	Resource/Hydro
Comments:						Parent Hole:	

K15-206 was drilled to test the continuity/extension of the lower massive sulphide lens (MET4 domain), between historic holes K94-024 and K94-025. Packer testing was completed as the hole advanced.

The hole consists predominantly of felsic volcanics with minor mudstone units. Multiple narrow (>1.5 m) FD-porphyry mafic dykes occur above 85 m. An aphanitic rhyolite intrusion occurs from 199.7 - 213.0 m, and hosts an ~5 m wide zone containing 5% SP. MU and CL-alteration increase in intensity from 88.1 m to 199.7m and decrease in intensity from 216 to 237 m.

Based on the observed alteration pattern and historic hole data, MSXS was expected where the RHYi occurs. The occurrence of higher SP within the RHYi may confirm this hypothesis.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-65	181.09	0	181.09	APS	Geotech	10-Aug-15		<input checked="" type="checkbox"/>	
27	-65.1	158.7	22.5	181.2	ReflexEVS	Geotech	08-Aug-15	5817	<input checked="" type="checkbox"/>	
51	-65.5	157.4	22.5	179.9	ReflexEVS	Geotech	08-Aug-15	5821	<input checked="" type="checkbox"/>	
75	-65.6	161.2	22.5	183.7	ReflexEVS	Geotech	08-Aug-15	5814	<input checked="" type="checkbox"/>	
102	-65.7	163.6	22.5	186.1	ReflexEVS	Geotech	08-Aug-15	5720	<input checked="" type="checkbox"/>	
126	-66.1	159.4	22.5	181.9	ReflexEVS	Geotech	09-Aug-15	5805	<input checked="" type="checkbox"/>	
150	-65.8	162.4	22.5	184.9	ReflexEVS	Geotech	09-Aug-15	5771	<input checked="" type="checkbox"/>	
175	-65.9	160.3	22.5	182.8	ReflexEVS	Geotech	09-Aug-15	5774	<input checked="" type="checkbox"/>	
200	-65.9	161.9	22.5	184.4	ReflexEVS	Geotech	09-Aug-15	5679	<input checked="" type="checkbox"/>	
225	-65.8	166.3	22.5	188.8	ReflexEVS	Geotech	09-Aug-15	5779	<input checked="" type="checkbox"/>	
237	-66.2	168.7	22.5	191.2	ReflexEVS	Geotech	10-Aug-15	5818	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	9.00	CASN Casing									

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-206

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
9.00	24.50	RHYvx Quartz and/or feldspar crystal tuff									
9 - 24.5: QZ-eyes and FD crystals in homogenous volcanoclastic rock. Many lpl sized fragments as well											
<<Min: 9 - 73.1 1% Min: Pyrite>>											
<<Min: 9 - 73.1 1% Min: Pyrrhotite>>											
<<Struc: 18 - 19.5 Weak (Alt) Fault>> moderate faulted zone with discrete fault gouge zone at 18											
24.50	27.00	MDSt Rhyolite tuff dominant mudstone									
24.5 - 27: Unit goes gradationally (24.5-25.9) from RHYvx with some carbonaceous material to MDSc (25.9-26.2), then grades back to RHYvs											
27.00	32.10	RHYvx Quartz and/or feldspar crystal tuff									
27 - 32.1: QZ-eye rich with some FD crystals in a grey aphanitic groundmass											
32.10	33.20	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
32.1 - 33.2: FD-porphyritic CL-BI dyke (?)											
<<Alt: 32.1 - 33.2 Moderate-Strong (Alt) Chlorite>>											
<<Alt: 32.1 - 33.2 Moderate-Strong (Alt) Biotite>>											
33.20	37.00	RHYvi Lapilli tuff									
37.00	47.20	RHYvx Quartz and/or feldspar crystal tuff									
37 - 47.2: QZ-eye rich with some FD crystals in a grey aphanitic groundmass. FD-porphyritic CL-BI dyke from 44.5-45 m.											
47.20	48.70	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
47.2 - 48.7: CA-after-FD porphyritic CLBI dyke.											
<<Min: 47.2 - 48.7 20% Min: Calcite>>											
<<Alt: 47.2 - 48.7 Moderate-Strong (Alt) Chlorite>>											
<<Alt: 47.2 - 48.7 Moderate-Strong (Alt) Biotite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-206

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
48.70	52.10	RHYvx Quartz and/or feldspar crystal tuff									
48.7 - 52.1: QZ-eye rich with some FD crystals in a grey aphanitic groundmass											
52.10	54.70	RHYc Rhyolite coherent volcanics									
52.1 - 54.7: grey-brown coherent rhyolite, with curdy texture. Has chilled margins (?) where the unit becomes ~aphanitic on either end.											
54.70	66.60	RHYvx Quartz and/or feldspar crystal tuff									
54.7 - 66.6: QZ-eye rich with some FD crystals in a grey aphanitic groundmass											
<<Vein: 64.3 - 65.6 20% Quartz-Carbonate>> Qz-carb vein set in RHYvx											
66.60	69.00	RHYvl Lapilli tuff									
69.00	71.90	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
69 - 71.9: Good curdy texture											
71.90	73.10	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
71.9 - 73.1: FD-porphyritic CL dyke											
<<Min: 71.9 - 73.1 15% Min: Calcite>>											
<<Alt: 71.9 - 73.1 Moderate (Alt) Chlorite>>											
73.10	82.60	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
73.1 - 82.6: Good curdy texture with dyke between 74.5-74.8 and 79.3-79.7 (MAFi)											
<<Min: 73.1 - 108 0.5% Min: Sphalerite>>											
<<Min: 73.1 - 108 2% Min: Pyrite>>											
<<Min: 73.1 - 108 3% Min: Pyrrhotite>>											
<<Min: 73.1 - 108 0.5% Min: Chalcopyrite>>											
<<Min: 79.3 - 79.7 15% Min: Calcite>>											
<<Alt: 75.8 - 82.6 Weak (Alt) Chlorite>>											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
82.60	84.30	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
82.6 - 84.3: FD-porphyritic CL-BI dyke											
<<Min: 82.6 - 88.1 15% Min: Calcite>>											
<<Alt: 82.6 - 84.3 Moderate (Alt) Chlorite>>											
<<Struc: 83 - 83.4 Moderate (Alt) Fault>> weak-moderate two discrete fault gouge zones											
84.30	86.10	RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
86.10	88.10	RHYva	Coarse grained to ash tuff								
<<Alt: 86.1 - 88.1 Weak-Moderate (Alt) Chlorite>>											
88.10	102.00	RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
88.1 - 102: Good curdy and flow banded textures											
<<Min: 88.1 - 93.3 5% Min: Calcite>>											
<<Alt: 88.1 - 93.3 Weak (Alt) Chlorite>>											
102.00	109.60	RHYvl	Lapilli tuff								
<<Min: 108 - 164.8 2% Min: Pyrite>>											
<<Min: 108 - 164.8 2% Min: Pyrrhotite>>											
109.60	121.90	RHYvl	Lapilli tuff								
109.6 - 121.9: FD porphyry. Increases deformation from relatively unstrained (109.6) to highly strained (121.9) MB likely lithic +/- crystals as lith/xtl lapilli tuff - peperite.											
<<Struc: 109.6 - 114.5 Strong (Alt) Fault>> Strongly faulted zone with >2m of core loss and lots of fault gouge											
121.90	125.60	RHYvl	Lapilli tuff								
121.9 - 125.6: FD-crystal lpl tuff. Decrease in deformation from 121.9 to 125.6. Deformation may cause lpl like texture.											
125.60	131.30	MDS	Rhyolite tuff dominant mudstone								
125.6 - 131.3: carbonaceous content ~10-15%											
131.30	135.00	RHYva	Coarse grained to ash tuff								
131.3 - 135: fine grained tuff, with some FD (?) phenocrysts. Well developed spaced cleavage folds some QZ-veinlets that appear similar to flow banding texture.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-206

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
135.00	138.20	MDSt Rhyolite tuff dominant mudstone									
135 - 138.2: carbonaceous content ~15-20%											
138.20	165.20	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
138.2 - 165.2: QZ-eye bearing											
<<Min: 164.8 - 167.5 1% Min: Sphalerite>>											
<<Min: 164.8 - 167.5 2% Min: Pyrite>>											
<<Min: 164.8 - 167.5 4% Min: Pyrrhotite>>											
<<Min: 164.8 - 167.5 0.5% Min: Galena>>											
<<Min: 164.8 - 167.5 1% Min: Chalcopyrite>>											
<<Alt: 138.2 - 148 Weak (Alt) Muscovite>>											
<<Alt: 148 - 165.2 Moderate (Alt) Muscovite>>											
<<Vein: 138.6 - 139.3 25% Quartz>> Qz vein set											
<<Struc: 150.3 - 150.5 Moderate (Alt) Fault>> weak-moderate faulted zone with some gouge											
165.20	167.20	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
<<Alt: 165.2 - 167.5 Moderate (Alt) Chlorite>>											
167.20	170.90	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
<<Min: 167.5 - 182.9 2% Min: Pyrite>>											
<<Min: 167.5 - 182.9 2% Min: Pyrrhotite>>											
<<Alt: 167.5 - 178 Moderate (Alt) Muscovite>>											
170.90	178.00	MDSt Rhyolite tuff dominant mudstone									
170.9 - 178: Carbonaceous content ~10%											
178.00	182.90	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
<<Alt: 178 - 182.9 Strong (Alt) Muscovite>>											
<<Struc: 180.12 - 180.13 Weak (Alt) >> elongated lpl											
<<Struc: 181.35 - 181.36 Weak (Alt) >> elongated lpl											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-206

From (m) To (m) Rocktype & Description

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

<<Struc: 182.34 - 182.35 Weak (Alt) >> elongated lpl

182.90 188.90 RHYcw Curdy textured-flow banded (flows, subvolcanics)

182.9 - 188.9: CL altered coherent rhyolite

<<Min: 182.9 - 188.9 1% Min: Pyrite>>

<<Min: 182.9 - 188.9 3% Min: Pyrrhotite>>

<<Min: 182.9 - 188.9 0.5% Min: Chalcopyrite>>

<<Alt: 182.9 - 188.9 Strong (Alt) Chlorite>>

<<Struc: 183.58 - 183.59 Weak (Alt) >> CL band

<<Struc: 184.47 - 184.49 Weak (Alt) >> Flow band

<<Struc: 185.77 - 185.78 Weak (Alt) >> MU band

<<Struc: 187.07 - 187.08 Trace (Alt) >> MU band

<<Struc: 188.03 - 188.04 Trace (Alt) >> MU band

188.90 193.10 RHYcw Curdy textured-flow banded (flows, subvolcanics)

<<Min: 188.9 - 199.7 2% Min: Pyrite>>

<<Min: 188.9 - 199.7 2% Min: Pyrrhotite>>

<<Alt: 188.9 - 199.7 Weak (Alt) Muscovite>>

<<Struc: 190.85 - 190.86 Trace (Alt) >> MU band

193.10 194.90 MDSw Coherent rhyolite flow with carbonaceous content
194.90 199.70 RHYcw Curdy textured-flow banded (flows, subvolcanics)

<<Struc: 197.5 - 197.8 Strong (Alt) Fault>> moderate fault gouge zone

<<Struc: 197.89 - 197.9 Trace (Alt) >> MU band

199.70 213.00 RHYi Aphanitic Rhyolite (intrusion)

199.7 - 213: Aphanitic QZ-rhyolite intrusion. SP ~5% from 203.5-206.5

<<Min: 199.7 - 203.4 0.5% Min: Sphalerite>>

<<Min: 199.7 - 203.4 1% Min: Pyrite>>

<<Min: 199.7 - 203.4 3% Min: Pyrrhotite>>

<<Min: 199.7 - 203.4 0.5% Min: Galena>>

<<Min: 199.7 - 203.4 0.5% Min: Chalcopyrite>>

203.00	204.50	1.50	B00264553	1.2	0.011	-0.01	0.02	0.94
--------	--------	------	-----------	-----	-------	-------	------	------

204.50	206.00	1.50	B00264554	1.9	0.018	-0.01	0.01	1.55
--------	--------	------	-----------	-----	-------	-------	------	------

206.00	207.50	1.50	B00264555	1.7	0.035	0.01	0.03	1.33
--------	--------	------	-----------	-----	-------	------	------	------

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-206

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
		<<Min: 200.1 - 216 15% Min: Calcite>>									
		<<Min: 203.4 - 207 5% Min: Sphalerite>>									
		<<Min: 203.4 - 207 3% Min: Pyrite>>									
		<<Min: 203.4 - 207 0.5% Min: Galena>>									
		<<Min: 203.4 - 207 0.5% Min: Chalcopyrite>>									
		<<Min: 207 - 213 1% Min: Sphalerite>>									
		<<Min: 207 - 213 3% Min: Pyrite>>									
		<<Min: 207 - 213 2% Min: Pyrrhotite>>									
		<<Alt: 199.7 - 201.1 Strong (Alt) Silicification>>									
		<<Alt: 199.7 - 201.1 Strong (Alt) Muscovite>>									
		<<Alt: 211.5 - 216 Strong (Alt) Silicification>>									
		<<Alt: 211.5 - 216 Moderate-Strong (Alt) Muscovite>>									
		<<Vein: 201.5 - 215.3 20% Quartz-Carbonate>> CA-QZ vein set in RHYi									
		<<Struc: 200.95 - 200.96 Trace (Alt) >> MU band									
		213.00 219.20 RHYcw Curdy textured-flow banded (flows, subvolcanics)									
		213 - 219.2: Strongly altered next to RHYi. Also, has CA-QZ veins (5-30cm) cutting it from 213-215.3.									
		<<Min: 213 - 217.2 0.5% Min: Sphalerite>>									
		<<Min: 213 - 217.2 2% Min: Pyrite>>									
		<<Min: 213 - 217.2 3% Min: Pyrrhotite>>									
		<<Min: 213 - 217.2 1% Min: Chalcopyrite>>									
		<<Min: 217.2 - 232.5 2% Min: Pyrite>>									
		<<Min: 217.2 - 232.5 2% Min: Pyrrhotite>>									
		<<Alt: 216 - 237 Moderate (Alt) Muscovite>>									
		<<Struc: 215.71 - 215.72 Trace (Alt) >> MU band									
		<<Struc: 218.74 - 218.75 Trace (Alt) >> MU band									
		219.20 221.10 RHYcw Curdy textured-flow banded (flows, subvolcanics)									
		219.2 - 221.1: CL altered RHYcw?									
		<<Alt: 219.2 - 221.1 Moderate-Strong (Alt) Chlorite>>									

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-206

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
221.10	231.90	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
221.1 - 231.9: QZ-eye bearing											
<<Struc: 230.95 - 230.96 Trace (Alt) >> MU band											
231.90	237.00	RHYvl Lapilli tuff									
231.9 - 237: CL-MU-QZ lpl tuff											
<<Min: 232.5 - 237 4% Min: Pyrite>>											
<<Min: 232.5 - 237 2% Min: Pyrrhotite>>											
<<Alt: 232.5 - 237 Weak-Moderate (Alt) Chlorite>>											
<<Struc: 236.92 - 236.93 Trace (Alt) >> elongated lpl											
End of Hole @ 237											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-207

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Sean Suttie	
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	09-Aug-15	
UTM Easting	414554.169	Core Size:	NQ3	Azimuth:	180	Date Logging Complete:	11-Aug-15	
UTM Northing:	6815404.739	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech	
UTM Elev. (m):	1455.015	Casing Depth (m):	6.8	Length (m):	112	Drill Rig:	Hydracore	
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	08-Aug-15	
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	10-Aug-15	
Local Elev. (m):						Purpose:	Resource Definition	
Comments:							Parent Hole:	

K15-207 was drilled to test the western continuity/extension of the massive sulphide lens.

The hanging wall package, from 6.8-76.3 m, consists of a sequence of felsic volcanics and mudstone horizons. This package includes an aphanitic rhyolite intrusion from 19.8-20.8 m. Weak MU-alteration begins at 33.7 m and increases in intensity toward the MSXS with CL-alteration occurring in proximity to the MSXS. MSXS occurs from 76.3-85.4 m consisting of OJ, OD, OA, and OH ore types. The footwall package consists of CL-altered felsic volcanics from 85.4-91.3 m, and an aphanitic rhyolite intrusion from 91.3-112 m (EOH).

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	180.89	0	180.89	APS	Geotech	10-Aug-15		<input checked="" type="checkbox"/>	
32	-61.1	158	22.5	180.5	ReflexEVS	Geotech	08-Aug-15	5805	<input checked="" type="checkbox"/>	
56	-61	156.7	22.5	179.2	ReflexEVS	Geotech	09-Aug-15	5813	<input checked="" type="checkbox"/>	
80	-61.3	175	22.5	197.5	ReflexEVS	Geotech	09-Aug-15	6003	<input type="checkbox"/>	High magnetic field possibly resulting in large difference in corrected azimuth.
107	-61.2	163.4	22.5	185.9	ReflexEVS	Geotech	10-Aug-15	5739	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	6.84	OVBN Overburden									
6.84	11.60	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
6.84 - 11.6: Locally carbonaceous from 8-9m.											
<<Min: 6.84 - 11.6 0.5% Min: Calcite>>											
<<Min: 6.84 - 15.8 1% Min: Pyrite>> up to 5% PY in veinlet selvages.											
<<Vein: 9.5 - 11.1 5% Quartz-Carbonate>>											
11.60	15.80	RHYva Coarse grained to ash tuff									
<<Min: 11.6 - 19.8 5% Min: Calcite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-207

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
15.80	19.80	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
<<Min: 15.8 - 22.1 4% Min: Pyrite>>											
<<Alt: 19 - 22.1 Strong (Alt) Silicification>> alteration due to aphanitic dyke.											
<<Alt: 19 - 22.1 Moderate (Alt) Muscovite>> alteration due to aphanitic dyke.											
19.80	20.80	RHYi Aphanitic Rhyolite (intrusion)									
<<Min: 19.8 - 20.8 0.01% Min: Calcite>>											
20.80	30.70	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
20.8 - 30.7: Intense silicification 1m down section past the contact.											
<<Min: 20.8 - 25 10% Min: Calcite>>											
<<Min: 22.1 - 33.3 1% Min: Pyrite>>											
<<Min: 25 - 37.2 5% Min: Calcite>>											
<<Struc: 21.1 - 21.15 Fault>> weak											
30.70	33.90	RHYvi Lapilli tuff									
<<Min: 33.3 - 34.2 0.5% Min: Sphalerite>> CP, SP & GL mineralization within 30cm long veinlet.											
<<Min: 33.3 - 34.2 5% Min: Pyrite>>											
<<Min: 33.3 - 34.2 0.5% Min: Galena>> CP, SP & GL mineralization within 30cm long veinlet.											
<<Min: 33.3 - 34.2 0.5% Min: Chalcopryrite>> CP, SP & GL mineralization within 30cm long veinlet.											
<<Alt: 33.7 - 38.5 Weak (Alt) Muscovite>>											
<<Vein: 32.4 - 37.6 10% Quartz>>											
<<Struc: 32.6 - 32.65 Weak (Alt) Fault>> trace											
33.90	41.00	MDSt Rhyolite tuff dominant mudstone									
33.9 - 41: Local interval of RHYcw within MDSt unit - 38.5 to 39.1m.											
<<Min: 34.2 - 41 1% Min: Pyrite>>											
<<Min: 37.2 - 43 1% Min: Calcite>>											
<<Alt: 38.5 - 47.8 Moderate (Alt) Muscovite>>											
<<Struc: 38.35 - 38.45 Moderate (Alt) Fault>> weak-moderate											
<<Struc: 39.1 - 39.15 Moderate (Alt) Fault>> weak											
<<Struc: 40.95 - 41 Weak (Alt) Fault>> weak											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-207
From (m) **To (m)** **Rocktype & Description**

**41.00 51.50 RHYcw Curdy textured-flow banded
(flows, subvolcanics)**

41 - 51.5: 1.2m quartz eye field starting from 46.8m.

<<Min: 41 - 51.5 3% Min: Pyrite>>

<<Min: 43 - 70.3 0.01% Min: Calcite>>

<<Alt: 47.8 - 69.4 Strong (Alt) Muscovite>>

**51.50 57.50 MDSw Coherent rhyolite flow with
carbonaceous content**

51.5 - 57.5: Flow banded texture may be due to deformation of crb material.

<<Min: 51.5 - 57.5 3% Min: Pyrite>>

**57.50 76.30 RHYcw Curdy textured-flow banded
(flows, subvolcanics)**

<<Min: 57.5 - 60.4 1% Min: Galena>> locally 3% GL in 15cm QZC vein.

<<Min: 57.5 - 60.4 5% Min: Pyrite>>

<<Min: 57.5 - 60.4 3% Min: Sphalerite>>

<<Min: 57.5 - 60.4 3% Min: Chalcopryrite>>

<<Min: 60.4 - 67.4 1% Min: Pyrite>>

<<Min: 67.4 - 68.7 5% Min: Sphalerite>>

<<Min: 67.4 - 68.7 2% Min: Chalcopryrite>>

<<Min: 67.4 - 68.7 5% Min: Pyrite>>

<<Min: 67.4 - 68.7 5% Min: Pyrrhotite>>

<<Min: 68.7 - 76.1 7% Min: Pyrrhotite>>

<<Min: 68.7 - 76.1 7% Min: Pyrite>>

<<Min: 70.3 - 75.4 0.5% Min: Calcite>>

<<Min: 73.4 - 76.3 1% Min: Chalcopryrite>>

<<Min: 75.4 - 76.1 10% Min: Calcite>>

<<Min: 76.1 - 77.9 5% Min: Chalcopryrite>>

<<Min: 76.1 - 77.9 8% Min: Calcite>>

<<Alt: 63.1 - 66.9 Weak (Alt) Chlorite>>

<<Alt: 66.9 - 69.4 Moderate (Alt) Chlorite>>

<<Alt: 69.4 - 77.8 Moderate (Alt) Muscovite>>

<<Alt: 69.4 - 77.8 Strong (Alt) Chlorite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

65.70	66.70	1.00	B00265001	3.7	0.013	0.08	0.1	1.68
-------	-------	------	-----------	-----	-------	------	-----	------

71.80	73.30	1.50	B00265002	0.6	-0.005	-0.01	-0.01	0.01
-------	-------	------	-----------	-----	--------	-------	-------	------

73.30	74.80	1.50	B00265003	3	0.008	0.16	0.02	0.72
-------	-------	------	-----------	---	-------	------	------	------

74.80	76.30	1.50	B00265004	5.5	0.007	0.11	0.05	0.13
-------	-------	------	-----------	-----	-------	------	------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-207

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Vein: 58.6 - 60.4 50% Quartz-Carbonate>> Minor dolomite blebs and disseminated sulphides within vein.											
<<Vein: 71 - 71.2 100% Quartz-Carbonate>>											
<<Struc: 63.3 - 63.4 Trace (Alt) >> QZ band											
<<Struc: 64.2 - 64.3 Trace (Alt) >> MU band											
<<Struc: 67.3 - 67.4 Trace (Alt) >> CL band											
<<Struc: 71 - 71.05 Moderate (Alt) Fault>> weak											
<<Struc: 71.2 - 71.25 Moderate (Alt) Fault>> weak											
<<Struc: 73.2 - 73.3 Trace (Alt) >> QZ band											
<<Struc: 73.8 - 73.9 Trace (Alt) >> QZ band											
<<Struc: 74.85 - 75 Moderate (Alt) Fault>> moderate											
<<Struc: 75.6 - 75.7 Trace (Alt) >> MU band											
76.30	77.90	OJ									
		Heavily disseminated sulphides in proximal altered rock	76.30	77.10	0.80	B00265005	40.3	0.231	2.34	0.17	0.26
<<Alt: 77.8 - 81 Weak (Alt) Muscovite>>											
<<Alt: 77.8 - 81 Strong (Alt) Chlorite>>											
<<Struc: 76.3 - 76.4 Trace (Alt) >> CL band											
<<Struc: 76.6 - 76.7 Trace (Alt) >> CL band											
<<Struc: 77 - 77.1 Trace (Alt) >> PY Vein											
77.90	78.90	OD									
		Brecciated sulphides	77.90	78.90	1.00	B00265007	33	0.662	3.12	0.15	6.32
<<Min: 77.9 - 78.9 10% Min: Chalcopryite>>											
78.90	79.70	OA									
		Magnetite bearing sulphides	78.90	79.70	0.80	B00265008	24.3	0.215	0.67	0.73	5.56
<<Min: 78.9 - 81.1 10% Min: Chalcopryite>>											
79.70	81.00	OJ									
		Heavily disseminated sulphides in proximal altered rock	79.70	80.40	0.70	B00265009	13.1	0.075	0.72	0.13	1.58
			80.40	81.00	0.60	B00265012	19.6	0.203	0.47	0.67	6.24
81.00	83.00	OH									
		Fine grained, megascopically homogeneous pyrite rock	81.00	82.00	1.00	B00265013	26.6	0.318	0.33	1.52	7.89
			82.00	83.00	1.00	B00265014	14.2	0.312	0.09	0.48	9
83.00	85.40	OA									
		Magnetite bearing sulphides	83.00	83.80	0.80	B00265015	7.6	0.243	0.31	0.11	9.76
			83.80	84.60	0.80	B00265016	14	0.158	0.25	0.37	10.5
			84.60	85.40	0.80	B00265017	7.6	0.249	0.42	0.08	7.38



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-207

From (m) To (m) Rocktype & Description

**85.40 90.30 RHYcw Curdy textured-flow banded
(flows, subvolcanics)**

85.4 - 90.3: Intense silicification of unit due to RHYi.

<<Min: 85.4 - 94 2% Min: Pyrite>>

<<Min: 90.1 - 96.1 5% Min: Calcite>>

<<Alt: 85.4 - 112 Strong (Alt) Silicification>>

<<Alt: 85.4 - 112 Moderate (Alt) Muscovite>>

<<Struc: 85.8 - 85.9 Trace (Alt) >> QZ band

90.30 91.30 RHYvl Lapilli tuff

90.3 - 91.3: Intense silicification of unit due to RHYi.

<<Struc: 91 - 91.1 Trace (Alt) >> Elongated lpl - Ques measurement

91.30 112.00 RHYi Aphanitic Rhyolite (intrusion)

91.3 - 112: Quartz phenocrysts abundant; grgy colour fades at 98m.

<<Min: 94 - 112 1% Min: Pyrite>>

<<Min: 96.1 - 112 1% Min: Calcite>>

<<Min: 104.1 - 109 0.5% Min: Sphalerite>> SP mineralization in veinlets.

<<Vein: 107.5 - 108.6 35% Quartz>> minor SP mineralization in lower massive vein.

<<Struc: 91.8 - 91.9 Trace (Alt) >> Elongated lpl

<<Struc: 92.1 - 92.2 Trace (Alt) >> QZ Vein

<<Struc: 93.1 - 93.2 Trace (Alt) >>

<<Struc: 94.9 - 95 Trace (Alt) >>

<<Struc: 97.9 - 98 Trace (Alt) >>

<<Struc: 99.2 - 99.3 Trace (Alt) >>

<<Struc: 100.5 - 100.6 Trace (Alt) >>

<<Struc: 102.8 - 102.9 Trace (Alt) >>

<<Struc: 103.3 - 103.4 Trace (Alt) >>

<<Struc: 106.3 - 106.4 Trace (Alt) >>

<<Struc: 107 - 107.1 Trace (Alt) >>

<<Struc: 109.4 - 109.5 Trace (Alt) >> QZ band

<<Struc: 110 - 110.1 Trace (Alt) >>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
85.40	86.90	1.50	B00265018	0.5	-0.005	-0.01	-0.01	0.04

86.90	88.40	1.50	B00265019	0.4	0.007	-0.01	-0.01	0.03
88.40	89.90	1.50	B00265021	1.5	0.005	-0.01	0.02	0.01

GeoSpark Logger ~ Drill Log

Project:		KZK		Hole Number:		K15-207					
	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %		

End of Hole @ 112

GeoSpark Logger ~ Drill Log

Project: KZK **Hole Number:** K15-208

Prospect:	Infrst	Hole Type:	DD	Survey Type:	GPS-LIDAR	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:		Date Logging Start:	08-Nov-15
UTM Easting	414788	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	08-Nov-15
UTM Northing:	6819204	Casing Pulled?:	Yes	Dip:	-90	Drill Company:	Geotech
UTM Elev. (m):	1317.73	Casing Depth (m):	21	Length (m):	42	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	09-Aug-15
Local Northing:		Cemented?:	SP	Core Storage Loc.:	KZK Camp	Drill Completed:	10-Aug-15
Local Elev. (m):						Purpose:	Hydro
Comments:						Parent Hole:	

Northing and easting coordinates are provided by Tetra Tech, and were measured with a hand-held GPS unit. Elevation value was not measured when hole was drilled; the recorded value is taken from the drill plan.

K15-208 was drilled as a monitoring well.

K15-208 encountered mafic CL+BI+FD schists with a horizon of argillite from 26.3-27 m.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-90	0	0	0	UNKN				<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	21.00	OVBN Overburden									
21.00	26.30	MAFw mafic volcanic flows									
21 - 26.3: CL+BI+FD (?) schist with vuggy texture											
<<Vein: 24 - 25.5 80% Quartz>> Poor core recovery with chunks fo massive QZ vein											
<<Struc: 23.7 - 23.8 Weak (Alt) Fault>> Fault gouge zone											
26.30	27.00	MDS Sc Carbonaceous dominant mudstone									
26.3 - 27: Argillitic mudstone with vuggy porosity											
27.00	42.00	MAFw mafic volcanic flows									
27 - 42: CL+BI+FD schist with local vuggy porosity (vesicules?)											
End of Hole @ 42											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-209

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	12-Aug-15
UTM Easting	414625.14	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	12-Aug-15
UTM Northing:	6815358.582	Casing Pulled?:	Yes	Dip:	-50	Drill Company:	Geotech
UTM Elev. (m):	1436.289	Casing Depth (m):	7.5	Length (m):	54	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	10-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	11-Aug-15
Local Elev. (m):						Purpose:	Metallurgical
Comments:						Parent Hole:	

K15-209 was drilled to collect metallurgical samples of MET5 & MET2 domains but was abandoned due to poor core recovery. The hole was re-drilled as K15-213. The hole intersected a section of felsic volcanic rocks from 8.5-21.4 m displaying increasing MU alteration down hole, followed by MSXS from 21.4-29.4 m consisting of OA and OB ore types. A second package of felsic volcanics occurs from 29.4-39.6 m with heavily disseminated sulphide from 33.7-37.4 m and is strongly MU+CL altered. A second narrow interval of OB and OA occurs followed by a small section of CL+CL altered felsic coherent rocks from 43.4-45.3 m. A third interval of MSXS is present from 45.3-51.3 m consisting of OB and OH ore types. The footwall package consists of CL+MU altered felsic volcanoclastic rocks intruded by an aphanitic rhyolite dyke.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-50	179.74	0	179.74	APS	Geotech	11-Aug-15		<input checked="" type="checkbox"/>	
36	-51.5	155.5	22.5	178	ReflexEVS	Geotech	11-Aug-15	2672	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	7.50	CASN Casing									
7.50	8.50	OVBN Overburden									
8.50	13.10	RHYvl Lapilli tuff									
<<Min: 8.5 - 15.6 3% Min: Pyrite>>											
<<Min: 8.5 - 15.6 2% Min: Pyrrhotite>>											
<<Min: 9.3 - 21.4 10% Min: Calcite>>											
<<Alt: 8.5 - 9.3 Strong (Alt) Silicification>> Related to RHYi?											
<<Alt: 8.5 - 9.3 Strong (Alt) Muscovite>> Related to RHYi?											
<<Alt: 9.3 - 15.6 Moderate (Alt) Muscovite>>											
13.10	21.40	RHYcw Curdy textured-flow banded (flows, subvolcanics)	17.90	19.40	1.50	B00265058	15.3	0.126	0.06	0.05	0.5
<<Min: 15.6 - 21.4 2% Min: Pyrite>>											
			19.40	20.90	1.50	B00265059	0.3	0.008	-0.01	-0.01	0.01



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-209

From (m) To (m) Rocktype & Description

<<Alt: 15.6 - 21.4 Moderate (Alt) Muscovite>>

<<Vein: 16.3 - 18.3 40% Quartz-Carbonate>> QZ-Carb vein set

<<Struc: 19.4 - 21 Strong (Alt) Fault>> Moderate fault gouge zone. Recovery is very poor, from and to measurements are probably inaccurate.

21.40 21.80 OA Magnetite bearing sulphides

MG

21.4 - 21.8: OA from 21.4 to 21.8. Bands of high grade SP+GL

<<Min: 21.4 - 25 10% Min: Sphalerite>>

21.80 25.00 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

25.00 27.00 OA Magnetite bearing sulphides

MG

27.00 29.40 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

29.40 30.90 RHYvx Quartz and/or feldspar crystal tuff

29.4 - 30.9: FD porphyry with FD pseudomorphed to EP+Fe-oxide/carb

<<Min: 29.4 - 31.2 2% Min: Pyrite>>

<<Alt: 29.4 - 37.4 Moderate (Alt) Muscovite>>

<<Alt: 29.4 - 37.4 Weak (Alt) Chlorite>>

30.90 33.70 OI Heavily disseminated sulphides in host schist

30.9 - 33.7: Texture obscured by alteration. Blebs of magnetite surrounded by dolomite/Fe-carb. With disseminated sulphides.

<<Min: 31.2 - 33.7 2% Min: Sphalerite>>

<<Min: 31.2 - 33.7 4% Min: Pyrite>>

<<Min: 31.2 - 33.7 1% Min: Galena>>

<<Min: 31.2 - 33.7 20% Min: Dolomite>> Dolomite or Fe-carb surrounding blebs of MG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
20.90	21.40	0.50	B00265061	15.6	0.498	0.67	0.06	0.48

21.40	21.80	0.40	B00265062	54.1	0.831	0.91	0.68	6.91
-------	-------	------	-----------	------	-------	------	------	------

21.80	22.80	1.00	B00265063	212	2.2	0.53	5.67	16.8
-------	-------	------	-----------	-----	-----	------	------	------

22.80	23.80	1.00	B00265064	197	2.47	0.67	3.4	9.07
-------	-------	------	-----------	-----	------	------	-----	------

23.80	25.00	1.20	B00265065	153	2.49	0.47	2.54	6.62
-------	-------	------	-----------	-----	------	------	------	------

25.00	26.00	1.00	B00265066	34.6	0.793	0.49	0.43	7.68
-------	-------	------	-----------	------	-------	------	------	------

26.00	27.00	1.00	B00265067	111	1.35	0.75	0.85	11.2
-------	-------	------	-----------	-----	------	------	------	------

27.00	28.50	1.50	B00265068	154	1.24	0.36	2.61	8.38
-------	-------	------	-----------	-----	------	------	------	------

28.50	29.40	0.90	B00265069	320	1.49	0.5	5.1	10.8
-------	-------	------	-----------	-----	------	-----	-----	------

29.40	30.90	1.50	B00265071	1.6	0.015	-0.01	0.02	0.19
-------	-------	------	-----------	-----	-------	-------	------	------

30.90	32.40	1.50	B00265072	106	2.91	1.22	0.13	1.28
-------	-------	------	-----------	-----	------	------	------	------

32.40	33.40	1.00	B00265073	31.2	0.704	0.51	0.43	2.33
-------	-------	------	-----------	------	-------	------	------	------

33.40	33.70	0.30	B00265074	13.9	0.601	0.27	0.08	0.54
-------	-------	------	-----------	------	-------	------	------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-209

From (m) To (m) Rocktype & Description

<<Struc: 33.3 - 33.4 Moderate (Alt) Fault>> moderate fault gouge zone

33.70 37.40 OJ Heavily disseminated sulphides in proximal altered rock

33.7 - 37.4: Sulphide heavily disseminated in CL-altered flow rock

<<Min: 33.7 - 37.4 3% Min: Sphalerite>>

<<Min: 33.7 - 37.4 15% Min: Pyrite>>

<<Min: 33.7 - 37.4 2% Min: Galena>>

37.40 39.60 RHYvl Lapilli tuff

<<Min: 37.4 - 39.6 1% Min: Sphalerite>>

<<Min: 37.4 - 39.6 2% Min: Pyrite>>

<<Min: 37.4 - 39.6 0.5% Min: Galena>>

<<Alt: 37.4 - 39.6 Strong (Alt) Muscovite>>

<<Alt: 37.4 - 39.6 Weak (Alt) Chlorite>>

39.60 41.20 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Min: 39.6 - 41.2 15% Min: Sphalerite>>

41.20 42.20 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

41.2 - 42.2: with ~5% disseminated MG

<<Min: 41.2 - 43.4 10% Min: Sphalerite>>

<<Min: 41.2 - 43.4 5% Min: Galena>>

42.20 43.40 OI Heavily disseminated sulphides in host schist

<<Alt: 42.2 - 43.4 Weak (Alt) Chlorite>>

<<Alt: 42.2 - 43.4 Weak (Alt) Cordierite>>

<<Alt: 42.2 - 45.3 Strong (Alt) Muscovite>>

43.40 45.30 RHY undifferentiated rhyolite

43.4 - 45.3: CI prophyroblastic

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
33.70	34.80	1.10	B00265075	82.6	0.564	0.11	0.9	3.26
34.80	35.80	1.00	B00265076	96.5	0.745	0.78	0.74	2.86
35.80	36.80	1.00	B00265077	142	2.74	4.31	0.08	1.88
36.80	37.40	0.60	B00265078	92.8	1.34	2.13	0.09	1.27
37.40	38.90	1.50	B00265079	4.8	0.052	0.11	0.01	0.34
38.90	39.60	0.70	B00265081	8.1	0.054	-0.01	0.14	0.32
39.60	40.60	1.00	B00265082	318	2.23	0.24	5.52	14.9
40.60	41.20	0.60	B00265083	440	3.42	0.68	3.05	9.47
41.20	42.20	1.00	B00265084	549	2.74	0.24	6.74	20
42.20	42.90	0.70	B00265085	626	5.85	0.79	2.46	5.41
42.90	43.40	0.50	B00265086	324	2.98	0.11	3.33	7.24
43.40	44.40	1.00	B00265087	3.9	0.037	-0.01	0.04	0.14



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-209

From (m) To (m) Rocktype & Description

<<Min: 43.4 - 45.3 2% Min: Pyrite>>

<<Min: 43.4 - 45.3 1% Min: Pyrrhotite>>

45.30 51.30 OB Wispy laminate, fine
buckshot textured, non-
magnetite bearing sulphides

<<Min: 45.3 - 46.2 5% Min: Sphalerite>>

51.30 51.80 RHYv Rhyolite volcanoclastic

51.3 - 51.8: 51.3-51.8 is a QZ-Carb vein. 51.8-51.9 is a small section of footwall MU schist which is cut by RHYi at ~51.9.

<<Min: 51.3 - 51.8 5% Min: Chalcopryite>>

<<Min: 51.3 - 51.8 20% Min: Calcite>>

<<Alt: 51.3 - 51.9 Moderate (Alt) Muscovite>>

<<Alt: 51.3 - 51.9 Weak (Alt) Chlorite>>

<<Vein: 51.3 - 51.8 90% Quartz-Carbonate>> QZ-carb vein hosting ~5% CP

51.80 53.50 RHYi Aphanitic Rhyolite (intrusion)

51.8 - 53.5: aphanitic rhyolite dyke

<<Min: 51.8 - 53.5 5% Min: Pyrite>>

53.50 54.00 RHYva Coarse grained to ash tuff

53.5 - 54: Note: Small section of MSXS from 54-54.1 which does not seem in place and is not included in log.

<<Min: 53.5 - 54 1% Min: Pyrite>>

<<Min: 53.5 - 54 10% Min: Calcite>>

End of Hole @ 54

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
44.40	45.30	0.90	B00265088	48.1	0.157	0.03	0.74	1.43

45.30	46.20	0.90	B00265089	330	2.65	0.57	3.4	9.03
-------	-------	------	-----------	-----	------	------	-----	------

46.20	47.20	1.00	B00265092	443	4.49	1.04	3.58	7.08
47.20	48.20	1.00	B00265093	269	3.19	0.8	4.26	11.1
48.20	49.20	1.00	B00265094	141	1.56	0.51	1.8	7.29
49.20	50.20	1.00	B00265095	128	1.06	0.59	2.58	7.87
50.20	51.30	1.10	B00265096	291	3.46	1.67	2.39	6.94
51.30	51.80	0.50	B00265097	270	2	1.7	0.12	0.75

51.80	52.80	1.00	B00265098	2.1	0.066	-0.01	0.02	0.1
-------	-------	------	-----------	-----	-------	-------	------	-----

52.80	54.00	1.20	B00265099	21.7	0.201	0.05	0.67	1.4
-------	-------	------	-----------	------	-------	------	------	-----



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-210

Prospect:	Infrst	Hole Type:	DD	Survey Type:	GPS-LIDAR	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:		Date Logging Start:	08-Nov-15
UTM Easting	414705	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	08-Nov-15
UTM Northing:	6819176	Casing Pulled?:	Yes	Dip:	-90	Drill Company:	Geotech
UTM Elev. (m):	1319.63	Casing Depth (m):	12	Length (m):	36	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	10-Aug-15
Local Northing:		Cemented?:	SP	Core Storage Loc.:	KZK Camp	Drill Completed:	11-Aug-15
Local Elev. (m):						Purpose:	Hydro
Comments:						Parent Hole:	

Northing and easting coordinates are provided by Tetra Tech, and were measured with a hand-held GPS unit. Elevation value was not measured when hole was drilled; the recorded value is taken from the drill plan.
 K15-210 was drilled as a monitoring well.
 K15-210 encountered mafic CL+BI+CA schists and carbonaceous mudstones

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-90	0	0	0	UNKN				<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	21.00	OVBN Overburden									
21.00	29.20	MAFw mafic volcanic flows									
21 - 29.2: CL+CA+/-BI schist with vuggy porosity (vesicules?)											
<<Min: 21 - 29.2 15% Min: Calcite>>											
<<Struc: 26.5 - 26.7 Weak (Alt) Fault>> Fault gouge zone											
29.20	29.60	MDS Sc Carbonaceous dominant mudstone									
29.2 - 29.6: Argillitic mudstone with blebby CA											
<<Min: 29.2 - 29.6 15% Min: Calcite>>											
29.60	30.60	MAFw mafic volcanic flows									
29.6 - 30.6: CL+BI+CA schist with local carbonaceous cleavages and vuggy porosity (Vesicules?)											
<<Min: 29.6 - 30.6 15% Min: Calcite>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-210

From (m)	To (m)	Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
30.60	31.10	MDSc	Carbonaceous dominant mudstone									
30.6 - 31.1: Argillitic mudstone with vuggy porosity												
31.10	33.50	SED	undifferentiated Sediment									
31.1 - 33.5: Unconsolidated sand												
33.50	36.00	MAFw	mafic volcanic flows									
33.5 - 36: CL+BI+CA schist												
<<Min: 33.5 - 36 20% Min: Calcite>> Disseminated to patchy calcite												
<<Vein: 34 - 34.2 90% Quartz>> Massive QZ+CB vein												
End of Hole @ 36												

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-211

Prospect:	Infrst	Hole Type:	DD	Survey Type:	GPS-LIDAR	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:		Date Logging Start:	08-Nov-15
UTM Easting	414474	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	08-Nov-15
UTM Northing:	6816552	Casing Pulled?:	Yes	Dip:	-90	Drill Company:	Geotech
UTM Elev. (m):	1491.27	Casing Depth (m):	1.5	Length (m):	20	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	11-Aug-15
Local Northing:		Cemented?:	SP	Core Storage Loc.:	KZK Camp	Drill Completed:	11-Aug-15
Local Elev. (m):						Purpose:	Hydro
Comments:						Parent Hole:	

Northing and easting coordinates are provided by Tetra Tech, and were measured with a hand-held GPS unit. Elevation value was not measured when hole was drilled; the recorded value is taken from the drill plan.

K15-211 was drilled as a monitoring well.

K15-211 encounters argillitic mudstone, minor coherent rhyolite, and fine grained CL+CA schist.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-90	0	0	0	UNKN				<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	1.50	OVBN Overburden									
1.50	8.60	MDSc Carbonaceous dominant mudstone									
1.5 - 8.6: Grey-black, Argillitic mudstone with minor blebby CA.											
<<Min: 1.5 - 8.6 0.5% Min: Pyrrhotite>>											
<<Min: 1.5 - 8.6 5% Min: Calcite>>											
<<Vein: 5.7 - 5.9 40% Quartz>> Deformed QZ+CA vein											
8.60	9.30	RHYc Rhyolite coherent volcanics									
8.6 - 9.3: Siliceous coherent rhyolite											
9.30	15.60	MAFta Coarse grained to ash tuff									
9.3 - 15.6: CL+QZ+CA schist											
<<Min: 9.3 - 15.6 20% Min: Calcite>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-211

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 9.3 - 20 0.5% Min: Pyrrhotite>>											
<<Vein: 11.7 - 11.9 100% Quartz>> Massive QZ+CA vein											
15.60	20.00	MDS	Carbonaceous dominant mudstone								
15.6 - 20: Grey-black, Argillitic mudstone with minor blebby CA.											
<<Min: 15.6 - 20 5% Min: Calcite>>											
End of Hole @ 20											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-212

Prospect:	Infrst	Hole Type:	DD	Survey Type:	GPS-LIDAR	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:		Date Logging Start:	08-Nov-15
UTM Easting	414902	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	08-Nov-15
UTM Northing:	6818520	Casing Pulled?:	Yes	Dip:	-90	Drill Company:	Geotech
UTM Elev. (m):	1332.15	Casing Depth (m):	13.5	Length (m):	36	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	11-Aug-15
Local Northing:		Cemented?:	SP	Core Storage Loc.:	KZK Camp	Drill Completed:	12-Aug-15
Local Elev. (m):						Purpose:	Hydro
Comments:						Parent Hole:	

Northing and easting coordinates are provided by Tetra Tech, and were measured with a hand-held GPS unit. Elevation value was not measured when hole was drilled; the recorded value is taken from the drill plan.
 K15-212 was drilled as a monitoring well.
 K15-212 encountered layered light-green, fine grained, CL+BI schists and argillitic mudstones.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-90	0	0	0	UNKN				<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	13.80	OVBN Overburden									
13.80	15.00	MAFta Coarse grained to ash tuff									
13.8 - 15: Light green, fine grained CL+BI+CA schist											
<<Min: 13.8 - 15 15% Min: Calcite>>											
15.00	16.20	MDSc Carbonaceous dominant mudstone									
15 - 16.2: Black argillitic mudstone											
<<Min: 15 - 16.2 1% Min: Pyrrhotite>>											
<<Min: 15 - 16.2 5% Min: Calcite>>											
16.20	18.00	MAFta Coarse grained to ash tuff									
16.2 - 18: Light green, fine grained CL+BI+CA schist											
<<Min: 16.2 - 18 15% Min: Calcite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-212

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
18.00	20.90	MDS	Carbonaceous dominant mudstone								
18 - 20.9: Dark grey argillitic mudstone, with local band of CL schist											
<<Min: 18 - 20.9 0.5% Min: Pyrite>>											
<<Min: 18 - 20.9 5% Min: Calcite>>											
20.90	26.80	MAF	Coarse grained to ash tuff								
20.9 - 26.8: Light green, fine grained CL+BI+CA schist											
<<Min: 20.9 - 26.8 15% Min: Calcite>>											
<<Vein: 23 - 23.25 80% Quartz>> Massive QZ+CA vein											
26.80	29.90	MDS	Carbonaceous dominant mudstone								
26.8 - 29.9: Dark grey argillitic mudstone											
<<Min: 26.8 - 29.9 1% Min: Pyrite>>											
<<Min: 26.8 - 29.9 5% Min: Calcite>>											
29.90	36.00	MAF	Coarse grained to ash tuff								
29.9 - 36: Light green, fine grained CL+BI+CA schist											
<<Min: 29.9 - 36 20% Min: Calcite>>											
<<Vein: 35.75 - 35.85 80% Calcite>> Massive CA vein											
<<Struc: 31.9 - 33 Weak (Alt) Fault>> Highly fractured with local fault gouge											
End of Hole @ 36											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-213

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Sean Suttie	
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	13-Aug-15	
UTM Easting	414625.136	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	15-Aug-15	
UTM Northing:	6815357.987	Casing Pulled?:	No	Dip:	-50	Drill Company:	Geotech	
UTM Elev. (m):	1436.3	Casing Depth (m):	7.5	Length (m):	99	Drill Rig:	Hydracore	
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	11-Aug-15	
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	14-Aug-15	
Local Elev. (m):						Purpose:	Metallurgical	
Comments:							Parent Hole:	

This metallurgical hole was drilled to collect samples that test the near surface oxidation of MET5 and MET2 Domain, as well as validate historical results from hole K95-095. The structural hanging wall is composed of rhyolite (felsic) flows, quartz feldspar porphyritic rocks and felsic volcanoclastic rocks. Sulphide mineralization is present in three distinct lenses from 21m - 27.7m, 39.2m - 43.1m and 44.7m - 51.6m. The structural footwall rock package is composed of a glassy felsic dike, felsic flow rocks and calcite banded chlorite rich mafic intrusive.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-50	180.41	0	180.41	APS	David Nuttal	12-Aug-15		<input checked="" type="checkbox"/>	
33	-51	157.8	22.5	180.3	ReflexEVS	Geotech	12-Aug-15	5673	<input checked="" type="checkbox"/>	
58.5	-51.4	157.8	22.5	180.3	ReflexEVS	Geotech	12-Aug-15	5724	<input checked="" type="checkbox"/>	
85.5	-51.4	160.3	22.5	182.8	ReflexEVS	Geotech	12-Aug-15	5742	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
7.50	8.70	RHYi Aphanitic Rhyolite (intrusion) grey-green									
<<Min: 7.5 - 13.1 3% Min: Pyrite>> Mineralization also present in mm sized veins.											
<<Alt: 7.5 - 8.7 Strong (Alt) Muscovite>>											
<<Alt: 7.5 - 9 Strong (Alt) Silicification>>											
8.70	13.10	RHYvi Lapilli tuff medium grey									
<<Min: 8.7 - 13.1 5% Min: Calcite>>											
<<Min: 8.7 - 16.5 2% Min: Pyrrhotite>> Mineralization also present in mm sized veins.											
<<Alt: 8.7 - 13.6 Weak (Alt) Muscovite>>											
<<Struc: 8.7 - 8.75 Fault>> Weak											
13.10	21.20	RHYcw Curdy textured-flow banded (flows, subvolcanics) medium grey	16.00	17.00	1.00						
<<Min: 13.1 - 16.5 5% Min: Pyrite>> 10cm interval of 15% SP at 15.6m.											
			17.00	18.00	1.00						



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-213

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 13.1 - 16.5 20% Min: Calcite>>			18.00	19.00	1.00						
<<Min: 16.5 - 21.2 1% Min: Pyrite>> Local SP and PY mineralization (~18.6m) of 5 and 8%, respectively.			19.00	20.00	1.00						
<<Min: 16.5 - 21.2 1% Min: Calcite>>			20.00	21.20	1.20						
<<Alt: 13.6 - 16.2 Moderate (Alt) Muscovite>>											
<<Alt: 16.2 - 27.8 Weak (Alt) Chlorite>> initial 4m CL alteration displayed disseminated form.											
<<Alt: 16.2 - 30.3 Strong (Alt) Muscovite>>											
<<Struc: 20.9 - 21 >> Sulphide lamination											
21.20	21.50	OA Magnetite bearing sulphides	21.20	21.50	0.30						
<<Min: 21.2 - 25 12% Min: Sphalerite>>											
21.50	25.00	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	21.50	22.00	0.50						
21.5 - 25: Core recovery poor from 24-25m.											
			22.00	23.00	1.00						
			23.00	24.00	1.00						
			24.00	25.00	1.00						
25.00	27.80	OA Magnetite bearing sulphides	25.00	26.00	1.00						
<<Min: 25 - 27.8 10% Min: Sphalerite>> Local CP and GL min. of 2% at 25.2m.			26.00	27.00	1.00						
			27.00	27.80	0.80						
27.80	31.30	RHYcf Feldspar & feldspar quartz porphyry	27.80	28.50	0.70						
27.8 - 31.3: Pseudomorph feldspar xtls found throughout interval.											
<<Min: 27.8 - 30.1 0.5% Min: Pyrite>>			28.50	29.20	0.70						
<<Min: 27.8 - 30.1 0.5% Min: Pyrrhotite>>			29.20	30.00	0.80						
<<Min: 27.8 - 31.3 0.01% Min: Calcite>>			30.00	31.30	1.30						
<<Min: 30.1 - 30.3 3% Min: Sphalerite>>											
<<Min: 30.1 - 30.3 20% Min: Pyrite>>											
<<Min: 30.1 - 30.3 3% Min: Galena>>											
<<Min: 30.1 - 30.3 5% Min: Chalcocopyrite>>											
<<Min: 30.3 - 33.1 5% Min: Sphalerite>>											
<<Min: 30.3 - 33.1 5% Min: Pyrite>>											
<<Alt: 27.8 - 30.3 Weak (Alt) Chlorite>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-213

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %									
<<Struc: 41.9 - 42 Vein>> PY vein																				
43.10	44.70	RHYva Coarse grained to ash tuff																		
<<Min: 43.1 - 44.7 7% Min: Pyrite>> Local fractures host mineralized PY.																				
<<Min: 43.1 - 44.7 5% Min: Calcite>>																				
<<Struc: 43.3 - 43.4 >> CL band within RHYva																				
44.70	45.70	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	44.70	45.70	1.00															
<<Min: 44.7 - 45.7 8% Min: Sphalerite>>																				
45.70	51.60	OH Fine grained, megascopically homogeneous pyrite rock	45.70	46.70	1.00															
<<Min: 45.7 - 51.6 4% Min: Sphalerite>> Local CP and SP min of 3 and 8%, respectively within vein starting at 51.5m.																				
<<Vein: 51.5 - 51.6 100% Quartz-Carbonate-Sulphide>> Hosts 4% CP and 8% SP mineralization.																				
<<Struc: 50.3 - 50.4 >> SP band																				
51.60	53.10	RHYcw Curdy textured-flow banded (flows, subvolcanics) grey	46.70	47.70	1.00															
<<Min: 51.6 - 53.9 3% Min: Sphalerite>>																				
<<Min: 51.6 - 53.9 10% Min: Pyrite>>																				
<<Min: 51.6 - 55.3 10% Min: Calcite>>																				
<<Alt: 51.6 - 56 Weak-Moderate (Alt) Chlorite>>																				
<<Alt: 51.6 - 62 Strong (Alt) Silicification>>																				
<<Alt: 51.6 - 62 Moderate (Alt) Muscovite>>																				
<<Struc: 51.8 - 51.9 Fault>> Weak																				
<<Struc: 52.4 - 52.5 Vein>> QZ-CB vein																				
53.10	55.00	RHYvx Quartz and/or feldspar crystal tuff grey	53.10	54.00	0.90															
53.1 - 55: Silica and muscovite alteration due to proximal felsic dyke, abundant qtz crystals qz after fd?.																				
<<Min: 53.9 - 57 4% Min: Pyrite>>																				
<<Min: 53.9 - 57 0.01% Min: Chalcopyrite>>																				



Project:
KZK
Hole Number:
K15-213

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
55.00	90.50	RHYi Aphanitic Rhyolite (intrusion) grey									
55 - 90.5: good evidence of pepperitic contacts, 90% RHYi but intervals of pepperitic xtl tuff??											
<<Min: 55.3 - 73 3% Min: Calcite>>											
<<Min: 57 - 62 1% Min: Pyrite>>											
<<Min: 62 - 76 1% Min: Pyrite>>											
<<Min: 62 - 76 0.5% Min: Pyrrhotite>>											
<<Min: 73 - 87 5% Min: Calcite>>											
<<Min: 76 - 99 0.5% Min: Pyrite>>											
<<Min: 76 - 99 0.25% Min: Pyrrhotite>>											
<<Min: 87 - 90.5 15% Min: Calcite>>											
<<Alt: 62 - 90 Strong (Alt) Silicification>>											
<<Alt: 62 - 90 Strong (Alt) Muscovite>>											
<<Alt: 90 - 90.5 Moderate (Alt) Silicification>>											
<<Alt: 90 - 90.5 Weak (Alt) Muscovite>>											
<<Alt: 90 - 90.5 Moderate (Alt) Chlorite>>											
<<Vein: 68.1 - 68.6 95% Quartz-Carbonate-Sulphide>>											
<<Struc: 56.8 - 56.9 >> QZ band											
<<Struc: 58.6 - 58.7 >> QZ-CB band											
<<Struc: 59.2 - 59.3 Vein>> QZ-sulphide fracture filled vein											
<<Struc: 60 - 60.1 Vein>> QZ VN											
<<Struc: 62.9 - 63 >> QZ band											
<<Struc: 63.4 - 63.5 Kink bands>> Highly deformed, qz band											
<<Struc: 65.5 - 65.6 >> QZ band											
<<Struc: 72 - 72.4 Foliation>>											
<<Struc: 75.6 - 75.7 >>											
90.50	94.30	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<<Min: 90.5 - 94.3 25% Min: Calcite>> Locally found within veinlets.											
<<Alt: 90.5 - 94.3 Strong (Alt) Chlorite>>											
<<Alt: 90.5 - 94.3 Strong (Alt) Biotite>>											
<<Struc: 93.7 - 94.4 Fault>> Fractured zone with multiple flt gouges.											
94.30	99.00	RHYi Aphanitic Rhyolite (intrusion) grey									
<<Min: 94.3 - 99 0.01% Min: Calcite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-213

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 94.3 - 99 Strong (Alt) Silicification>>											
<<Alt: 94.3 - 99 Moderate (Alt) Muscovite>>											
<<Vein: 94.3 - 94.4 100% Quartz-Carbonate-Sulphide>> 3% PY mineralization, trace dolomite											
<<Struc: 97.3 - 97.4 Vein>> Fe-carbonate veinlets.											
<<Struc: 97.8 - 97.9 Fault>> Moderate intensity for fault gouge.											
End of Hole @ 99											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-214

Prospect:	Infrst	Hole Type:	DD	Survey Type:	GPS-LIDAR	Logged By:	Mike Leidel
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:		Date Logging Start:	10-Nov-15
UTM Easting	414808	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	10-Nov-15
UTM Northing:	6816270	Casing Pulled?:	Yes	Dip:	-90	Drill Company:	Geotech
UTM Elev. (m):	1429.95	Casing Depth (m):	5	Length (m):	32	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	12-Aug-15
Local Northing:		Cemented?:	SP	Core Storage Loc.:	KZK Camp	Drill Completed:	12-Aug-15
Local Elev. (m):						Purpose:	Hydro
Comments:						Parent Hole:	

Northing and easting coordinates are provided by Tetra Tech, and were measured with a hand-held GPS unit. Elevation value was not measured when hole was drilled; the recorded value is taken from the drill plan.

K15-214 encountered fine grained chlorite biotite schist interbedded with a very fine grained mudstone. Calcite and biotite content increased in the last 7m of the hole.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-90	0	0	0	APS	Mike Leidel			<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	7.30	OVB									
7.30	11.12	MAFi									
		Overburden									
		Mafic Intrusions (primarily green FG footwall mafic intrusion)									
7.3 - 11.12: Fine grained mafic ash or volcanoclastic, with wispy calcite, a chlorite overprint and biotite porphyroblasts (1-3mm). Sharp lower contact with MDS.											
<<Min: 7.3 - 11 5% Min: Calcite>>											
<<Min: 7.3 - 32 0.1% Min: Pyrrhotite>>											
<<Min: 11 - 24.7 1% Min: Calcite>>											
<<Alt: 7.3 - 11.12 Weak-Moderate (Alt) Biotite>>											
<<Alt: 7.3 - 32 Weak-Moderate (Alt) Chlorite>>											
<<Vein: 7.6 - 8.14 68% Quartz>>											
<<Vein: 10.44 - 10.46 100% Quartz-Carbonate>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-214

From (m)	To (m)	Rocktype & Description				From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
11.12	19.50	MDS	Carbonaceous dominant mudstone	black	VFG									
11.12 - 19.5: Very fine grained homogenous argillite mudstone. Low calcite and biotite porphyroblast content, and chlorite overprint with intermittent banding.														
19.50	32.00	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)	green	FG									
19.5 - 32: Fine grained homogenous Mafic ash or dyke with chlorite overprint, biotite porphyroblasts and variable calcite mineralization.														
<<Min: 24.7 - 26.8 5% Min: Calcite>>														
<<Min: 26.8 - 32 15% Min: Calcite>>														
<<Alt: 19.5 - 32 Weak-Moderate (Alt) Biotite>> Biotite porphyroblasts increase from 1-2% between 19.50-24.80m to double that from 24.80-32m														
<<Vein: 29.29 - 29.33 100% Quartz-Carbonate>>														
End of Hole @ 32														

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-215

Prospect:	Infrst	Hole Type:	DD	Survey Type:	GPS-LIDAR	Logged By:	Mike Leidel
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:		Date Logging Start:	10-Nov-15
UTM Easting	414915	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	10-Nov-15
UTM Northing:	6817786	Casing Pulled?:	Yes	Dip:	-90	Drill Company:	Geotech
UTM Elev. (m):	1361.6	Casing Depth (m):	13.5	Length (m):	33	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	12-Aug-15
Local Northing:		Cemented?:	SP	Core Storage Loc.:	KZK Camp	Drill Completed:	13-Aug-15
Local Elev. (m):						Purpose:	Hydro
Comments:						Parent Hole:	

Northing and easting coordinates are provided by Tetra Tech, and were measured with a hand-held GPS unit. Elevation value was not measured when hole was drilled; the recorded value is taken from the drill plan.

K15-215 encountered a fine grained chlorite biotite mafic schist, which was present throughout the extent of the hole. Between 20.90-22m was a massive brecciated vein stockwork with trace amounts of Cp and Po mineralization.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-90	0	0	0	APS	Mike Leidel			<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	14.20	OVBN Overburden									
<<Min: 13.5 - 33 0.1% Min: Pyrite>>											
<<Min: 13.5 - 33 0.5% Min: Pyrrhotite>>											
<<Min: 13.5 - 33 0.1% Min: Chalcopryite>>											
14.20	20.91	MAFi Mafic Intrusions (primarily grey-green FG footwall mafic intrusion)									
14.2 - 20.91: Fine grained homogenous Mafic Dyke or Ash, with biotite porphyroblasts and chlorite groundmass. 5-10% Calcite veining with possible calcite replaced amygdules(1-4mm).											
<<Min: 14.2 - 17 10% Min: Calcite>> Disseminated in matrix											
<<Min: 17 - 20.91 5% Min: Calcite>>											
<<Alt: 14.2 - 33 Weak-Moderate (Alt) Chlorite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-215

From (m)		To (m)		Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
20.91	22.00	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)		grey-green	FG								
20.91 - 22: Vein- 50-60% veining with calcite, quartz, dolomite, ankerite. Fine grained mafic ash groundmass within vein stockwork. Biotite banding on periphery of veins.														
<<Min: 20.91 - 22 20% Min: Calcite>>														
<<Vein: 20.91 - 22 100% Quartz>> Increasing biotite concentration on periphery														
22.00	33.00	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)		grey-green	FG								
22 - 33: Fine grained homogenous Mafic Dyke or Ash, with biotite porphyroblasts, chlorite groundmass and variable Calcite veining 5-18%. EOH														
<<Min: 22 - 26.83 5% Min: Calcite>>														
<<Min: 26.83 - 27.75 10% Min: Calcite>>														
<<Min: 27.75 - 30 5% Min: Calcite>>														
<<Min: 30 - 33 18% Min: Calcite>>														
<<Vein: 27.55 - 27.56 100% Quartz 30 deg. >>														
<<Vein: 29.53 - 30 21% Quartz>>														
<<Struc: 24.55 - 25.4 Weak-Moderate (Alt) >>														
End of Hole @ 33														

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-216

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	14-Aug-15
UTM Easting	414845.596	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	17-Aug-15
UTM Northing:	6815743.656	Casing Pulled?:	Yes	Dip:	-65	Drill Company:	Geotech
UTM Elev. (m):	1394.852	Casing Depth (m):	6	Length (m):	233	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	13-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	16-Aug-15
Local Elev. (m):						Purpose:	Resource/Met
Comments:						Parent Hole:	

K15-216 was drilled to twin the sulphide intercept of historic hole K95-157. K15-216W1 is a wedge drilled to collect a sample of the MET6 domain. The hanging wall package consists of felsic volcanics from 5-147.3 m, with five ~2 m wide FD-porphyry mafic dykes above 63 m and two mudstone units between 136 m and 146 m. Alteration increases in intensity from moderate MU-alteration at 133 m to strong CI+CL-alteration at 146.8 m. MSXS occurs from 147.3-151.3 m, consisting of OJ, OG, and OD ore types followed by strongly MU-altered and fractured felsic volcanics from 151.3-154.8 m. A second MSXS interval occurs from 154.8-157.9, consisting of the OD ore type. A third MSXS interval occurs from 163.9-176.4 m, consisting of OD, OA, OB, and OJ ore types followed by MU+CL-altered felsic volcanics from 176.4 - 178.1 m. A mafic sill (MAFi) is present from 178.1-204.3, with a ~3 m wide wedge of coherent rhyolite within. A fourth MSXS interval occurs below the MAFi at 203.8-204.3 m consisting of semi-massive OJ type mineralization. Felsic volcanics continue to EOH at 233 m decreasing in alteration intensity from strong CL-alteration to moderate MU-alteration. A well developed fractured and faulted zone occurs from ~135-168.9 m that includes brecciated ore zones.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-65	180.24	0	180.24	APS	Geotech	16-Aug-15		<input checked="" type="checkbox"/>	
26	-63.1	161.3	22.5	183.8	ReflexEVS	Geotech	13-Aug-15	5782	<input checked="" type="checkbox"/>	
50	-62.6	162.6	22.5	185.1	ReflexEVS	Geotech	13-Aug-15	5752	<input checked="" type="checkbox"/>	
71	-62.1	161.4	22.5	183.9	ReflexEVS	Geotech	14-Aug-15	5786	<input checked="" type="checkbox"/>	
98	-62.6	163.9	22.5	186.4	ReflexEVS	Geotech	14-Aug-15	5754	<input checked="" type="checkbox"/>	
125	-62.5	165	22.5	187.5	ReflexEVS	Geotech	14-Aug-15	5761	<input checked="" type="checkbox"/>	
149	-62.4	170.7	22.5	193.2	ReflexEVS	Geotech	15-Aug-15	5795	<input checked="" type="checkbox"/>	
176	-62.8	163.9	22.5	186.4	ReflexEVS	Geotech	16-Aug-15	5632	<input checked="" type="checkbox"/>	
200	-63.1	167.7	22.5	190.2	ReflexEVS	Geotech	15-Aug-15	5800	<input checked="" type="checkbox"/>	
230	-63.1	168.8	22.5	191.3	ReflexEVS	Geotech	16-Aug-15	5792	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	5.00	OVBN									
5.00	11.60	RHYvl									
		Overburden									
		Lapilli tuff									



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-216

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 5 - 32.6 1% Min: Pyrite>>											
<<Min: 8.1 - 9.4 5% Min: Calcite>>											
<<Vein: 8.1 - 9.4 20% Quartz-Carbonate>> QZ-Carb veining in RHYcw											
11.60	12.90	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
11.6 - 12.9: FD-porphyry CL-BI mafic dyke											
<<Min: 11.6 - 12.9 3% Min: Calcite>>											
<<Vein: 11.6 - 12.9 10% Quartz-Carbonate>> QZ-carb veining in MAFi											
12.90	30.20	RHYvl	Lapilli tuff								
12.9 - 30.2: good curdy texture											
30.20	32.60	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
30.2 - 32.6: FD-porphyry CL-BI mafic dyke											
32.60	38.90	RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
32.6 - 38.9: Good cury and flow banded texture											
<<Min: 32.6 - 133.5 2% Min: Pyrite>>											
<<Min: 32.6 - 133.5 2% Min: Pyrrhotite>>											
38.90	41.00	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
38.9 - 41: Sheared FD-porphyry CL-BI mafic dyke											
41.00	43.10	RHYvl	Lapilli tuff								
43.10	45.30	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
43.1 - 45.3: Sheared FD-porphyry CL-BI mafic dyke. Small section of RHYcw within the dyke.											
<<Struc: 43.17 - 43.18 Contact>> Contact of mafic dyke RHYcw											
<<Struc: 43.52 - 43.53 Foliation>> Sheared band in MAFi											
45.30	61.10	RHYvl	Lapilli tuff								
45.3 - 61.1: Good curdy and flow banded texture											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-216

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %									
<<Min: 60.9 - 62.8 10% Min: Calcite>>																				
<<Struc: 61.06 - 61.07 Contact>> Upper contact of MAFi dyke																				
61.10	62.80	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)																	
61.1 - 62.8: Cl-BI mafic dyke																				
<<Struc: 62.68 - 62.69 Contact>> Lower contact MAFi dyke																				
62.80	67.00	RHYcw	Curdy textured-flow banded (flows, subvolcanics)																	
67.00	99.00	RHYvl										Lapilli tuff								
67 - 99: RHYcw with minor (~5%) carbonaceous material.																				
<<Struc: 75 - 75.1 Vein>> PY-filled fracture																				
<<Struc: 81.8 - 81.9 Weak (Alt) Fault>> weak fault w/ minor gouge																				
<<Struc: 87.5 - 87.6 Weak (Alt) Fault>> weak fault																				
<<Struc: 97.5 - 97.6 Moderate (Alt) Fault>> weak-moderate fault gouge zone																				
99.00	109.00	RHYcw	Curdy textured-flow banded (flows, subvolcanics)																	
99 - 109: Good curdy and flow banded texture																				
<<Alt: 101 - 102.4 Weak (Alt) Muscovite>>																				
<<Alt: 101 - 102.4 Weak (Alt) Chlorite>>																				
<<Vein: 101.6 - 102.2 20% Quartz-Chlorite-Carbonate>> QZ-Carb-CL veining associated with some globs of PO																				
109.00	128.20	RHYvl	Lapilli tuff																	
109 - 128.2: RHYcw with intermittent beds/layers of RHYv																				
<<Min: 126.3 - 127 3% Min: Calcite>>																				
<<Alt: 123 - 126 Moderate (Alt) Muscovite>>																				
<<Alt: 126 - 133 Weak (Alt) Muscovite>>																				
<<Struc: 124.1 - 124.4 Strong (Alt) Fault>> moderate faulted and fault gouge zone																				
128.20	136.50	RHYvl	Lapilli tuff																	
128.2 - 136.5: rhyolitic lpl and PO-replaced lpl. Becomes faulted with gouge at 133.6 m																				
<<Min: 133.5 - 147.3 3% Min: Pyrite>>																				
<<Alt: 133 - 137.5 Moderate (Alt) Muscovite>>																				

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-216

From (m)		To (m)	Rocktype & Description									
<<Struc: 133.5 - 136.4 Intense (Alt) Fault>> moderate fault gouge zone												
136.50	137.50	MDS	Rhyolite tuff dominant mudstone									
136.5 - 137.5: Carbonaceous content ~15%												
<<Struc: 136.98 - 136.99 Foliation>> Dominant foliation in carbonaceous unit.												
137.50	143.60	RHYv	Rhyolite volcaniclastic									
137.5 - 143.6: Texture obscured by alteration and faulting/shearing?												
<<Alt: 137.5 - 146.8 Strong (Alt) Muscovite>>												
<<Vein: 141.8 - 142.6 15% Quartz-Chlorite-Pyrrhotite>> QZ-CL-PO veins in MU-altered rocks												
<<Struc: 138 - 144.2 Moderate (Alt) Fault>> moderately fractured and faulted zone												
143.60	146.00	MDS	Rhyolite tuff dominant mudstone									
143.6 - 146: carbonaceous content ~20%												
<<Struc: 145.3 - 146.8 Strong (Alt) Fault>> moderately fractured and faulted zone												
146.00	147.30	RHYv	Rhyolite volcaniclastic									
146 - 147.3: Texture obscured by alteration and fracturing												
<<Alt: 146.8 - 148.6 Strong (Alt) Cordierite>>												
<<Alt: 147 - 148.6 Strong (Alt) Chlorite>>												
147.30	148.60	OJ	Heavilly disseminated sulphides in proximal altered rock									
147.3 - 148.6: blebs of CP+PO in strongly CL+CI altered rock												
148.60	148.90	OG	Chalcopyrite rich sulphides									
148.6 - 148.9: Net-textured CP+PO with CP>40%. PY-slickensides on fractured surfaces												
<<Min: 148.6 - 148.9 45% Min: Chalcopyrite>>												
148.90	150.50	OD	Brecciated sulphides									
148.9 - 150.5: Brecciated OH with ~5% CP from 150.9-151.3 m												
<<Min: 148.9 - 151.3 5% Min: Calcite>>												
<<Struc: 150.3 - 155.4 Strong (Alt) Fault>> strongly faultedand gouged zone												

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
142.80	144.30	1.50	B00264556	1	0.01	-0.01	0.01	0.03

144.30	145.80	1.50	B00264557	-0.3	-0.005	-0.01	-0.01	-0.01
--------	--------	------	-----------	------	--------	-------	-------	-------

145.80	147.30	1.50	B00264558	21.5	0.097	0.4	0.06	0.16
--------	--------	------	-----------	------	-------	-----	------	------

147.30	148.60	1.30	B00264559	143	1.76	4.76	0.09	0.42
--------	--------	------	-----------	-----	------	------	------	------

148.60	149.00	0.40	B00264561	309	3.07	11.6	0.19	4.18
--------	--------	------	-----------	-----	------	------	------	------

149.00	149.70	0.70	B00264562	46.1	0.578	0.07	0.57	4.21
--------	--------	------	-----------	------	-------	------	------	------

149.70	150.50	0.80	B00264563	97.5	1.21	1.31	0.97	6.1
--------	--------	------	-----------	------	------	------	------	-----

MG

MG



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-216

From (m) To (m) Rocktype & Description

150.50 154.80 RHYv Rhyolite volcanoclastic

150.5 - 154.8: texture obscured by alteration and faulting

<<Min: 151.3 - 154.8 1% Min: Pyrite>>

<<Alt: 150.5 - 154.8 Strong (Alt) Muscovite>>

154.80 157.90 OD Brecciated sulphides

154.8 - 157.9: Brecciated OB (Py+CP+/-SP+/-GL)

157.90 163.90 RHYv Rhyolite volcanoclastic

157.9 - 163.9: Texture obscured by alteration and faulting

<<Min: 157.9 - 163.9 1% Min: Pyrite>>

<<Alt: 157.9 - 163.9 Strong (Alt) Muscovite>>

<<Struc: 157.9 - 163.9 Strong (Alt) Fault>> strongly/intensely faulted zone with fault gouge

163.90 168.90 OD Brecciated sulphides

163.9 - 168.9: Unit has both wispy laminated texture and local zones brecciated MSXS. Low grade CP+/-SP+/-GL, but ~85% PY. PY-slickensides on fractured surfaces.

<<Min: 163.9 - 168.9 2% Min: Calcite>>

168.90 171.20 OA Magnetite bearing sulphides

168.9 - 171.2: magnetite bearing MSXS

171.20 174.80 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

171.2 - 174.8: laminated to buckshot textured MSXS. PY+SP+GL+/-CP

<<Min: 171.2 - 174.8 2% Min: Calcite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
150.50	152.00	1.50	B00264564	51	0.227	1.18	0.12	0.21

152.00	153.20	1.20	B00264565	1.2	0.017	0.01	-0.01	0.03
153.20	154.80	1.60	B00264566	42.4	0.194	0.98	0.12	0.54
154.80	156.00	1.20	B00264567	54.2	0.53	1.01	0.83	8.03

156.00	157.00	1.00	B00264568	61.3	1.1	1.56	0.83	8.01
157.00	157.90	0.90	B00264569	67.5	0.534	1.41	0.73	2.96
157.90	161.00	3.10	B00264572	5.5	0.062	0.13	-0.01	0.05

161.00	162.50	1.50	B00264573	30.8	0.242	0.12	0.29	2.4
162.50	163.90	1.40	B00264574	7.9	0.055	0.13	0.01	0.07

163.90	164.90	1.00	B00264575	137	1.6	1.51	1.78	6.26
--------	--------	------	-----------	-----	-----	------	------	------

164.90	165.90	1.00	B00264576	183	1.73	0.42	2.52	8.96
165.90	166.90	1.00	B00264577	229	1.93	0.54	2.33	7.6
166.90	167.90	1.00	B00264578	179	1.19	0.38	2.28	7.21
167.90	168.90	1.00	B00264579	67.1	1.07	0.37	0.83	3.17
168.90	169.70	0.80	B00264581	78.6	0.851	1.08	0.96	4.38

169.70	170.50	0.80	B00264582	60.9	0.455	0.69	0.74	5.14
170.50	171.20	0.70	B00264583	89.6	0.626	1.17	0.55	4.15
171.20	172.10	0.90	B00264584	119	0.568	0.52	1.22	6.26

172.10	173.00	0.90	B00264585	68.8	0.856	0.27	1.43	11.1
173.00	173.90	0.90	B00264586	118	0.935	0.36	2.31	10.2



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-216

From (m) To (m) Rocktype & Description

174.80 176.40 OJ Heavily disseminated sulphides in proximal altered rock

174.8 - 176.4: Disseminated to patchy CP+PY+SP+/-GL in CL-altered schist

<<Alt: 174.8 - 178.1 Moderate (Alt) Muscovite>>

<<Alt: 174.8 - 178.1 Moderate-Strong (Alt) Chlorite>>

176.40 178.10 RHYva Coarse grained to ash tuff

176.4 - 178.1: Cl-altered fine grain volcanoclastic?

<<Min: 176.4 - 178.1 4% Min: Pyrite>>

<<Struc: 176.4 - 176.8 Moderate (Alt) Fault>> weak-moderate faulted zone

178.10 182.30 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

178.1 - 182.3: CA-BI-CL mafic sill

<<Min: 178.1 - 183.6 15% Min: Calcite>>

<<Min: 178.1 - 203.8 1% Min: Pyrite>>

<<Min: 178.1 - 203.8 1% Min: Pyrrhotite>>

<<Alt: 178.1 - 182.3 Moderate-Strong (Alt) Chlorite>>

<<Alt: 178.1 - 182.3 Moderate-Strong (Alt) Biotite>>

<<Struc: 179.9 - 182 Moderate (Alt) Fault>> strong fault gouge zone with high core loss

182.30 185.40 RHYcw Curdy textured-flow banded (flows, subvolcanics)

182.3 - 185.4: good curdy texture with strong MU alteration of groundmass

<<Min: 184.4 - 203.8 15% Min: Calcite>>

<<Alt: 182.3 - 185.4 Moderate-Strong (Alt) Muscovite>>

185.40 203.80 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

185.4 - 203.8: CA-BI-CL mafic sill

<<Alt: 185.4 - 203.8 Moderate-Strong (Alt) Chlorite>>

<<Alt: 185.4 - 203.8 Moderate-Strong (Alt) Biotite>>

<<Struc: 194.09 - 194.1 Foliation>> dominant foliation in MAFi (CA-band)

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
173.90	174.80	0.90	B00264587	201	1.02	0.33	4.1	8.48
174.80	175.60	0.80	B00264588	74	1.66	2.56	0.19	0.54

175.60	176.40	0.80	B00264589	55.3	0.756	1.65	0.31	3.04
--------	--------	------	-----------	------	-------	------	------	------

176.40	177.30	0.90	B00264591	1.3	0.108	-0.01	0.02	0.03
--------	--------	------	-----------	-----	-------	-------	------	------

177.30	178.10	0.80	B00264592	6.4	0.075	0.03	0.16	0.24
--------	--------	------	-----------	-----	-------	------	------	------

178.10	179.60	1.50	B00264593	-0.3	-0.005	0.01	-0.01	0.01
--------	--------	------	-----------	------	--------	------	-------	------

202.30	203.80	1.50	B00264594	-0.3	0.011	-0.01	-0.01	0.02
--------	--------	------	-----------	------	-------	-------	-------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-216

From (m)		To (m)		Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 197.49 - 197.5		Foliation>>		dominant foliation in MAFi (CA-band)										
<<Struc: 201.79 - 201.8		Foliation>>		dominant foliation in MAFi (CA-band)										
<<Struc: 203.35 - 203.36		Foliation>>		dominant foliation in MAFi (CA-band)										
203.80	204.30	OJ	Heavilly disseminated sulphides in proximal altered rock	MG	203.80	204.30	0.50	B00264595	60.4	0.206	0.29	1.11	2.63	
203.8 - 204.3: semi-massive PY+CP in CL-altered schist														
<<Alt: 203.8 - 207.5 Strong (Alt) Chlorite>>														
204.30	212.60	RHYva	Coarse grained to ash tuff		204.30	205.80	1.50	B00264596	3	0.008	-0.01	0.02	0.05	
204.3 - 212.6: Texture very obscured by alteration? High CL content makes this unit hard to differentiate from MAFi. However, does not have CA and is harder.														
<<Min: 204.3 - 211.5 3% Min: Pyrrhotite>>														
<<Min: 211.5 - 233 2% Min: Pyrite>>														
<<Min: 211.5 - 233 2% Min: Pyrrhotite>>														
<<Alt: 207.5 - 210 Strong (Alt) Chlorite>>														
<<Alt: 210 - 216.3 Weak-Moderate (Alt) Muscovite>>														
<<Alt: 210 - 216.3 Moderate (Alt) Chlorite>>														
<<Vein: 207.7 - 209.6 50% Quartz-Carbonate>> QZ-carbonate-TR veins in CL-altered rocks														
<<Struc: 205.17 - 205.18 Foliation>> foliation in CL-altered RHYv														
<<Struc: 207.06 - 207.07 Foliation>> QZ-band														
212.60	216.30	RHYcw	Curdy textured-flow banded (flows, subvolcanics)											
212.6 - 216.3: CL-MU-altered RHYcw with moderate curdy/flow banded texture														
<<Struc: 214.69 - 214.7 Foliation>> QZ-band														
<<Struc: 215.8 - 215.81 Foliation>> QZ-band														
216.30	233.00	RHYvl	Lapilli tuff											
216.3 - 233: Variation in alteration intensity from moderate CL to moderate MU and lpl composition from rhyolitic to lithic (?)														
<<Min: 226.6 - 233 10% Min: Calcite>>														
<<Alt: 216.3 - 233 Moderate (Alt) Muscovite>> Original ateration?														
<<Vein: 225.6 - 226.4 40% Tourmaline>> TR-QZ-CA veins along fracture that is oblique to core axis														
<<Struc: 217 - 217.01 Foliation>> MU band														



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-216

From (m)	To (m)	Rocktype & Description
----------	--------	------------------------

<<Struc: 218.8 - 218.9 Strong (Alt) Fault>>	weak-moderate fault gouge zone
<<Struc: 221.46 - 221.47 Foliation>>	elongated lpl
<<Struc: 221.87 - 221.88 Foliation>>	elongated lpl
<<Struc: 226.1 - 226.6 Moderate (Alt) Fault>>	weak-moderate faulted zone
<<Struc: 229.24 - 229.25 Foliation>>	elongated lpl
<<Struc: 232.84 - 232.85 Foliation>>	elongated lpl

End of Hole @ 233

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-216W1

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	18-Aug-15
UTM Easting	414845.596	Core Size:	HQ3	Azimuth:	195	Date Logging Complete:	19-Aug-15
UTM Northing:	6815743.656	Casing Pulled?:	Yes	Dip:	-61	Drill Company:	Geotech
UTM Elev. (m):	1394.852	Casing Depth (m):	121.5	Length (m):	182	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	16-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	18-Aug-15
Local Elev. (m):						Purpose:	Metallurgical Wedge
Comments:						Parent Hole:	K15-216

K15-216W1 wedged off K15-216 at 121.5 m depth to collect a sample of the MET6 Domain.

Unaltered felsic volcanics occur from 121.5 -134 m with strong to intense faulting from 134-169.8 m. Altered and/or faulted felsic volcanics occur from 134-155.2 m, with two carbonaceous horizons. MU-alteration increases in intensity from 136.1-155.2 m in proximity to a MSXS horizon from 155.2-158 m consisting of the OD ore type. Strong to intensely faulted and MU-altered felsic volcanics occur from 158 - 166.7 m followed by MSXS lens consisting of OD, OA, OB, and OJ ore types to 177.1 m. Alteration decreases in intensity from moderate-strong CL-alteration to moderate MU-alteration over an ~6 m interval from 173.1 - 178.9 m. CA-CL-BI altered MAFi occurs from 178.9 - 182 m.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-65	180.24	0	180.24	APS	Geotech	16-Aug-15		<input checked="" type="checkbox"/>	Values copied from K15-216
26	-63.1	161.3	22.5	183.8	ReflexEVS	Geotech	13-Aug-15	5782	<input checked="" type="checkbox"/>	Values copied from K15-216
50	-62.6	162.6	22.5	185.1	ReflexEVS	Geotech	13-Aug-15	5752	<input checked="" type="checkbox"/>	Values copied from K15-216
71	-62.1	161.4	22.5	183.9	ReflexEVS	Geotech	14-Aug-15	5786	<input checked="" type="checkbox"/>	Values copied from K15-216
98	-62.6	163.9	22.5	186.4	ReflexEVS	Geotech	14-Aug-15	5754	<input checked="" type="checkbox"/>	Values copied from K15-216
121.7	-61.1	170	22.5	192.5	ReflexEVS	Geotech	16-Aug-15	5850	<input checked="" type="checkbox"/>	Wedge start; value copied from first wedge survey at 149m
149	-61.1	170	22.5	192.5	ReflexEVS	Geotech	16-Aug-15	5850	<input checked="" type="checkbox"/>	
182	-62.1	166.7	22.5	189.2	ReflexEVS	Geotech	18-Aug-15	5622	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
121.70	128.20	RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
121.7 - 128.2: RHYcw with some layers of RHYt											
<<Min: 121.7 - 136.1 2% Min: Pyrite>>											
<<Min: 121.7 - 136.1 2% Min: Pyrrhotite>>											
128.20	136.10	RHYvl	Lapilli tuff								

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-216W1

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 134 - 136.7 Strong (Alt) Fault>> dry gouge zone											
136.10	138.10	MDSt Rhyolite tuff dominant mudstone									
<<Min: 136.1 - 155.2 1% Min: Pyrite>>											
<<Alt: 136.1 - 138.1 Weak-Moderate (Alt) Muscovite>>											
<<Struc: 138 - 144.2 Moderate (Alt) Fault>> fault zone with MU fracture surface											
138.10	143.40	RHY undifferentiated rhyolite									
138.1 - 143.4: Texture obscured by MU-alteration and faulting											
<<Alt: 138.1 - 147.2 Moderate-Strong (Alt) Muscovite>>											
143.40	147.20	MDSt Rhyolite tuff dominant mudstone									
143.4 - 147.2: Carbonaceous content ~10%. Unit is moderately faulted.											
<<Struc: 144.2 - 147.6 Moderate-Strong (Alt) Fault>> fault zone											
147.20	155.20	RHY undifferentiated rhyolite	150.20	151.20	1.00						
147.2 - 155.2: Texture is completely obliterated by alteration and strong-intense faulting, with fault gouge.											
<<Alt: 147.2 - 155.2 Strong (Alt) Muscovite>> MU makes up a large amount of the clay fault gouge											
<<Struc: 147.6 - 154.7 Strong (Alt) Fault>> fault zone with zones of MU fault gouge											
<<Struc: 148.5 - 148.51 Strong (Alt) Fault>> MU-cleavage in fault zone											
<<Struc: 149.8 - 149.81 Strong (Alt) Fault>> MU-cleavage in fault zone											
<<Struc: 153.4 - 153.41 Strong (Alt) Fault>> MU-cleavage in fault zone											
<<Struc: 154.7 - 155.2 Intense (Alt) Fault>> wet fault gouge with some 1 mm-1 cm clasts in clay gouge											
155.20	158.00	OD Brecciated sulphides	155.20	156.00	0.80						
155.2 - 158: Brecciated MSXS with pyritic groundmass. MSXS clasts are poorly sorted and sub angular. Clast sizes vary from 1 mm-10 cm.											
<<Struc: 155.2 - 155.21 Contact>> contact of faulted RHY and MSXS (OD)											
<<Struc: 157.8 - 160.2 Intense (Alt) Fault>> wet fault gouge with some 1 mm-1 cm clasts in clay gouge											
158.00	166.70	RHY undifferentiated rhyolite	158.00	159.00	1.00						
158 - 166.7: strong-intensely faulted felsic material. Sections are completely wet fault gouge with small ~1 mm-1 cm clasts within. Other sections are dry fault gouge.											
<<Min: 158 - 166.7 2% Min: Pyrite>>											
<<Alt: 158 - 166.7 Intense (Alt) Muscovite>> MU makes up a large amount of the fault gouge											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-216W1

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 160.2 - 166.7 Strong (Alt) Fault>>		faulted zone with some wet and dry gouge	161.00	162.00	1.00						
<<Struc: 165.8 - 165.81 Strong (Alt) Fault>>		MU-cleavage in RHY	162.00	163.00	1.00						
			163.00	164.00	1.00						
			164.00	165.00	1.00						
			165.00	166.00	1.00						
			166.00	166.70	0.70						
			166.70	167.50	0.80						
166.70 169.80 OD		Brecciated sulphides									
166.7 - 169.8: Brecciated MSXS with sub-angular, poorly sorted clasts ranging from 1 mm-10 cm. Sections of this unit are un-fractured. Groundmass of clasts is MSXS.											
			167.50	168.30	0.80						
			168.30	169.10	0.80						
			169.10	169.80	0.70						
			169.80	170.80	1.00						
169.80 171.50 OA		Magnetite bearing sulphides									
169.8 - 171.5: Magnetite-bearing MSXS dominated by PY.											
<<Alt: 171.3 - 172.2 Moderate-Strong (Alt) Chlorite>>		patchy CL in MSXS	170.80	171.50	0.70						
171.50 175.30 OB		Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	171.50	172.50	1.00						
171.5 - 175.3: wispy laminated MSXS with bands of SP+/-GL. Non-magnetite bearing.											
<<Min: 171.5 - 175.3 15% Min: Sphalerite>>			172.50	173.50	1.00						
			173.50	174.50	1.00						
			174.50	175.30	0.80						
			175.30	176.30	1.00						
175.30 177.10 OJ		Heavily disseminated sulphides in proximal altered rock									
175.3 - 177.1: Disseminated to banded PY+SP+CP+/-GL in CL-MU altered host schist											
<<Alt: 175.3 - 177.1 Moderate (Alt) Chlorite>>			176.30	177.10	0.80						
<<Alt: 175.3 - 178.9 Moderate (Alt) Muscovite>>			177.10	178.10	1.00						
177.10 178.90 RHY		undifferentiated rhyolite									
177.1 - 178.9: MU-altered siliceous RHY. Texture is obscured by alteration.											
<<Min: 177.1 - 178.9 2% Min: Pyrite>>			178.10	178.90	0.80						

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-216W1

From (m) To (m) Rocktype & Description

<<Struc: 178 - 178.7 Weak-Moderate (Alt) Fault>> faulted zone

**178.90 182.00 MAFi Mafic Intrusions (primarily
footwall mafic intrusion)**

178.9 - 182: CL-CA-BI banded mafic sill

<<Min: 178.9 - 182 1% Min: Pyrite>>

<<Min: 178.9 - 182 15% Min: Calcite>> CA bands in mafic sill

<<Alt: 178.9 - 182 Moderate-Strong (Alt) Chlorite>>

<<Alt: 178.9 - 182 Moderate (Alt) Biotite>>

End of Hole @ 182

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
178.90	179.90	1.00						
179.90	180.90	1.00						
180.90	181.90	1.00						

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-217

Prospect:	Infrst	Hole Type:	DD	Survey Type:	GPS-LIDAR	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:		Date Logging Start:	07-Nov-15
UTM Easting	415455	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	07-Nov-15
UTM Northing:	6816730	Casing Pulled?:	Yes	Dip:	-90	Drill Company:	Geotech
UTM Elev. (m):	1387.66	Casing Depth (m):	10	Length (m):	10	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	13-Aug-15
Local Northing:		Cemented?:	SP	Core Storage Loc.:	KZK Camp	Drill Completed:	15-Aug-15
Local Elev. (m):						Purpose:	Hydro
Comments:						Parent Hole:	

Northings and easting coordinates are provided by Tetra Tech, and were measured with a hand-held GPS unit. Elevation value was not measured when hole was drilled; the recorded value is taken from the drill plan.

K15-217 was drilled as a monitoring well.

K15-217 drilled 10 m into overburden. No core recovered.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-90	0	0	0	UNKN				<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	10.00	OVBN Overburden									
0 - 10: No core recovered											
End of Hole @ 10											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-218

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	David Nuttal	
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	14-Aug-15	
UTM Easting	414677.716	Core Size:	NQ3	Azimuth:	180	Date Logging Complete:	16-Aug-15	
UTM Northing:	6815353.816	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech	
UTM Elev. (m):	1424.351	Casing Depth (m):	9	Length (m):	81	Drill Rig:	Hydracore	
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	14-Aug-15	
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	15-Aug-15	
Local Elev. (m):						Purpose:	Resource/Met	
Comments:							Parent Hole:	

Resource infill to confirm extension of massive sulphide lens to below the base of the gravels. Planned as shallow hole to test oxidized/transitional sulphide at the base of the gravel overburden. Massive sulphide interval is present as three distinct lenses between 9.4m to 35m, spaced by metamorphosed felsic volcanoclastic/coherent rocks. The ore zone and structural hangingwall and footwall rocks exhibit moderate to strong syngenetic muscovite and lack presence of chlorite or cordierite alteration mineralization. The structural footwall is composed predominantly of glassy, felsic aphanitic dike with short intervals of silicified felsic volcanoclastic and felsic flow textured rocks. The ore zones are predominantly wispy, buckshot textured (OB) massive sulphides, dominated by pyrite, galena, sphalerite and isolated sulphosalts. From 17.6m to 18.2m there is chalcopyrite rich ore (OG) and from 21m to 21.7m there is magnetite bearing sulphide. The grey aphanitic dike hosts veins that contain quartz, carbonate,pyrite, galena, sphalerite.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	180	0	180	APS	David Nuttal	14-Aug-15		<input checked="" type="checkbox"/>	
39	-59.6	159.8	22.5	182.3	ReflexEVS	Geotech	15-Aug-15	5739	<input checked="" type="checkbox"/>	
63	-63	160.6	22.5	183.1	ReflexEVS	Geotech	15-Aug-15	5750	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	9.00	OVBN Overburden									
9.00	9.30	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
<<Min: 9 - 9.4 1% Min: Pyrite>>											
<<Min: 9 - 17.6 2% Min: Calcite>>											
<<Alt: 9 - 9.4 Weak (Alt) Muscovite>>											
9.30	14.30	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	9.40	10.30	0.90	B00265022	253	1.81	0.27	3.29
9.3 - 14.3: Medium grained to coarse grained. Minerals: pyrite, galena, sphalerite.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-218

From (m) To (m) Rocktype & Description

<<Alt: 13.8 - 17.1 Weak-Moderate (Alt) Muscovite>>

<<Vein: 13.8 - 14.8 85% Quartz>>

14.30 17.10 RHYv Rhyolite volcaniclastic

14.3 - 17.1: Interval intercepted by >10cm diameter quartz/carbonate veins.

<<Struc: 16 - 16.1 Fault>>

**17.10 17.60 OB Wispy laminate, fine
buckshot textured, non-
magnetite bearing sulphides**

17.60 18.20 OG Chalcopyrite rich sulphides

<<Min: 17.6 - 36.3 1% Min: Calcite>>

18.20 20.90 RHYv Rhyolite volcaniclastic

<<Min: 18.2 - 20.9 0.5% Min: Pyrite>>

<<Alt: 18.2 - 20.9 Moderate (Alt) Muscovite>>

20.90 21.70 OA Magnetite bearing sulphides

20.9 - 21.7: Magnetite present at 5%

**21.70 26.70 OB Wispy laminate, fine
buckshot textured, non-
magnetite bearing sulphides**

21.7 - 26.7: In decreasing abundance: Pyrite, galena, sphalerite, chalcopyrite.

26.70 27.20 RHYv Rhyolite volcaniclastic

26.7 - 27.2: Recovery poor; approximately 30%

<<Min: 26.7 - 27.2 5% Min: Pyrite>> Very poor recovery in this section. Confidence in estimates is low,.

<<Min: 26.7 - 27.2 5% Min: Galena>>

<<Alt: 26.7 - 27.2 Weak (Alt) Muscovite>>

dark grey

grey-green

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
10.30	11.30	1.00	B00265023	259	2.52	0.61	2.01	6.95
11.30	12.30	1.00	B00265024	147	2.05	0.37	1.69	6.91
12.30	13.20	0.90	B00265025	225	1.95	0.26	2.03	6.93
13.20	14.00	0.80	B00265026	149	1.79	0.22	1.62	4.08
14.00	15.00	1.00	B00265027	7.2	0.032	-0.01	0.14	0.52
15.00	16.00	1.00	B00265028	1	0.005	-0.01	0.01	0.26

16.00	17.10	1.10	B00265029	59	0.264	0.04	0.87	1.96
17.10	17.60	0.50	B00265032	86.9	0.572	0.04	1.42	5.49

17.60	18.20	0.60	B00265033	364	3.9	14	0.31	1.48
-------	-------	------	-----------	-----	-----	----	------	------

18.20	19.30	1.10	B00265034	19.4	0.113	0.7	0.01	0.17
19.30	20.00	0.70	B00265035	5.9	0.038	0.02	0.01	0.06
20.00	20.90	0.90	B00265036	19.3	0.761	0.75	0.01	0.12
20.90	21.70	0.80	B00265037	171	8.44	4.67	0.47	2.1

21.70	22.70	1.00	B00265038	176	2.36	0.58	1.19	4.44
-------	-------	------	-----------	-----	------	------	------	------

22.70	23.70	1.00	B00265039	141	2.06	0.43	1.48	7.35
23.70	24.70	1.00	B00265041	182	1.61	0.28	3.66	13
24.70	25.70	1.00	B00265042	71.6	1.11	0.12	2.35	12.3
25.70	26.70	1.00	B00265043	121	0.693	0.16	2.99	11.1
26.70	27.20	0.50	B00265044	110	0.653	0.13	2.1	5.33

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-218
From (m) **To (m)** **Rocktype & Description**
27.20 35.00 OB
**Wispy laminate, fine
buckshot textured, non-
magnetite bearing sulphides**

<<Struc: 33.9 - 34 Fault>>

35.00 75.60 RHYi Aphanitic Rhyolite (intrusion) dark grey

35 - 75.6: Interval contains evidence for small (<30cm) sections of felsic flow +/- felsic volcanoclastic rocks overprinted (silicified) by felsic intrusion that dominates the interval.

<<Min: 35 - 44.5 1% Min: Pyrite>>

<<Min: 36.3 - 42 0.5% Min: Calcite>>

<<Min: 42 - 49.2 4% Min: Calcite>>

<<Min: 44.5 - 50 1% Min: Sphalerite>>

<<Min: 44.5 - 50 2% Min: Pyrite>>

<<Min: 44.5 - 50 0.5% Min: Galena>>

<<Min: 49.2 - 55.1 2% Min: Calcite>>

<<Min: 50 - 81 1% Min: Pyrite>>

<<Min: 50 - 81 0.5% Min: Pyrrhotite>>

<<Min: 55.1 - 75.6 3% Min: Calcite>>

<<Alt: 35 - 38 Weak (Alt) Muscovite>>

<<Alt: 38 - 81 Moderate (Alt) Silicification>>

<<Struc: 37 - 37.1 Foliation>>

<<Struc: 48.2 - 48.4 Foliation>>

<<Struc: 50.4 - 51 Foliation>>

<<Struc: 69 - 69.1 Foliation>>

75.60 76.10 MAFi
**Mafic Intrusions (primarily
footwall mafic intrusion) green**

<<Min: 75.6 - 76 10% Min: Calcite>>

<<Min: 76 - 80 2% Min: Calcite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
27.20	28.20	1.00	B00265045	273	1.83	0.41	3	10.7

28.20	29.20	1.00	B00265046	126	0.884	0.18	2.88	10.8
29.20	30.20	1.00	B00265047	203	1.56	0.46	1.8	10.2
30.20	31.20	1.00	B00265048	175	1.7	0.44	3.08	8.82
31.20	32.20	1.00	B00265049	248	2.25	0.72	3.32	7.39
32.20	33.20	1.00	B00265052	231	2.14	0.62	2.11	7.47
33.20	34.20	1.00	B00265053	167	1.58	0.37	1.72	4.47
34.20	35.00	0.80	B00265054	191	0.87	0.2	2.65	7.11
35.00	36.50	1.50	B00265055	2.8	0.017	-0.01	0.04	0.08

36.50	38.00	1.50	B00265056	2	0.013	-0.01	0.04	0.06
38.00	39.50	1.50	B00265057	1.5	0.012	-0.01	0.02	0.03

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-218

From (m)	To (m)	Rocktype & Description			From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 75.6 - 76 Moderate (Alt) Chlorite>>													
76.10	80.00	RHYi	Aphanitic Rhyolite (intrusion)	dark grey									
80.00	81.00	RHYcw	Curdy textured-flow banded (flows, subvolcanics)	cream									
80 - 81: Silicified by adjacent felsic dike.													
<<Struc: 80.5 - 81 Foliation>>													
End of Hole @ 81													

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-219

Prospect:	Infrst	Hole Type:	DD	Survey Type:	GPS-LIDAR	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:		Date Logging Start:	08-Nov-15
UTM Easting	415850	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	08-Nov-15
UTM Northing:	6816872	Casing Pulled?:	Yes	Dip:	-90	Drill Company:	Geotech
UTM Elev. (m):	1463.67	Casing Depth (m):	9	Length (m):	30	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	14-Aug-15
Local Northing:		Cemented?:	SP	Core Storage Loc.:	KZK Camp	Drill Completed:	15-Aug-15
Local Elev. (m):						Purpose:	Hydro
Comments:						Parent Hole:	

Northing and easting coordinates are provided by Tetra Tech, and were measured with a hand-held GPS unit. Elevation value was not measured when hole was drilled; the recorded value is taken from the drill plan.

K15-219 was drilled as a monitoring well.

K15-219 encountered carbonaceous mudstone throughout the hole.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-90	0	0	0	UNKN				<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	9.00	OVBN Overburden									
9.00	30.00	MDSc Carbonaceous dominant mudstone									
9 - 30: Carbonaceous mudstone with blebs of CA+AK											
<<Min: 9 - 30 15% Min: Calcite>>											
<<Vein: 11.75 - 11.9 60% Quartz>> Massive QZ+CA+AK vein											
<<Vein: 13.45 - 13.65 100% Quartz>> Massive QZ+carbonate vein											
<<Vein: 18.1 - 18.5 100% Quartz>> Massive QZ+carbonate vein											
<<Vein: 18.8 - 19.1 100% Quartz>> Massive QZ+carbonate vein											
<<Vein: 19.3 - 19.6 100% Quartz>> Massive QZ+carbonate vein											
<<Vein: 24.75 - 24.95 100% Quartz>> Massive QZ+AK vein											
End of Hole @ 30											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-220

Prospect:	Infrst	Hole Type:	DD	Survey Type:	GPS-LIDAR	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:		Date Logging Start:	07-Nov-15
UTM Easting	415782	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	07-Nov-15
UTM Northing:	6816158	Casing Pulled?:	Yes	Dip:	-90	Drill Company:	Geotech
UTM Elev. (m):	1451.17	Casing Depth (m):	5.9	Length (m):	33	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	15-Aug-15
Local Northing:		Cemented?:	SP	Core Storage Loc.:	KZK Camp	Drill Completed:	15-Aug-15
Local Elev. (m):						Purpose:	Hydro
Comments:						Parent Hole:	

Northing and easting coordinates are provided by Tetra Tech, and were measured with a hand-held GPS unit. Elevation value was not measured when hole was drilled; the recorded value is taken from the drill plan.

K15-220 was drilled as monitoring well.

K15-220 encountered an ash tuff from 11.8-24 m, followed by a calcareous mudstone to a depth of 27.6 m. From 27.6-33 m a lpl tuff is encountered.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-90	0	0	0	UNKN				<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	11.80	OVBN Overburden									
11.80	24.00	RHYva Coarse grained to ash tuff									
11.8 - 24: Grey, fine grained, ash tuff with disseminated euhedral BI and fracture-filling CA											
<<Min: 11.8 - 24 5% Min: Calcite>>											
24.00	27.60	MDSc Carbonaceous dominant mudstone									
24 - 27.6: Black carbonaceous mudstone with banded CA											
<<Min: 24 - 27.6 10% Min: Calcite>>											
27.60	33.00	RHYvl Lapilli tuff									
27.6 - 33: Grey, lpl tuff, with CL and calcareous lpl in fine grained grey-green (CL?) ash tuff. Disseminated euhedral BI. Local QZ eyes?											
<<Min: 27.6 - 33 15% Min: Calcite>>											



GeoSpark Logger ~ Drill Log

Project:		KZK		Hole Number:		K15-220					
	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %		

End of Hole @ 33

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-221

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	David Nuttal
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	16-Aug-15
UTM Easting	414675.698	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	17-Aug-15
UTM Northing:	6815358.001	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1424.236	Casing Depth (m):	9	Length (m):	44	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	16-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	16-Aug-15
Local Elev. (m):						Purpose:	Metallurgical Twin
Comments:						Parent Hole:	K15-218

Twin of ABM79 to collect oxidised sample of MET5 domain, planned to drill a minimum of 5 m into the footwall. This hole was added to increase MET spatial coverage. A massive sulphide interval is present as two distinct lenses between 9.4m to 35m, separated by metamorphosed felsic volcanoclastic/coherent rocks. The ore zone and structural hangingwall and footwall rocks exhibit moderate to strong syngenetic muscovite and lack chlorite or cordierite alteration/mineralization. The structural footwall is composed predominantly of a glassy, felsic aphanitic dike with short intervals of silicified felsic volcanoclastic and felsic flow textured rocks. This dike hosts veins that contain quartz, carbonate, pyrite, galena, sphalerite. The ore zones are predominantly wispy, buckshot textured (OB) massive sulphides, dominated by pyrite, galena, sphalerite and isolated sulphosalts. From 17.6m to 18.2m there is chalcopyrite rich ore (OG) and from 21m to 21.7m there is magnetite bearing sulphide.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	180	0	180	APS	David Nuttal	16-Aug-15		<input checked="" type="checkbox"/>	
44	-61	160.2	22.5	182.7	ReflexEVS	Geotech	16-Aug-15	5731	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	8.83	OVBN Overburden	8.80	9.40	0.60						
8.83	9.40	RHYcw Curdy textured-flow banded (flows, subvolcanics) light grey									
8.83 - 9.4: Casing											
<<Min: 8.83 - 9.4 0.5% Min: Pyrite>>											
9.40	15.50	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	9.40	10.40	1.00						
9.4 - 15.5: Visibly decreasing abundance: Pyrite, sphalerite, galena.+/- very localized magnetite clots.											
			10.40	11.40	1.00						
			11.40	12.40	1.00						

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-221

From (m) To (m) Rocktype & Description

15.50 22.30 RHYv Rhyolite volcanoclastic

grey-green

15.5 - 22.3: +/- lapilli?

<<Min: 15.5 - 17 2% Min: Galena>>

<<Min: 15.5 - 17 1% Min: Barite>>

<<Min: 15.5 - 22.3 1% Min: Pyrite>>

<<Alt: 15.5 - 18.9 Weak-Moderate (Alt) Muscovite>>

<<Alt: 18.9 - 22.3 Moderate (Alt) Muscovite>>

<<Vein: 15.5 - 16.9 99% Quartz>>

**22.30 22.60 OI Heavily disseminated
sulphides in host schist**

22.3 - 22.6: Sulphides appear to be ripped up and mixed with adjacent unit in structural hanging wall rather than disseminated.

**22.60 26.80 OB Wispy laminate, fine
buckshot textured, non-
magnetite bearing sulphides**

26.80 28.50 OA Magnetite bearing sulphides

**28.50 29.00 OI Heavily disseminated
sulphides in host schist**

<<Vein: 28.5 - 28.8 95% Quartz-Carbonate-Sulphide>>

**29.00 35.30 OB Wispy laminate, fine
buckshot textured, non-
magnetite bearing sulphides**

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
12.40	13.40	1.00						
13.40	14.40	1.00						
14.40	15.50	1.10						
15.50	16.50	1.00						

16.50	17.50	1.00
17.50	18.50	1.00
18.50	19.50	1.00
19.50	20.50	1.00
20.50	21.50	1.00
21.50	22.30	0.80
22.30	22.60	0.30

22.60	23.60	1.00
-------	-------	------

23.60	24.60	1.00
24.60	25.60	1.00
25.60	26.30	0.70
26.30	26.80	0.50
26.80	27.80	1.00
27.80	28.50	0.70
28.50	29.00	0.50

29.00	30.00	1.00
-------	-------	------

30.00	31.00	1.00
31.00	32.00	1.00

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-221

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
			32.00	33.00	1.00						
			33.00	34.00	1.00						
			34.00	35.00	1.00						
			35.00	35.30	0.30						
			35.30	36.30	1.00						
			36.30	37.30	1.00						
			37.30	37.90	0.60						
35.30	37.90	RHYi Aphanitic Rhyolite (intrusion) grey-green									
<<Min: 35.3 - 44 1% Min: Pyrite>>											
<<Min: 35.3 - 44 0.25% Min: Pyrrhotite>>											
<<Min: 35.3 - 44 0.25% Min: Galena>>											
<<Alt: 35.3 - 37.9 Weak (Alt) Muscovite>>											
<<Alt: 35.3 - 41 Weak-Moderate (Alt) Silicification>>											
37.90	38.50	RHYcw Curdy textured-flow banded cream (flows, subvolcanics)	37.90	38.50	0.60						
37.9 - 38.5: Silicified.											
<<Alt: 37.9 - 44 Trace (Alt) Muscovite>>											
38.50	44.00	RHYi Aphanitic Rhyolite (intrusion) dark grey	38.50	39.50	1.00						
<<Alt: 41 - 44 Moderate-Strong (Alt) Silicification>>											
End of Hole @ 44											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-222

Prospect:	Infrst	Hole Type:	DD	Survey Type:	GPS-LIDAR	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:		Date Logging Start:	07-Nov-15
UTM Easting	416314	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	07-Nov-15
UTM Northing:	6816049	Casing Pulled?:	Yes	Dip:	-90	Drill Company:	Geotech
UTM Elev. (m):	1465.24	Casing Depth (m):	5	Length (m):	18	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	15-Aug-15
Local Northing:		Cemented?:	SP	Core Storage Loc.:	KZK Camp	Drill Completed:	16-Aug-15
Local Elev. (m):						Purpose:	Hydro
Comments:						Parent Hole:	

Northing and easting coordinates are provided by Tetra Tech, and were measured with a hand-held GPS unit. Elevation value was not measured when hole was drilled; the recorded value is taken from the drill plan.
K15-222 was drilled as a monitoring well.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-90	0	0	0	UNKN				<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	5.20	OVBN Overburden									
5.20	10.60	MDSc Carbonaceous dominant mudstone									
5.2 - 10.6: Black carbonaceous mudstone with blebby CA											
<<Min: 5.2 - 14.4 1% Min: Calcite>>											
<<Min: 5.2 - 14.4 5% Min: Ankerite>>											
<<Vein: 7.9 - 8 100% Calcite>> Massive CA vein (OVBN?)											
10.60	11.20	MAFta Coarse grained to ash tuff									
10.6 - 11.2: Fine grained green ash tuff (?)											
11.20	13.20	MDSt Rhyolite tuff dominant mudstone									
11.2 - 13.2: Mixed carbonaceous sediment and fine grained green ash (?)											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-222

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
13.20	14.00	MAFta Coarse grained to ash tuff									
13.2 - 14: Fien grained green ash tuff (?)											
14.00	14.40	MDSc Carbonaceous dominant mudstone									
14 - 14.4: Black, mixed carbonaceous mudstone and green ash tuff (?)											
14.40	18.00	MAFta Coarse grained to ash tuff									
14.4 - 18: Fine grained CL+BI+QZ schist, with heavily disseminated BI porphyroblasts and local calcareous lpl.											
<<Min: 14.4 - 18 3% Min: Calcite>>											
End of Hole @ 18											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-223

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Cooper Campbell	
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	18-Aug-15	
UTM Easting	414752.647	Core Size:	NQ3	Azimuth:	180.8	Date Logging Complete:	19-Aug-15	
UTM Northing:	6815349.063	Casing Pulled?:	Yes	Dip:	-70	Drill Company:	Geotech	
UTM Elev. (m):	1408.797	Casing Depth (m):	9	Length (m):	71	Drill Rig:	Hydracore	
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	17-Aug-15	
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	18-Aug-15	
Local Elev. (m):						Purpose:	Resource/Met	
Comments:							Parent Hole:	

The purpose of this drill hole was to determine if the massive sulphide zone comes to surface in this location and to see if the OH zone above the OA and OB zones of K95-081 is present in this area. Results showed that the massive sulphide zone comes to surface at 6815350 mN along the 414750 mE section and that the OH zone in K95-081 is absent at this location. Overburden extends from surface to 9 m. Below that depth, the hole intersected OA massive sulphide from 9.0-14.0 m, OB massive sulphide from 9-14 m, variably strained RHYi aphanitic rhyolite intrusive from 16.3-50.92 m, MAFi mafic sill from 50.92-59.52 m, and RHYva rhyolitic ash tuff from 59.52-65.2. The total thickness of the massive sulphide intercept is 7.3 m. A strong to intense overprint of silicification and weak to moderate muscovite alteration dominates the RHYi unit. The upper portion of the MAFi unit is intensely silicified and moderately muscovitized. The MAFi unit has moderate pervasive chlorite/biotite alteration. The RHYva unit has been weakly to moderately overprinted by muscovite. The presence of the RHYi unit directly below the massive sulphide zone and the lack of an intense restricted or proximal alteration zone may indicate that the felsic intrusive truncated the bottom of the syngenetic alteration zone. A small section of rubbly massive sulphide from 59.93-60.0 is due to caving of ore zone when the drill bit was changed. Poor recoveries were achieved during the drilling of the massive sulphide zone in this hole.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-70	180.8	0	180.8	APS	Cooper Campbell	16-Aug-15		<input checked="" type="checkbox"/>	
35	-69.1	163.6	22.5	186.1	ReflexEZS	Geotech	17-Aug-15	5749	<input checked="" type="checkbox"/>	
70	-68.9	164.9	22.5	187.4	ReflexEZS	Geotech	17-Aug-15	5745	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description			From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	9.00	OVBN	Overburden										
9.00	14.00	OA	Magnetite bearing sulphides	CG	9.00	10.00	1.00	B00266501	83.8	0.62	0.07	2.37	9.73
<<Struc: 10.89 - 10.9 dominant foliation>>					10.00	11.00	1.00	B00266502	71.9	0.446	0.11	1.42	6.58
<<Struc: 13.94 - 13.95 dominant foliation>>					11.00	14.00	3.00	B00266503	151	0.892	0.37	2.64	8.56
14.00	16.30	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	CG	14.00	15.00	1.00	B00266504	151	1.86	0.23	2.62	7.86
					15.00	16.30	1.30	B00266505	90.4	0.758	0.01	1.85	6.15
16.30	50.92	RHYi	Aphanitic Rhyolite (intrusion)		16.30	17.80	1.50	B00266506	6.8	0.049	-0.01	-0.01	0.04



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-223
From (m) To (m) Rocktype & Description

<<Min: 16.3 - 20.3 0.5% Min: Pyrite>>
 <<Min: 16.3 - 20.3 3% Min: Calcite>>
 <<Min: 20.3 - 26.2 0.25% Min: Pyrite>>
 <<Min: 20.3 - 38.49 1% Min: Calcite>>
 <<Min: 26.2 - 38.49 0.5% Min: Pyrite>>
 <<Min: 34.86 - 50.92 0.01% Min: Sphalerite>>
 <<Min: 38.49 - 49.38 0.25% Min: Pyrite>>
 <<Min: 38.49 - 50.92 0.01% Min: Galena>>
 <<Min: 38.49 - 50.92 0.25% Min: Calcite>>
 <<Min: 49.38 - 56.47 2% Min: Pyrite>>
 <<Alt: 16.3 - 20.3 Strong (Alt) Silicification>>
 <<Alt: 16.3 - 20.3 Weak-Moderate (Alt) Muscovite>>
 <<Alt: 20.3 - 23.33 Intense (Alt) Silicification>>
 <<Alt: 20.3 - 56 Weak (Alt) Muscovite>>
 <<Alt: 23.33 - 31.75 Moderate-Strong (Alt) Silicification>>
 <<Alt: 31.75 - 33.47 Intense (Alt) Silicification>>
 <<Alt: 33.47 - 38.49 Strong (Alt) Silicification>>
 <<Alt: 38.49 - 46.47 Intense (Alt) Silicification>>
 <<Alt: 46.47 - 58.39 Strong (Alt) Silicification>>
 <<Struc: 16.87 - 16.88 dominant foliation>>
 <<Struc: 19.92 - 19.93 dominant foliation>>
 <<Struc: 31.48 - 31.49 dominant foliation>>
 <<Struc: 34.94 - 34.95 dominant foliation>>
 <<Struc: 36.56 - 36.57 dominant foliation>>
 <<Struc: 37.92 - 37.93 dominant foliation>>
 <<Struc: 40.89 - 40.9 dominant foliation>>
 <<Struc: 43.88 - 43.89 dominant foliation>>
 <<Struc: 46.87 - 46.88 dominant foliation>>
 <<Struc: 48.3 - 49.1 Moderate (Alt) Fault>> Broken rock and fault gouge locally
**50.92 59.52 MAFi Mafic Intrusions (primarily
footwall mafic intrusion)**
 <<Min: 50.92 - 55.43 1% Min: Sphalerite>>
 <<Min: 50.92 - 55.43 0.01% Min: Galena>>
 <<Min: 50.92 - 55.43 0.01% Min: Chalcopyrite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
17.80	19.30	1.50	B00266507	1.5	0.01	0.07	-0.01	0.02
19.30	20.80	1.50	B00266508	1.4	0.007	-0.01	-0.01	-0.01



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-223

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 50.92 - 56 5% Min: Calcite>>											
<<Min: 56 - 59.52 0.25% Min: Calcite>>											
<<Min: 56.47 - 71 0.25% Min: Pyrite>>											
<<Alt: 56 - 58.39 Weak-Moderate (Alt) Muscovite>>											
<<Alt: 58.39 - 59.52 Intense (Alt) Silicification>>											
<<Alt: 58.39 - 59.65 Moderate (Alt) Muscovite>>											
<<Struc: 55.73 - 55.74 dominant foliation>>											
<<Struc: 58.95 - 58.96 dominant foliation>>											
59.52 65.20 RHYva Coarse grained to ash tuff											
<<Min: 59.52 - 65.2 7% Min: Calcite>>											
<<Alt: 59.65 - 65.2 Moderate (Alt) Chlorite>>											
<<Alt: 59.65 - 65.2 Weak-Moderate (Alt) Biotite>>											
<<Struc: 61.75 - 61.76 dominant foliation>>											
<<Struc: 64.67 - 64.68 dominant foliation>>											
65.20 71.00 RHYva Coarse grained to ash tuff											
<<Min: 65.2 - 71 2% Min: Calcite>>											
<<Min: 69.4 - 71 0.01% Min: Sphalerite>>											
<<Alt: 65.2 - 71 Weak-Moderate (Alt) Muscovite>>											
<<Struc: 70.66 - 70.67 dominant foliation>>											
End of Hole @ 71											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-224

Prospect:	GP4F	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Murray Jones	
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	20-Aug-15	
UTM Easting	419404.222	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	24-Aug-15	
UTM Northing:	6813275.77	Casing Pulled?:	No	Dip:	-70	Drill Company:	Geotech	
UTM Elev. (m):	1354.779	Casing Depth (m):	2	Length (m):	351	Drill Rig:	Hydracore	
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	17-Aug-15	
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	23-Aug-15	
Local Elev. (m):						Purpose:	Resource Definition	
Comments:							Parent Hole:	

Southernmost hole on Section 419400E. Intended as fill-in hole for resource on GP4F, and should be similar to K98-188.
The hole intersected the GP4F Zone from 91.30 to 99.0, semi-massive sulphide from 95.8 to 99, strongly faulted and poor core recovery. Second zone at 154 consists of two 1m zones of 5-10% PY-SP-GLand CL-CI alteration separated by a mafic dyke.
Overall, the hole consists of metamorphic rocks of sedimentary and intrusive (feldspar and quartz porphyry) affinity in the upper 80 m, felsic volcanic rocks from 80-206 m, and sedimentary rocks to bottom. Faulting is common, particularly in the lower half of the hole where the faults appear to be carbonaceous though not conductive.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-70	180	0	180	APS	Murray Jones	18-Aug-15		<input type="checkbox"/>	
22.5	-69	165	22.4	187.4	ReflexEVS	Geotech	18-Aug-15	5752	<input checked="" type="checkbox"/>	
49.5	-69.2	166.8	22.4	189.2	ReflexEVS	Geotech	18-Aug-15	5754	<input checked="" type="checkbox"/>	
76.5	-68.9	164.9	22.4	187.3	ReflexEVS	Geotech	19-Aug-15	5734	<input checked="" type="checkbox"/>	
102	-68.8	164.4	22.4	186.8	ReflexEVS	Geotech	19-Aug-15	5764	<input checked="" type="checkbox"/>	
150	-68.7	167.3	22.4	189.7	ReflexEVS	Geotech	19-Aug-15	5744	<input checked="" type="checkbox"/>	
158	-69.4	191.7	22.4	214.1	ReflexEVS	Geotech	22-Aug-15	6009	<input type="checkbox"/>	Magnetic field is high, likely results in incorrect azimuth
174	-68.6	166.8	22.4	189.2	ReflexEVS	Geotech	20-Aug-15	5713	<input checked="" type="checkbox"/>	
234	-68.4	168.9	22.4	191.3	ReflexEVS	Geotech	20-Aug-15	5727	<input checked="" type="checkbox"/>	
273	-68.2	165.7	22.4	188.1	ReflexEVS	Geotech	20-Aug-15	5716	<input checked="" type="checkbox"/>	
300	-67.8	165.6	22.4	188	ReflexEVS	Geotech	22-Aug-15	5717	<input checked="" type="checkbox"/>	
342	-70.7	169.9	22.4	192.3	ReflexEVS	Geotech	23-Aug-15	5733	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	2.00	CASN Casing									

Project:
KZK
Hole Number:
K15-224

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
2.00	13.10	RHYi									
		Aphanitic Rhyolite (intrusion)									
2 - 13.1: similar to Glassy dyke in ABM section, green-grey alteration locally, bleaching around QV's, lge QV's included											
<<Min: 2 - 13.1 0.01% Min: Pyrite>> rare											
<<Alt: 2 - 8.5 Weak-Moderate (Alt) Silicification>> glassy portion											
<<Alt: 8.5 - 10.3 Weak (Alt) Muscovite>> mostly in fractures											
<<Alt: 10.3 - 13.1 Weak (Alt) Muscovite>>											
<<Alt: 10.3 - 13.1 Moderate (Alt) Biotite>> fractures											
<<Vein: 2.5 - 4.5 100% Quartz>> bull QZ vein, broken to bottom, lost core											
13.10	43.20	SED									
		undifferentiated Sediment									
		dark grey									
		FG									
13.1 - 43.2: BI pblasts consistent t/o unit, TO pblasts also?, harder to ID but visible on fractures, variable colour, MU in bands vary in yellowy green bands common, multiple dark BI (CA) rich dykes cut through with some dark colouration of wall rock common. Locally, small sections of siliceous, lt coloured rock, flow banded?- felsic component? Maybe a tuffaceous/sedimentary mix - porphyry unit?											
<<Min: 13.1 - 27.5 0.1% Min: Calcite>> fractures											
<<Min: 13.1 - 32.3 0.01% Min: Pyrite>> quite rare, locally on fol'n											
<<Min: 27.5 - 29.8 8% Min: Calcite>> diss'd in groundmass											
<<Min: 32.3 - 34.3 0.01% Min: Pyrrhotite>> in mx TO vein, minor Diss'ns											
<<Min: 32.3 - 34.3 10% Min: Calcite>> to pervasive locally											
<<Min: 34.3 - 42.3 0.01% Min: Pyrrhotite>> scattered											
<<Min: 34.3 - 43.2 0.01% Min: Pyrite>>											
<<Min: 34.3 - 43.2 0.1% Min: Calcite>> local fractures											
<<Alt: 22 - 27.5 Weak-Moderate (Alt) Muscovite>> bands and lenses of lighter coloured, altered SCHS, MU visible on frac. On surfaces											
<<Alt: 29.8 - 32.3 Trace (Alt) Muscovite>>											
<<Alt: 34.3 - 43.2 Weak (Alt) Muscovite>> still gives streaky look to core											
<<Vein: 14.2 - 14.7 95% Quartz 70 deg. >> bull QV											
<<Struc: 15 - 15.1 Moderate (Alt) Fault>> gouge, broken core below											
<<Struc: 26.9 - 27.5 Moderate (Alt) Fault>> gouge and broken core over interval, dyke below											
<<Struc: 34.8 - 36 Moderate (Alt) Fault>>											
43.20	46.90	MAFi									
		Mafic Intrusions (primarily									
		footwall mafic intrusion)									
		green									
		MG									
43.2 - 46.9: dark green/black bands, AC dominated rock, CL after AC, BI pblasts t/o, patches of fg BI, lt brown colour with coarse black pblasts (CI?, TO?), local QZ-CA bands with AC, leucoxene scattered in patches.											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-224

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 43.2 - 46.9 0.1% Min: Pyrite>> local											
<<Min: 43.2 - 46.9 0.01% Min: Chalcopyrite>> rare											
<<Min: 43.2 - 46.9 3% Min: Calcite>> veins											
<<Alt: 43.2 - 46.9 Moderate (Alt) Chlorite>> after AC,											
46.90	80.20	SED undifferentiated Sediment dark grey FMG	79.70	80.90	1.20	B00269001	13.5	0.036	0.06	0.68	1.48
46.9 - 80.2: It grey to darker bands, MU in bands, locally pervasive gives patchy to banded appearance											
<<Min: 46.9 - 50.8 1% Min: Calcite>>											
<<Min: 46.9 - 63.4 0.01% Min: Pyrite>>											
<<Min: 50.8 - 53.9 15% Min: Calcite>> to pervasive											
<<Min: 53.9 - 61.2 0.1% Min: Calcite>>											
<<Min: 61.2 - 62.3 15% Min: Calcite>> to pervasive, fractures											
<<Min: 62.3 - 78.2 0.1% Min: Calcite>> fractures											
<<Min: 63.4 - 72 2% Min: Pyrite>> locally 5%											
<<Min: 72 - 74.4 0.5% Min: Pyrite>>											
<<Min: 74.4 - 80.9 2% Min: Pyrite>> tends to occur in bands along fol'n											
<<Min: 78.2 - 79.7 8% Min: Calcite>> dyke											
<<Min: 79.7 - 82.3 2% Min: Sphalerite>> veins, bx filling, along fol'n											
<<Min: 79.7 - 82.3 2% Min: Pyrite>> and fractures.											
<<Min: 79.7 - 82.3 0.25% Min: Galena>>											
<<Alt: 46.9 - 53.9 Weak (Alt) Muscovite>> bands											
<<Alt: 53.9 - 63.4 Weak-Moderate (Alt) Muscovite>> still banded appearance											
<<Alt: 63.4 - 74.4 Moderate (Alt) Muscovite>> to patchy											
<<Alt: 74.4 - 80.9 Moderate-Strong (Alt) Muscovite>> strong fol'n, not in dyke											
<<Struc: 74.9 - 74.91 Moderate (Alt) Foliation>>											
<<Struc: 78 - 79.6 Moderate-Strong (Alt) Fault>> broken at top, gouge at bottom											
80.20	89.90	RHYcq Quartz porphyry grey-brown	80.90	82.30	1.40	B00269002	3.8	0.007	0.04	0.25	0.82
80.2 - 89.9: abundant blue QZ eyes, clustered and scattered,											
<<Min: 82.3 - 91.3 0.25% Min: Pyrite>> minor diss'ns			82.30	84.00	1.70	B00269003	0.5	-0.005	0.01	-0.01	0.14
<<Alt: 80.9 - 82.3 Moderate (Alt) Silicification>> glassy sections			84.00	86.10	2.10	B00269004	1.9	0.008	0.11	0.02	0.31
<<Alt: 80.9 - 82.3 Strong (Alt) Muscovite>> It green colour, in groundmass, alt'n possibly cut off by fault on bottom			86.10	87.10	1.00	B00269005	2	0.006	0.03	-0.01	0.02
<<Alt: 82.3 - 92.6 Moderate (Alt) Muscovite>> bands to patches			87.10	88.50	1.40	B00269006	0.8	0.016	0.03	-0.01	0.03
<<Struc: 83.5 - 88.1 Strong (Alt) Fault>> very strong fault broken with abdt gouge t/o, solid gouge from 84-86.1m, poor core recovery			88.50	90.00	1.50	B00269007	0.9	-0.005	0.02	-0.01	0.14

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-224

From (m) To (m) Rocktype & Description

<<Struc: 86.99 - 87 Moderate-Strong (Alt) Foliation>> adjacent to Fault

89.90 95.80 SED undifferentiated Sediment grey-brown

89.9 - 95.8: sulphide in upper section with SI, SP-PY-GL bands t/o, GA pblasts,in lower section

<<Min: 91.3 - 92.6 8% Min: Sphalerite>> fol'n control

<<Min: 91.3 - 92.6 5% Min: Pyrite>> some diis'd blebs, with CP

<<Min: 91.3 - 92.6 2% Min: Galena>>

<<Min: 91.3 - 92.6 0.1% Min: Chalcopryrite>> scattered

<<Min: 92.6 - 93.8 3% Min: Sphalerite>> as PY

<<Min: 92.6 - 93.8 5% Min: Pyrite>> scattered along fol'n

<<Min: 92.6 - 93.8 0.25% Min: Galena>> with PY, SP

<<Min: 92.6 - 93.8 0.25% Min: Chalcopryrite>> blebs

<<Min: 93.8 - 95.8 8% Min: Pyrite>> conc'd bands of PY wisps, blebs along fol'n, no other sx but matrix is dark, fg

<<Alt: 91.3 - 92.6 Moderate (Alt) Silicification>> MU intervening, sulphide bands t/o

<<Alt: 92.6 - 95.8 Moderate (Alt) Garnet>> pblasts up to 8 mm dia.

<<Alt: 92.6 - 95.8 Moderate (Alt) Chlorite>> replaced and/or retrograde BI

<<Alt: 92.6 - 95.8 Strong (Alt) Biotite>>

<<Struc: 93 - 93.01 Moderate-Strong (Alt) Foliation>> sx/BI bands in proximal alteration

<<Struc: 93.9 - 93.91 Moderate (Alt) Foliation>> poor continuity

<<Struc: 94.3 - 94.9 Moderate (Alt) Fault>> crushed rock

95.80 99.00 OD Brecciated sulphides grey

95.8 - 99: semi-massive to local bands of massive sulphide, PO content is high, rock is broken, gouge in the middle, core recovery is low, sulphide-rich schist sections included

<<Min: 95.8 - 99 5% Min: Sphalerite>> conc'd bands locally

<<Min: 95.8 - 99 5% Min: Pyrrhotite>> mostly massive bands and veins

<<Min: 95.8 - 99 0.25% Min: Galena>> scattered, with SP

<<Min: 95.8 - 99 0.5% Min: Chalcopryrite>> mixed with PO

<<Alt: 95.8 - 98.45 Moderate-Strong (Alt) Muscovite>> on fol'n

<<Alt: 95.8 - 100.6 Moderate (Alt) Silicification>> QZ in BX too

<<Struc: 96 - 99 Moderate-Strong (Alt) Fault>> lost core

99.00 99.45 SED undifferentiated Sediment grey-brown

99 - 99.45: short unmineralized section of sediment

<<Min: 99 - 100.1 1% Min: Pyrite>> in schist, not dyke

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
90.00	91.30	1.30	B00269008	0.7	-0.005	0.03	0.01	0.08
91.30	92.60	1.30	B00269009	15.5	0.034	0.18	0.77	4.06
92.60	93.80	1.20	B00269011	4.4	0.012	0.07	0.56	0.97
93.80	95.00	1.20	B00269012	1.4	-0.005	0.01	0.24	0.63
95.00	95.75	0.75	B00269013	13.8	0.048	0.07	1.82	2.07
95.75	96.00	0.25	B00269014	30	0.433	0.11	2.94	6.36
96.00	99.00	3.00	B00269015	104	0.301	0.13	2.24	5.08
99.00	100.10	1.10	B00269016	1.4	0.118	-0.01	0.08	0.19



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-224

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
99.45	100.10	MAFi Mafic Intrusions (primarily footwall mafic intrusion) brown									
99.45 - 100.1: dyke at contact											
100.10	136.80	RHYcf Feldspar & feldspar quartz porphyry grey-brown	100.10	100.60	0.50	B00269017	35.6	1.44	0.08	1.77	3.27
100.1 - 136.8: blue QZ eyes and FP phenos, locally felsic domains i.e. boudins, also quite variable tx.											
<<Min: 100.1 - 100.6 2% Min: Sphalerite>> along fol'n, similar to 92.6-93.8											
<<Min: 100.1 - 100.6 2% Min: Pyrite>>											
<<Min: 100.1 - 100.6 3% Min: Pyrrhotite>> bands, wisps											
<<Min: 100.1 - 100.6 1% Min: Galena>> with SP											
<<Min: 100.1 - 100.6 0.01% Min: Chalcopyrite>>											
<<Min: 100.6 - 106.7 2% Min: Pyrite>> small masses in QZ vein											
<<Min: 109.02 - 125 0.25% Min: Sphalerite>> associated with QV's,											
<<Min: 109.02 - 125 1% Min: Pyrite>> bands up to 5 cm wide of diss'd PY											
<<Min: 109.02 - 125 0.1% Min: Galena>> with PY, SP in QV's											
<<Min: 125 - 136.8 0.5% Min: Pyrite>> along fol'n, w/BI											
<<Alt: 100.1 - 105.7 Weak-Moderate (Alt) Muscovite>> flakes visible on fracs											
<<Alt: 105.7 - 115.86 Weak (Alt) Biotite>> surrounds sx bands in schist, envelope?											
<<Alt: 105.7 - 124.95 Weak-Moderate (Alt) Muscovite>> in groundmass, overprint on BI											
<<Alt: 124.95 - 136.8 Weak (Alt) Muscovite>> mostly BI groundmass											
<<Vein: 115.86 - 117.3 70% Quartz>> bullQZ with MU, sx locally											
<<Struc: 104.7 - 105 Moderate (Alt) Fault>> gouge at 105m											
<<Struc: 117.3 - 125 Moderate (Alt) Fault>> series of faults with gouge, broken core											
<<Struc: 132 - 133.45 Weak (Alt) Fault>> gouge locally											
136.80	154.80	RHYva Coarse grained to ash tuff grey-green	150.10	151.57	1.47	B00269022	2.4	-0.005	0.02	0.02	0.04
136.8 - 154.8: lenses and bands of siliceous and micaceous rock, homogeneous appearance, cut by MAFi (BI SCHS)											
<<Min: 136.8 - 143 1% Min: Pyrite>> and fractures											
<<Min: 143 - 147.14 8% Min: Calcite>> and irregular veins											
<<Min: 147.14 - 153.07 0.01% Min: Sphalerite>> in rare QV's											
<<Min: 147.14 - 153.07 0.5% Min: Pyrite>> generally along fol'n											
<<Min: 147.14 - 153.07 0.01% Min: Galena>> as SP											
<<Min: 153.07 - 153.95 1% Min: Sphalerite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-224

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
		<<Alt: 159.02 - 160.12 Weak (Alt) Garnet>> rare pblasts									
		<<Alt: 159.02 - 160.12 Moderate-Strong (Alt) Chlorite>> bands									
		<<Alt: 159.02 - 160.12 Moderate-Strong (Alt) Cordierite>> pblasts in conc'd areas									
		<<Alt: 159.02 - 160.12 Moderate (Alt) Biotite>>									
		<<Alt: 159.67 - 160.12 Moderate (Alt) Muscovite>>									
		<<Alt: 160.12 - 160.8 Weak (Alt) Biotite>> MU overprinting?									
		<<Alt: 160.12 - 164.75 Moderate-Strong (Alt) Muscovite>>									
		<<Alt: 165.68 - 168.16 Weak-Moderate (Alt) Muscovite>>									
168.16	179.10	RHYvx Quartz and/or feldspar crystal tuff									
168.16 - 179.1: scattered QE?, Tourmaline locally, MU overprints BI,											
		<<Min: 168.16 - 179.1 0.1% Min: Sphalerite>> with PO in frags, bands									
		<<Min: 168.16 - 179.1 0.5% Min: Pyrrhotite>> bands along foliation									
		<<Alt: 168.16 - 179.1 Weak (Alt) Muscovite>>									
		<<Alt: 168.16 - 179.1 Trace (Alt) Garnet>> scattered pblasts									
179.10	186.50	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	green-brown	MG							
		<<Min: 179.1 - 186.5 1% Min: Pyrite>>									
		<<Min: 179.1 - 186.5 1% Min: Calcite>>									
		<<Alt: 179.1 - 186.5 Weak (Alt) Chlorite>>									
186.50	193.78	RHYv Rhyolite volcanoclastic	grey-brown	FG							
186.5 - 193.78: locally strong MU, around faulting, banded BI/MU schist,											
		<<Min: 186.5 - 187.5 5% Min: Pyrite>> in bands									
		<<Min: 186.5 - 193.78 3% Min: Pyrite>> conc'd in bands									
		<<Min: 186.5 - 193.78 1% Min: Pyrrhotite>> also in bands									
		<<Alt: 186.5 - 188.8 Moderate-Strong (Alt) Muscovite>> in fault zone									
		<<Alt: 188.8 - 193.78 Weak (Alt) Muscovite>>									
		<<Struc: 186.5 - 187.4 Moderate (Alt) Fault>> slips show variable angles									
193.78	206.20	RHYcf Feldspar & feldspar quartz porphyry	grey-brown	FMG							
193.78 - 206.2: generally massive appearance, locally high strain apparent											
		<<Min: 193.78 - 203.2 0.25% Min: Pyrite>>									

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-224

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<div><<Min: 203.2 - 206.2 3% Min: Pyrite>> and wisps</div> <div><<Alt: 203.2 - 206.2 Strong (Alt) Silicification>> near contact</div> <div><<Alt: 203.2 - 206.2 Moderate (Alt) Muscovite>></div> <div><<Vein: 196.5 - 197 100% Quartz 85 deg. >> bull QZ, and PY blebs</div> <div><<Struc: 206.15 - 206.2 Moderate (Alt) Crenulation cleavage>> adjacent to a fault</div> <div><div>206.20218.61SEDundifferentiated Sedimentdark grey</div><div>206.2 - 218.61: dark, siliceous, sediment, possibly graphitic very locally</div></div> <div><<Min: 206.2 - 209.75 1% Min: Pyrite>> t/o</div> <div><<Min: 209.75 - 218.61 0.25% Min: Pyrite>> local</div> <div><<Alt: 206.2 - 211.2 Moderate (Alt) Silicification>></div> <div><<Alt: 211.2 - 218.61 Moderate (Alt) Muscovite>> soapy feel</div> <div><<Struc: 206.5 - 216.5 Moderate-Strong (Alt) Fault>> big gouge zones, broken core</div> <div><<Struc: 209.75 - 209.76 Moderate-Strong (Alt) Fault>> slip in gouge zone</div> <div><div>218.61235.40MAFiMafic Intrusions (primarily footwall mafic intrusion)</div><div>218.61 - 235.4: very heterogeneous section, faulting intense, local stretches of veining, bx filling, gouge,</div></div> <div><<Min: 218.61 - 227.75 20% Min: Calcite>> pervasive, massive CA locally</div> <div><<Min: 218.61 - 240 0.01% Min: Sphalerite>> rare, in QV</div> <div><<Min: 218.61 - 240 0.1% Min: Pyrite>> in frags, scattered in fault</div> <div><<Min: 218.61 - 240 0.01% Min: Galena>> as SP</div> <div><<Alt: 218.61 - 240 Weak (Alt) Muscovite>> retrograde, more clay?</div> <div><<Vein: 219.8 - 223.5 20% Quartz 80 deg. >> spaced QZ veins, fault zone, SP in small vein</div> <div><<Vein: 224.1 - 227.75 70% Calcium carbonate/Carbonate 60 deg. >> carbonate bx in fault zone, vein?, CA-DI-MG?, gives talcose feel</div> <div><<Struc: 223.4 - 240 Strong (Alt) Fault>> multiple strings</div> <div><div>235.40236.90SEDundifferentiated Sedimentlight grey</div><div>235.4 - 236.9: strongly alt'd, caught up in fault, between dykes</div></div> <div><div>236.90240.00MAFiMafic Intrusions (primarily footwall mafic intrusion)</div><div>236.9 - 240: core is crushed, strongly faulted, clay altered?</div></div>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-224

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
240.00	266.46	SED undifferentiated Sediment black FG									
240 - 266.46: massive to weakly foliated, siliceous toward bottom, probably metamorphic sweat of silica											
<<Min: 240 - 266.46 1% Min: Pyrite>> tiny wisps											
<<Min: 240 - 266.46 0.1% Min: Pyrrhotite>>											
<<Min: 240 - 266.46 0.01% Min: Chalcopyrite>>											
<<Alt: 240 - 266.46 Weak (Alt) Silicification>> silica sweats?, prominent on dyke contacts											
<<Vein: 241.25 - 247.17 25% Quartz>> QZ-minor CA-tracePO											
<<Struc: 253.4 - 256 Moderate-Strong (Alt) Fault>> carbonaceous (not conductive)											
266.46	287.53	SEDc calcareous Sediment									
<<Min: 266.46 - 306.23 0.01% Min: Pyrite>> local crystals in veinlets,											
<<Min: 266.46 - 306.23 0.01% Min: Pyrrhotite>>											
<<Min: 266.46 - 306.23 0.01% Min: Chalcopyrite>>											
<<Alt: 281.2 - 282.47 Moderate (Alt) Muscovite>> Carbonate?											
<<Vein: 284.89 - 287.2 30% Quartz>> QZ-minor clotty CL?											
<<Struc: 271.75 - 279.8 Moderate-Strong (Alt) Fault>>											
<<Struc: 283.37 - 284.89 Moderate (Alt) Fault>>											
287.53	296.45	SED undifferentiated Sediment black									
287.53 - 296.45: laminated, SI bands, very dark, homogeneous											
<<Struc: 293.15 - 296.3 Moderate (Alt) Fault>>											
296.45	300.80	MAFi Mafic Intrusions (primarily footwall mafic intrusion) salt + pepper FMG									
296.45 - 300.8: leucocratic dyke? Looks like a diorite, BI and AM pblasts scattered t/o, weak fol'n, lies within fault zone, reddish GA pblasts are scattered, 0.1% overall											
<<Struc: 299.1 - 303.17 Moderate-Strong (Alt) Fault>> 40 cm gouge near top, broken core											
300.80	306.23	SED undifferentiated Sediment black FG									
300.8 - 306.23: BI pblasts prominent, siliceous groundmass, seems to grade into darker sediment below, weak GA, silvery PY on fractures											
306.23	351.00	SEDc calcareous Sediment green-brown FMG									
306.23 - 351: banded rock, BI-AC green to BI brown, and black also. Weakly calcareous version of SED above?, heterogeneous, alt'n is MU-calc-silicate (possibly), BI speckles locally, MAFi occurs throughout but is very chopped up, focused around faults, It green coloured sections around faults with late CA and vuggy QZ veinlets, PY, too, colour due to MS or EP(?), DI(?).											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-224

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 306.23 - 351 0.1% Min: Pyrite>> occurs in fractures, veinlets, and small shears. Scattered down the hole. <<Alt: 324.65 - 328.15 Moderate (Alt) Muscovite>> Is this EP or DI? <<Alt: 335.2 - 336 Moderate (Alt) Muscovite>> EP/DI? <<Vein: 330.65 - 331.6 60% Quartz>> QZ <<Struc: 333.83 - 340 Moderate-Strong (Alt) Fault>> several strings, striae on slips <<Struc: 343.4 - 346.7 Moderate (Alt) Fault>> gougy,fault breccia, no obvious slips, mostly irregular surfaces.											
End of Hole @ 351											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-225

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Cooper Campbell
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	20-Aug-15
UTM Easting	414752.728	Core Size:	HQ3	Azimuth:	180.96	Date Logging Complete:	21-Aug-15
UTM Northing:	6815351.293	Casing Pulled?:	Yes	Dip:	-70	Drill Company:	Geotech
UTM Elev. (m):	1408.902	Casing Depth (m):	9	Length (m):	25	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	18-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	18-Aug-15
Local Elev. (m):						Purpose:	Metallurgical Twin
Comments:						Parent Hole:	K15-223

The purpose of this hole was to twin K15-223 to collect potentially oxidised sample of MET7 Domain. Oxidized OH was sampled. A massive sulphide body consisting of OH, OA, and OB sits structurally above RHYi. No syngenetic alteration was found directly adjacent to the massive sulphide body in the RHYi. The ore body was intersected at surface. The thickness of massive sulphide intercept was 8 m. The presence of the RHYi unit directly below the massive sulphide zone and the lack of an intense restricted or proximal alteration zone may indicate that the felsic intrusive truncated the bottom of the syngenetic alteration zone.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-70	180.96	0	180.96	APS	Cooper Campbell	18-Aug-15		<input checked="" type="checkbox"/>	
25	-70.5	162.7	22.5	185.2	ReflexEVS	Geotech	18-Aug-15	5696	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	9.00	OVBN Overburden									
9.00	9.90	OH Fine grained, megascopically homogeneous pyrite rock	CG	9.00	9.90	0.90					
<<Struc: 9.5 - 9.65 Weak (Alt) Fault>> Oxidized and faulted sulphide rock. Broken rock.											
9.90	15.36	OA Magnetite bearing sulphides	CG	9.90	10.90	1.00					
				10.90	11.90	1.00					
				11.90	14.00	2.10					
				14.00	15.36	1.36					
15.36	17.00	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	CG	15.36	16.00	0.64					
				16.00	17.00	1.00					
17.00	25.00	RHYi Aphanitic Rhyolite (intrusion)		17.00	18.00	1.00					



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-225

From (m) To (m) Rocktype & Description

<<Min: 17 - 19.92 0.5% Min: Pyrite>>
 <<Min: 19.92 - 25 0.25% Min: Pyrite>>
 <<Alt: 17 - 19.92 Strong (Alt) Silicification>>
 <<Alt: 17 - 20 Weak-Moderate (Alt) Muscovite>>
 <<Alt: 19.92 - 25 Intense (Alt) Silicification>>
 <<Alt: 20 - 25 Weak (Alt) Muscovite>>

End of Hole @ 25

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
18.00	19.00	1.00						
19.00	20.00	1.00						
20.00	21.00	1.00						
21.00	22.00	1.00						

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-226

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	20-Aug-15
UTM Easting	414850.978	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	22-Aug-15
UTM Northing:	6815676.392	Casing Pulled?:	Yes	Dip:	-70	Drill Company:	Geotech
UTM Elev. (m):	1396.44	Casing Depth (m):	6	Length (m):	230	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	18-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	21-Aug-15
Local Elev. (m):						Purpose:	Resource/Met
Comments:						Parent Hole:	

Hole K15-226 was drilled to intersect the historical hole K94-022 in the sulfide zone.

Hole K15-226 is made up of coherent and volcanoclastic rhyolite crosscut by mafic or intermediate dykes on the top 35 meters. A mudstone unit is observed between 125m and 130m. The hole shows progressive moderate to strong muscovite alteration followed by the mineralized zone.

The massive sulfide unit is intersected from 143.7m to 175.7m (32m thick). The footwall consists of a mafic sill crosscut by an aphanitic rhyolite intrusion with green-grey alteration associated from 179.6m to 185.2m. The hole ends at 230.0m in a muscovite altered volcanoclastic rhyolite unit.

The dominant domain of the massive sulfide unit is OB. OA and OG domains are observed as well as minor OH and OJ respectively at the upper and the lower contacts of the massive sulfide.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-70	180	0	180	APS	Dillon Hume	20-Aug-15		<input checked="" type="checkbox"/>	
26	-71.5	160.2	22.5	182.7	ReflexEVS	Geotech	18-Aug-15	5849	<input checked="" type="checkbox"/>	
50	-71.7	161	22.5	183.5	ReflexEVS	Geotech	19-Aug-15	5762	<input checked="" type="checkbox"/>	
74	-71.9	164.5	22.5	187	ReflexEVS	Geotech	19-Aug-15	5764	<input checked="" type="checkbox"/>	
101	-71.9	162	22.5	184.5	ReflexEVS	Geotech	19-Aug-15	5782	<input checked="" type="checkbox"/>	
125	-71.7	165.1	22.5	187.6	ReflexEVS	Geotech	19-Aug-15	5750	<input checked="" type="checkbox"/>	
149	-71.5	154.6	22.5	177.1	ReflexEVS	Geotech	20-Aug-15	5049	<input type="checkbox"/>	Reading not accepted due to difference in magnetic field.
176	-71.7	157.7	22.5	180.2	ReflexEVS	Geotech	20-Aug-15	5767	<input checked="" type="checkbox"/>	
200	-71.9	169.4	22.5	191.9	ReflexEVS	Geotech	20-Aug-15	5821	<input checked="" type="checkbox"/>	
230	-71.6	167.6	22.5	190.1	ReflexEVS	Geotech	20-Aug-15	5789	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	6.00	OVBN Overburden									
6.00	11.50	RHYva Coarse grained to ash tuff									
<<Min: 6 - 59.4 2% Min: Pyrrhotite>>											
<<Min: 6 - 143.7 1% Min: Pyrite>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-226

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %									
<<Alt: 6 - 62.3 Weak-Moderate (Alt) Muscovite>> obscures the original texture of the rock																				
11.50	17.50	RHYcw	Curdy textured-flow banded (flows, subvolcanics)																	
11.5 - 17.5: Curdy texture and siliceous flow banded texture																				
17.50	19.50	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)																	
17.5 - 19.5: Curdy texture and siliceous flow banded texture																				
<<Min: 17.5 - 19.5 3% Min: Calcite>>																				
19.50	22.50	RHYcw	Curdy textured-flow banded (flows, subvolcanics)																	
19.5 - 22.5: fgr tuff? ~3% MG-porphyroblasts/phenocrysts																				
22.50	31.00	RHYva	Coarse grained to ash tuff																	
22.5 - 31: fgr tuff? ~3% MG-porphyroblasts/phenocrysts																				
<<Struc: 27.8 - 29.9 Strong (Alt) Fault>> weak-moderate faulted zone with some wet fault gouge. Rocks also appear to be ductily strained in this zone																				
31.00	32.30	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)																	
31 - 32.3: Fgr dark greenish-grey MG-bearing dyke. ~5% CA																				
<<Min: 31 - 32.3 5% Min: Calcite>>																				
32.30	36.00	RHYcw	Curdy textured-flow banded (flows, subvolcanics)																	
32.3 - 36: good siliceous flow banded texture																				
36.00	83.70	RHYvl	Lapilli tuff																	
36 - 83.7: Curdy rhyolite with some layers of tuffaceous material within																				
<<Min: 59.4 - 63.4 4% Min: Pyrrhotite>>																				
<<Min: 63.4 - 103 4% Min: Pyrrhotite>>																				
<<Vein: 56.9 - 57.5 80% Quartz>> QZ-AK-CL vein																				

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-226

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
83.70	86.50	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
83.7 - 86.5: Dominated by fgr ash with rhyolite and lpl. Some ~10-30 cm layers of curdy rhyolite (blocks?)											
86.50	107.30	RHYvl Lapilli tuff									
86.5 - 107.3: Dominated by curdy texture											
<<Min: 103 - 106.3 4% Min: Pyrrhotite>>											
<<Min: 106.3 - 117.2 2% Min: Pyrrhotite>>											
107.30	117.60	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
107.3 - 117.6: Medium grey volcanoclastic unit with rhyolitic lpl											
<<Min: 117.2 - 124.6 4% Min: Pyrrhotite>>											
117.60	124.60	RHYvl Lapilli tuff									
117.6 - 124.6: lpl ranges from rhyolitic near the top of the unit to sulphides-after-lithics (?) near the bottom of the unit											
<<Alt: 121.1 - 125.9 Weak (Alt) Muscovite>>											
<<Struc: 122.11 - 122.12 dominant foliation>> elongated lpl											
<<Struc: 122.25 - 122.26 dominant foliation>> elongated lpl											
<<Struc: 124.5 - 127.4 Strong (Alt) Fault>> weak-moderate fractured zone											
124.60	129.30	MDS Sc Carbonaceous dominant mudstone									
124.6 - 129.3: MU-altered and deformed mudstone. ~40-50% carbonaceous material.											
<<Min: 124.6 - 143.7 2% Min: Pyrrhotite>>											
<<Alt: 125.9 - 128.1 Moderate (Alt) Muscovite>>											
<<Alt: 128.1 - 133 Moderate (Alt) Muscovite>>											
<<Struc: 127.85 - 127.86 dominant foliation>> carbonaceous band											
129.30	131.00	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
129.3 - 131: texture completed obscured by alteration and deformation											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-226

From (m) To (m) Rocktype & Description

158.00 162.10 OG Chalcopyrite rich sulphides

158 - 162.1: Patchy CP,PY/PO, locally brecciated or net texture, some coarse PY grain

<<Min: 158 - 162.1 10% Min: Chalcopyrite>>

<<Alt: 158 - 162.1 Moderate (Alt) Chlorite>>

162.10 163.15 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

162.1 - 163.15: SP laminated

<<Min: 162.1 - 163.15 20% Min: Sphalerite>>

163.15 165.20 OA Magnetite bearing sulphides

<<Min: 163.15 - 165.2 10% Min: Magnetite>>

165.20 170.60 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

165.2 - 170.6: Maybe dolomite matrix locally or BA. Patch of very soft mineral, maybe talc (greenish) some patch of CP

<<Min: 165.2 - 170.6 5% Min: Sphalerite>>

<<Min: 165.2 - 170.6 3% Min: Chalcopyrite>>

170.60 171.70 OA Magnetite bearing sulphides

170.6 - 171.7: Chlorite rich, lamination, locally folded

<<Min: 170.6 - 171.7 10% Min: Magnetite>>

<<Alt: 170.6 - 173 Moderate (Alt) Chlorite>>

171.70 172.30 OG Chalcopyrite rich sulphides

<<Min: 171.7 - 172.3 10% Min: Chalcopyrite>>

<<Struc: 171.8 - 171.81 Kink bands>> Lamination in MXSX

FMG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
156.00	157.00	1.00	B00264637	55.8	0.674	0.19	1.28	5.22
157.00	158.00	1.00	B00264638	77.4	0.256	0.13	1.04	4.8
158.00	159.00	1.00	B00264639	163	2.2	2.66	0.44	2.43

MCG

159.00	160.00	1.00	B00264641	194	4.09	4.45	0.21	1.16
160.00	161.00	1.00	B00264642	243	3.9	5.85	0.28	2.48
161.00	162.10	1.10	B00264643	146	1.44	2.89	0.46	3.19
162.10	163.15	1.05	B00264644	72	1.41	0.45	1.02	5.99

FMG

163.15	164.00	0.85	B00264645	40.3	0.47	0.14	1.31	8.28
164.00	165.20	1.20	B00264646	43.6	0.3	0.08	2.37	9.4
165.20	166.00	0.80	B00264647	99	0.562	0.5	2.67	9.95

FMG

166.00	167.00	1.00	B00264648	65.5	0.507	0.19	1.49	8.03
167.00	168.00	1.00	B00264649	62.2	0.489	0.1	1.62	9.11
168.00	168.85	0.85	B00264652	67.4	0.356	0.06	2.22	5.65
168.85	169.65	0.80	B00264653	85.1	0.631	0.17	1.46	6.06
169.65	170.60	0.95	B00264654	67.1	0.714	0.64	1.07	4.33
170.60	171.70	1.10	B00264655	63.3	0.814	1.31	0.85	3.32

FMG

171.70	172.30	0.60	B00264656	221	5.43	4.83	0.78	4.05
--------	--------	------	-----------	-----	------	------	------	------

FG



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-226

From (m) To (m) Rocktype & Description

172.30 174.10 OB **Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides**

FMG

172.3 - 174.1: GL, patch of BA or dolomite

<<Min: 172.3 - 174.1 0.2% Min: Galena>>

<<Alt: 173.6 - 185.2 Strong (Alt) Muscovite>> MU-Si (green-grey alteration) related to intrusive felsic dyke

174.10 175.70 OJ **Heavily disseminated sulphides in proximal altered rock**

MG

174.1 - 175.7: CP patch, SP, GL. Locally massive and semi-massive sulfide up to 20 cm. Cpin veinlets.

<<Min: 174.1 - 175.7 0.1% Min: Galena>>

<<Min: 174.1 - 175.7 3% Min: Chalcopyrite>>

175.70 185.20 MAFi **Mafic Intrusions (primarily footwall mafic intrusion)**

175.7 - 185.2: Maybe green/grey alteration at 179.6. Birich from 182.7.

<<Min: 175.7 - 179.6 20% Min: Calcite>>

<<Alt: 175.7 - 179.6 Strong (Alt) Chlorite>>

<<Alt: 182.7 - 185.2 Strong (Alt) Biotite>>

<<Struc: 181.8 - 181.81 dominant foliation>>

<<Struc: 184.1 - 184.12 Weak (Alt) Fault>> late fault

<<Struc: 184.7 - 184.71 Foliation>> BI foliation

185.20 189.36 RHYi **Aphanitic Rhyolite (intrusion)**

185.2 - 189.36: Sharpe lower contact with 30 cm of alteration. Stringers (about 3 per 10 cm). Considered as aphanitic rhyolite dyke crosscutting the MAFi.

<<Min: 185.2 - 189.36 0.5% Min: Pyrrhotite>> stringers with few PY

<<Alt: 185.2 - 189.36 Strong (Alt) Silicification>> silicified dyke

<<Alt: 185.2 - 202.35 Strong (Alt) Chlorite>>

<<Vein: 185.2 - 189.36 Pyrrhotite>> stringers set

<<Struc: 185.2 - 189.36 Vein>> stringers, PO few Py

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
172.30	173.30	1.00	B00264657	155	1.1	0.57	2.68	5.99
173.30	174.10	0.80	B00264658	118	0.773	0.22	3.09	6.64
174.10	175.00	0.90	B00264659	112	1.98	3.08	0.49	5.88
175.00	175.70	0.70	B00264661	188	1.64	0.38	1.77	3.17
175.70	177.20	1.50	B00264662	1.1	0.01	0.02	0.01	0.07
177.20	178.70	1.50	B00264663	0.6	0.01	-0.01	0.01	0.02
178.70	180.20	1.50	B00264664	0.7	0.012	-0.01	0.01	0.02



Project:
KZK
Hole Number:
K15-226

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
189.36	202.35	MAFi									
		Mafic Intrusions (primarily footwall mafic intrusion)									
189.36 - 202.35: Calcite rich, chlorite alteration overprinting. Sheared at 200.00. Biotite rich. One MXSX PY/CP with CA/CL, 30 cm in the sheared zone.											
<<Min: 189.36 - 202.35 15% Min: Calcite>>											
<<Min: 201.6 - 201.9 5% Min: Chalcopryite>>											
<<Struc: 190.4 - 190.41 Foliation>> CA foliation or veinlet											
<<Struc: 190.6 - 190.61 dominant foliation>> CA foliation											
<<Struc: 192 - 192.01 dominant foliation>> CA foliation											
<<Struc: 192.6 - 192.61 Vein>> CA veinlets											
<<Struc: 197.1 - 197.11 Vein>> CA/PO veinlets											
<<Struc: 197.3 - 197.31 Vein>> CA veinlet											
<<Struc: 200 - 202.35 Shear>> sheared zone in MAFi											
202.35	230.00	RHYv									
		Rhyolite volcanoclastic									
202.35 - 230: QZ eyes observed. QZ/sulfide banded-Could be coherent rhyolite. Biotite rich when going deeper. CL disseminated as well from 214.4. 230.00 E.O.H.											
<<Min: 202.35 - 214.4 0.1% Min: Pyrite>> local patch and vein containing PO/PY/SP/GL											
<<Min: 202.35 - 214.4 0.1% Min: Pyrrhotite>>											
<<Min: 214.4 - 230 3% Min: Calcite>>											
<<Alt: 202.35 - 230 Strong (Alt) Muscovite>>											
<<Alt: 214.4 - 230 Weak (Alt) Chlorite>>											
<<Alt: 214.4 - 230 Moderate (Alt) Biotite>>											
<<Vein: 218 - 219 Chlorite>> CL veinlets set											
<<Vein: 224.2 - 224.9 80% Quartz>> QZ/Dolomite											
<<Struc: 202.45 - 203.3 Shear>> sheared zone in RHY											
<<Struc: 203.3 - 203.44 Strong (Alt) Fault>> fault gouge											
<<Struc: 212.1 - 212.11 Vein>> QZ/PO foliation oriented											
<<Struc: 218 - 219 Vein>> shallow angle CL veinlet set											
<<Struc: 218.2 - 218.21 dominant foliation>>											
<<Struc: 219 - 219.01 Vein>> Late Tourmaline vein set											
<<Struc: 223.9 - 223.91 Vein>> lower contact with massive QZ vein											
<<Struc: 224.2 - 224.9 Vein>> Massive QZ vein with dolomite											
<<Struc: 226.4 - 226.41 Vein>> fracture mineralized PO											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-226

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 229.1 - 229.11 Vein>> CL veinlets set											
End of Hole @ 230											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-226W1

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	23-Aug-15
UTM Easting	414850.978	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	24-Aug-15
UTM Northing:	6815676.392	Casing Pulled?:	Yes	Dip:	-70	Drill Company:	Geotech
UTM Elev. (m):	1396.44	Casing Depth (m):	6	Length (m):	182	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	22-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	23-Aug-15
Local Elev. (m):						Purpose:	Metallurgical Wedge
Comments:						Parent Hole:	K15-226

Hole K15-226W1 was a wedge from 111.5m to 182m off of K15-226 in order to collect samples of MET6 and MET7 domains and to increase the spatial coverage of potential underground ore. The units encountered outside of the massive sulfide are very similar to K15-226 in term of lithology, alteration and depth, with a rhyolitic unit above the ore deposit and strong muscovite alteration of the hanging-wall. The footwall consists of a mafic intrusive sill intersecting the ore deposit at 178.0m. Green-grey alteration suggests the proximity of the felsic dyke. The massive sulfide extends from 144.2 to 178.0m (33.8m wide). Most of the unit is made up of OA, OB and OG and shows abundant CP relative to the parent hole. The proximal chlorite alteration contains cordierite. This hole confirms the lateral variations of the massive sulfide domains.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-70	180	0	180	APS	Dillon Hume	20-Aug-15		<input checked="" type="checkbox"/>	Values copied from K15-226
26	-71.5	160.2	22.5	182.7	ReflexEVS	Geotech	18-Aug-15	5849	<input checked="" type="checkbox"/>	Values copied from K15-226
50	-71.7	161	22.5	183.5	ReflexEVS	Geotech	19-Aug-15	5762	<input checked="" type="checkbox"/>	Values copied from K15-226
74	-71.9	164.5	22.5	187	ReflexEVS	Geotech	19-Aug-15	5764	<input checked="" type="checkbox"/>	Values copied from K15-226
101	-71.9	162	22.5	184.5	ReflexEVS	Geotech	19-Aug-15	5782	<input checked="" type="checkbox"/>	Values copied from K15-226
111.5	-69.4	168.1	22.5	190.6	ReflexEVS	Geotech	22-Aug-15	5813	<input checked="" type="checkbox"/>	Wedge start; value copied from first wedge survey at 134m
118	-71.8	184.9	22.5	207.4	ReflexEVS	Geotech	21-Aug-15	2302	<input type="checkbox"/>	Bad survey - low magnetic field, results not accepted.
134	-69.4	168.1	22.5	190.6	ReflexEVS	Geotech	22-Aug-15	5813	<input checked="" type="checkbox"/>	
155	-69.4	191.7	0	191.7	ReflexEVS	Geotech	22-Aug-15	6009	<input checked="" type="checkbox"/>	Azimuth correction by the Driller

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
111.50	118.45	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
111.5 - 118.45: disseminated and elongated PO											
<<Min: 111.5 - 124.7 0.2% Min: Pyrrhotite>> elongated											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-226W1

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
149.80	159.60	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	149.80	150.40	0.60						
149.8 - 159.6: SP rich, dolomite maybe barite patch. Large SP xtals associated with host patch. Soft light green mineral (talc?). Locally weak stockwork texture.											
<<Min: 150 - 154.7 5% Min: Sphalerite>>			150.40	151.00	0.60						
<<Min: 150 - 154.7 1% Min: Galena>>			151.00	152.00	1.00						
<<Min: 158.45 - 160.5 1% Min: Sphalerite>> large xtals			152.00	153.00	1.00						
<<Struc: 155.4 - 155.5 Strong (Alt) Fault>> minor			153.00	154.00	1.00						
			154.00	155.00	1.00						
			155.00	156.00	1.00						
			156.00	157.00	1.00						
			157.00	158.00	1.00						
			158.00	158.95	0.95						
			158.95	159.60	0.65						
			159.60	160.40	0.80						
159.60	161.30	OJ Heavily disseminated sulphides in proximal altered rock									
<<Min: 159.6 - 161.3 20% Min: Chalcopyrite>> proximal alteration? Large patch of chlorite/talc, almost brecciated texture			160.40	161.30	0.90						
<<Min: 160.5 - 161 5% Min: Pyrrhotite>> and veins											
<<Alt: 159.6 - 161.3 Strong (Alt) Chlorite>> with talc											
161.30	163.20	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	161.30	162.30	1.00						
<<Struc: 162 - 162.2 Weak (Alt) Fault>> minor											
163.20	165.30	OA Magnetite bearing sulphides	162.30	163.20	0.90						
163.2 - 165.3: laminated, Clpatch, SP rich from 163.2 to 154.0m.			163.20	164.00	0.80						
<<Min: 163.2 - 164 3% Min: Sphalerite>>			164.00	164.65	0.65						
<<Min: 163.2 - 165.45 10% Min: Magnetite>> and lamination			164.65	165.30	0.65						
165.30	166.60	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	165.30	166.00	0.70						



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-226W1

From (m)	To (m)	Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 165.3 - 166.6 10% Min: Sphalerite>>												
166.60	167.40	OH	Fine grained, megascopically homogeneous pyrite rock	FMG	166.00	166.60	0.60					
					166.60	167.40	0.80					
167.40	170.70	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG	167.40	168.00	0.60					
					168.00	169.00	1.00					
					169.00	170.00	1.00					
					170.00	170.70	0.70					
170.70	173.30	OI	Heavily disseminated sulphides in host schist	MG	170.70	171.63	0.93					
170.7 - 173.3: folded host rock (BI/GL).												
					171.63	172.40	0.77					
					172.40	173.30	0.90					
173.30	174.20	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG	173.30	174.20	0.90					
174.20	175.25	OI	Heavily disseminated sulphides in host schist		174.20	174.70	0.50					
174.2 - 175.25: few patch of host rock.												
<<Min: 174.4 - 175.25 3% Min: Sphalerite>> cordierite zone												
<<Min: 174.4 - 175.25 1% Min: Galena>> cordierite zone												
<<Alt: 174.2 - 175.25 Moderate (Alt) Cordierite>>												
175.25	176.65	OG	Chalcopyrite rich sulphides		175.25	176.00	0.75					
175.25 - 176.65: CP fracture filled. Host rock with dominant CP/GL rich domain.												
<<Min: 175.25 - 176.65 20% Min: Chalcopyrite>> and fracture filled												
176.65	178.00	OI	Heavily disseminated sulphides in host schist	FMG	176.00	176.65	0.65					
					176.65	177.30	0.65					
					177.30	178.00	0.70					



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-226W1

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
178.00	180.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	178.00	179.00	1.00						
178 - 180: calcite riche, TO patch folded associated with PO.											
<<Min: 178 - 180 30% Min: Calcite>> in lithology											
<<Alt: 178 - 180 Moderate-Strong (Alt) Chlorite>>											
180.00	182.00	RHYcw Curdy textured-flow banded (flows, subvolcanics)	180.00	181.00	1.00						
180 - 182: sharpe upper contact. PY in lamination. Maybe green-grey aletration. Sheared from 180.9m, fault proximity (?). 182.0m E.O.H.											
<<Alt: 180 - 180.7 Moderate (Alt) Silicification>> green-grey alteration?											
<<Struc: 181 - 182 Weak (Alt) Shear>> fault proximity?											
End of Hole @ 182											

GeoSpark Logger ~ Drill Log

Project: KZK Hole Number: K15-227

Prospect: ABM	Hole Type: DD	Survey Type: RTK DGPS	Logged By: David Nuttal
Grid: NAD83_Z9	Hole Diameter: 75.7	Survey By: Challenger_Survey	Date Logging Start: 21-Aug-15
UTM Easting: 414871.848	Core Size: NQ3	Azimuth: 180	Date Logging Complete: 22-Aug-15
UTM Northing: 6815376.6	Casing Pulled?: Yes	Dip: -60	Drill Company: Geotech
UTM Elev. (m): 1391.054	Casing Depth (m): 12	Length (m): 86	Drill Rig: Hydracore
Local Easting:	Stored?: Yes	Claims Title	Drill Started: 19-Aug-15
Local Northing:	Cemented?: Yes	Core Storage Loc.: KZK Camp	Drill Completed: 21-Aug-15
Local Elev. (m):		Purpose: Resource/Met	Parent Hole:

This hole was drilled as resource infill to confirm extension of massive sulphide lens to below the base of the gravels. It is a shallow hole to test oxidised/transitional sulphide at the base of the gravel overburden.

The logging of this hole confirms that an extension of the massive sulphide lens does continue towards the south below the base of the gravels. The structural hanging wall is composed of overburden gravels and coherent/clastic felsic volcanics. Massive sulphide intervals occur from 11.45m to 11.9m (OB code). 12.65m to 18.2m (OA, OB, OJ codes) and from 33.6m to 36.1m (OB, OI codes) with small coherent/clastic felsic volcanic intervals between. The structural foot wall is composed of a mafic dike that was intruded by a grey, aphanitic felsic dike. The main ore zone is found between 12.65m to 18.2m. Muscovite alteration is pervasive and increases in intensity towards the massive sulphide lenses. Chlorite alteration is pervasive in the mafic dike and is interpreted to be the result of metamorphic overprinting, and therefor not associated with massive sulphides. This hole is significant because it confirms the extension of the massive sulphide ore zone towards the south on section 414850E. In addition an unexpected interval of heavily disseminated sulphides in proximally altered rock (OJ) occurs between 49.2m to 50.8m.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-55	180	0	180	APS	David Nuttal	20-Aug-15		<input checked="" type="checkbox"/>	
36	-54.4	159.3	22.5	181.8	ReflexEVS	Geotech	21-Aug-15	5782	<input checked="" type="checkbox"/>	
66	-53.6	157.6	22.5	180.1	ReflexEVS	Geotech	21-Aug-15	5653	<input checked="" type="checkbox"/>	
80	-54.8	160.4	22.5	182.9	ReflexEVS	Geotech	21-Aug-15	5724	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	11.00	OVBN Overburden									
11.00	11.45	RHYv Rhyolite volcanoclastic									
<<Min: 11 - 11.45 0.5% Min: Pyrite>>											
<<Alt: 11 - 11.45 Moderate (Alt) Muscovite>>											
11.45	11.90	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	11.45	11.90	0.45	B00268501	279	2.63	0.61	2.03	8.92
11.90	12.65	RHYv Rhyolite volcanoclastic	11.90	12.65	0.75	B00268502	177	3.75	0.78	0.17	0.76



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-227

From (m) To (m) Rocktype & Description

<<Min: 11.9 - 12.65 2% Min: Pyrite>>

12.65 14.83 OA Magnetite bearing sulphides

<<Struc: 13.35 - 13.35 dominant foliation>>

14.83 16.70 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

16.70 18.20 OJ Heavily disseminated sulphides in proximal altered rock

<<Min: 16.7 - 18.2 3% Min: Pyrite>>

<<Min: 16.7 - 18.6 2% Min: Pyrrhotite>>

<<Alt: 16.7 - 18.2 Weak-Moderate (Alt) Muscovite>>

<<Alt: 17 - 18.2 Weak-Moderate (Alt) Chlorite>>

<<Struc: 16.8 - 16.8 dominant foliation>>

18.20 23.00 RHYv Rhyolite volcaniclastic

<<Min: 18.6 - 25 2% Min: Pyrite>>

<<Alt: 18.2 - 23 Weak (Alt) Muscovite>>

23.00 29.50 RHYcw Curdy textured-flow banded (flows, subvolcanics)

23 - 29.5: flow banded with pervasive sericite.

<<Min: 25 - 29.5 1% Min: Pyrite>>

<<Alt: 23 - 26 Weak (Alt) Muscovite>>

<<Alt: 26 - 29 Weak (Alt) Muscovite>>

<<Alt: 29 - 32 Weak-Moderate (Alt) Muscovite>>

<<Vein: 23.4 - 23.6 20% Quartz>>

<<Vein: 23.6 - 26.1 7% Quartz>>

<<Vein: 28.4 - 33.5 11% Quartz>>

29.50 33.60 RHYv Rhyolite volcaniclastic

<<Min: 29.5 - 33.9 0.5% Min: Pyrite>>

<<Alt: 32 - 33.9 Strong (Alt) Muscovite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
12.65	13.65	1.00	B00268503	140	0.952	0.36	2.84	15.2
13.65	14.30	0.65	B00268504	92.5	1.17	1.42	0.84	12.3
14.30	14.83	0.53	B00268505	184	0.714	0.53	3.38	11.6
14.83	15.80	0.97	B00268506	206	2.09	0.63	3.58	9.83
15.80	16.70	0.90	B00268507	236	2.48	0.6	2.94	10.7
16.70	17.60	0.90	B00268508	60.4	0.779	1.66	0.21	0.61
17.60	18.20	0.60	B00268509	23.8	0.136	0.21	0.3	1.2
18.20	19.70	1.50	B00268511	1.4	0.01	-0.01	-0.01	0.03
19.70	21.20	1.50	B00268512	1.5	0.011	-0.01	-0.01	-0.01
21.20	22.70	1.50	B00268513	1	0.006	-0.01	-0.01	0.01
29.30	30.80	1.50	B00268514	0.6	0.008	-0.01	-0.01	-0.01
30.80	32.30	1.50	B00268515	0.3	0.006	-0.01	-0.01	-0.01
32.30	33.90	1.60	B00268516	0.4	0.007	-0.01	-0.01	-0.01



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-227

From (m) To (m) Rocktype & Description

<<Struc: 30.05 - 30.075 Weak (Alt) Fault>>

33.60 35.00 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Struc: 34.5 - 34.5 dominant foliation>>

35.00 36.10 OI Heavily disseminated sulphides in host schist

<<Alt: 35 - 37 Weak-Moderate (Alt) Muscovite>>

36.10 41.40 RHYcw Curdy textured-flow banded (flows, subvolcanics)

<<Min: 36.1 - 46 2% Min: Pyrite>>

<<Alt: 37 - 42 Trace (Alt) Muscovite>>

<<Alt: 37.8 - 49 Weak-Moderate (Alt) Silicification>>

<<Struc: 36.8 - 37.1 Weak (Alt) Fault>> Fault + fracture zone with gauge.

41.40 47.90 RHYi Aphanitic Rhyolite (intrusion)

41.4 - 47.9: Pyrite stringers, angular 0.5-2mm diameter quartz phenocrysts, 1-5% calcite. Alteration halo penetrates into mafic intrusion structurally below interval.

<<Min: 46 - 68 0.5% Min: Pyrite>>

<<Alt: 47 - 49.66 Weak (Alt) Chlorite>>

<<Struc: 43.7 - 43.7 dominant foliation>>

47.90 49.20 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

49.20 50.80 OJ Heavily disseminated sulphides in proximal altered rock

49.2 - 50.8: 4-5% CP, 3%PO, 3%PY in chlorite rich rock.

<<Alt: 49.66 - 50.2 Moderate (Alt) Chlorite>>

<<Alt: 50.2 - 50.8 Strong (Alt) Chlorite>>

50.80 86.00 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

50.8 - 86: Coloration and textural heterogeneity. Possibly due to proximity to felsic intrusion(s)? Presence of fuchsite and calcite banding used to determine that siliceous lithologies are a replacement assemblage of mafic package.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
33.90	35.00	1.10	B00268517	402	2.8	0.75	4.65	11
35.00	36.10	1.10	B00268518	34.3	0.415	0.62	0.26	1.42
36.10	37.60	1.50	B00268519	2.6	0.035	0.03	0.02	0.05
37.60	39.10	1.50	B00268521	-0.3	-0.005	-0.01	-0.01	-0.01
39.10	40.60	1.50	B00268522	0.5	-0.005	-0.01	-0.01	-0.01
47.70	49.20	1.50	B00268523	1.4	-0.005	0.02	0.03	0.05
49.20	50.80	1.60	B00268524	18.8	0.093	0.94	0.06	0.34
50.80	52.30	1.50	B00268525	-0.3	-0.005	-0.01	-0.01	0.01



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-227

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 68 - 80 0.5% Min: Pyrite>> <<Min: 68 - 86 1% Min: Pyrrhotite>> <<Min: 79 - 82 1% Min: Sphalerite>> <<Min: 80 - 86 2% Min: Pyrite>> <<Alt: 50.8 - 60.8 Moderate (Alt) Chlorite>> <<Alt: 59.7 - 77.3 Moderate (Alt) Silicification>> <<Alt: 68 - 74 Weak-Moderate (Alt) Chlorite>> <<Alt: 73 - 79.1 Weak-Moderate (Alt) Chlorite>> <<Alt: 79.1 - 84.1 Moderate (Alt) Silicification>> <<Alt: 84.1 - 86 Trace (Alt) Chlorite>> <<Vein: 66.95 - 67.6 97% Quartz>> 1% muscovite <<Vein: 78.8 - 85.7 10% Quartz-Carbonate>> <<Struc: 51.9 - 51.9 dominant foliation>> <<Struc: 60.3 - 60.35 Weak (Alt) Fault>> gauge present <<Struc: 65 - 65.05 Weak (Alt) Fault>> Gauge present <<Struc: 79.7 - 81.3 Weak (Alt) Fault>> High oblique angle to foliation. Displacement approximately 1.5cm. No fault gauge present; fault surface has been healed.											
End of Hole @ 86											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-228

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Mark Baknes	
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	20-Aug-15	
UTM Easting	414748.183	Core Size:	NQ3	Azimuth:	180.4	Date Logging Complete:	21-Aug-15	
UTM Northing:	6815380.313	Casing Pulled?:	Yes	Dip:	-70	Drill Company:	Geotech	
UTM Elev. (m):	1408.915	Casing Depth (m):	9	Length (m):	95	Drill Rig:	Hydracore	
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	18-Aug-15	
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	19-Aug-15	
Local Elev. (m):						Purpose:	Resource Confirmation	
Comments:							Parent Hole:	

The purpose of this hole is to confirm the resource delineated by K95-081. The presence of the massive sulphide body was confirmed within an interval of RHYi. This sulphide bearing rhyolite unit sits stratigraphically above MAFi which appears to have intruded RHYi. The ore zone was first intersected at 21.4 m and is 10.4 m thick. The ore zone is diluted by 1.7 m of RHYi. The ore zone consists of OB, OH, and OA massive sulphide types. All alteration types logged were overprinted and not believed to be syngenetic. The RHYi unit appears to be eliminating any syngenetic alteration.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-70	180.4	0	180.4	APS	Cooper Campbell	18-Aug-15		<input checked="" type="checkbox"/>	
41	-69.1	163.2	22.5	185.7	ReflexEVS	Geotech	19-Aug-15	5754	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	9.00	CASN Casing									
9.00	21.40	RHYi Aphanitic Rhyolite (intrusion)	16.90	18.40	1.50	B00264597	3.6	0.011	-0.01	-0.01	-0.01
<<Min: 9 - 21.4 4% Min: Pyrite>>			18.40	19.90	1.50	B00264598	1.5	0.041	-0.01	-0.01	-0.01
<<Min: 9 - 21.4 3% Min: Calcite>>			19.90	21.40	1.50	B00264599	3.5	0.035	-0.01	0.04	0.06
<<Alt: 9 - 21.4 Moderate (Alt) Silicification>>											
<<Alt: 9 - 21.4 Weak-Moderate (Alt) Muscovite>>											
21.40	25.70	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	21.40	23.00	1.60	B00264601	254	2.28	0.3	4.08	12
<<Min: 21.4 - 25.7 3% Min: Calcite>>											
			23.00	24.00	1.00	B00264602	198	1.98	0.31	2.28	8.25
			24.00	25.00	1.00	B00264603	258	3.39	0.49	3	8.71
			25.00	25.70	0.70	B00264604	237	1.67	0.18	4.63	9.54
25.70	27.40	RHY undifferentiated rhyolite	25.70	26.70	1.00	B00264605	2.5	0.04	-0.01	0.04	0.15



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-228

From (m) To (m) Rocktype & Description

<<Min: 25.7 - 27.4 7% Min: Pyrite>>

<<Min: 25.7 - 27.4 1% Min: Calcite>>

<<Alt: 25.7 - 27.4 Weak-Moderate (Alt) Silicification>>

<<Alt: 25.7 - 27.4 Moderate-Strong (Alt) Muscovite>>

27.40 28.90 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

MG

<<Min: 27.4 - 33.5 2% Min: Calcite>>

28.90 30.00 OH Fine grained, megascopically homogeneous pyrite rock

FMG

30.00 31.00 OA Magnetite bearing sulphides

FMG

31.00 33.50 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

MG

<<Struc: 31.73 - 31.74 dominant foliation>>

33.50 62.60 RHYi Aphanitic Rhyolite (intrusion)

<<Min: 33.5 - 62.6 0.5% Min: Sphalerite>>

<<Min: 33.5 - 62.6 5% Min: Pyrite>>

<<Min: 33.5 - 62.6 0.5% Min: Galena>>

<<Min: 33.5 - 62.6 4% Min: Calcite>>

<<Alt: 33.5 - 62.6 Weak-Moderate (Alt) Silicification>>

<<Alt: 33.5 - 62.6 Weak-Moderate (Alt) Muscovite>>

<<Struc: 33.5 - 33.54 Strong (Alt) Fault>>

62.60 85.60 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

62.6 - 85.6: banded alteration, locally intense, CL-BI domains less than 1/2 section

<<Min: 62.6 - 74 10% Min: Calcite>>

<<Min: 62.6 - 85.6 3% Min: Pyrite>>

<<Min: 74 - 76.5 15% Min: Calcite>>

<<Min: 76.5 - 85.6 3% Min: Calcite>>

<<Alt: 62.6 - 73.5 Moderate (Alt) Silicification>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
26.70	27.40	0.70	B00264606	55.2	0.025	0.09	-0.01	0.03

27.40	28.15	0.75	B00264607	158	1.3	0.23	2.97	9.1
-------	-------	------	-----------	-----	-----	------	------	-----

28.15	28.90	0.75	B00264608	140	1.82	0.36	2.65	11
28.90	30.00	1.10	B00264609	177	1.45	0.37	1.73	5.4

30.00	31.00	1.00	B00264611	94.9	0.547	0.31	1.71	5.93
-------	-------	------	-----------	------	-------	------	------	------

31.00	32.00	1.00	B00264612	177	2.77	0.36	3.66	7.82
-------	-------	------	-----------	-----	------	------	------	------

32.00	33.00	1.00	B00264613	96.1	1.12	0.13	2.49	6.92
-------	-------	------	-----------	------	------	------	------	------

33.00	33.50	0.50	B00264614	213	3.59	0.69	1.87	7.43
-------	-------	------	-----------	-----	------	------	------	------

33.50	35.00	1.50	B00264615	6.4	0.023	0.08	0.03	0.07
-------	-------	------	-----------	-----	-------	------	------	------

35.00	36.50	1.50	B00264616	1.2	0.009	-0.01	-0.01	0.01
-------	-------	------	-----------	-----	-------	-------	-------	------

36.50	38.00	1.50	B00264617	1.2	0.013	-0.01	-0.01	0.06
-------	-------	------	-----------	-----	-------	-------	-------	------

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-228

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 62.6 - 73.5 Moderate (Alt) Muscovite>>											
<<Alt: 73.5 - 76.7 Weak (Alt) Silicification>>											
<<Alt: 73.5 - 76.7 Weak (Alt) Muscovite>>											
<<Alt: 73.5 - 76.7 Weak (Alt) Chlorite>>											
<<Alt: 73.5 - 76.7 Weak (Alt) Biotite>>											
<<Alt: 76.7 - 85.6 Strong (Alt) Silicification>>											
<<Alt: 76.7 - 85.6 Strong (Alt) Muscovite>>											
<<Struc: 82.5 - 84.4 Moderate (Alt) Fault>>											
85.60	93.30	RHYi	Aphanitic Rhyolite (intrusion)								
<<Min: 85.6 - 93.3 2% Min: Sphalerite>>											
<<Min: 85.6 - 93.3 3% Min: Pyrite>>											
<<Min: 85.6 - 93.3 2% Min: Calcite>>											
<<Alt: 85.6 - 93.3 Weak (Alt) Silicification>>											
<<Alt: 85.6 - 93.3 Weak (Alt) Muscovite>>											
<<Vein: 85.6 - 89 30% Quartz-Albite>>											
93.30	95.00	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
<<Min: 93.3 - 95 3% Min: Pyrite>>											
<<Min: 93.3 - 95 2% Min: Calcite>>											
<<Alt: 93.3 - 95 Strong (Alt) Silicification>>											
<<Alt: 93.3 - 95 Strong (Alt) Muscovite>>											
End of Hole @ 95											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-229

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Cooper Campbell
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	21-Aug-15
UTM Easting	414749.37	Core Size:	NQ3	Azimuth:	181.38	Date Logging Complete:	22-Aug-15
UTM Northing:	6815426.643	Casing Pulled?:	Yes	Dip:	-70	Drill Company:	Geotech
UTM Elev. (m):	1409.179	Casing Depth (m):	9	Length (m):	110	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	20-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	21-Aug-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

The purpose of this hole is to infill the gap and confirm the resource between K94-038 & K94-039.

The presence of the massive sulphide body was confirmed. The sulphide zone in K15-229 is thicker than that of K94-038 but the thinner than that of K94-039. Structural hanging wall rhyolitic volcanics are present from surface to 43.4 m. The upper 28.7 m of hanging wall volcanics consists of rhyolite flows which contain variable amounts of carbonaceous material and a thin horizon of carbonaceous mudstone. An undifferentiated unit of rhyolitic volcanics sits stratigraphically above the sulphide zone. The ore zone was first intersected at 43.4 m, consists of OB, OA, OI, and OF sulphide types, and is cumulatively 24.15 m thick, cut (diluted) by 9.53 m of RHYi. The stratigraphic footwall consists of MAFi with RHYi. A possible RHYcw unit was identified at the end of the hole. The only syngenetic alteration observed was located 9.53m below the main sulphide body and consisted of moderate to strong muscovite and moderate to strong chlorite alteration over 3.38 m thickness.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-70	181.38	0	181.38	APS	Cooper Campbell	20-Aug-15		<input checked="" type="checkbox"/>	
25	-67.6	160.6	22.5	183.1	ReflexEVS	Geotech	20-Aug-15	5827	<input checked="" type="checkbox"/>	
77	-66.1	159.2	22.5	181.7	ReflexEVS	Geotech	21-Aug-15	5722	<input checked="" type="checkbox"/>	
110	-66.4	159.5	22.5	182	ReflexEVS	Geotech	21-Aug-15	5712	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	8.27	OVBN Overburden									
8.27	10.94	MDSw Coherent rhyolite flow with carbonaceous content									
<<Min: 8.27 - 23.35 0.25% Min: Pyrite>>											
<<Min: 8.27 - 28.7 0.01% Min: Chalcopryite>> BL and FD											
<<Alt: 8.27 - 14 Moderate (Alt) Muscovite>>											
10.94	11.58	MDSc Carbonaceous dominant mudstone									
<<Vein: 11.43 - 29.69 3% Quartz-Carbonate-Sulphide 45 deg. >> CP											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-229

From (m) To (m) Rocktype & Description

11.58 22.40 MDSw Coherent rhyolite flow with carbonaceous content

<<Alt: 14 - 18.86 Strong (Alt) Muscovite>>

<<Alt: 18.86 - 24.5 Moderate (Alt) Muscovite>>

<<Struc: 20.6 - 24.5 Weak (Alt) Fault>> Broken rock and trace fault gouge.

22.40 23.35 MDSc Carbonaceous dominant mudstone

23.35 28.70 RHYcw Curdy textured-flow banded (flows, subvolcanics)

<<Min: 23.35 - 28.7 0.01% Min: Sphalerite>> VEN, FD, and WIS

<<Min: 23.35 - 28.7 0.01% Min: Galena>> VEN, FD, and WIS

<<Min: 23.35 - 33.97 1% Min: Pyrite>>

<<Alt: 24.5 - 29.9 Moderate-Strong (Alt) Muscovite>>

<<Struc: 28.15 - 28.16 dominant foliation>>

<<Struc: 28.17 - 28.18 Foliation>>

28.70 33.97 RHYi Aphanitic Rhyolite (intrusion)

<<Alt: 29.9 - 31.2 Strong (Alt) Silicification>>

<<Alt: 29.9 - 31.2 Moderate (Alt) Muscovite>>

<<Alt: 31.2 - 33.97 Intense (Alt) Silicification>>

<<Alt: 31.2 - 33.97 Weak (Alt) Muscovite>>

<<Struc: 32.98 - 32.99 dominant foliation>>

<<Struc: 33.1 - 33.11 dominant foliation>>

33.97 43.40 RHYv Rhyolite volcanoclastic

<<Min: 33.97 - 43.4 0.25% Min: Sphalerite>> DIS

<<Min: 33.97 - 43.4 3% Min: Pyrite>>

<<Min: 33.97 - 43.4 0.01% Min: Galena>> FD

<<Min: 33.97 - 43.4 0.01% Min: Chalcopyrite>>

<<Alt: 33.97 - 43.4 Strong (Alt) Silicification>>

<<Alt: 33.97 - 43.4 Moderate-Strong (Alt) Muscovite>>

<<Struc: 37.44 - 37.45 dominant foliation>>

43.40 47.60 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

38.90	40.40	1.50	B00266509	46	0.25	0.05	0.22	0.81
40.40	41.90	1.50	B00266511	36	0.522	-0.01	0.72	1.14
41.90	43.40	1.50	B00266512	1.9	0.018	-0.01	-0.01	0.01

43.40	44.00	0.60	B00266513	499	3.36	0.44	3.55	10.6
-------	-------	------	-----------	-----	------	------	------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-229

From (m) To (m) Rocktype & Description

<<Struc: 43.59 - 43.6 dominant foliation>>

47.60 50.18 OA Magnetite bearing sulphides

<<Struc: 49.77 - 49.78 dominant foliation>>

50.18 61.13 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

61.13 61.95 OA Magnetite bearing sulphides

61.95 64.17 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Struc: 61.95 - 61.96 dominant foliation>>

64.17 73.70 RHYi Aphanitic Rhyolite (intrusion)

<<Min: 64.17 - 73.7 0.01% Min: Sphalerite>>

<<Min: 64.17 - 73.7 0.25% Min: Pyrite>>

<<Min: 64.17 - 73.7 0.01% Min: Pyrrhotite>>

<<Min: 64.17 - 73.7 0.01% Min: Galena>>

<<Alt: 64.17 - 73.7 Moderate-Strong (Alt) Silicification>>

<<Alt: 64.17 - 73.7 Weak-Moderate (Alt) Muscovite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
44.00	45.00	1.00	B00266519	264	2.38	0.49	2.03	6.95
45.00	46.00	1.00	B00266521	180	2.74	0.5	1.89	5.71
46.00	47.00	1.00	B00266522	125	1.17	0.17	1.83	4.92
47.00	48.00	1.00	B00266523	154	1.95	0.49	2.41	6.92
48.00	49.00	1.00	B00266524	152	0.677	0.26	5.14	10.2
49.00	49.50	0.50	B00266525	106	0.928	0.75	2.45	7.76
49.50	50.18	0.68	B00266526	142	1.55	0.95	3.14	13.2
50.18	51.00	0.82	B00266527	166	1.84	0.38	2.95	8.83

51.00	53.00	2.00	B00266528	152	1.46	0.24	2.57	7.82
53.00	54.00	1.00	B00266529	239	1.06	0.2	3.44	13.3
54.00	55.00	1.00	B00266531	181	0.62	0.13	3.05	14.6
55.00	56.00	1.00	B00266532	347	2.78	0.86	2.65	9.76
56.00	57.00	1.00	B00266533	144	0.952	0.31	3.8	11.6
57.00	58.00	1.00	B00266534	350	1.58	0.68	1.89	8.54
58.00	59.00	1.00	B00266535	187	2.17	0.67	1.29	6.8
59.00	60.00	1.00	B00266536	76.6	0.845	0.26	0.6	2.75
60.00	60.50	0.50	B00266537	49.1	0.588	0.09	1.11	5.29
60.50	61.13	0.63	B00266538	134	2.32	0.53	0.58	2.15
61.13	61.95	0.82	B00266539	119	0.815	0.26	2.48	7.71
61.95	63.00	1.05	B00266541	181	1.53	0.31	3.18	6.54

63.00	63.50	0.50	B00266542	114	1.49	0.36	0.48	2.81
63.50	64.17	0.67	B00266543	139	0.934	0.3	1.2	6.56
64.17	65.67	1.50	B00266544	4.2	0.011	0.01	0.06	0.12
65.67	67.17	1.50	B00266545	3.2	0.012	-0.01	0.05	0.1
67.17	68.67	1.50	B00266546	1.1	0.008	-0.01	-0.01	0.02
72.20	73.70	1.50	B00266547	1	0.031	-0.01	0.01	0.02



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-229

From (m) To (m) Rocktype & Description

73.70 76.26 OI Heavily disseminated sulphides in host schist

<<Alt: 73.7 - 77.08 Moderate-Strong (Alt) Muscovite>>

<<Alt: 73.7 - 77.08 Weak (Alt) Chlorite>>

<<Vein: 74.28 - 79.8 15% Quartz-Carbonate-Sulphide>> SP, GL

76.26 77.08 OF Pyrrhotite rich sulphides

<<Struc: 76.95 - 76.96 dominant foliation>>

77.08 81.76 RHYvx Quartz and/or feldspar crystal tuff

<<Min: 77.08 - 81.76 0.01% Min: Sphalerite>> VEN

<<Min: 77.08 - 81.76 0.25% Min: Pyrite>>

<<Min: 77.08 - 81.76 0.01% Min: Galena>> VEN

<<Alt: 77.08 - 82.69 Weak (Alt) Chlorite>>

<<Alt: 77.08 - 92.3 Weak (Alt) Muscovite>>

<<Vein: 81.7 - 102.35 5% Quartz-Carbonate 70 deg. >>

81.76 97.59 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

<<Min: 81.76 - 87.56 3% Min: Pyrite>>

<<Min: 87.56 - 97.59 1% Min: Sphalerite>> WIS

<<Min: 87.56 - 97.59 1% Min: Pyrite>>

<<Min: 87.56 - 97.59 0.01% Min: Galena>> WIS

<<Min: 87.56 - 102.35 0.01% Min: Pyrrhotite>>

<<Alt: 82.69 - 87.56 Moderate (Alt) Chlorite>>

<<Alt: 82.69 - 87.56 Moderate-Strong (Alt) Biotite>>

<<Alt: 87.56 - 97.59 Weak (Alt) Chlorite>>

<<Alt: 92.3 - 97.59 Moderate (Alt) Muscovite>>

<<Alt: 96.59 - 97.59 Weak (Alt) Biotite>>

<<Struc: 88.83 - 88.84 dominant foliation>>

<<Struc: 94.53 - 94.54 dominant foliation>>

97.59 101.52 RHYi Aphanitic Rhyolite (intrusion)

<<Min: 97.59 - 102.35 1% Min: Sphalerite>> Foliation parallel. Separates siliceous domains.

<<Min: 97.59 - 102.35 0.5% Min: Pyrite>>

<<Min: 97.59 - 109.4 0.01% Min: Chalcopyrite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
73.70	74.70	1.00	B00266548	223	0.529	0.74	1.38	3.03
74.70	76.26	1.56	B00266549	24.3	0.089	0.15	0.41	0.91
76.26	77.08	0.82	B00266551	143	0.174	0.25	5.1	11.9
77.08	78.58	1.50	B00266552	4.6	0.006	0.02	0.21	0.36
78.58	80.08	1.50	B00266553	-0.3	-0.005	-0.01	-0.01	0.02
80.08	81.58	1.50	B00266554	4.9	0.029	-0.01	0.13	0.13



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-229

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 97.59 - 101.52 Strong (Alt) Silicification>>											
<<Alt: 97.59 - 101.52 Moderate-Strong (Alt) Muscovite>>											
101.52	109.40	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<<Min: 102.35 - 109.4 0.25% Min: Pyrrhotite>>											
<<Min: 102.35 - 110 0.01% Min: Sphalerite>>											
<<Min: 102.35 - 110 1% Min: Pyrite>>											
<<Alt: 101.52 - 102.35 Moderate-Strong (Alt) Silicification>>											
<<Alt: 101.52 - 106.9 Moderate (Alt) Chlorite>>											
<<Alt: 101.52 - 108.04 Weak-Moderate (Alt) Muscovite>>											
<<Alt: 102.35 - 106.9 Weak-Moderate (Alt) Biotite>>											
<<Alt: 106.9 - 108.04 Strong (Alt) Chlorite>>											
<<Alt: 108.04 - 110 Moderate (Alt) Muscovite>>											
<<Alt: 108.04 - 110 Trace (Alt) Chlorite>>											
<<Struc: 105.46 - 108 Weak (Alt) Fault>> Trace fault gouge.											
109.40	110.00	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
End of Hole @ 110											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-230

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	David Nuttal
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	22-Aug-15
UTM Easting	414871.81	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	22-Aug-15
UTM Northing:	6815378.906	Casing Pulled?:	Yes	Dip:	-55	Drill Company:	Geotech
UTM Elev. (m):	1390.693	Casing Depth (m):	12	Length (m):	41	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	21-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	22-Aug-15
Local Elev. (m):						Purpose:	Metallurgical Twin
Comments:						Parent Hole:	K15-227

This hole is a twin of K15-227 to collect oxidised sample of MET7 & MET6 domains and for increased MET spatial coverage. The hole was drilled to 41m depth and successfully captures the portion of massive sulphide to be analysed for MET7 and MET6 domains. Massive sulphide (OB) occurs below and adjacent to overburden cobbles and gravels. Massive sulphide intervals are 11.3m to 12m (OB), 12.5m to 12.8m (OB), 13.2m to 18.45m (OA, OB) and 35.6m to 37.5m. Only intervals between 11.3m to 18.45m were sampled for MET.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-55	180	0	180	APS	David Nuttal	21-Aug-15		<input checked="" type="checkbox"/>	
35	-54.7	158.9	22.5	181.4	ReflexEVS	Geotech	22-Aug-15	5683	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	11.30	OVBN Overburden									
11.30	12.00	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	11.30	12.00	0.70						
12.00	12.50	RHYv Rhyolite volcaniclastic	12.00	12.50	0.50						
<<Min: 12 - 12.5 1% Min: Pyrite>>											
<<Alt: 12 - 12.5 Moderate (Alt) Muscovite>>											
<<Struc: 12.25 - 12.3 Fault>> fault gouge. Parallel to foliation.											
12.50	12.80	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	12.50	12.80	0.30						
12.80	13.20	RHYv Rhyolite volcaniclastic	12.80	13.20	0.40						
<<Min: 12.8 - 13.2 0.5% Min: Pyrite>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-230

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 12.8 - 13.2 Moderate (Alt) Muscovite>>											
13.20	16.55	OA Magnetite bearing sulphides	13.20	14.20	1.00						
			14.20	14.80	0.60						
			14.80	15.60	0.80						
			15.60	16.55	0.95						
			16.55	17.00	0.45						
16.55	18.00	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides									
			17.00	18.00	1.00						
18.00	18.20	OA Magnetite bearing sulphides	18.00	18.45	0.45						
18.20	18.45	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides									
18.45	23.50	RHYv Rhyolite volcaniclastic	18.45	19.45	1.00						
<<Min: 18.45 - 18.9 2% Min: Sphalerite>>											
<<Min: 18.45 - 18.9 2% Min: Pyrite>>											
<<Min: 18.45 - 18.9 0.5% Min: Galena>>											
<<Min: 18.45 - 18.9 1% Min: Chalcopyrite>>											
<<Min: 18.5 - 23.9 1% Min: Calcite>>											
<<Min: 18.9 - 35.6 1% Min: Pyrite>>											
<<Min: 18.9 - 35.6 0.25% Min: Pyrrhotite>>											
<<Alt: 18.45 - 24.5 Weak (Alt) Muscovite>>											
<<Vein: 22.7 - 25.9 25% Quartz-Carbonate>>											
23.50	30.10	RHYcw Curdy textured-flow banded (flows, subvolcanics)	23.50	24.50	1.00						
<<Min: 23.9 - 33 3% Min: Calcite>>											
<<Alt: 24.5 - 29 Weak-Moderate (Alt) Muscovite>>											
<<Alt: 29 - 35 Trace (Alt) Muscovite>>											
30.10	35.60	RHYv Rhyolite volcaniclastic	24.50	25.50	1.00						
<<Min: 33 - 35.6 5% Min: Calcite>>											
			25.50	26.50	1.00						
			26.50	27.50	1.00						
			27.50	28.50	1.00						
			28.50	29.50	1.00						
			29.50	30.10	0.60						
			30.10	31.10	1.00						
			31.10	32.10	1.00						



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-230

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 35 - 35.6 Weak-Moderate (Alt) Muscovite>>			32.10	33.10	1.00						
<<Vein: 33 - 37.8 7% Quartz-Carbonate>>			33.10	34.10	1.00						
<<Struc: 32.2 - 32.25 Fault>> fault gouge			34.10	35.10	1.00						
			35.10	35.60	0.50						
35.60	36.70	OB	35.60	36.70	1.10						
<<Min: 35.6 - 37.5 2% Min: Calcite>>											
36.70	37.50	OI	36.70	37.50	0.80						
37.50	41.00	RHYv	37.50	38.50	1.00						
<<Min: 37.5 - 41 1% Min: Pyrite>>			38.50	39.50	1.00						
<<Min: 37.5 - 41 1% Min: Calcite>>			39.50	40.50	1.00						
<<Alt: 37.5 - 41 Weak (Alt) Muscovite>>			40.50	41.00	0.50						
<<Struc: 38.3 - 40.9 Fault>> Large zone of broken and milled core, poor recovery and abundant fault gauge present.											
End of Hole @ 41											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-231

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Cooper Campbell
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	23-Aug-15
UTM Easting	414750.054	Core Size:	NQ3	Azimuth:	180	Date Logging Complete:	25-Aug-15
UTM Northing:	6815467.364	Casing Pulled?:	Yes	Dip:	-70	Drill Company:	Geotech
UTM Elev. (m):	1408.099	Casing Depth (m):	4.5	Length (m):	176	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	21-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	23-Aug-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

The purpose of this whole was to confirm the resource between K94 - 039 & K94 - 007.

From surface to 52.9 m K15-236 consists of a thick package of rhyolite flows +/- carbonaceous material and carbonaceous mudstones. The shallowest of two massive sulphide intercepts consisting of OA, OB, and OH ore types was intersected between 52.9-73.3 m (20.4 m total thickness). The two massive sulphide intercepts are separated by RHYi and RHYvx between 73.03 -82.5 m. The deeper of the two massive sulphide intercepts consisting of OB, OA ore types was intersected between 82.5-89.78 m (7.28 m total thickness). The lower sulphide zone contains 2.25 m of RHYv. The structural footwall consists of MAFi intruded by RHYi, both of which sit stratigraphically above a thick succession of RHYvx and RHYvl. The footwall was intersected between 97.52-176.0 m. A thin unit of what appeared to be OJ was intersected between 127.12-127.9 m.

There is no syngenetic alteration in the felsic volcanic hanging wall. Weak to moderate MU and moderate to strong CL syngenetic alteration is present within a the unit of RHYv in the lower ore zone(89.78-92.03 m). Moderate MU and CL syngenetic alteration is present from 98.37-99.8 m; weak CI alteration present between 98.37-98.66 m. Syngenetic alteration of the footwall has been eliminated by MAFi and RHYi units with the exception of a thin zone of strong CL, moderate CI, and weak BI alteration between 127.12 and 127.9 m. Alteration of the footwall is characterized by a strong CL, and weak BI overprint as well as strong to intense silicification associated with RHYi.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-70	180	0	180	APS	Cooper Campbell	22-Aug-15		<input checked="" type="checkbox"/>	
26	-68.5	160.1	22.5	182.6	ReflexEVS	Geotech	22-Aug-15	5826	<input checked="" type="checkbox"/>	
65	-69	149.3	22.5	171.8	ReflexEVS	Geotech	22-Aug-15	6033	<input type="checkbox"/>	Hit fault at 56 to 59 m. Driller was going to do a survey but chose not to because of bad ground. High magnetic field likely resulting in incorrect survey.
95	-68.3	163.5	22.5	186	ReflexEVS	Geotech	22-Aug-15	5637	<input checked="" type="checkbox"/>	
128	-68.6	163.1	22.5	185.6	ReflexEVS	Geotech	23-Aug-15	5750	<input checked="" type="checkbox"/>	
176	-67.9	168.5	22.5	191	ReflexEVS	Geotech	23-Aug-15	5746	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	4.00	OVBN Overburden									
4.00	5.50	MDSw Coherent rhyolite flow with carbonaceous content									
<<Min: 4 - 38.76 0.01% Min: Sphalerite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-231

From (m)			To (m)			Rocktype & Description			From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 4 - 38.76 3% Min: Pyrite>>																	
<<Min: 4 - 38.76 0.01% Min: Galena>>																	
<<Alt: 4 - 28.37 Weak-Moderate (Alt) Muscovite>>																	
<<Struc: 4 - 30.85 Weak (Alt) Fault>> Narrow brittle faults with minor gouge and broken rock. Low intensity faults spaced metres apart.																	
5.50	18.00	RHYcw	Curdy textured-flow banded (flows, subvolcanics)														
18.00	25.92	MDSw	Coherent rhyolite flow with carbonaceous content														
25.92	28.37	MDSc	Carbonaceous dominant mudstone														
28.37	38.76	MDSw	Coherent rhyolite flow with carbonaceous content														
<<Alt: 28.37 - 38.76 Moderate (Alt) Muscovite>>																	
38.76	52.90	RHYcw	Curdy textured-flow banded (flows, subvolcanics)														
<<Min: 38.76 - 45.22 0.25% Min: Sphalerite>> VN																	
<<Min: 38.76 - 45.22 2% Min: Pyrite>>																	
<<Min: 38.76 - 45.22 0.25% Min: Galena>> VN																	
<<Min: 38.76 - 45.22 0.5% Min: Chalcopyrite>>																	
<<Min: 45.22 - 47 5% Min: Sphalerite>>																	
<<Min: 45.22 - 47 7% Min: Pyrite>>																	
<<Min: 45.22 - 47 2% Min: Galena>>																	
<<Min: 45.22 - 47 0.5% Min: Chalcopyrite>>																	
<<Min: 47 - 52.9 0.01% Min: Sphalerite>>																	
<<Min: 47 - 52.9 1% Min: Pyrite>>																	
<<Min: 47 - 52.9 0.01% Min: Galena>>																	
<<Alt: 38.76 - 48.56 Moderate-Strong (Alt) Muscovite>>																	
<<Alt: 48.56 - 52.9 Strong (Alt) Muscovite>>																	
<<Struc: 45 - 45.13 Weak (Alt) Fault>> Narrow high intensity fault in massive sulphide. 100% fault gouge.																	
<<Struc: 46.1 - 46.11 dominant foliation>>																	
<<Struc: 46.57 - 46.58 dominant foliation>>																	
<<Struc: 48.56 - 58.85 Weak (Alt) Fault>> Variable orientation. Narrow brittle faults with minor gouge and broken rock. Low intensity faults spaced metres apart.																	

43.72	45.22	1.50	B00266555	8.1	0.16	0.3	0.02	0.05
-------	-------	------	-----------	-----	------	-----	------	------

45.22	46.00	0.78	B00266556	6.5	0.056	-0.01	0.16	0.29
46.00	47.00	1.00	B00266557	19.6	0.441	0.81	0.21	5.74
47.00	48.40	1.40	B00266558	5.7	0.1	0.13	0.06	0.34
48.40	49.90	1.50	B00266559	1	-0.005	-0.01	0.02	0.03
49.90	51.40	1.50	B00266561	2.8	0.039	0.03	0.02	0.05
51.40	52.90	1.50	B00266562	36	0.385	0.11	0.1	0.39

43.72	45.22	1.50	B00266555	8.1	0.16	0.3	0.02	0.05
45.22	46.00	0.78	B00266556	6.5	0.056	-0.01	0.16	0.29
46.00	47.00	1.00	B00266557	19.6	0.441	0.81	0.21	5.74
47.00	48.40	1.40	B00266558	5.7	0.1	0.13	0.06	0.34
48.40	49.90	1.50	B00266559	1	-0.005	-0.01	0.02	0.03
49.90	51.40	1.50	B00266561	2.8	0.039	0.03	0.02	0.05
51.40	52.90	1.50	B00266562	36	0.385	0.11	0.1	0.39



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-231

From (m)		To (m)		Rocktype & Description									
52.90	56.90	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
					52.90	54.00	1.10	B00266563	251	2.27	0.4	4.28	9.78
					54.00	55.00	1.00	B00266564	256	3.26	0.52	4.21	7.39
					55.00	56.00	1.00	B00266565	392	2.73	0.63	4.33	9.91
					56.00	56.90	0.90	B00266566	211	1.1	0.73	3.85	7.98
56.90	58.00	OA	Magnetite bearing sulphides	MG	56.90	58.00	1.10	B00266567	91.8	0.281	0.23	2.14	4.89
					58.00	59.00	1.00	B00266568	206	1.88	0.4	4.03	13
58.00	59.50	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	59.00	59.50	0.50	B00266569	290	2.94	0.81	3.02	8.91
					59.50	60.00	0.50	B00266571	48.7	1.36	0.42	0.79	10.3
61.33	67.23	OA	Magnetite bearing sulphides	MG	60.00	61.33	1.33	B00266572	154	1.7	0.7	1.77	5.73
					61.33	62.00	0.67	B00266573	140	1.1	1.17	1.79	6.82
<<Struc: 61.51 - 61.52 dominant foliation>>					62.00	63.00	1.00	B00266574	86.2	1.37	1.57	0.35	5.35
<<Struc: 62.98 - 62.99 dominant foliation>>					63.00	64.00	1.00	B00266575	28.8	0.953	1.14	0.1	5.16
<<Struc: 63.12 - 63.13 dominant foliation>>					64.00	65.00	1.00	B00266576	54	0.602	0.76	0.46	7.78
<<Struc: 64.85 - 64.86 dominant foliation>>					65.00	66.00	1.00	B00266577	113	0.936	0.66	1.44	4.94
<<Struc: 67.05 - 67.06 dominant foliation>>					66.00	66.50	0.50	B00266578	56.4	0.77	0.66	0.62	3.5
67.23	73.03	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	66.50	67.23	0.73	B00266579	66.6	0.873	0.37	1.11	8.14
					67.23	68.00	0.77	B00266581	85.2	1.09	0.23	1.29	7.63
					68.00	69.00	1.00	B00266582	177	2.26	0.59	0.49	2.32
<<Struc: 69.43 - 69.44 dominant foliation>>					69.00	70.00	1.00	B00266583	117	1.48	0.22	0.43	4.16
<<Struc: 71.66 - 71.67 dominant foliation>>					70.00	71.00	1.00	B00266584	221	2.35	0.35	0.95	4.82
73.03	79.83	RHYi	Aphanitic Rhyolite (intrusion)		71.00	72.00	1.00	B00266585	162	1.4	0.1	1.31	4.96
					72.00	73.03	1.03	B00266586	337	4.03	0.44	1.39	5.52
					73.03	74.50	1.47	B00266587	11.3	0.169	0.11	0.1	1.19
					74.50	76.00	1.50	B00266588	21.5	0.191	-0.01	0.03	0.6
					76.00	77.50	1.50	B00266589	55.1	0.554	-0.01	0.04	0.59
					77.50	79.00	1.50	B00266591	12.3	0.309	-0.01	0.01	0.14
					<<Min: 73.18 - 81.74 2% Min: Sphalerite>>								
<<Min: 73.18 - 81.74 3% Min: Pyrite>>													
<<Min: 73.18 - 81.74 0.01% Min: Galena>>													



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-231

From (m) To (m) Rocktype & Description

<<Min: 73.18 - 81.74 0.01% Min: Chalcopryite>>

<<Min: 73.18 - 82.5 3% Min: Calcite>>

<<Alt: 73.18 - 82.5 Moderate-Strong (Alt) Silicification>>

<<Alt: 73.18 - 82.5 Moderate (Alt) Muscovite>>

<<Struc: 74.09 - 74.1 dominant foliation>>

<<Struc: 76.44 - 76.45 dominant foliation>>

<<Struc: 79.59 - 79.6 dominant foliation>>

79.83 82.50 RHYvx Quartz and/or feldspar crystal tuff

<<Min: 81.74 - 82.5 0.01% Min: Sphalerite>>

<<Min: 81.74 - 82.5 0.5% Min: Pyrite>>

<<Min: 81.74 - 82.5 0.01% Min: Galena>>

<<Min: 81.74 - 82.5 0.5% Min: Chalcopryite>>

<<Vein: 81.74 - 82.5 100% Quartz-Carbonate-Sulphide 50 deg. >> PY, CP, GL, SP

82.50 83.22 OA Magnetite bearing sulphides

83.22 88.04 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

83.22 - 88.04: Short medium grained OA intercepts from 84.04-84.17 m and 86.56-86.78 m

<<Struc: 85.35 - 85.36 dominant foliation>>

<<Struc: 86.58 - 86.59 dominant foliation>>

88.04 88.46 OA Magnetite bearing sulphides

88.46 89.78 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

89.78 92.03 RHYv Rhyolite volcanoclastic

<<Min: 89.78 - 92.03 0.5% Min: Sphalerite>>

<<Min: 89.78 - 92.03 1% Min: Pyrite>>

<<Alt: 89.78 - 92.03 Weak-Moderate (Alt) Muscovite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
79.00	80.50	1.50	B00266592	16.2	0.153	-0.01	0.06	0.15

80.50	81.74	1.24	B00266593	4.6	0.041	-0.01	0.03	0.02
-------	-------	------	-----------	-----	-------	-------	------	------

81.74	82.50	0.76	B00266594	25.9	0.149	0.53	0.09	0.36
-------	-------	------	-----------	------	-------	------	------	------

82.50	83.22	0.72	B00266595	114	1.81	1.55	0.49	5.58
-------	-------	------	-----------	-----	------	------	------	------

83.22	84.20	0.98	B00266596	137	1.54	0.54	2.84	8.23
-------	-------	------	-----------	-----	------	------	------	------

84.20	85.20	1.00	B00266597	69.1	1.42	0.33	0.95	3.72
-------	-------	------	-----------	------	------	------	------	------

85.20	86.20	1.00	B00266598	108	1.43	0.41	1.18	7.78
-------	-------	------	-----------	-----	------	------	------	------

86.20	87.20	1.00	B00266599	98.2	0.977	0.47	1.14	4.02
-------	-------	------	-----------	------	-------	------	------	------

87.20	88.04	0.84	B00266601	120	1.1	0.15	3.63	7.15
-------	-------	------	-----------	-----	-----	------	------	------

88.04	88.46	0.42	B00266602	121	0.882	0.3	4.58	8.09
-------	-------	------	-----------	-----	-------	-----	------	------

88.46	89.00	0.54	B00266603	149	2.44	0.43	2.16	8.81
-------	-------	------	-----------	-----	------	------	------	------

89.00	89.78	0.78	B00266604	134	2.25	0.5	1.63	7.91
-------	-------	------	-----------	-----	------	-----	------	------

89.78	91.00	1.22	B00266605	24.3	0.388	0.08	0.04	0.11
-------	-------	------	-----------	------	-------	------	------	------

91.00	92.03	1.03	B00266606	32	0.169	0.06	0.1	0.31
-------	-------	------	-----------	----	-------	------	-----	------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-231
From (m) **To (m)** **Rocktype & Description**

<<Alt: 91.48 - 92.03 Moderate-Strong (Alt) Chlorite>>

<<Struc: 90.34 - 92 Weak (Alt) Fault>> Narrow brittle faults with minor gouge and broken rock. Low intensity faults spaced metres apart.

**92.03 97.52 OB Wispy laminate, fine
buckshot textured, non-
magnetite bearing sulphides**

MG

<<Struc: 92.75 - 92.76 dominant foliation>>

<<Struc: 93.3 - 93.4 dominant foliation>>

<<Struc: 94.54 - 94.55 dominant foliation>>

**97.52 98.37 MAFi Mafic Intrusions (primarily
footwall mafic intrusion)**

<<Min: 97.52 - 99.8 0.01% Min: Sphalerite>>

<<Min: 97.52 - 99.8 3% Min: Pyrite>>

<<Min: 97.52 - 118.89 10% Min: Calcite>>

<<Alt: 97.52 - 98.37 Weak-Moderate (Alt) Muscovite>>

<<Alt: 97.52 - 98.37 Moderate (Alt) Chlorite>>

<<Alt: 97.52 - 98.37 Trace (Alt) Biotite>>

98.37 99.80 RHYv Rhyolite volcaniclastic

<<Alt: 98.37 - 98.66 Weak (Alt) Cordierite>>

<<Alt: 98.37 - 99.8 Moderate (Alt) Muscovite>>

<<Alt: 98.37 - 99.8 Moderate (Alt) Chlorite>>

**99.80 119.37 MAFi Mafic Intrusions (primarily
footwall mafic intrusion)**

<<Min: 99.8 - 118.89 0.01% Min: Pyrite>>

<<Min: 118.89 - 125.36 1% Min: Sphalerite>>

<<Min: 118.89 - 125.36 0.01% Min: Pyrite>>

<<Min: 118.89 - 125.36 0.5% Min: Pyrrhotite>>

<<Min: 118.89 - 125.36 3% Min: Calcite>>

<<Alt: 99.8 - 102.53 Moderate (Alt) Muscovite>>

<<Alt: 99.8 - 102.53 Weak-Moderate (Alt) Chlorite>>

<<Alt: 102.53 - 118.89 Moderate-Strong (Alt) Chlorite>>

<<Alt: 102.53 - 118.89 Moderate-Strong (Alt) Biotite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

92.03	93.00	0.97	B00266607	439	5.6	0.64	2.73	4.76
-------	-------	------	-----------	-----	-----	------	------	------

93.00	94.00	1.00	B00266608	576	4.82	0.55	4.71	9.22
-------	-------	------	-----------	-----	------	------	------	------

94.00	95.00	1.00	B00266609	282	1.98	0.32	3.5	10
-------	-------	------	-----------	-----	------	------	-----	----

95.00	96.00	1.00	B00266612	218	2.21	0.41	3.94	8.42
-------	-------	------	-----------	-----	------	------	------	------

96.00	97.00	1.00	B00266613	175	1.74	0.41	3.58	9.98
-------	-------	------	-----------	-----	------	------	------	------

97.00	97.52	0.52	B00266614	71.3	0.405	0.07	1.81	6.16
-------	-------	------	-----------	------	-------	------	------	------

97.52	98.37	0.85	B00266615	11.4	0.072	0.01	0.41	0.31
-------	-------	------	-----------	------	-------	------	------	------

98.37	99.80	1.43	B00266616	3	0.011	0.01	0.13	0.15
-------	-------	------	-----------	---	-------	------	------	------

99.80	101.30	1.50	B00266617	1.3	-0.005	-0.01	0.03	0.06
-------	--------	------	-----------	-----	--------	-------	------	------

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-231

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 118.89 - 125.41 Strong (Alt) Silicification>>											
<<Alt: 118.89 - 125.41 Weak-Moderate (Alt) Muscovite>>											
<<Vein: 99.8 - 161.12 6% Quartz-Carbonate-Sulphide 50 deg. >> Trace PY, SP, PO, CP BLEB.											
<<Struc: 102.05 - 108.3 Weak (Alt) Fault>> Narrow brittle faults with minor gouge and broken rock. Low intensity faults spaced metres apart.											
<<Struc: 115.36 - 115.37 dominant foliation>>											
119.37	125.36	RHYi	Aphanitic Rhyolite (intrusion)								
125.36	127.12	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
<<Min: 125.36 - 127.12 0.01% Min: Pyrite>>											
<<Min: 125.36 - 127.12 0.25% Min: Pyrrhotite>>											
<<Min: 125.36 - 127.9 7% Min: Calcite>>											
<<Alt: 125.41 - 127.12 Moderate-Strong (Alt) Chlorite>>											
<<Alt: 125.41 - 127.12 Weak (Alt) Biotite>>											
127.12	127.90	OJ	Heavilly disseminated sulphides in proximal altered rock								
<<Min: 127.12 - 127.9 2% Min: Pyrrhotite>>											
<<Min: 127.12 - 127.9 1% Min: Chalcopyrite>>											
<<Alt: 127.12 - 127.9 Strong (Alt) Chlorite>>											
<<Alt: 127.12 - 127.9 Moderate (Alt) Cordierite>>											
<<Alt: 127.12 - 127.9 Weak (Alt) Biotite>>											
127.90	131.93	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
<<Min: 127.9 - 131.93 0.01% Min: Pyrrhotite>>											
<<Min: 127.9 - 131.93 1% Min: Calcite>>											
<<Alt: 127.9 - 131.93 Strong (Alt) Chlorite>>											
<<Alt: 127.9 - 131.93 Trace (Alt) Biotite>>											
131.93	146.56	RHYvx	Quartz and/or feldspar crystal tuff								
131.93 - 146.56: QZ eyes.											
<<Min: 131.93 - 142.94 0.01% Min: Pyrrhotite>>											
<<Min: 131.94 - 142.94 0.01% Min: Sphalerite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-231

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 131.94 - 142.94 0.01% Min: Pyrite>>											
<<Min: 131.94 - 142.94 0.01% Min: Galena>>											
<<Min: 142.94 - 145.07 0.25% Min: Sphalerite>>											
<<Min: 142.94 - 145.07 1% Min: Pyrrhotite>>											
<<Min: 145.07 - 176 0.01% Min: Sphalerite>>											
<<Min: 145.07 - 176 0.25% Min: Pyrite>>											
<<Min: 145.07 - 176 0.5% Min: Pyrrhotite>>											
<<Min: 145.88 - 163.41 1% Min: Calcite>>											
<<Alt: 131.93 - 152.69 Moderate-Strong (Alt) Muscovite>>											
<<Alt: 141.22 - 145.07 Moderate (Alt) Chlorite>>											
<<Alt: 145.07 - 149.09 Weak (Alt) Chlorite>>											
146.56	158.89	RHYvl Lapilli tuff									
<<Alt: 149.09 - 152.69 Weak-Moderate (Alt) Chlorite>>											
<<Alt: 149.09 - 152.69 Weak-Moderate (Alt) Biotite>>											
<<Alt: 152.69 - 158.89 Weak (Alt) Chlorite>>											
<<Alt: 152.69 - 158.89 Trace (Alt) Biotite>>											
<<Alt: 152.69 - 163.41 Moderate (Alt) Muscovite>>											
158.89	160.77	RHYvx Quartz and/or feldspar crystal tuff									
<<Alt: 158.89 - 160.77 Weak-Moderate (Alt) Chlorite>>											
<<Alt: 158.89 - 160.77 Weak-Moderate (Alt) Biotite>>											
160.77	163.41	RHYvl Lapilli tuff									
<<Alt: 160.77 - 163.41 Weak (Alt) Chlorite>>											
<<Alt: 160.77 - 163.41 Trace (Alt) Biotite>>											
163.41	176.00	RHYvx Quartz and/or feldspar crystal tuff									
<<Min: 163.41 - 176 10% Min: Calcite>>											
<<Alt: 163.41 - 176 Weak-Moderate (Alt) Muscovite>>											
<<Alt: 163.41 - 176 Weak-Moderate (Alt) Chlorite>>											
<<Alt: 163.41 - 176 Weak-Moderate (Alt) Biotite>>											
End of Hole @ 176											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-232

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	David Nuttal
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	23-Aug-15
UTM Easting	414843.564	Core Size:	NQ3	Azimuth:	180.68	Date Logging Complete:	25-Aug-15
UTM Northing:	6815601.358	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1395.499	Casing Depth (m):	3	Length (m):	209	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	22-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	24-Aug-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

This hole is designed to confirm resource grade between K94-047 & K94-010.

The structural hanging wall of this hole is composed of metamorphosed clastic and coherent felsic volcanics mixed with biotite rich/carbonaceous mudstones and small foliation parallel mafic intrusives. In the structural hangingwall muscovite alteration is pervasive and intensity increases towards the ore body. Proximal to the massive sulphide is an increasing intensity of chloritic and cordierite alteration. Massive sulphide is heavily disseminated within host schist rocks (OJ) between 134.52m to 139.46m. Massive sulphide lenses are 142.47m to 144.91m (OG, OA), 148m to 150.8m (OB, OA), 151.35m to 163.3m (OB, OJ, OI), 163.8m to 164.1m (OB). The structural footwall is composed of a felsic dike, a mafic intrusive and felsic volcanoclastic/coherent schist. An anomalous OJ interval occurs with strong chloritic alteration at 189.8m to 190.06m; this interval contains abundant CP. The footwall contains both chloritic alteration in the mafic intrusive as well as siliceous overprinting thought to be derived from the felsic dike.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	180.68	0	180.68	APS	David Nuttal	23-Aug-15		<input checked="" type="checkbox"/>	
68	-59.7	162.4	22.5	184.9	ReflexEVS	Geotech	22-Aug-15	5758	<input checked="" type="checkbox"/>	
89	-59.5	163.4	22.5	185.9	ReflexEVS	Geotech	22-Aug-15	5714	<input checked="" type="checkbox"/>	
120	-59.5	165.6	22.5	188.1	ReflexEVS	Geotech	22-Aug-15	5771	<input checked="" type="checkbox"/>	
150	-59.6	165.8	22.5	188.3	ReflexEVS	Geotech	22-Aug-15		<input checked="" type="checkbox"/>	
179	-60	30.8	22.5	53.3	ReflexEVS	Geotech	22-Aug-15	4721	<input type="checkbox"/>	Values not accepted, low magnetic field
203	-59	162.9	22.5	185.4	ReflexEVS	Geotech	22-Aug-15	5651	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	3.00	OVBN Overburden									
3.00	6.70	RHYcw Curdy textured-flow banded (flows, subvolcanics) grey									
<<Min: 3 - 15.7 0.25% Min: Pyrite>>											
<<Min: 3 - 15.72 0.25% Min: Pyrrhotite>>											
<<Alt: 3 - 33 Trace (Alt) Muscovite>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-232

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
6.70	12.70	RHYvl Lapilli tuff	medium grey								
12.70	13.20	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	grey-brown								
13.20	15.72	RHYvl Lapilli tuff	light grey								
15.72	17.73	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	leucocratic								
15.72 - 17.73: White calcite bands.											
<<Min: 15.72 - 17.73 1% Min: Pyrrhotite>>											
17.73	26.45	RHYvl Lapilli tuff	medium grey								
17.73 - 26.45: Mixed fine grain material 21.2m to 21.73m											
<<Min: 17.73 - 21.73 0.5% Min: Pyrite>>											
<<Min: 17.73 - 22 0.1% Min: Sphalerite>>											
<<Min: 21.73 - 22.32 5% Min: Pyrite>>											
<<Min: 21.73 - 22.32 3% Min: Pyrrhotite>>											
<<Min: 22.32 - 35 0.5% Min: Pyrite>>											
<<Vein: 21.8 - 22 98% Quartz>>											
26.45	31.61	RHYv Rhyolite volcanoclastic	medium grey								
26.45 - 31.61: Dominant texture cannot be recognized.											
31.61	32.19	RHYcw Curdy textured-flow banded (flows, subvolcanics)	leucocratic								
32.19	36.60	RHYvl Lapilli tuff	light grey								
<<Min: 36 - 42 3% Min: Pyrite>>											
<<Alt: 33 - 40 Weak (Alt) Muscovite>>											
36.60	38.10	RHYcw Curdy textured-flow banded (flows, subvolcanics)	leucocratic								
38.10	40.38	RHY undifferentiated rhyolite	grey-brown								
<<Alt: 40 - 96 Trace (Alt) Muscovite>>											
40.38	43.83	RHYv Rhyolite volcanoclastic	grey								
<<Min: 42 - 74 1% Min: Pyrite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-232

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
43.83	63.08	RHYvl Lapilli tuff									
43.83 - 63.08: bottom of interval contains modal abundance of biotite and chlorite, which colours the rock dark grey/brown.											
63.08	64.03	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
64.03	66.44	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
66.44	73.88	MDSr Rhyolite tuff dominant mudstone									
<<Min: 66.44 - 75 1% Min: Pyrrhotite>>											
73.88	76.10	MDSw Coherent rhyolite flow with carbonaceous content									
<<Min: 74 - 88 2% Min: Pyrite>>											
<<Min: 75 - 88 1% Min: Pyrrhotite>>											
76.10	77.60	RHYvl Lapilli tuff									
77.60	85.00	RHY undifferentiated rhyolite									
85.00	96.00	RHYv Rhyolite volcaniclastic									
<<Min: 88 - 92 0.5% Min: Pyrite>>											
<<Min: 88 - 107 0.5% Min: Pyrrhotite>>											
<<Min: 92 - 107 2% Min: Pyrite>>											
96.00	113.00	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
<<Min: 107 - 141 1% Min: Pyrrhotite>>											
<<Min: 107 - 148 2% Min: Pyrite>>											
<<Alt: 96 - 107 Weak-Moderate (Alt) Muscovite>>											
<<Alt: 107 - 115 Moderate (Alt) Muscovite>>											
<<Struc: 96.51 - 96.54 Weak (Alt) Fault>>											
<<Struc: 96.71 - 96.74 Weak (Alt) Fault>>											
<<Struc: 97.89 - 97.93 Weak (Alt) Fault>>											
<<Struc: 104 - 104.05 Moderate (Alt) Fault>>											
113.00	117.10	MDSw Coherent rhyolite flow with carbonaceous content									
<<Alt: 115 - 122 Moderate-Strong (Alt) Muscovite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-232

From (m)			To (m)			Rocktype & Description			From (m)			To (m)			Width			Sample			Ag PPM			Au PPM			Cu %			Pb %			Zn %		
<<Struc: 113 - 113.18 Weak (Alt) Fault>>																																			
<<Struc: 113.7 - 120 Weak (Alt) Fault>> Several small faults in interval																																			
117.10			123.68			RHYcw			Curdy textured-flow banded (flows, subvolcanics)			medium grey																							
<<Alt: 122 - 130 Moderate (Alt) Muscovite>>																																			
<<Struc: 121.56 - 121.72 Moderate (Alt) Fault>>																																			
123.68			125.00			MDSw			Coherent rhyolite flow with carbonaceous content			dark grey																							
125.00			132.90			RHY			undifferentiated rhyolite			light grey																							
<<Min: 128 - 134.45 0.5% Min: Sphalerite>>																																			
<<Alt: 129 - 134.83 Weak (Alt) Chlorite>>																																			
<<Alt: 130 - 134.45 Strong (Alt) Muscovite>>																																			
132.90			134.52			MDSw			Coherent rhyolite flow with carbonaceous content			melanocratic																							
<<Min: 133.91 - 148 0.5% Min: Pyrite>>																																			
<<Min: 133.91 - 209 0.5% Min: Pyrrhotite>>																																			
134.52			134.83			OJ			Heavilly disseminated sulphides in proximal altered rock																										
134.83			135.54			RHY			undifferentiated rhyolite																										
<<Alt: 134.83 - 140.9 Weak-Moderate (Alt) Chlorite>>																																			
135.54			135.80			OJ			Heavilly disseminated sulphides in proximal altered rock																										
135.80			139.12			RHYv			Rhyolite volcaniclastic																										
<<Struc: 136.83 - 136.83 dominant foliation>>																																			
139.12			139.46			OJ			Heavilly disseminated sulphides in proximal altered rock																										
139.46			142.47			RHYv			Rhyolite volcaniclastic			melanocratic																							
139.46 - 142.47: Complex interval. Contains abundant chlorite present as alteration, and cordierite porphyroblasts.																																			



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-232

From (m) To (m) Rocktype & Description

<<Alt: 140.9 - 145.1 Moderate-Strong (Alt) Chlorite>>

142.47 144.20 OG Chalcopyrite rich sulphides

144.20 144.91 OA Magnetite bearing sulphides

144.91 148.00 RHYv Rhyolite volcaniclastic

<<Alt: 145.1 - 163.3 Weak (Alt) Chlorite>>

<<Alt: 146.4 - 148 Strong (Alt) Muscovite>>

148.00 150.20 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

150.20 150.80 OA Magnetite bearing sulphides

150.80 151.35 RHYv Rhyolite volcaniclastic

<<Min: 151 - 151.35 0.5% Min: Pyrite>>

<<Alt: 150.8 - 151.35 Strong (Alt) Muscovite>>

151.35 152.60 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

152.60 154.76 OJ Heavily disseminated sulphides in proximal altered rock

154.76 158.00 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

158.00 158.60 OI Heavily disseminated sulphides in host schist

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
140.96	142.47	1.51	B00268536	8.9	0.095	0.25	0.02	0.22
142.47	143.40	0.93	B00268537	208	2.94	9.27	0.09	0.81
143.40	144.20	0.80	B00268538	203	2.73	8.75	0.14	0.78
144.20	144.91	0.71	B00268539	128	1.03	5.22	0.26	1.19
144.91	146.40	1.49	B00268541	2.4	0.014	0.04	0.02	0.37
146.40	148.00	1.60	B00268542	6.5	0.07	0.23	0.01	0.15
148.00	149.00	1.00	B00268543	28.3	0.459	0.1	0.33	2.95
149.00	149.60	0.60	B00268544	55.2	0.392	0.14	0.51	5.37
149.60	150.20	0.60	B00268545	24.4	0.226	0.04	0.37	5.49
150.20	150.80	0.60	B00268546	20.3	0.347	0.41	0.11	2.28
150.80	151.35	0.55	B00268547	4.7	0.054	0.03	0.04	0.27
151.35	152.00	0.65	B00268548	200	1.22	0.02	2.48	5.99
152.00	152.60	0.60	B00268549	189	1.5	0.02	2.47	7.36
152.60	153.60	1.00	B00268551	425	2.48	0.65	1.4	3.58
153.60	154.10	0.50	B00268552	510	1.86	0.65	1.59	4.25
154.10	154.76	0.66	B00268553	243	1.68	0.6	2.4	5.3
154.76	155.70	0.94	B00268554	84	0.838	0.15	1.65	5.87
155.70	156.70	1.00	B00268555	70	0.544	0.11	1.01	2.97
156.70	157.20	0.50	B00268556	123	0.766	0.27	1.94	7.34
157.20	158.00	0.80	B00268557	80	0.345	0.12	3.06	8.89
158.00	158.60	0.60	B00268558	433	3.63	1.09	2.63	5.14

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-232

From (m) To (m) Rocktype & Description

158.60 159.96 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

159.96 161.95 OI Heavily disseminated sulphides in host schist

161.95 162.45 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

162.45 163.30 OI Heavily disseminated sulphides in host schist

<<Min: 163.1 - 209 1% Min: Pyrite>>

<<Struc: 163 - 163.5 Moderate (Alt) Fault>>

163.30 163.80 RHY undifferentiated rhyolite

<<Alt: 163.3 - 166 Moderate (Alt) Chlorite>>

163.80 164.10 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

164.10 182.72 MAFi Mafic Intrusions (primarily grey-green footwall mafic intrusion)

164.1 - 182.72: Silicified mafic intrusive, fuchsite present. Silicification increases towards base of interval where felsic intrusive meets unit.

<<Alt: 168 - 182 Moderate (Alt) Silicification>>

<<Alt: 182 - 188 Strong (Alt) Silicification>>

<<Vein: 180.1 - 192.6 5% Quartz>>

<<Struc: 165.88 - 165.9 Weak (Alt) Fault>>

182.72 188.10 RHYi Aphanitic Rhyolite (intrusion) leucocratic

182.72 - 188.1: angular to subrounded quartz (or quartz replaced) phenocrysts. Large siliceous alteration zone occurs around dike.

<<Alt: 188 - 189 Moderate (Alt) Chlorite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
158.60	159.10	0.50	B00268559	180	0.879	0.39	1.16	5.04

159.10	159.96	0.86	B00268561	128	1.23	0.28	3.13	8.38
159.96	160.50	0.54	B00268562	137	1.6	0.3	3.67	6.65

160.50	161.40	0.90	B00268563	365	3.07	0.99	5.63	9.94
161.40	161.95	0.55	B00268564	348	4	0.76	3.77	6.66
161.95	162.45	0.50	B00268565	209	1.27	0.15	5	10.8

162.45	163.30	0.85	B00268566	159	1.88	0.33	3.66	7.23
--------	--------	------	-----------	-----	------	------	------	------

163.30	164.00	0.70	B00268567	25.2	0.021	0.51	0.23	1.85
--------	--------	------	-----------	------	-------	------	------	------

164.00	165.50	1.50	B00268568	3.1	0.01	-0.01	0.08	0.24
--------	--------	------	-----------	-----	------	-------	------	------

165.50	167.00	1.50	B00268569	1.1	0.008	-0.01	0.02	0.05
--------	--------	------	-----------	-----	-------	-------	------	------

167.00	168.50	1.50	B00268571	-0.3	-0.005	-0.01	-0.01	0.47
--------	--------	------	-----------	------	--------	-------	-------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-232

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
188.10	189.80	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
<<Alt: 189 - 190 Strong (Alt) Chlorite>>											
<<Struc: 189.22 - 189.25 Weak (Alt) Fault>>											
<<Struc: 189.59 - 189.62 Weak (Alt) Fault>>											
189.80	190.06	OJ	Heavilly disseminated sulphides in proximal altered rock								
<<Alt: 190 - 191.51 Moderate (Alt) Chlorite>>											
<<Struc: 189.91 - 189.94 Moderate (Alt) Fault>>											
190.06	191.50	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
191.50	201.13	RHYv	Rhyolite volcaniclastic								
<<Alt: 191.51 - 209 Weak (Alt) Muscovite>>											
<<Struc: 194 - 194.26 Moderate (Alt) Fault>>											
<<Struc: 198.42 - 198.48 Weak (Alt) Fault>>											
201.13	204.00	RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
<<Alt: 203.91 - 209 Weak (Alt) Chlorite>>											
<<Struc: 202.4 - 202.5 Weak (Alt) Fault>> Orthogonal to foliation											
<<Struc: 203.9 - 203.91 Weak (Alt) Fault>>											
204.00	209.00	RHYv	Rhyolite volcaniclastic								
204 - 209: Intersected by small mafic dikes. Abundant sphalerite in isolated lenses.											
<<Struc: 208.71 - 208.79 Moderate (Alt) Fault>>											
End of Hole @ 209											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-233

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	24-Aug-15
UTM Easting	414899.046	Core Size:	NQ3	Azimuth:	180	Date Logging Complete:	26-Aug-15
UTM Northing:	6815796.997	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1387.119	Casing Depth (m):	9	Length (m):	224	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	23-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	25-Aug-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

Hole K15-233 was drilled to intersect the massive sulfide in a target zone between 180 to 200m.

The upper units (hanging wall) are made up of coherent and lapilitic rhyolite crosscut by mafic dykes, followed by a mudstone unit directly above the massive sulfide. Mineralization starts at 175.2m and ends at 181.36 m (6.16m thick), and consists of both OI and OA domains.

In the hanging-wall, strong muscovite alteration (from 141.80 to 177.22m) as well as strong proximal chlorite alteration with cordierite (from 161 to 177.2) is present. The footwall includes a mafic sill at 181.36m with a progressive contact. The drill hole ends in a fault zone which can be correlated with the fault encountered in hole K15-238.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	180.53	0	180.53	APS	Geotech	23-Aug-15		<input checked="" type="checkbox"/>	
26	-60.9	160.2	22.5	182.7	ReflexEVS	Geotech	23-Aug-15	5766	<input checked="" type="checkbox"/>	
50	-61.5	159	22.5	181.5	ReflexEVS	Geotech	23-Aug-15	5779	<input checked="" type="checkbox"/>	
74	-61.8	159.8	22.5	182.3	ReflexEVS	Geotech	23-Aug-15	5707	<input checked="" type="checkbox"/>	
101	-61.8	160.5	22.5	183	ReflexEVS	Geotech	24-Aug-15	5803	<input checked="" type="checkbox"/>	
125	-62.1	163.6	22.5	186.1	ReflexEVS	Geotech	24-Aug-15	5778	<input checked="" type="checkbox"/>	
149	-61.9	156	22.5	178.5	ReflexEVS	Geotech	24-Aug-15	5714	<input checked="" type="checkbox"/>	
176	-62.5	160	22.5	182.5	ReflexEVS	Geotech	24-Aug-15	5427	<input checked="" type="checkbox"/>	
200	-62.4	164.5	22.5	187	ReflexEVS	Geotech	24-Aug-15	5829	<input checked="" type="checkbox"/>	
224	-62.4	164.9	22.5	187.4	ReflexEVS	Geotech	25-Aug-15	5802	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	9.00	CASN Casing									
9.00	10.25	RHYva Coarse grained to ash tuff									



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-233

From (m)			To (m)			Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
10.25			10.73			MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
10.25 - 10.73: Dyke altered CL. BI/CA															
10.73			17.95			RHYva	Coarse grained to ash tuff								
<<Min: 16 - 45 0.1% Min: Pyrite>>															
<<Min: 16 - 45 0.1% Min: Pyrrhotite>>						or patchy									
17.95			26.70			RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
17.95 - 26.7: Could be porphyritic															
26.70			31.07			MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
26.7 - 31.07: Dyke intruded from 29.51 to 30.46 by MAFi altered CA/CL (feldspar phenos?)															
31.07			36.77			RHYvx	Quartz and/or feldspar crystal tuff								
31.07 - 36.77: QZ eyes (high density locally), BI rich at ower contact															
<<Vein: 32 - 34 Quartz-Carbonate>>						4 QZ/CA vein 4cm wide									
36.77			39.00			RHYvl	Lapilli tuff								
36.77 - 39: Locally BI rich															
39.00			40.81			MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
39 - 40.81: Dyke, similar as mafic intrusion of the footwall. CL/BI/CA/MS															
40.81			49.30			RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
<<Alt: 40.81 - 141.8 Moderate (Alt) Muscovite>>															
<<Vein: 43 - 43.6 Tourmaline 10 deg. >>						TML vein shallow angle									
<<Struc: 45.12 - 45.3 Weak (Alt) Fault>>						minor									
<<Struc: 46.97 - 46.98 dominant foliation>>						QZ banded									
<<Struc: 48.81 - 48.82 dominant foliation>>															
49.30			50.75			RHYvl	Lapilli tuff								



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-233

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
50.75	51.25	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
50.75 - 51.25: BI rich dyke											
51.25	52.15	RHYvl Lapilli tuff									
52.15	52.53	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
52.53	56.12	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
52.53 - 56.12: Probably dyke, intermediate composition, QZ vein at lower contact											
<<Min: 56 - 71 0.2% Min: Pyrrhotite>> Along foliation, discontinuous thin veinlets or elongated mineral											
56.12	61.90	RHYc Rhyolite coherent volcanics									
<<Struc: 58.81 - 58.82 dominant foliation>>											
61.90	67.50	RHYvl Lapilli tuff									
<<Struc: 61.96 - 61.97 dominant foliation>>											
<<Struc: 64.96 - 64.97 dominant foliation>>											
67.50	70.30	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
70.30	73.44	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
70.3 - 73.44: foliated, few BI											
<<Struc: 70.94 - 70.95 dominant foliation>>											
73.44	81.44	RHYvl Lapilli tuff									
<<Min: 75 - 81.44 0.1% Min: Pyrite>>											
81.44	83.43	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
81.44 - 83.43: foliated											
<<Min: 81.44 - 91 0.2% Min: Pyrite>> with GL trace											
<<Min: 81.44 - 91 0.5% Min: Pyrrhotite>>											
83.43	85.78	RHYvl Lapilli tuff									
<<Vein: 83.9 - 83.95 Quartz-Sulphide>> QZ with CP/PO											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-233

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
85.78	95.01	RHY undifferentiated rhyolite									
85.78 - 95.01: maybe vx, feldspar porphyritic. Strong foliation. Clasts extend in the MDS.											
<<Struc: 86.08 - 87.24 Moderate (Alt) Fault>> and sheared											
<<Struc: 93.64 - 93.85 Weak (Alt) Fault>> fault gouge											
95.01	96.25	MDS Carbonaceous dominant mudstone									
96.25	105.03	RHY undifferentiated rhyolite									
96.25 - 105.03: maybe feldspar phenos, SI rich, high density of clasts											
<<Min: 96.25 - 105.38 1% Min: Sphalerite>>											
<<Min: 96.25 - 105.38 1% Min: Pyrite>> rare patch with CP in QZ vein											
105.03	105.98	MAFI Mafic Intrusions (primarily footwall mafic intrusion)									
105.98	110.70	RHYvx Quartz and/or feldspar crystal tuff									
105.98 - 110.7: QZ eyes, probably feldspar phenoblast, high density. Green aspect at contact with dyke. QZ vein (3 to 5 cm wide)											
<<Min: 110 - 122 0.2% Min: Pyrite>>											
<<Vein: 108.8 - 110.7 Quartz>> multiple QZ or pod (2 to 5 cm wide, 1 every meter)											
110.70	127.08	RHYvl Lapilli tuff									
110.7 - 127.08: maybe xl. QZ vein.											
<<Min: 122 - 129.95 0.5% Min: Pyrite>>											
<<Vein: 117 - 122 Quartz>> multiple QZ or pod (2 to 5 cm wide, 1 to 3 every meter)											
<<Struc: 117.09 - 117.14 Weak (Alt) Fault>> fault gouge at contact with QZ vein											
<<Struc: 119.07 - 119.11 Weak (Alt) Fault>> fault gouge at contact with QZ vein											
127.08	139.18	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
127.08 - 139.18: curdy texture from 138.25 to 139.18											
<<Vein: 130 - 131 Quartz>> multiple QZ or pod											
<<Struc: 134.12 - 134.13 dominant foliation>> MU and PO in foliation											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-233

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
139.18	146.50	RHYvl Lapilli tuff 139.18 - 146.5: discontinuous PO veinlets in foliation <<Alt: 141.8 - 177.22 Strong (Alt) Muscovite>> <<Struc: 145.75 - 146 Strong (Alt) Fault>> fault gouge, clay, major. <<Struc: 146 - 160.14 Moderate (Alt) Fault>> multiple small faults, about 1 every meter (45 degrees average)									
146.50	160.04	RHYcw Curdy textured-flow banded (flows, subvolcanics) 146.5 - 160.04: broken zone <<Min: 150 - 160.14 1% Min: Pyrite>> Elongated along the foliation									
160.04	160.40	MDSc Carbonaceous dominant mudstone 160.04 - 160.4: CP/PO stringers in proximal alteration. SP patch <<Min: 160.14 - 175.2 0.5% Min: Pyrite>> coarse grain <<Min: 160.14 - 175.2 1% Min: Pyrrhotite>> In foliation <<Min: 160.14 - 175.2 0.2% Min: Chalcopyrite>>									
160.40	175.20	MDSt Rhyolite tuff dominant mudstone 160.4 - 175.2: CP/PO stringers in proximal alteration. SP patch. By 170m rock unrecognizeable via CL alt <<Min: 167.9 - 175.2 1% Min: Sphalerite>> In foliation <<Alt: 161 - 170.49 Moderate (Alt) Chlorite>> <<Alt: 170.49 - 181.64 Strong (Alt) Chlorite>> <<Alt: 174.15 - 184.82 Moderate-Strong (Alt) Cordierite>> Aggregate <<Struc: 170.41 - 170.48 Weak (Alt) Fault>> fault gouge, clay	170.70	172.20	1.50	B00264708	9.6	0.037	0.41	0.13	1.2
175.20	177.22	OJ Heavilly disseminated sulphides in proximal altered rock 175.2 - 177.22: Cordierite aggregate <<Min: 175.2 - 177.22 10% Min: Pyrrhotite>> <<Min: 175.2 - 177.22 3% Min: Chalcopyrite>> <<Alt: 175.2 - 177.2 Intense (Alt) Chlorite>> <<Struc: 175.46 - 175.47 Vein>> PO/CP stringer in proximal alteration zone	172.20	173.70	1.50	B00264709	9.4	0.012	0.17	0.08	0.59
			173.70	175.20	1.50	B00264711	17.2	0.112	0.63	0.02	0.25
			175.20	175.86	0.66	B00264712	42.2	0.498	1.29	0.21	1.58
			175.86	176.46	0.60	B00264713	16.3	0.167	0.67	0.02	0.12
			176.46	177.22	0.76	B00264714	85.5	1.08	4.11	0.05	0.87

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-233

From (m) To (m) Rocktype & Description

177.22 178.53 OA Magnetite bearing sulphides

177.22 - 178.53: laminated. PY/PO, few CP

<<Min: 177.22 - 178.53 10% Min: Magnetite>>

<<Min: 177.22 - 178.53 2% Min: Chalcopyrite>>

178.53 179.66 OI Heavily disseminated sulphides in host schist

<<Min: 178.53 - 179.66 3% Min: Sphalerite>>

<<Min: 178.53 - 179.66 0.2% Min: Galena>>

179.66 180.60 OA Magnetite bearing sulphides

179.66 - 180.6: PO

<<Min: 179.66 - 180.6 2% Min: Sphalerite>>

<<Min: 179.66 - 180.6 20% Min: Pyrrhotite>>

<<Min: 179.66 - 180.6 10% Min: Magnetite>>

<<Min: 179.66 - 180.6 3% Min: Chalcopyrite>>

<<Alt: 179.66 - 180.6 Weak-Moderate (Alt) Chlorite>>

180.60 181.36 OI Heavily disseminated sulphides in host schist

180.6 - 181.36: Cordierite replacement. Could be OC, PO rich.

<<Min: 180.6 - 181.36 1% Min: Sphalerite>>

<<Min: 180.6 - 181.36 2% Min: Chalcopyrite>>

181.36 218.00 MAFI Mafic Intrusions (primarily footwall mafic intrusion)

181.36 - 218: MU rich at upper contact, aggregated CB porphyryblasts. Patchy leucoxene. Alt nd cntorting of mafic gives appearance of rhyolite

<<Min: 185 - 218 20% Min: Calcite>> foliation

<<Min: 190.85 - 218 0.2% Min: Sphalerite>>

<<Min: 190.85 - 218 0.2% Min: Pyrite>> Locally weak halo of oxidation

<<Min: 190.85 - 218 0.2% Min: Pyrrhotite>> veinlet foliation oriented

<<Min: 190.85 - 218 0.1% Min: Chalcopyrite>> trace

<<Alt: 181.64 - 224 Moderate (Alt) Muscovite>>

<<Alt: 187.1 - 224 Strong (Alt) Chlorite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
177.22	178.00	0.78	B00264715	67.7	0.277	0.98	0.49	7

178.00	178.53	0.53	B00264716	95.1	0.35	2.14	0.76	4.12
--------	--------	------	-----------	------	------	------	------	------

178.53	179.08	0.55	B00264717	56.1	0.206	1.27	0.89	2.74
--------	--------	------	-----------	------	-------	------	------	------

179.08	179.66	0.58	B00264718	25.4	0.077	0.33	0.58	3.85
--------	--------	------	-----------	------	-------	------	------	------

179.66	180.60	0.94	B00264719	29.8	0.267	1.07	0.23	3.61
--------	--------	------	-----------	------	-------	------	------	------

180.60	181.36	0.76	B00264721	26	0.103	0.39	0.36	2.44
--------	--------	------	-----------	----	-------	------	------	------

181.36	182.86	1.50	B00264722	5.2	0.013	0.03	0.13	0.33
--------	--------	------	-----------	-----	-------	------	------	------

182.86	184.36	1.50	B00264723	7	0.018	0.15	0.06	0.15
184.36	185.86	1.50	B00264724	19.8	0.023	0.11	0.12	0.15

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-233

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 194 - 206 Moderate (Alt) Biotite>>											
<<Alt: 206 - 224 Moderate (Alt) Biotite>> Associated with kind of SI/MU (maybe be glassy) dyke.											
<<Alt: 216.1 - 224 Moderate (Alt) Muscovite>>											
<<Struc: 182.14 - 182.16 Vein>> CI altered TML vein											
<<Struc: 182.5 - 182.52 Weak (Alt) Fault>> fracture infilled											
<<Struc: 185.47 - 185.52 Weak (Alt) Fault>> fault gauge, clay											
<<Struc: 185.47 - 185.53 Weak (Alt) Fault>> fault gouge											
<<Struc: 188.14 - 188.2 Weak (Alt) Fault>> fault gouge											
<<Struc: 188.22 - 188.26 Weak (Alt) Fault>> fault gauge, clay											
<<Struc: 193.75 - 193.76 dominant foliation>> CA in foliation											
<<Struc: 204.46 - 204.47 dominant foliation>> CA in foliation											
<<Struc: 205.77 - 205.78 dominant foliation>> CA veining.											
<<Struc: 209.19 - 209.2 dominant foliation>> CA in foliation											
<<Struc: 211.71 - 211.78 Weak (Alt) Fault>> fault gouge											
<<Struc: 214.76 - 214.77 >> Secondary (ghost) foliation.											
<<Struc: 214.78 - 214.79 dominant foliation>>											
218.00 224.00 MAFi Mafic Intrusions (primarily footwall mafic intrusion)											
218 - 224: Faulty zone, sheared. Core loss. 224.00m E.O.H.											
<<Struc: 219.4 - 221 Strong (Alt) Fault>> major fault											
<<Struc: 221 - 224 Shear>>											
End of Hole @ 224											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-234

Prospect:	GP4F	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Murray Jones	
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	27-Aug-15	
UTM Easting	419417.376	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	03-Sep-15	
UTM Northing:	6813698.554	Casing Pulled?:	No	Dip:	-70	Drill Company:	Geotech	
UTM Elev. (m):	1373.213	Casing Depth (m):	12	Length (m):	393	Drill Rig:	Hydracore	
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	26-Aug-15	
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	02-Sep-15	
Local Elev. (m):						Purpose:	Resource Definition	
Comments:							Parent Hole:	

The hole intersected the typical GP4F stratigraphy with a mixed sediment-mafic-felsic dominated package high in the hole, a broad section of feldspar and quartz porphyry sills and tuff through the middle, and into the "Mineralized Sequence", quartz and feldspar porphyry intruding rhyolite tuff and strongly chlorite, biotite, cordierite and garnet altered rock, including disseminated to semi-massive sphalerite-galena-pyrite-chalcopryite (OJ? Mineralization). The mineralized and altered section stretches from 306 to 327 metres, with a section of unaltered porphyry from 309-313 and mafic dyke from around 319 to 323 metres.

Alteration associated with fault at bottom of hole is potentially quite significant, with strong MU and stringer sulphide with GL, and potential SP.

Note that on run of core was dropped at drill and core appears to be jumbled from 367.5 to about 369 m. 369 to 372 was reassembled with confidence.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-70	180	0	180	APS	Murray Jones	26-Aug-15		<input checked="" type="checkbox"/>	
24	-68.6	157.3	22.4	179.7	ReflexEVS	Geotech	26-Aug-15	5772	<input checked="" type="checkbox"/>	
66	-68.5	156.8	22.4	179.2	ReflexEVS	Geotech	26-Aug-15	5755	<input checked="" type="checkbox"/>	
105	-69	161.6	22.4	184	ReflexEVS	Geotech	27-Aug-15	5766	<input type="checkbox"/>	
132	-67.8	160.2	22.4	182.6	ReflexEVS	Geotech	27-Aug-15	5768	<input checked="" type="checkbox"/>	
159	-68.5	161.5	22.4	183.9	ReflexEVS	Geotech	28-Aug-15	5761	<input checked="" type="checkbox"/>	
189	-67.2	160	22.4	182.4	ReflexEVS	Geotech	28-Aug-15	5744	<input checked="" type="checkbox"/>	
222	-68.1	166.1	22.4	188.5	ReflexEVS	Geotech	29-Aug-15	5733	<input checked="" type="checkbox"/>	
246	-67.7	163.8	22.4	186.2	ReflexEVS	Geotech	30-Aug-15	5788	<input checked="" type="checkbox"/>	
276	-67.3	169.5	22.4	191.9	ReflexEVS	Geotech	30-Aug-15	5730	<input type="checkbox"/>	
303	-66.9	170.2	22.4	192.6	ReflexEVS	Geotech	31-Aug-15	5667	<input checked="" type="checkbox"/>	
330	-69.7	166.7	22.4	189.1	ReflexEVS	Geotech	31-Aug-15	5855	<input type="checkbox"/>	
363	-65.2	167	22.4	189.4	ReflexEVS	Geotech	01-Sep-15	5776	<input checked="" type="checkbox"/>	
387	-65.1	163.7	22.4	186.1	ReflexEVS	Geotech	02-Sep-15	5649	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	------------------------	----------	--------	-------	--------	--------	--------	------	------	------

0.00 12.40 OVBN Overburden

0 - 12.4: Box 1 has several metres of rock that was deemed to be overburden as drillers suggested they thought they had bedrock at 8 metres but they got back into sand and clay below that.

12.40 23.00 SED undifferentiated Sediment brown FG

12.4 - 23: dark coloured uit, some QZ in groundmass, , relatively homogeneous, minor narrow QV's, minor faulting

<<Min: 12.4 - 33.01 0.01% Min: Pyrrhotite>> possibly PY too

<<Min: 15.92 - 20.4 3% Min: Calcite>> mafic unit

<<Struc: 20.8 - 24.5 Moderate (Alt) Fault>> strongly oxidized

23.00 43.90 RHYvx Quartz and/or feldspar crystal grey FMG

23 - 43.9: variably coloured unit, but grey in unweathered sections, QZ and minor FP phenos, generally massive, homogeneous appearance, cut by several narrow mafic dykes (BI SCHS).

<<Min: 30.6 - 31.68 1% Min: Calcite>>

<<Min: 33.01 - 34.7 1% Min: Pyrite>> minor fracture control

<<Min: 34.7 - 36.7 3% Min: Calcite>>

<<Min: 34.7 - 43.9 0.1% Min: Pyrrhotite>>

<<Alt: 33.01 - 34.7 Moderate (Alt) Muscovite>> seems to be focused around a QZ vein and fault

43.90 47.85 RHYcq Quartz porphyry dark grey VFG

43.9 - 47.85: banded, siliceous, flow? Rock, is broken and oxidized on fracs

<<Struc: 46.2 - 57.2 Strong (Alt) Fault>> broken core, gouge, lost core

47.85 57.20 MAFt Mafic Volcaniclastics green

47.85 - 57.2: possibly CL alt'd felsic tuff?, broken ground and dykes cut through, small white phenos-FP?

57.20 70.87 RHYcf Feldspar & feldspar quartz grey-green porphyry

57.2 - 70.87: bluish QE, conc'd locally, FP phenos less common, generally fg, fol'd tuff. Banding near the bottom, both compositional and BI/MU banding.

<<Min: 57.2 - 112.8 0.01% Min: Pyrite>>

<<Min: 60 - 62.82 3% Min: Calcite>> in BI SCHS

<<Alt: 62.82 - 69.7 Weak (Alt) Muscovite>> actually MS, overprints BI



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-234

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
70.87	85.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	green-brown	FMG							
70.87 - 85: strong BI locally, aphanitic, maybe dyke, mixed looking unit with speckled and homogeneous tx's, overprint by MS common, bleaches (replaces BI) and gives rock light green colour.											
<<Min: 80.35 - 85 2% Min: Calcite>>											
<<Alt: 77.26 - 80.35 Moderate (Alt) Muscovite>> bleached biotite by MS											
<<Struc: 71.7 - 72.8 Weak (Alt) Fault>> broken core, minor gouge											
85.00	95.93	MAFta Coarse grained to ash tuff	green								
85 - 95.93: very well fol'd, striped green with QZ-CB veins/bands, BI is lesser, locally faulted strongly, MS overprint											
<<Min: 85 - 95.93 8% Min: Calcite>> in bands in CL SCHS											
95.93	106.75	MAFt Mafic Volcaniclastics	green-brown	MG							
95.93 - 106.75: strongly CL-BI banded, possible mixed tuff/sed, coarse and fg CL bands, CA in lenses and veins, BI bands, PO? As very fine diss'ns in BI bands											
<<Min: 95.93 - 101 5% Min: Calcite>> bands											
<<Min: 95.93 - 106.75 0.01% Min: Pyrrhotite>> seems to be in BI bands, not visible											
<<Min: 101 - 108.8 1% Min: Calcite>>											
<<Struc: 105.65 - 107 Moderate (Alt) Fault>> gougy, bleaching around structure											
106.75	116.99	SED undifferentiated Sediment	black								
106.75 - 116.99: laminated, siliceous locally, deformed bands,											
<<Min: 108.8 - 112.8 5% Min: Calcite>> veins, lenses, fractures											
<<Min: 112.8 - 118 1% Min: Calcite>> mostly but also patchy											
<<Min: 112.8 - 135.2 0.01% Min: Pyrrhotite>> minor wisps locally											
116.99	125.75	MAFt Mafic Volcaniclastics	green-brown								
116.99 - 125.75: CA bands/patches											
<<Min: 118 - 125.75 3% Min: Calcite>> greenish tuff											
125.75	153.01	SED undifferentiated Sediment	black								
125.75 - 153.01: minor CL bands, mafic tuff beds?,											
<<Min: 125.75 - 130.85 1% Min: Calcite>>											
<<Min: 130.85 - 133.93 3% Min: Calcite>> bands											
<<Min: 135.2 - 141.33 3% Min: Calcite>> and fractures											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-234

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
		<p><<Min: 135.2 - 153.01 0.5% Min: Pyrite>> with PO</p> <p><<Min: 135.2 - 153.01 1% Min: Pyrrhotite>> along fol'n</p> <p><<Min: 142.27 - 147.6 5% Min: Calcite>> minor bands/lenses</p> <p><<Min: 147.76 - 153.01 1% Min: Calcite>></p> <p><<Vein: 135.54 - 147.6 50% Quartz-Carbonate>> QZ-CA vein swarm</p> <p><<Struc: 145.4 - 147.3 Weak (Alt) Fault>> minor broken core, several gougy strings</p> <p>153.01 203.51 RHYvx Quartz and/or feldspar crystal grey-brown FG tuff</p> <p>153.01 - 203.51: blue QE in brownish, BI-rich matrix very fg leucoxene(?) in groundmass, scattered, weakly deformed, QZ-CA-CL veinlets,CL-BI alt'n associated with QV's</p> <p><<Min: 153.01 - 173.6 3% Min: Calcite>> in veins and bands in tuff</p> <p><<Min: 153.01 - 177.39 0.5% Min: Pyrite>> minor in CA vnlts, fracs</p> <p><<Min: 166.8 - 197.1 0.5% Min: Pyrrhotite>> in dark section, sedimentary component</p> <p><<Min: 173.6 - 197.1 0.01% Min: Calcite>> minor veinlets.</p> <p><<Min: 177.39 - 178.71 0.5% Min: Pyrrhotite>></p> <p><<Min: 177.39 - 197.1 0.01% Min: Pyrite>> diss'd bleb in scattered veinlets, with CA-CL</p> <p><<Min: 197.1 - 213.08 0.01% Min: Pyrite>></p> <p><<Min: 197.1 - 213.08 1% Min: Calcite>> in dykes</p> <p><<Alt: 181.6 - 182.75 Moderate (Alt) Silicification>> related to nearby dyke?</p> <p><<Alt: 181.6 - 182.75 Weak (Alt) Muscovite>> bleached</p> <p><<Alt: 201 - 205.4 Moderate (Alt) Muscovite>> in broken SED</p> <p><<Vein: 160.25 - 164.18 75% Quartz-Carbonate 88 deg. >> QZ-CA veins</p> <p><<Vein: 164.7 - 166.8 20% Calcite 90 deg. >> CA-QZ, banded, veins in fol'n</p> <p><<Vein: 185 - 185.75 80% Quartz-Tourmaline 45 deg. >> QZ-TO, minor PO</p> <p><<Struc: 181.01 - 181.2 Moderate (Alt) Fault>> gouge</p> <p><<Struc: 197.1 - 206.45 Strong (Alt) Fault>> sheared rock on magins, very broken, gouge filled structure, obvious slip near centre at 20°</p> <p>203.51 213.08 SED undifferentiated Sediment dark grey</p> <p>203.51 - 213.08: sedimentary section, has absorbed all the faulting in this section, MAFi cuts through as well, CL occurs locally, GA pblasts scattered in sediment</p> <p><<Struc: 211.9 - 213.08 Strong (Alt) Fault>> mixed gouge broken, MAFi included, SED host</p>									

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-234

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
213.08	270.69	RHYcf Feldspar & feldspar quartz porphyry brown FMG									
<p>213.08 - 270.69: locally highly strained, light coloured domains/clasts, boudins? Or deformed phenos?, blue QE present but scattered, leucoxene present locally, Intermediate composition?, several narrow sections of SED? Or MAFi? Included</p> <p><<Min: 213.08 - 233.25 0.01% Min: Pyrite>></p> <p><<Min: 213.08 - 233.25 0.5% Min: Pyrrhotite>> tiny generally</p> <p><<Min: 213.08 - 250.88 0.01% Min: Calcite>> minor patchy in dykes</p> <p><<Min: 233.25 - 242.26 0.01% Min: Pyrrhotite>></p> <p><<Min: 233.25 - 270.69 1% Min: Pyrite>> PY in diss'd bands with CL, CA?, possibly SI locally</p> <p><<Min: 242.26 - 242.85 20% Min: Pyrrhotite>> several bands of massive PO</p> <p><<Min: 242.85 - 270.69 0.01% Min: Pyrrhotite>> with PY, fine diss'ns elsewhere</p> <p><<Min: 250.88 - 254.18 8% Min: Calcite>> and veins</p> <p><<Min: 257.3 - 259.33 8% Min: Calcite>> and veins</p> <p><<Alt: 213.08 - 223.33 Weak (Alt) Muscovite>> weak bands to pervasive, related to fault?</p> <p><<Alt: 231.8 - 233.25 Weak (Alt) Silicification>> fault related</p> <p><<Alt: 242.26 - 242.85 Weak (Alt) Silicification>> between mx PO bands</p> <p><<Struc: 233.2 - 233.25 Weak (Alt) Fault>> small discrete gouge</p> <p><<Struc: 252.1 - 252.75 Moderate (Alt) Fault>> angle at edge of zone, gouge and broken</p>											
270.69	278.01	MAFi Mafic Intrusions (primarily footwall mafic intrusion) brown									
<p>270.69 - 278.01: , very broken, fault zone, short intervals of RHYcf and SED</p> <p><<Min: 270.69 - 279.2 5% Min: Calcite>></p> <p><<Struc: 271.6 - 279.1 Strong (Alt) Fault>> very broken, rough orientation</p>											
278.01	297.02	RHYcf Feldspar & feldspar quartz porphyry grey-brown	278.85	279.87	1.02	B00269034	0.8	-0.005	-0.01	-0.01	0.02
<p>278.01 - 297.02: massive FP-minor QZ porphyry, variable strain and alt'n, TO common as pblasts and in QV's</p>											
<<Min: 278.9 - 280.98 1% Min: Pyrite>>			279.87	280.87	1.00	B00269035	0.8	-0.005	-0.01	-0.01	-0.01
<<Min: 279.2 - 301.55 0.01% Min: Calcite>>			293.75	295.25	1.50	B00269036	1.7	-0.005	-0.01	0.07	0.58
<<Min: 280.98 - 285.9 0.5% Min: Pyrite>>			295.25	296.75	1.50	B00269037	0.7	-0.005	-0.01	0.02	0.73
<<Min: 285.9 - 293.75 1% Min: Pyrite>> in bands			296.75	298.25	1.50	B00269038	0.7	-0.005	-0.01	0.02	0.41
<<Min: 285.9 - 293.75 0.5% Min: Pyrrhotite>> with PY mostly											
<<Min: 293.75 - 299.31 1% Min: Sphalerite>> commonly with some PY but also separate											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-234

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 293.75 - 299.31 3% Min: Pyrite>> as bands along fol'n, with CL, SI, SP locally											
<<Min: 293.75 - 299.31 0.01% Min: Galena>>											
<<Alt: 278.9 - 280.98 Moderate (Alt) Muscovite>>											
<<Alt: 280.98 - 289.98 Weak (Alt) Muscovite>> locally strong, in shears and as envelope to QZ-TO veins											
<<Alt: 289.98 - 293.75 Strong (Alt) Muscovite>> in host, in fault gouge											
<<Alt: 293.75 - 297.02 Moderate (Alt) Silicification>> associated with sx veinlets											
<<Alt: 293.75 - 297.02 Moderate (Alt) Muscovite>> interstitial to SI patches											
<<Struc: 290.25 - 293.75 Moderate (Alt) Fault>> gouge, broken, strong MU t/o											
297.02	308.20	RHYvx Quartz and/or feldspar crystal green-brown tuff FG	298.25	299.31	1.06	B00269039	1.6	-0.005	-0.01	0.08	0.82
297.02 - 308.2: possibly still RHYcf to 299.1m, well fol'd, QE scattered but generally obvious, MU t/o, locally dark brown from BI, strongly micaceous gouge in slips, alteration increases towards bottom of interval											
<<Min: 299.31 - 302.15 0.5% Min: Pyrite>>			299.31	300.45	1.14	B00269041	-0.3	-0.005	-0.01	-0.01	0.02
<<Min: 301.55 - 302.15 5% Min: Calcite>> and veins			300.45	301.55	1.10	B00269042	-0.3	-0.005	-0.01	-0.01	0.07
<<Min: 302.15 - 306.03 3% Min: Pyrite>> and bands, locally weak in BI rich sections			301.55	302.15	0.60	B00269043	-0.3	-0.005	-0.01	-0.01	0.14
<<Min: 306.03 - 308.8 1% Min: Sphalerite>> minor blebs in QZ veins, similar to 293.75-299.31			302.15	303.00	0.85	B00269044	-0.3	-0.005	-0.01	-0.01	0.1
<<Min: 306.03 - 308.8 0.5% Min: Pyrite>> tiny wisps			303.00	304.03	1.03	B00269045	1	-0.005	-0.01	0.03	0.33
<<Min: 306.03 - 308.8 3% Min: Pyrrhotite>> in narrow bands, with CP, wisps in rock			304.03	305.03	1.00	B00269046	-0.3	0.016	0.01	0.02	0.07
<<Min: 306.03 - 308.8 0.01% Min: Galena>> with SP			305.03	306.03	1.00	B00269047	-0.3	-0.005	-0.01	-0.01	0.06
<<Min: 306.03 - 308.8 1% Min: Chalcopyrite>> and blebs, in bands with PO, in veins and diss'd			306.03	307.00	0.97	B00269048	3.3	0.013	0.17	0.09	0.61
<<Min: 306.03 - 308.8 0.5% Min: Calcite>> blebs in QV's			307.00	308.20	1.20	B00269049	10	0.053	0.26	0.55	1.5
<<Alt: 297.02 - 299.31 Moderate (Alt) Muscovite>> and in slips, strong MU											
<<Alt: 297.02 - 303 Moderate (Alt) Silicification>>											
<<Alt: 299.31 - 302.15 Weak (Alt) Muscovite>> between BI bands											
<<Alt: 302.15 - 306.03 Strong (Alt) Muscovite>> to pervasive, drops off in last metre,											
<<Alt: 306.03 - 308.8 Weak (Alt) Silicification>> remobilized from host?											
<<Alt: 306.03 - 308.8 Strong (Alt) Chlorite>> surrounds SI domains											
<<Alt: 306.03 - 308.8 Moderate (Alt) Biotite>> as CL											
<<Struc: 299.12 - 299.13 Moderate (Alt) Fault>> narrow, highly micaceous gouge in slip											
<<Struc: 299.35 - 299.36 dominant foliation>> not traceable completely through core											
<<Struc: 299.99 - 300 dominant foliation>> better continuity											
<<Struc: 302.15 - 304.25 Moderate (Alt) Fault>> gouge,alt'n t/o, rough attitude											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-234

From (m) To (m) Rocktype & Description

308.20 313.60 RHYcq Quartz porphyry

grey-brown

308.2 - 313.6: locally strongly altered (to 308.8), in and out of MAFi, bluish QE's

<<Min: 308.8 - 313.6 0.01% Min: Pyrite>>

<<Alt: 308.8 - 313.6 Moderate (Alt) Muscovite>>

<<Alt: 308.8 - 313.6 Moderate (Alt) Chlorite>>

313.60 327.61 RHYvx Quartz and/or feldspar crystal green tuff

313.6 - 327.61: heavily altered to 327.1, locally sections of RHYcf

<<Min: 313.6 - 318.35 3% Min: Pyrite>> along fol'n, in shears

<<Min: 313.6 - 319.51 1% Min: Sphalerite>> conc'd from 318.35

<<Min: 313.6 - 319.51 5% Min: Pyrrhotite>> scatterd along fol'n, also in veins

<<Min: 313.6 - 319.51 1% Min: Chalcopryite>> and blebs in heavy CL

<<Min: 318.35 - 319.51 0.5% Min: Galena>> with SP

<<Min: 319.51 - 323.49 0.5% Min: Pyrite>> in QZ-TO veins and envelopes cutting the dyke

<<Min: 323.49 - 327.1 10% Min: Sphalerite>> in bands, 10 cm wide mx SP

<<Min: 323.49 - 327.1 1% Min: Pyrite>> in CL seams, scattered FD in groundmass

<<Min: 323.49 - 327.1 3% Min: Magnetite>> to 5 mm

<<Min: 323.49 - 327.1 3% Min: Galena>> with SP

<<Min: 323.49 - 327.1 1% Min: Chalcopryite>> scattered

<<Min: 327.1 - 331.15 1% Min: Sphalerite>> assocted with QV's

<<Min: 327.1 - 331.15 0.5% Min: Galena>> in QV selvages

<<Min: 327.1 - 335.73 3% Min: Pyrrhotite>> along fol'n

<<Min: 327.1 - 335.73 5% Min: Calcite>> in both SED and MAFi

<<Alt: 313.6 - 319.51 Weak (Alt) Garnet>> porphyroblasts to 5 mm

<<Alt: 313.6 - 319.51 Strong (Alt) Chlorite>> massive locally

<<Alt: 313.6 - 319.51 Strong (Alt) Biotite>> massive, coarse

<<Alt: 319.51 - 323.49 Weak (Alt) Muscovite>> locally associated with veinlets

<<Alt: 323.49 - 327.1 Strong (Alt) Chlorite>> massive to banded

<<Alt: 323.49 - 327.1 Moderate (Alt) Cordierite>> conc'd bands and patches, associated with sx

<<Alt: 323.49 - 327.1 Strong (Alt) Biotite>> coarse grained

<<Alt: 327.1 - 335.73 Weak (Alt) Chlorite>> with BI-TO pblasts

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
308.20	308.80	0.60	B00269051	3.7	0.015	0.15	0.05	0.18

308.80	310.13	1.33	B00269052	0.9	0.01	0.02	0.01	0.13
310.13	311.60	1.47	B00269053	-0.3	-0.005	-0.01	-0.01	0.03
311.60	312.60	1.00	B00269054	-0.3	0.006	-0.01	-0.01	-0.01
312.60	313.60	1.00	B00269055	-0.3	-0.005	-0.01	-0.01	-0.01
313.60	314.15	0.55	B00269056	1.7	0.031	0.04	0.02	0.93

314.15	315.15	1.00	B00269057	2	0.007	0.25	0.01	0.18
315.15	316.15	1.00	B00269058	1.1	-0.005	0.02	0.03	0.73
316.15	317.35	1.20	B00269059	1.1	-0.005	0.02	0.02	0.64
317.35	318.35	1.00	B00269061	1.3	-0.005	-0.01	0.1	0.13
318.35	319.51	1.16	B00269062	16.9	0.015	0.05	1.5	4.71
319.51	320.40	0.89	B00269063	-0.3	-0.005	-0.01	-0.01	0.05
320.40	321.90	1.50	B00269064	-0.3	-0.005	-0.01	-0.01	0.03
321.90	322.78	0.88	B00269065	0.6	-0.005	0.02	0.01	0.07
322.78	323.49	0.71	B00269066	0.6	-0.005	0.02	-0.01	2.31
323.49	324.10	0.61	B00269067	21.2	0.02	0.07	2.19	6.53
324.10	325.10	1.00	B00269068	15.7	0.022	0.1	1.54	3.84
325.10	326.37	1.27	B00269069	21.4	0.038	0.1	1.65	3.83
326.37	327.61	1.24	B00269072	17.1	0.017	0.04	1.75	2.19



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-234

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Vein: 314.15 - 315.15 40% Quartz-Tourmaline-Sulphide 10 deg. >> QZ-TO-Sx vein, sub parallel to core axis											
<<Struc: 316.75 - 316.76 dominant foliation>> difficult area to get good plane											
<<Struc: 317.75 - 317.76 Foliation>> discontinuous											
327.61	335.73	SED undifferentiated Sediment black FG	327.61	329.10	1.49	B00269073	1.7	-0.005	0.02	0.1	0.19
327.61 - 335.73: darkly coloured, very close to MAFi, QZ in groundmass, CL bands locally, BI-TO pblasts in CL altered masses, QV's common, brown GA scattered throughout											
<<Vein: 328.3 - 331.15 20% Quartz-Carbonate 70 deg. >> QZ-CB, iregular			329.10	330.50	1.40	B00269074	1.3	-0.005	0.02	0.05	0.11
<<Struc: 329.3 - 329.31 Foliation>> not continuous fol'n			330.50	332.00	1.50	B00269075	1	-0.005	0.01	0.02	0.67
<<Struc: 334 - 335.12 Moderate (Alt) Fault>>											
335.73	356.55	RHYcf Feldspar & feldspar quartz grey-brown porphyry	343.40	344.10	0.70	B00269076	0.6	-0.005	0.03	0.02	2.15
335.73 - 356.55: mottled, massive to moderately fol'd unit, interlayered tuff?, FP phenos at top and QZ phenos appear in centre of unit. Phenos locally crowded. "Curdy tx" locally											
<<Min: 335.73 - 343.4 0.5% Min: Pyrite>> in fracs, veinlets, bands											
<<Min: 343.4 - 344.07 5% Min: Sphalerite>> conc'd in top of interval											
<<Min: 343.4 - 344.07 0.5% Min: Pyrite>> scattered											
<<Min: 343.4 - 344.07 1% Min: Galena>> with SP											
<<Min: 344.07 - 346.65 0.01% Min: Sphalerite>> in veins											
<<Min: 344.07 - 356.55 0.5% Min: Pyrite>> minor narrow bands											
<<Min: 348.25 - 356.55 0.5% Min: Pyrrhotite>> in bands											
<<Alt: 335.73 - 348.25 Weak (Alt) Muscovite>> overprints BI											
<<Alt: 343.4 - 344.07 Weak (Alt) Garnet>> scattered											
<<Alt: 343.4 - 344.07 Strong (Alt) Chlorite>> alternates with BI?											
<<Alt: 343.4 - 344.07 Moderate (Alt) Biotite>>											
<<Alt: 348.25 - 356.55 Moderate (Alt) Muscovite>> minor sx associated											
<<Struc: 335.87 - 335.88 >> difficult to trace											
<<Struc: 338.38 - 338.39 dominant foliation>> decent fol'n line											
<<Struc: 343.4 - 343.41 Weak (Alt) Contact>> alt'n zone contact, perpendicular to core axis											
<<Struc: 344.5 - 346.65 Strong (Alt) Fault>> also 35°, crushed rock, gouge											
356.55	370.41	RHYvx Quartz and/or feldspar crystal grey-brown tuff	368.96	369.77	0.81	B00269077	0.5	-0.005	-0.01	-0.01	0.03
356.55 - 370.41: FP phenos present commonly sausseritized, BI bands t/o, brown to black, minor MU-CL in faults and around veins, GA prophyroblasts locally, MAFi locally, generally narrow, in faults, deformed, BI-rich											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-234

From (m)	To (m)	Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 356.55 - 369.77 0.5% Min: Pyrite>>		blebs in QZ vns, in fractures		369.77	370.41	0.64	B00269078	10.9	0.008	0.08	0.08	1.41
<<Min: 359.55 - 361.5 1% Min: Pyrrhotite>>		in QZ vns										
<<Min: 369.77 - 370.4 0.5% Min: Pyrite>>		on fol'n										
<<Min: 369.77 - 370.41 1% Min: Chalcopyrite>>		and blebs in alt'd zone, conc'd at lower contact										
<<Min: 370.4 - 375.51 0.5% Min: Pyrite>>		minor fracture control										
<<Alt: 363.38 - 368 Moderate (Alt) Garnet>>		scattered brown porphyroblasts, fade out in jumbled core										
<<Alt: 363.38 - 369.77 Moderate (Alt) Chlorite>>		in groundmass, lt green										
<<Alt: 367.77 - 370.44 Weak (Alt) Cordierite>>		local Cl possibly?										
<<Alt: 369.77 - 370.41 Strong (Alt) Chlorite>>		intense , massive CL alt'n										
<<Struc: 360.4 - 361.8 Moderate (Alt) Fault>>		QZ vns with CL-MU-PO										
370.41 375.51 RHYcf		Feldspar & feldspar quartz	grey	370.41	371.41	1.00	B00269079	2.6	-0.005	0.02	-0.01	0.18
		porphyry										
370.41 - 375.51: massive to banded, leucocratic, local AC pblasts?, flow banding possible												
<<Alt: 375.5 - 376.16 Weak (Alt) Biotite>>												
375.51 389.30 RHYvx		Quartz and/or feldspar crystal	grey-green	387.55	388.65	1.10	B00269081	19.4	0.018	0.02	0.07	0.13
		tuff										
375.51 - 389.3: FP phenos common, CL alt'n locally, RHYc locally?,												
<<Min: 375.51 - 387.6 1% Min: Pyrrhotite>>		in fractures, wisps, bands, and blebs		388.65	389.30	0.65	B00269082	14.4	0.03	0.04	0.07	0.09
<<Min: 387.6 - 389.3 0.5% Min: Pyrite>>												
<<Min: 387.6 - 389.3 3% Min: Pyrrhotite>>		along fol'n										
<<Min: 387.6 - 389.3 0.01% Min: Galena>>		along fol'n, in fracs										
<<Min: 387.6 - 389.3 0.5% Min: Chalcopyrite>>												
<<Alt: 375.51 - 376.16 Moderate (Alt) Chlorite>>												
<<Alt: 376.16 - 383 Weak (Alt) Garnet>>		scattered pblasts, also in groundmass, purplish colour										
<<Alt: 376.16 - 383 Weak (Alt) Chlorite>>		lt green t/o										
<<Alt: 387.6 - 389.3 Strong (Alt) Muscovite>>		strong locally										
<<Alt: 387.6 - 389.3 Moderate (Alt) Chlorite>>												
389.30 393.00 RHYcf		Feldspar & feldspar quartz	grey-brown									
		porphyry	MG									
389.3 - 393: strongly alt'd, from fault?, talc or clay alteration of rock, lt green, very soft, coarse phenos of milky QZ and FP(?), striped BI-MU layeres, TO pblasts?, BI is light brown due to weathering?,												
<<Min: 389.3 - 393 0.5% Min: Pyrrhotite>>		minor bands, very local, leached out?										



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-234

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 389.3 - 393 Strong (Alt) Muscovite>>		mixed with Talc? Soapy or waxy feel on foliation surfaces.									
<<Alt: 389.3 - 393 Moderate (Alt) Chlorite>>		massive locally, shears?, talcose bands in QZ-FP porphyry									
<<Struc: 392.27 - 393 Moderate (Alt) Fault>>		clay gouge prominent, alteration around, talc? Or clay?, brown BI									
End of Hole @ 393											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-235

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	David Nuttal	
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	25-Aug-15	
UTM Easting	414930.873	Core Size:	NQ3	Azimuth:	158.8	Date Logging Complete:	25-Aug-15	
UTM Northing:	6815550.438	Casing Pulled?:	Yes	Dip:	-63	Drill Company:	Geotech	
UTM Elev. (m):	1384.181	Casing Depth (m):	6	Length (m):	47	Drill Rig:	Hydracore	
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	24-Aug-15	
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	25-Aug-15	
Local Elev. (m):						Purpose:	Resource Definition	
Comments:							Parent Hole:	

This hole was drilled to define the resource between historic holes K94-011 & K94-012. The hole was aborted at 47m depth from the original plan of 180m depth, due to significant deviation in dip from 63 degrees (planned azimuth) to 59 degrees. Therefore, pierce point on resource domain was not achieved. The log information for this hole represents a package of felsic coherent and volcanoclastic rocks and a small interval of felsic volcanoclastic dominated mudstones. No massive sulphide intersections are present. Muscovite alteration intensity increases towards a large quartz vein structure at 22m to 24.8m. Chlorite alteration is weak and disseminated within the biotite-rich mudstones.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-63	159	0	159	APS	David Nuttal	24-Aug-15		<input checked="" type="checkbox"/>	
14	-63.3	139.7	22.5	162.2	ReflexEVS	Geotech	24-Aug-15	5761	<input checked="" type="checkbox"/>	
30	-59	139.2	22.5	161.7	ReflexEVS	Geotech	24-Aug-15	5716	<input checked="" type="checkbox"/>	
47	-59.5	137.2	22.5	159.7	ReflexEVS	Geotech	24-Aug-15	5664	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	6.00	CASN Casing									
<<Min: 4.5 - 14 1% Min: Pyrite>>											
<<Min: 4.5 - 14 0.5% Min: Pyrrhotite>>											
<<Min: 4.5 - 47 0.1% Min: Calcite>> Occurres within thin, healed fractures.											
<<Alt: 0 - 9.8 Weak (Alt) Muscovite>>											
6.00	10.27	RHYvl Lapilli tuff									
<<Alt: 9.8 - 16.2 Weak-Moderate (Alt) Muscovite>>											
10.27	11.45	RHYcw Curdy textured-flow banded (flows, subvolcanics)									



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-235

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
11.45	20.52	RHYv Rhyolite volcaniclastic									
11.45 - 20.52: Interval is a package of felsic volcaniclastic rock types. Grain size of clasts ranges from coarse grained to lapilli. Also present are sub-round to round disaggregated curdy white quartz phenocrysts.											
<<Min: 14 - 20 2% Min: Pyrite>>											
<<Min: 14 - 20 1% Min: Pyrrhotite>>											
<<Min: 20 - 28.5 1% Min: Pyrrhotite>>											
<<Min: 20 - 29 2% Min: Pyrite>>											
<<Alt: 16.2 - 26 Moderate (Alt) Muscovite>>											
<<Struc: 14.1 - 15.47 Weak (Alt) Fault>> Oblique to foliation. Fracture rather than fault. No gouge present.											
20.52	29.00	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
<<Min: 28.5 - 43 0.5% Min: Pyrrhotite>>											
<<Alt: 26 - 27.2 Weak-Moderate (Alt) Muscovite>>											
<<Alt: 27.2 - 45 Weak-Moderate (Alt) Muscovite>>											
<<Vein: 22.18 - 24.8 90% Quartz-Sulphide>> Large clots of PO/PY within quartz											
29.00	31.20	RHYv Rhyolite volcaniclastic									
29 - 31.2: Quartz phenocrysts/porphyroblasts show as milky white fragmented cores with transparent grey quartz rims. Xtals are isolated from each other by fine grained matrix.											
<<Min: 29 - 38 1% Min: Pyrite>>											
31.20	32.79	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
32.79	34.38	RHYv Rhyolite volcaniclastic									
34.38	37.42	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
37.42	41.05	MDSst Rhyolite tuff dominant mudstone									
<<Min: 38 - 47 0.5% Min: Pyrite>>											
<<Alt: 38.7 - 42.5 Weak (Alt) Chlorite>>											
41.05	42.55	RHYv Rhyolite volcaniclastic									
<<Alt: 42.5 - 44.2 Weak-Moderate (Alt) Chlorite>>											
42.55	44.50	MDSst Rhyolite tuff dominant mudstone									

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-235

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 43 - 47 1% Min: Pyrrhotite>>											
44.50	47.00	RHYv Rhyolite volcanoclastic									
<<Alt: 45 - 47 Weak (Alt) Muscovite>>											
<<Struc: 46.8 - 46.9 Moderate (Alt) Fault>> Foliation parallel with gouge present.											
End of Hole @ 47											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-235R

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	David Nuttal
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	27-Aug-15
UTM Easting	414930.879	Core Size:	NQ3	Azimuth:	158.8	Date Logging Complete:	29-Aug-15
UTM Northing:	6815550.423	Casing Pulled?:	Yes	Dip:	-63	Drill Company:	Geotech
UTM Elev. (m):	1384.175	Casing Depth (m):	4.5	Length (m):	176	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	26-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	28-Aug-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

This hole is planned to define the resource between historic holes K94-011 & K94-012.

The hole confided sulphide mineralization continuity and characterized structural footwall litho-units. Sulphide mineralization (both massive and heavily disseminated) is present from 130.35m to 137.43m (OI, OB), 159.45m, to 160.35m (OI, OB), 165.85m to 166.4m (OJ) and 169m to 172m (OJ). The structural hanging wall is composed of a package of felsic meta-volcaniclastic rocks. The structural footwall is composed of a mafic dike that is structurally underlain by felsic volcanics.

Muscovite alteration is pervasive through both the structural hanging wall and footwall, and increases in intensity towards the massive sulphide interval. O-type sulphide mineralization is associated with strong chlorite alteration/replacement that intensifies towards zones of accumulated sulphides. Cordierite porphyroblasts are rare and occur only proximally to massive sulphide mineralization.

Silicification is present in the structural footwall mafic dike and may represent that this hole is in proximity to the felsic aphanitic dike present on adjacent sections to the west of this location.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-63	158.8	0	158.8	APS	David Nuttal	26-Aug-15		<input checked="" type="checkbox"/>	
14	-63.3	139.7	22.5	162.2	ReflexEVS	Geotech	26-Aug-15	5761	<input checked="" type="checkbox"/>	
35	-63	139.4	22.5	161.9	ReflexEVS	Geotech	26-Aug-15	5765	<input checked="" type="checkbox"/>	
47	-59.5	137.2	22.5	159.7	ReflexEVS	Geotech	26-Aug-15	5664	<input checked="" type="checkbox"/>	
59	-59	143.2	22.5	165.7	ReflexEVS	Geotech	26-Aug-15	5627	<input checked="" type="checkbox"/>	
89	-63	142.5	22.5	165	ReflexEVS	Geotech	26-Aug-15	5681	<input checked="" type="checkbox"/>	
119	-62.9	145.4	22.5	167.9	ReflexEVS	Geotech	26-Aug-15	5630	<input checked="" type="checkbox"/>	
149	-62.7	147.4	22.5	169.9	ReflexEVS	Geotech	26-Aug-15	5743	<input checked="" type="checkbox"/>	
176	-62.6	149.1	22.5	171.6	ReflexEVS	Geotech	26-Aug-15	5732	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
5.60	9.13	RHYvl Lapilli tuff									
<<Min: 5.6 - 18.7 2% Min: Pyrite>>											
<<Min: 5.6 - 19.53 0.5% Min: Pyrrhotite>>											
<<Min: 5.6 - 32 0.1% Min: Calcite>> trace +/- along fractures											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-235R

From (m)	To (m)	Rocktype & Description										From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 5.6 - 12 Trace (Alt) Muscovite>>																				
9.13	18.36	RHYvx	Quartz and/or feldspar crystal tuff																	
<<Alt: 12 - 65 Weak (Alt) Muscovite>>																				
18.36	19.53	RHYv	Rhyolite volcaniclastic																	
<<Min: 18.7 - 39.1 1% Min: Pyrite>>																				
19.53	20.96	MDS	Rhyolite tuff dominant mudstone																	
19.53 - 20.96: Biotite content used to classify interval. Muscovite alteration is dominant. Trace chlorite alteration, replacing fine grained biotite																				
<<Min: 19.53 - 35 0.5% Min: Pyrrhotite>>																				
20.96	21.73	RHYcw	Curdy textured-flow banded (flows, subvolcanics)																	
21.73	23.84	RHYvl	Lapilli tuff																	
23.84	32.04	RHYcw	Curdy textured-flow banded (flows, subvolcanics)																	
23.84 - 32.04: Fine grained mafic intrusive with biotite, chlorite, calcite, from 28.22m to 28.30m.																				
<<Min: 32 - 44.69 2% Min: Calcite>>																				
<<Vein: 30.03 - 32.04 96% Quartz>>																				
32.04	41.87	RHYv	Rhyolite volcaniclastic																	
32.04 - 41.87: Dominantly felsic volcaniclastics with fine-grained biotite partially replaced by chlorite.																				
<<Min: 35 - 44.69 1% Min: Pyrrhotite>>																				
<<Min: 39.1 - 62 0.25% Min: Pyrite>>																				
<<Vein: 39.1 - 40.36 20% Quartz-Carbonate-Sulphide>> PY, PO																				
41.87	44.69	MDS	Rhyolite tuff dominant mudstone																	
41.87 - 44.69: Volcaniclastic textures are distinct to convoluted.																				
44.69	50.78	RHYvl	Lapilli tuff																	
44.69 - 50.78: Trace biotite																				
<<Min: 44.69 - 64.16 1% Min: Pvrrhotite>>																				



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-235R

Rocktype & Description				From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 44.69 - 86 0.1% Min: Calcite>> Trace +/- along fractures												
50.78	51.96	MDS	Rhyolite tuff dominant mudstone									
51.96	55.75	RHY	Lapilli tuff									
55.75	64.16	MDS	Rhyolite tuff dominant mudstone									
<<Min: 62 - 76.79 0.5% Min: Pyrite>>												
64.16	76.35	RHY	Curdy textured-flow banded (flows, subvolcanics)									
<<Min: 64.16 - 76.35 0.5% Min: Pyrrhotite>>												
<<Alt: 65 - 76.3 Weak-Moderate (Alt) Muscovite>>												
<<Alt: 76.3 - 97 Moderate (Alt) Muscovite>>												
<<Struc: 74.72 - 74.88 Strong (Alt) Fault>>												
<<Struc: 75.92 - 75.98 Moderate (Alt) Fault>>												
76.35	76.79	MDS	Coherent rhyolite flow with carbonaceous content									
<<Min: 76.35 - 132 1% Min: Pyrrhotite>>												
76.79	82.90	RHY	Curdy textured-flow banded (flows, subvolcanics)									
<<Min: 76.79 - 86 1% Min: Pyrite>>												
<<Struc: 82.2 - 82.8 Weak (Alt) Fault>>												
82.90	85.11	MDS	Rhyolite tuff dominant mudstone									
85.11	90.64	RHY	undifferentiated rhyolite									
<<Min: 86 - 132 0.5% Min: Pyrite>>												
<<Min: 86 - 140.4 0.5% Min: Calcite>>												
<<Struc: 90.24 - 90.34 Moderate (Alt) Fault>>												
90.64	103.46	MDS	Coherent rhyolite flow with carbonaceous content									
90.64 - 103.46: interval contains coherent and volcanoclastic textures.												
<<Alt: 97 - 107 Moderate-Strong (Alt) Muscovite>>												
<<Struc: 103.36 - 103.46 Moderate (Alt) Fault>>												



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-235R

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
103.46	113.05	MDSt Rhyolite tuff dominant mudstone									
103.46 - 113.05: chlorite alteration strong at base of interval											
<<Alt: 104 - 116 Trace (Alt) Chlorite>>											
<<Alt: 107 - 116 Moderate (Alt) Muscovite>>											
<<Vein: 103.72 - 105.4 70% Quartz>> Galena, phyrrotite, Chalcopyrite											
113.05	117.76	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
<<Alt: 116 - 124 Moderate-Strong (Alt) Muscovite>>											
<<Alt: 116.7 - 127 Moderate (Alt) Chlorite>>											
<<Alt: 117.6 - 117.7 Moderate-Strong (Alt) Cordierite>>											
117.76	130.35	RHY undifferentiated rhyolite	127.90	129.40	1.50	B00268572	3	-0.005	0.02	0.03	0.01
117.76 - 130.35: Complex interval with patches of moderate to strong chlorite alteration. Dominant textures are volcanic last in and may contain mudstone/carbonaceous component. Also present are violently fractured/brecciated massive enclaves of dolomite and quartz.											
<<Alt: 124 - 133.5 Strong (Alt) Muscovite>>											
<<Alt: 127 - 133 Weak-Moderate (Alt) Chlorite>>											
<<Vein: 119.8 - 137.5 12% Quartz>>											
<<Struc: 120.53 - 120.53 dominant foliation>>											
<<Struc: 123.25 - 123.25 dominant foliation>>											
<<Struc: 124.33 - 124.33 dominant foliation>>											
<<Struc: 126.7 - 126.7 dominant foliation>>											
<<Struc: 129 - 129 dominant foliation>>											
130.35	133.76	OI Heavily disseminated sulphides in host schist	129.40	130.88	1.48	B00268573	1.5	0.008	0.03	-0.01	0.02
130.35 - 133.76: 3%CP, 3%Po, 10%Py, 3%SP											
<<Min: 132 - 165 1% Min: Pyrite>>											
<<Min: 132 - 165 1% Min: Pyrrhotite>>											
<<Alt: 133 - 135.5 Moderate (Alt) Chlorite>>											
<<Alt: 133.5 - 140.4 Moderate-Strong (Alt) Muscovite>>											
<<Struc: 133.43 - 133.43 dominant foliation>>											
<<Struc: 129 - 129 dominant foliation>>											
130.35	133.76	OI Heavily disseminated sulphides in host schist	130.88	132.00	1.12	B00268574	23.1	0.311	0.31	0.13	0.44
130.35 - 133.76: 3%CP, 3%Po, 10%Py, 3%SP											
<<Min: 132 - 165 1% Min: Pyrite>>											
<<Min: 132 - 165 1% Min: Pyrrhotite>>											
<<Alt: 133 - 135.5 Moderate (Alt) Chlorite>>											
<<Alt: 133.5 - 140.4 Moderate-Strong (Alt) Muscovite>>											
<<Struc: 133.43 - 133.43 dominant foliation>>											
<<Struc: 129 - 129 dominant foliation>>											
130.35	133.76	OI Heavily disseminated sulphides in host schist	132.00	133.00	1.00	B00268575	137	2.13	0.25	1.52	2.75
130.35 - 133.76: 3%CP, 3%Po, 10%Py, 3%SP											
<<Min: 132 - 165 1% Min: Pyrite>>											
<<Min: 132 - 165 1% Min: Pyrrhotite>>											
<<Alt: 133 - 135.5 Moderate (Alt) Chlorite>>											
<<Alt: 133.5 - 140.4 Moderate-Strong (Alt) Muscovite>>											
<<Struc: 133.43 - 133.43 dominant foliation>>											
<<Struc: 129 - 129 dominant foliation>>											
130.35	133.76	OI Heavily disseminated sulphides in host schist	133.00	133.77	0.77	B00268576	134	2.26	0.47	0.62	1.88
130.35 - 133.76: 3%CP, 3%Po, 10%Py, 3%SP											
<<Min: 132 - 165 1% Min: Pyrite>>											
<<Min: 132 - 165 1% Min: Pyrrhotite>>											
<<Alt: 133 - 135.5 Moderate (Alt) Chlorite>>											
<<Alt: 133.5 - 140.4 Moderate-Strong (Alt) Muscovite>>											
<<Struc: 133.43 - 133.43 dominant foliation>>											
<<Struc: 129 - 129 dominant foliation>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-235R

From (m) To (m) Rocktype & Description

133.76 135.50 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

133.76 - 135.5: SP ~15-20%,

<<Struc: 133.9 - 133.9 dominant foliation>>

135.50 136.60 OJ Heavily disseminated sulphides in proximal altered rock

135.5 - 136.6: Sulphide content ~10-15%

<<Alt: 135.5 - 140.4 Intense (Alt) Chlorite>>

136.60 136.85 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

136.85 137.43 OJ Heavily disseminated sulphides in proximal altered rock

136.85 - 137.43: ~15-20% sulphides.

137.43 140.35 RHY undifferentiated rhyolite

137.43 - 140.35: Interval has remnants of felsic origins, though chlorite alteration is strong to intense and obscures original mineralogy and volcanic textures.

<<Struc: 139.9 - 139.9 dominant foliation>>

140.35 145.20 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

140.35 - 145.2: High calcite

<<Min: 140.4 - 145.3 25% Min: Calcite>>

<<Alt: 140.4 - 145.2 Moderate-Strong (Alt) Chlorite>> Mafic dike alteration

<<Alt: 140.4 - 152 Weak (Alt) Muscovite>>

145.20 159.45 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

145.2 - 159.45: Silicified mafic dike. Felsic intrusion in proximity?

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
133.77	134.77	1.00	B00268577	189	1.42	0.25	3	9.57

134.77	135.50	0.73	B00268578	148	0.466	0.02	4	9.53
135.50	136.44	0.94	B00268579	22.6	0.399	0.63	0.09	0.37

136.44	137.42	0.98	B00268581	46.6	0.208	0.34	1.2	3.17
--------	--------	------	-----------	------	-------	------	-----	------

137.42	138.40	0.98	B00268582	5.1	0.02	0.03	0.02	0.07
--------	--------	------	-----------	-----	------	------	------	------

138.40	139.80	1.40	B00268583	2.1	0.013	0.07	-0.01	0.08
--------	--------	------	-----------	-----	-------	------	-------	------

139.80	140.40	0.60	B00268584	38.5	0.292	0.55	0.81	2.87
140.40	141.90	1.50	B00268585	1.1	-0.005	0.02	0.02	0.11

157.95	159.45	1.50	B00268586	0.4	-0.005	-0.01	-0.01	0.22
--------	--------	------	-----------	-----	--------	-------	-------	------

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-235R

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 145.3 - 152 2% Min: Calcite>>											
<<Min: 152 - 159.4 0.5% Min: Calcite>>											
<<Min: 159.4 - 165 25% Min: Calcite>>											
<<Alt: 145.2 - 159.45 Moderate-Strong (Alt) Silicification>>											
<<Alt: 152 - 176 Weak (Alt) Muscovite>>											
<<Struc: 148.76 - 148.76 dominant foliation>>											
<<Struc: 155.85 - 156 Moderate (Alt) Fault>>											
159.45	159.70	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	159.45	159.70	0.25	B00268587	62.4	0.12	0.34	1.4	8.12
<<Alt: 159.45 - 165.6 Moderate-Strong (Alt) Chlorite>> Mafic dike alteration											
159.70	160.35	OI Heavily disseminated sulphides in host schist	159.70	160.35	0.65	B00268588	45.3	0.287	0.83	0.33	2.26
159.7 - 160.35: 20-25% sulphides. Dominantly PO, Pyand CP											
160.35	165.05	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	160.35	161.85	1.50	B00268589	-0.3	-0.005	0.01	-0.01	0.02
160.35 - 165.05: High calcite											
<<Min: 165 - 169 1% Min: Chalcopryite>>			161.85	163.29	1.44	B00265284	-0.3	-0.005	-0.01	-0.01	0.02
<<Min: 165 - 176 0.5% Min: Calcite>>			163.29	165.00	1.71	B00265285	0.7	-0.005	-0.01	-0.01	0.05
<<Struc: 164.3 - 167.3 Moderate (Alt) Fault>> Fault zone. 4 faults ~10-15cm foliation parallel.			165.00	165.88	0.88	B00268591	15.1	0.044	0.31	0.09	0.23
165.05	165.85	RHYcq Quartz porphyry									
165.05 - 165.85: Heavy chlorite alteration											
<<Alt: 165.6 - 173 Intense (Alt) Chlorite>> Unexpected strong to intense chlorite alteration accompanied by CP, GL, SP, PO, PY mineralization.											
165.85	166.40	OJ Heavily disseminated sulphides in proximal altered rock	165.88	166.37	0.49	B00268592	316	0.191	0.56	4.12	0.85
165.85 - 166.4: ~20% sulphides. GL, SP, CP, PY, PO											
166.40	169.00	RHY undifferentiated rhyolite	166.37	167.40	1.03	B00268593	22.2	0.073	0.37	0.1	0.41
166.4 - 169: Heavy chlorite alteration			167.40	168.05	0.65	B00265286	7.2	0.023	0.09	0.08	0.13

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-235R

From (m) To (m) Rocktype & Description

169.00 172.00 OJ

**Heavily disseminated
sulphides in proximal altered
rock**

<<Min: 169 - 176 0.5% Min: Pyrite>>

<<Min: 169 - 176 0.5% Min: Pyrrhotite>>

<<Struc: 169.6 - 170.4 Weak (Alt) Fault>> 2 faults ~10cm

172.00 176.00 RHY

undifferentiated rhyolite

172 - 176: Possibly associated with felsic dike?

<<Alt: 173 - 176 Weak-Moderate (Alt) Muscovite>>

<<Struc: 175.4 - 175.45 Moderate (Alt) Fault>>

End of Hole @ 176

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
168.05	168.90	0.85	B00268594	7.1	0.029	0.11	0.06	0.61
168.90	170.00	1.10	B00268595	30.9	0.216	0.68	0.18	1.73
170.00	171.00	1.00	B00268596	3.5	0.011	0.02	0.03	0.68
171.00	172.00	1.00	B00268597	29.2	0.134	0.6	0.19	0.75
172.00	173.50	1.50	B00268598	1.1	0.009	-0.01	0.03	0.12
173.50	174.86	1.36	B00265287	-0.3	-0.005	-0.01	-0.01	-0.01
174.86	176.00	1.14	B00265288	-0.3	-0.005	-0.01	-0.01	-0.01

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-236

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Cooper Campbell	
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	26-Aug-15	
UTM Easting	414750.866	Core Size:	NQ3	Azimuth:	179.69	Date Logging Complete:	27-Aug-15	
UTM Northing:	6815498.936	Casing Pulled?:	Yes	Dip:	-70	Drill Company:	Geotech	
UTM Elev. (m):	1406.81	Casing Depth (m):	7	Length (m):	149	Drill Rig:	Hydracore	
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	23-Aug-15	
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	25-Aug-15	
Local Elev. (m):						Purpose:	Resource/Met	
Comments:							Parent Hole:	

The purpose of this whole was to twin the historical hole K94-040. The first 75.97 m of K15-236 consists of a thick package of rhyolitic flows and volcanoclastics +/- carbonaceous material, and carbonaceous mudstones. The shallowest of two massive sulphide intercepts consisting of OA, OB, and OC ore types was intersected between 75.97-89.23 m (13.26 m total thickness). The two massive sulphide intercepts are separated by cordierite altered RHY and a zone of OI from 95.22-97.22 m. The second massive sulphide intercept, consisting of OA, OB, and OI ore types, was intersected between 98.86-110.87 m (12.01 m total thickness). The structural footwall consists of MAFi intruded by RHYi, both of which sit stratigraphically above RHYvx. The footwall was intersected between 110.87-149.0 m. The structural hanging wall felsic volcanics are moderate to strongly MU altered. This syngenetic alteration increases in intensity with proximity to the sulphide zone. A weak CI-CL alteration was logged between 89.23-93.78 m. Syngenetic alteration of the footwall has been eliminated by MAFi and RHYi units. Alteration of the footwall is characterized by a moderate to strong CL-BI overprint as well as intense silicification associated with RHYi.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-70	179.69	0	179.69	APS	Cooper Campbell	23-Aug-15		<input checked="" type="checkbox"/>	
29	-69.2	160.7	22.5	183.2	ReflexEVS	Geotech	24-Aug-15	5789	<input checked="" type="checkbox"/>	
59	-68.9	162.2	22.5	184.7	ReflexEVS	Geotech	24-Aug-15	5799	<input checked="" type="checkbox"/>	
89	-68.8	157.7	22.5	180.2	ReflexEVS	Geotech	24-Aug-15	5603	<input checked="" type="checkbox"/>	
119	-68.5	159.8	22.5	182.3	ReflexEVS	Geotech	25-Aug-15	5697	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	5.20	OVBN Overburden									
5.20	13.00	MDSw Coherent rhyolite flow with carbonaceous content									
<<Min: 5.2 - 71.42 0.01% Min: Sphalerite>>											
<<Min: 5.2 - 71.42 0.25% Min: Pyrite>> BL											
<<Min: 5.2 - 71.42 0.1% Min: Pyrrhotite>> BL											
<<Min: 5.2 - 75.6 0.01% Min: Calcite>>											
<<Alt: 5.2 - 71.42 Moderate (Alt) Muscovite>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-236

Rocktype & Description				From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
13.00	21.00	RHYcw	Curdy textured-flow banded (flows, subvolcanics)									
21.00	27.20	MDSw	Coherent rhyolite flow with carbonaceous content									
21 - 27.2: QZ eyes												
27.20	33.00	RHYcw	Curdy textured-flow banded (flows, subvolcanics)									
<<Struc: 30 - 69.76 Weak (Alt) Fault>> Narrow faults filled with broken rock and gouge. Spaced metres apart. Multiple orientations.												
33.00	34.23	MDSw	Coherent rhyolite flow with carbonaceous content									
34.23	36.74	MDSw	Carbonaceous dominant mudstone									
36.74	43.60	RHYva	Coarse grained to ash tuff									
43.60	47.50	RHYcw	Curdy textured-flow banded (flows, subvolcanics)									
47.50	55.30	MDSw	Rhyolite tuff dominant mudstone									
55.30	65.00	MDSw	Coherent rhyolite flow with carbonaceous content									
<<Struc: 58.95 - 58.96 dominant foliation>>												
65.00	66.60	MDSw	Carbonaceous dominant mudstone									
66.60	68.20	MDSw	Rhyolite tuff dominant mudstone									
68.20	71.80	RHYv	Rhyolite volcaniclastic									
68.2 - 71.8: possible flow												
<<Min: 71.42 - 75.6 0.01% Min: Sphalerite>>												
<<Min: 71.42 - 75.6 0.01% Min: Pyrite>>												
<<Min: 71.42 - 75.6 1% Min: Pyrrhotite>>												
<<Min: 71.42 - 75.6 0.01% Min: Arsenopyrite>>												

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-236

From (m) To (m) Rocktype & Description

<<Alt: 71.42 - 75.97 Moderate-Strong (Alt) Muscovite>>

<<Struc: 69.83 - 69.84 dominant foliation>>

71.80 75.00 RHYvl Lapilli tuff

71.8 - 75: fragments of semi msv sx tops up, if sx frags are rip upos suggests that se-floor sulphide not replacement

<<Struc: 72.16 - 72.17 dominant foliation>>

<<Struc: 73.19 - 73.2 dominant foliation>>

<<Struc: 74.96 - 74.97 dominant foliation>>

75.00 75.60 MDSt Rhyolite tuff dominant mudstone

75.60 75.97 MDSc Carbonaceous dominant mudstone

<<Min: 75.6 - 75.97 0.5% Min: Pyrite>>

<<Min: 75.6 - 75.97 2% Min: Pyrrhotite>>

<<Min: 75.6 - 75.97 0.01% Min: Chalcopyrite>>

<<Struc: 75.61 - 75.62 Contact>> Lith contact.

75.97 76.91 OA Magnetite bearing sulphides

<<Struc: 75.98 - 75.99 Contact>>

76.91 77.89 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Struc: 77.35 - 77.36 dominant foliation>>

77.89 82.00 OA Magnetite bearing sulphides

<<Min: 77.89 - 85.8 20% Min: Sphalerite>>

<<Struc: 78.5 - 78.51 dominant foliation>>

<<Struc: 79.1 - 79.11 dominant foliation>>

82.00 83.07 OC Chalcopyrite-pyrrhotite net textured sulphides

<<Min: 82 - 83.07 15% Min: Chalcopyrite>>

83.07 85.80 OA Magnetite bearing sulphides

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
72.60	74.10	1.50	B00266618	4	0.006	0.02	0.1	0.18
74.10	75.60	1.50	B00266619	5.3	0.032	-0.01	0.11	0.15
75.60	75.97	0.37	B00266621	61.6	0.844	0.15	1.4	3.59
75.97	76.91	0.94	B00266622	110	1.01	1.1	1.6	5.21
76.91	77.89	0.98	B00266623	96.8	1.42	0.49	1.12	9.05
77.89	78.50	0.61	B00266624	46.2	0.822	0.62	0.77	13.6
78.50	79.00	0.50	B00266625	93.2	0.935	0.65	1.65	12.7
79.00	80.00	1.00	B00266626	139	0.963	0.7	3.26	9.7
80.00	81.00	1.00	B00266627	78	0.524	0.53	1.61	9.17
81.00	82.00	1.00	B00266628	58.1	0.8	1.46	0.44	4.54
82.00	83.00	1.00	B00266629	200	3.56	7.45	0.4	5.91
83.00	84.00	1.00	B00266632	118	1.24	1.95	0.84	4.34
84.00	85.00	1.00	B00266633	72.4	0.652	0.58	0.99	5.91
85.00	85.80	0.80	B00266634	121	1.12	0.5	1.76	7.52



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-236

From (m) To (m) Rocktype & Description

85.80 89.23 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

MG

89.23 95.22 RHY undifferentiated rhyolite

<<Min: 89.23 - 98.86 5% Min: Pyrite>> WIS

<<Min: 89.23 - 98.86 5% Min: Pyrrhotite>>

<<Min: 89.23 - 98.86 0.01% Min: Galena>> DIS

<<Min: 89.23 - 98.86 0.5% Min: Chalcopyrite>>

<<Min: 89.23 - 98.86 0.25% Min: Calcite>>

<<Alt: 89.23 - 89.62 Weak (Alt) Cordierite>>

<<Alt: 89.23 - 93.78 Strong (Alt) Muscovite>>

<<Alt: 89.23 - 93.78 Weak (Alt) Chlorite>>

<<Alt: 93.78 - 97.58 Strong (Alt) Silicification>>

<<Alt: 93.78 - 97.58 Strong (Alt) Muscovite>>

<<Alt: 93.78 - 97.58 Weak (Alt) Chlorite>>

<<Vein: 90.32 - 98.62 5% Quartz-Carbonate-Sulphide 48 deg. >> CP, GL, CA, DO, PO, PY, SP

<<Struc: 89.23 - 89.24 Contact>> Lith contact

<<Struc: 91.97 - 91.98 dominant foliation>>

95.22 97.22 OI Heavily disseminated sulphides in host schist

97.22 98.86 RHY undifferentiated rhyolite

<<Alt: 97.58 - 98.86 Intense (Alt) Muscovite>>

<<Alt: 97.58 - 98.86 Weak (Alt) Chlorite>>

98.86 103.38 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

MG

<<Min: 100.27 - 104.58 20% Min: Sphalerite>>

<<Struc: 100.76 - 100.77 dominant foliation>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
85.80	86.50	0.70	B00266635	209	1.86	0.59	3.57	9.06

86.50	87.00	0.50	B00266636	120	1.48	0.48	1.39	8.39
87.00	88.00	1.00	B00266637	91.9	1.18	0.38	0.81	6.56
88.00	88.50	0.50	B00266638	47.3	0.842	0.14	0.45	5.45
88.50	89.23	0.73	B00266639	168	1.78	0.64	1.02	6.76
89.23	90.50	1.27	B00266641	7.7	0.123	0.04	0.05	0.09
90.50	92.00	1.50	B00266642	4.6	0.036	-0.01	0.02	0.19
92.00	93.50	1.50	B00266643	7.3	0.04	-0.01	0.04	0.11
93.50	94.50	1.00	B00266644	6.8	-0.005	0.04	0.07	0.16
94.50	95.22	0.72	B00266645	4.8	-0.005	0.04	0.01	0.02

95.22	96.22	1.00	B00266646	47.1	0.133	0.17	0.34	1.05
-------	-------	------	-----------	------	-------	------	------	------

96.22	97.22	1.00	B00266647	37.1	0.061	0.08	0.52	1.5
97.22	98.00	0.78	B00266648	5.9	0.38	0.05	0.03	0.44
98.00	98.86	0.86	B00266649	10.1	0.122	0.09	0.05	0.2

98.86	99.50	0.64	B00266652	147	1.23	1.41	0.17	0.35
-------	-------	------	-----------	-----	------	------	------	------

99.50	100.50	1.00	B00266653	102	1.1	0.6	0.84	3.01
100.50	101.50	1.00	B00266654	146	1.91	0.54	2.44	9.51

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-236

From (m) To (m) Rocktype & Description

<<Struc: 101.92 - 101.93 dominant foliation>>

<<Struc: 102.79 - 102.8 dominant foliation>>

<<Struc: 103.2 - 103.21 dominant foliation>>

103.38 103.94 OA Magnetite bearing sulphides

103.94 104.58 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Struc: 104.33 - 104.34 dominant foliation>>

104.58 105.64 OI Heavily disseminated sulphides in host schist

<<Vein: 104.58 - 105.64 40% Quartz-Carbonate-Sericite 80 deg. >>

105.64 110.87 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Min: 105.64 - 110.87 20% Min: Sphalerite>>

<<Struc: 107.06 - 107.07 dominant foliation>>

<<Struc: 108.37 - 108.38 dominant foliation>>

<<Struc: 109.84 - 109.85 dominant foliation>>

110.87 114.51 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

<<Min: 110.87 - 114.51 0.01% Min: Pyrite>>

<<Min: 110.87 - 114.51 15% Min: Calcite>>

<<Alt: 110.87 - 114.51 Moderate-Strong (Alt) Chlorite>>

<<Alt: 110.87 - 114.51 Moderate (Alt) Biotite>>

114.51 122.56 RHYi Aphanitic Rhyolite (intrusion)

114.51 - 122.56: MAFi xenoliths

<<Min: 114.51 - 122.56 1% Min: Sphalerite>> BL

<<Min: 114.51 - 122.56 0.5% Min: Pyrite>>

<<Min: 114.51 - 122.56 2% Min: Pyrrhotite>>

<<Min: 114.51 - 122.56 2% Min: Calcite>>

<<Min: 120.03 - 121.76 0.01% Min: Galena>>

MG

MG

MG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
101.50	102.50	1.00	B00266655	132	1.99	0.64	1.43	6.56
102.50	103.38	0.88	B00266656	78.3	0.827	0.13	2.32	8.04
103.38	103.94	0.56	B00266657	99.3	0.424	0.09	4.5	11.1
103.94	104.58	0.64	B00266658	112	1.45	0.35	1.51	7.63
104.58	105.08	0.50	B00266659	41	0.327	0.1	0.12	0.39
105.08	105.64	0.56	B00266661	159	1.01	0.46	1.49	4.02
105.64	106.50	0.86	B00266662	265	1.97	0.42	4.16	10.2
106.50	107.50	1.00	B00266663	219	2.13	0.5	1.11	4.37
107.50	108.50	1.00	B00266664	198	1.76	0.41	1.76	6.86
108.50	109.50	1.00	B00266665	164	1.67	0.43	1.71	5.66
109.50	110.05	0.55	B00266666	152	1.73	0.43	2.73	5.86
110.05	110.87	0.82	B00266667	159	0.954	0.26	3.32	8.52
110.87	112.37	1.50	B00266668	4.2	0.015	0.02	0.06	0.09
112.37	113.87	1.50	B00266669	0.4	-0.005	-0.01	-0.01	0.02
113.87	114.51	0.64	B00266671	-0.3	0.01	-0.01	-0.01	-0.01

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-236

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<div><<Min: 120.03 - 121.76 0.01% Min: Chalcopryite>></div> <div><<Alt: 114.51 - 122.56 Intense (Alt) Silicification>></div> <div><<Alt: 114.51 - 122.56 Moderate (Alt) Muscovite>></div> <div><<Alt: 120.03 - 121.76 Weak (Alt) Chlorite>></div> <div><<Vein: 114.51 - 122.56 20% Quartz-Carbonate-Sulphide 70 deg. >> CA, SP, PO, PY, GL</div> <div><<Struc: 118.7 - 118.71 dominant foliation>></div> <div><div>122.56128.00MAFi</div><div>Mafic Intrusions (primarily footwall mafic intrusion)</div></div> <div><<Min: 122.56 - 128 0.01% Min: Pyrite>></div> <div><<Min: 122.56 - 128 15% Min: Calcite>></div> <div><<Alt: 122.56 - 125.59 Weak-Moderate (Alt) Muscovite>></div> <div><<Alt: 122.56 - 128 Moderate (Alt) Chlorite>></div> <div><<Alt: 122.56 - 128 Moderate-Strong (Alt) Biotite>></div> <div><<Alt: 125.59 - 128 Moderate-Strong (Alt) Muscovite>> Patchy zones of Cr mica.</div> <div><<Vein: 122.56 - 128 20% Quarzt-Chlorite-Carbonate 74 deg. >></div> <div><<Struc: 125.64 - 126 Moderate (Alt) Fault>> Fault gouge medium to high intensity</div> <div><div>128.00136.35RHYi</div><div>Aphanitic Rhyolite (intrusion)</div></div> <div><<Min: 128 - 136.35 1% Min: Sphalerite>></div> <div><<Min: 128 - 136.35 1% Min: Pyrite>></div> <div><<Min: 128 - 136.35 0.01% Min: Galena>></div> <div><<Min: 128 - 136.35 2% Min: Calcite>></div> <div><<Alt: 128 - 136.35 Intense (Alt) Silicification>></div> <div><<Alt: 128 - 136.35 Weak-Moderate (Alt) Muscovite>></div> <div><<Vein: 128 - 136.35 10% Quartz-Carbonate-Sulphide 80 deg. >> CA, SP, PO, PY, GL</div> <div><div>136.35143.00MAFi</div><div>Mafic Intrusions (primarily footwall mafic intrusion)</div></div> <div><<Min: 136.35 - 143 0.01% Min: Pyrite>> CG PY bleb partially replaced by PO</div> <div><<Min: 136.35 - 143 0.01% Min: Pyrrhotite>> CG PY bleb partially replaced by PO</div> <div><<Min: 136.35 - 143 15% Min: Calcite>></div> <div><<Alt: 136.35 - 141.65 Moderate-Strong (Alt) Chlorite>></div> <div><<Alt: 136.35 - 141.65 Moderate (Alt) Biotite>></div> <div><<Alt: 141.65 - 143 Strong (Alt) Chlorite>></div> <div><<Struc: 136.35 - 141.65 Weak (Alt) Fault>> Narrow faults filled with broken rock and gouge. Spaced metres apart. Multiple orientations.</div>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-236

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
143.00	149.00	RHYvx Quartz and/or feldspar crystal tuff									
143 - 149: Trace tourmaline. QZ eyes.											
<<Min: 143 - 149 0.1% Min: Pyrite>>											
<<Min: 143 - 149 0.25% Min: Pyrrhotite>>											
<<Min: 143 - 149 0.01% Min: Chalcopyrite>>											
<<Alt: 143 - 149 Moderate (Alt) Muscovite>>											
End of Hole @ 149											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-237

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Cooper Campbell
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	27-Aug-15
UTM Easting	414750.629	Core Size:	HQ3	Azimuth:	179.15	Date Logging Complete:	28-Aug-15
UTM Northing:	6815496.738	Casing Pulled?:	Yes	Dip:	-70	Drill Company:	Geotech
UTM Elev. (m):	1406.768	Casing Depth (m):	4.5	Length (m):	119	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	25-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	26-Aug-15
Local Elev. (m):						Purpose:	Metallurgical Twin
Comments:						Parent Hole:	K15-236

The purpose of this whole was to twin K15-236 and to provide material for MET 2 and MET 7 domains, both of which were successfully intercepted. The first 75.26 m of K15-237 consists of a thick package of carbonaceous rhyolite flows and crystal tuffs with thin carbonaceous mudstones throughout. The shallower of two massive sulphide intercepts consists of OA, OB, and OC ore types and was intersected between 75.26-88.60 m (13.34 m total thickness). The two massive sulphide intercepts are separated by undifferentiated RHY between 88.60-96.80 m. The lowermost 2.65 m of the RHY unit contains heavily disseminated PY, PO, SP, CP, and GL and was logged as OI. The deeper of the two massive sulphide intercepts consisting of OB, OA, and OH ore types was intersected between 96.80-109.43 m (12.63 m total thickness). The structural footwall (109.43-119 m) consists of MAFi intruded by RHYi. The planned depth was 122 m but the hole was terminated at 119 m due to a blocking error made by the drill crew. Syngenetic alteration in the felsic volcanic hanging wall consists of moderate to strong MU alteration within about 7 m of the top of the sulphide zone. Weak to moderate CL alteration is present within 30 cm of the top of the ore zone. From 88.60-96.80 m moderate to strong MU alteration predominates with weak to moderate CL alteration. Syngenetic alteration of the footwall has been eliminated by MAFi and RHYi units. Alteration of the footwall is characterized by a moderate to strong CL, BI overprint and strong to intense silicification associated with RHYi.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-70	179.15	0	179.15	APS	Cooper Campbell	25-Aug-15		<input checked="" type="checkbox"/>	
29	-68.7	158.6	22.5	181.1	ReflexEVS	Geotech	26-Aug-15	5758	<input checked="" type="checkbox"/>	
59	-68.6	162.7	22.5	185.2	ReflexEVS	Geotech	26-Aug-15	5775	<input checked="" type="checkbox"/>	
86	-68.4	150.3	22.5	172.8	ReflexEVS	Geotech	26-Aug-15	5360	<input type="checkbox"/>	Chose not to accept value due to low magnetic field reading
119	-68.4	160.8	22.5	183.3	ReflexEVS	Geotech	27-Aug-15	5649	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	4.43	OVBN Overburden									
<<Alt: 4.3 - 66 Moderate (Alt) Muscovite>>											
4.43	13.00	MDSw Coherent rhyolite flow with carbonaceous content									
<<Min: 4.43 - 72.75 0.01% Min: Sphalerite>>											
<<Min: 4.43 - 72.75 0.25% Min: Pyrite>> BL											
<<Min: 4.43 - 72.75 0.01% Min: Pyrrhotite>> BL											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-237

Rocktype & Description				From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 4.43 - 72.75 0.01% Min: Calcite>>												
<<Struc: 4.43 - 66.1 Weak (Alt) Fault>> Narrow faults filled with broken rock and gouge. Spaced metres apart. Multiple orientations.												
13.00	23.00	RHYcw	Curdy textured-flow banded (flows, subvolcanics)									
23.00	27.00	MDSw	Coherent rhyolite flow with carbonaceous content									
27.00	34.27	RHYcw	Curdy textured-flow banded (flows, subvolcanics)									
27 - 34.27: QZ eyes												
34.27	45.30	MDSw	Coherent rhyolite flow with carbonaceous content									
<<Vein: 36.95 - 38.75 20% Quartz-Carbonate-Sulphide 80 deg. >> Trace PY												
45.30	60.89	MDSst	Rhyolite tuff dominant mudstone									
45.3 - 60.89: QZ eyes												
60.89	65.00	MDSw	Coherent rhyolite flow with carbonaceous content									
65.00	66.00	MDSsc	Carbonaceous dominant mudstone									
66.00	72.75	MDSst	Rhyolite tuff dominant mudstone	70.75	71.75	1.00						
<<Alt: 66 - 75.26 Moderate-Strong (Alt) Muscovite>>				71.75	72.75	1.00						
<<Vein: 72.28 - 72.7 95% Quartz-Carbonate-Sulphide 80 deg. >> Trace GL												
<<Struc: 66.1 - 69 Moderate (Alt) Fault>> Broken rock and fault gouge. Fault material accounts for 15% of interval.												
72.75	75.26	MDSsc	Carbonaceous dominant mudstone	72.75	73.75	1.00						
<<Min: 72.75 - 75.26 0.1% Min: Sphalerite>>				73.75	74.75	1.00						
<<Min: 72.75 - 75.26 2% Min: Pyrite>> DIS				74.75	75.26	0.51						
<<Min: 72.75 - 75.26 1% Min: Pyrrhotite>> DIS												
<<Min: 72.75 - 75.26 0.1% Min: Chalcopyrite>>												
<<Alt: 74.95 - 75.26 Weak-Moderate (Alt) Chlorite>>												



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-237

From (m)	To (m)	Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
75.26	76.02	OG	Chalcopyrite rich sulphides	CG	75.26	76.02	0.76					
75.26 - 76.02: 15% CP												
<<Min: 75.26 - 76.02 15% Min: Chalcopyrite>>												
76.02	77.18	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	76.02	76.52	0.50					
77.18	78.22	OA	Magnetite bearing sulphides	MG	76.52	77.18	0.66					
<<Min: 77.18 - 80.2 20% Min: Sphalerite>>												
77.18	77.18			MG	77.18	77.68	0.50					
78.22	78.75	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	77.68	78.22	0.54					
78.22	78.22			MG	78.22	78.75	0.53					
78.75	81.40	OA	Magnetite bearing sulphides	MG	78.75	79.50	0.75					
81.40	82.15	OC	Chalcopyrite-pyrrhotite net textured sulphides	CG	79.50	80.50	1.00					
81.4 - 82.15: 25%CP												
<<Min: 81.4 - 82.15 25% Min: Chalcopyrite>>												
81.40	81.40			CG	80.50	81.40	0.90					
82.15	85.22	OA	Magnetite bearing sulphides	MG	81.40	82.15	0.75					
<<Min: 83.89 - 85.22 20% Min: Sphalerite>>												
82.15	82.15			MG	82.15	83.15	1.00					
85.22	88.60	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	83.15	84.15	1.00					
<<Min: 87.95 - 88.6 15% Min: Sphalerite>>												
<<Min: 87.95 - 88.6 2% Min: Galena>>												
85.22	85.22			MG	84.15	84.72	0.57					
85.22	85.22			MG	84.72	85.22	0.50					
85.22	85.22			MG	85.22	86.00	0.78					
86.00	87.00				86.00	87.00	1.00					
87.00	88.00				87.00	88.00	1.00					
88.00	88.60				88.00	88.60	0.60					
88.60	94.15	RHY	undifferentiated rhyolite		88.60	89.60	1.00					
88.6 - 94.15: Syngenetic alteration zone												

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-237

From (m)	To (m)	Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 88.6 - 94.15 0.25% Min: Sphalerite>>				89.60	90.60	1.00						
<<Min: 88.6 - 94.15 1% Min: Pyrrhotite>>				90.60	91.60	1.00						
<<Min: 88.6 - 94.15 0.1% Min: Galena>>				91.60	92.60	1.00						
<<Min: 88.6 - 94.15 0.01% Min: Chalcopyrite>>				92.60	93.60	1.00						
<<Min: 88.6 - 96.8 2% Min: Calcite>>				93.60	94.15	0.55						
<<Alt: 88.6 - 92.82 Strong (Alt) Muscovite>>												
<<Alt: 88.6 - 92.82 Weak (Alt) Chlorite>>												
<<Alt: 92.82 - 95.42 Moderate-Strong (Alt) Silicification>>												
<<Alt: 92.82 - 96.8 Moderate-Strong (Alt) Muscovite>>												
<<Alt: 92.82 - 96.8 Weak-Moderate (Alt) Chlorite>>												
<<Vein: 89.08 - 96.8 20% Quartz-Carbonate-Sulphide 30 deg. >> 1% Po, 0.25% SP, tr GL, 0.25% PY												
94.15	96.80	OI	Heavilly disseminated sulphides in host schist	CG	94.15	95.00	0.85					
					95.00	96.00	1.00					
					96.00	96.80	0.80					
96.80	97.14	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	96.80	97.54	0.74					
97.14	97.54	OA	Magnetite bearing sulphides	MG								
97.54	98.45	OH	Fine grained, megascopically homogeneous pyrite rock	MG	97.54	98.45	0.91					
98.45	101.92	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	98.45	99.00	0.55					
<<Min: 99.13 - 109.43 20% Min: Sphalerite>>					99.00	100.00	1.00					
					100.00	101.00	1.00					
					101.00	101.92	0.92					
101.92	102.61	OA	Magnetite bearing sulphides	MG	101.92	102.61	0.69					
102.61	109.43	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	102.61	103.50	0.89					
					103.50	104.50	1.00					
					104.50	105.50	1.00					

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-237
From (m) **To (m)** **Rocktype & Description**

109.43 113.25 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

109.43 - 113.25: MU SI over print from RHYi. Brecciated contact with RHYi.

<<Min: 109.43 - 113.25 0.25% Min: Pyrite>>

<<Min: 109.43 - 113.25 0.01% Min: Pyrrhotite>> PO replacing PY.

<<Min: 109.43 - 113.94 15% Min: Calcite>>

<<Alt: 109.43 - 111.6 Strong (Alt) Silicification>>

<<Alt: 109.43 - 111.6 Moderate-Strong (Alt) Muscovite>>

<<Alt: 109.43 - 111.6 Weak (Alt) Chlorite>>

<<Alt: 109.43 - 111.6 Weak-Moderate (Alt) Biotite>>

<<Alt: 111.6 - 113.94 Weak-Moderate (Alt) Muscovite>>

<<Alt: 111.6 - 113.94 Moderate (Alt) Chlorite>>

<<Alt: 111.6 - 113.94 Moderate-Strong (Alt) Biotite>>

<<Vein: 109.43 - 111.6 25% Quartz-Carbonate 85 deg. >> Tourmaline.

113.25 119.00 RHYi Aphanitic Rhyolite (intrusion)

113.25 - 119: Brecciated boundary with MAFi.

<<Min: 113.25 - 119 3% Min: Sphalerite>>

<<Min: 113.25 - 119 1% Min: Pyrite>>

<<Min: 113.25 - 119 1% Min: Pyrrhotite>>

<<Min: 113.94 - 119 0.25% Min: Calcite>>

<<Alt: 113.94 - 119 Intense (Alt) Silicification>>

<<Alt: 113.94 - 119 Weak-Moderate (Alt) Muscovite>>

<<Vein: 117.85 - 118.02 100% Quartz-Carbonate-Sulphide 50 deg. >> SP, PO, PY, GL

End of Hole @ 119

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
105.50	106.50	1.00						
106.50	107.50	1.00						
107.50	108.50	1.00						
108.50	109.43	0.93						
109.43	110.43	1.00						

110.43	111.43	1.00
111.43	112.43	1.00
112.43	113.25	0.82

113.25	114.50	1.25
--------	--------	------

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-238

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	27-Aug-15
UTM Easting	414901.586	Core Size:	HQ3	Azimuth:	180.17	Date Logging Complete:	29-Aug-15
UTM Northing:	6815741.065	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1388.746	Casing Depth (m):	6	Length (m):	245	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	26-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	28-Aug-15
Local Elev. (m):						Purpose:	Resource/Met
Comments:						Parent Hole:	

Hole K15-238 is made up of primarily rhyolitic rock (RHYcw and RHYvl) with two minor mudstone units. The top of the hole is cut by mafic dykes. The massive sulfide was intersected within a shear zone from 179.84 to 181.88, and consists exclusively of the OB domain. The footwall consists of mafic sill crosscut by rhyolitic aphanitic dyke (green/grey alteration associated) and followed by biotite rich and weakly chloritized rhyolitic units.

The hole shows progressive muscovite alteration in the hanging-wall followed by strong to intense proximal alteration from 171m to 177m (cordierite) with wispy laminated PO/PY/AS/SP/GL mineralization.

This drill hole contains a significant shear zone (177m to 185m) hosting massive sulfide as well as multiple minor faults under the mafic intrusion. Multiple strong chlorite alteration zones are present.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	180.17	0	180.17	APS	Cooper Campbell	25-Aug-15		<input checked="" type="checkbox"/>	
26	-58.9	163.8	22.5	186.3	ReflexEVS	Geotech	26-Aug-15	5766	<input checked="" type="checkbox"/>	
50	-59.1	164	22.5	186.5	ReflexEVS	Geotech	26-Aug-15	5726	<input checked="" type="checkbox"/>	
75	-59.3	164.7	22.5	187.2	ReflexEVS	Geotech	26-Aug-15	5747	<input checked="" type="checkbox"/>	
101	-59.9	166.2	22.5	188.7	ReflexEVS	Geotech	26-Aug-15	5795	<input checked="" type="checkbox"/>	
125	-60.5	165.3	22.5	187.8	ReflexEVS	Geotech	26-Aug-15	5752	<input checked="" type="checkbox"/>	
152	-60.2	169.4	22.5	191.9	ReflexEVS	Geotech	26-Aug-15	5828	<input checked="" type="checkbox"/>	
176	-60.5	170	22.5	192.5	ReflexEVS	Geotech	27-Aug-15	5680	<input checked="" type="checkbox"/>	
200	-60.7	167.6	22.5	190.1	ReflexEVS	Geotech	27-Aug-15	5782	<input checked="" type="checkbox"/>	
227	-60.2	166.4	22.5	188.9	ReflexEVS	Geotech	28-Aug-15	5754	<input checked="" type="checkbox"/>	
245	-60.1	167.8	22.5	190.3	ReflexEVS	Geotech	28-Aug-15	5789	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	6.00	CASN Casing									

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-238

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
6.00	10.91	RHYva Coarse grained to ash tuff									
6 - 10.91: Trace of oxidation, BI at lower contact with mafic dyke.											
<<Min: 9 - 66.53 1% Min: Pyrite>> Locally in discontinuous veins, coarse grain.											
<<Min: 9 - 66.53 1% Min: Pyrrhotite>> Often elongated along the foliation or in foliation mostly in flow banded zone.											
<<Min: 9 - 66.53 1% Min: Chalcopyrite>> Trace											
<<Alt: 9 - 66.53 Weak (Alt) Muscovite>> maybe some chlorite, greenish color.											
10.91	11.77	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
10.91 - 11.77: Dyke. Foliated. Phenoblasts (feldspar?), few calcite, SP aggregate.											
11.77	18.45	RHYvi Lapilli tuff									
<<Vein: 14 - 14.5 Tourmaline>> TML in fracture along the core axis											
18.45	23.88	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
18.45 - 23.88: Dyke. Silicified mafic dyke, locally RHYvi, few CA, SP at lower contact.											
23.88	26.03	RHYvi Lapilli tuff									
26.03	26.40	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
26.03 - 26.4: Dyke. CA.											
26.40	28.40	RHYvi Lapilli tuff									
28.40	32.69	RHYvx Quartz and/or feldspar crystal tuff									
28.4 - 32.69: Probably phenoblasts, randomly oriented locally (or RHYvi).											
32.69	35.00	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
32.69 - 35: Flow banded, SI rich.											
35.00	36.43	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
35 - 36.43: Dyke. Silicified. Calcite at upper and lower contact.											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-238

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
36.43	41.63	RHYcw	Curdy textured-flow banded (flows, subvolcanics)	grey-green							
41.63	44.19	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
41.63 - 44.19: Dyke. CA in matrix, large patch CA/SP and few CL at upper contact (30 cm wide).											
<<Min: 41.63 - 41.93 20% Min: Sphalerite>> Patch at contact with mafic dyke, associated with CA vein.											
44.19	46.51	RHYcw	Curdy textured-flow banded (flows, subvolcanics)	grey-green							
44.19 - 46.51: Flow banded.											
46.51	48.71	RHYvi	Lapilli tuff	grey-green							
48.71	53.55	RHYcw	Curdy textured-flow banded (flows, subvolcanics)	grey-green							
48.71 - 53.55: Flow banded.											
53.55	54.09	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
53.55 - 54.09: Dyke. CA at upper and lower contact.											
54.09	56.55	RHYcw	Curdy textured-flow banded (flows, subvolcanics)	grey-green							
56.55	77.47	RHYvi	Lapilli tuff	dark grey							
56.55 - 77.47: Containing clasts locally. Bl.											
<<Min: 66.53 - 115 1% Min: Pyrite>> Discontinuous vein, coarse grain, and disseminated											
<<Min: 66.53 - 115 2% Min: Pyrrhotite>>											
77.47	98.08	RHYcf	Feldspar & feldspar quartz porphyry	grey-green							
77.47 - 98.08: QZ eyes, blue.											
<<Vein: 81 - 81.1 Quartz-Sulphide>> QZ vein, 1cm wide, shallow angle (10 degree), containing mineralization PO/PY/CP.											
<<Vein: 82.4 - 82.44 Quartz>> QZ few CA/CL											
98.08	100.71	RHYvi	Lapilli tuff	medium grey							

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-238

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
100.71	113.09	RHYcw Curdy textured-flow banded (flows, subvolcanics) medium grey									
100.71 - 113.09: Wavy QZ, folded. BI											
113.09	114.23	RHYvl Lapilli tuff medium grey									
114.23	117.44	RHYcw Curdy textured-flow banded (flows, subvolcanics) medium grey									
114.23 - 117.44: Silicification from 115.95 to 117.46m. Weak MU atteration at proximity of the fault (115.48). <<Struc: 115.95 - 116 Weak (Alt) Fault>> Fault gouge, minor fault.											
117.44	127.38	RHYvl Lapilli tuff medium grey									
117.44 - 127.38: Probably carbonaceous. Dyke with wavy contact at 115.20 and 116-20, 35 cm wide, probably the same dyke folded.											
127.38	131.85	MDSt Rhyolite tuff dominant mudstone dark grey									
131.85	143.67	RHYvl Lapilli tuff medium grey									
131.85 - 143.67: Locally fragmental. <<Alt: 131.85 - 155 Weak (Alt) Muscovite>>											
143.67	153.52	RHYcw Curdy textured-flow banded (flows, subvolcanics) grey-green									
143.67 - 153.52: Possibly phenoblasts (QZ, tectngular shape). <<Min: 143.67 - 153.32 1% Min: Pyrite>> <<Min: 143.67 - 153.32 8% Min: Pyrrhotite>> Coud be selective replacement. <<Vein: 152.52 - 163.2 Massive Sulphide/Sulphides undifferentiated>> PO/PY/SP/ AS stringers (4 thin veinlets every 10 cm)											
153.52	155.32	MDSt Rhyolite tuff dominant mudstone dark grey									
153.52 - 155.32: Foliated. <<Alt: 155 - 162.27 Moderate (Alt) Muscovite>>											
155.32	162.27	RHYcw Curdy textured-flow banded (flows, subvolcanics) grey-green									
155.32 - 162.27: Folded stringers PO/PY.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-238

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<p><<Min: 155.52 - 163.2 2% Min: Sphalerite>></p> <p><<Min: 155.52 - 163.2 1% Min: Pyrite>> Associated with other sulfide. Medium to coarse grain.</p> <p><<Min: 155.52 - 163.2 2% Min: Pyrrhotite>> Stringers, multi sulfide.</p> <p><<Min: 155.52 - 163.2 1% Min: Arsenopyrite>> Associated with other sulfides.</p>											
162.27	167.00	MDSw	Coherent rhyolite flow with carbonaceous content	medium grey							
<p>162.27 - 167: Intense MU alteration on both side of SI vein, PY coarse grain associated. This unit could be a silicified mudstone but it appears uncilicified on a 10 cm wide zone.</p>											
<<Alt: 162.27 - 186.02 Strong (Alt) Muscovite>>											
167.00	171.07	RHY	undifferentiated rhyolite	grey-green							
<p>167 - 171.07: Folded stringers PO/PY.</p>											
<<Min: 168.02 - 176.85 3% Min: Sphalerite>>											
<<Min: 168.02 - 176.85 3% Min: Pyrite>> Discontinuous vening, medium grain.											
<<Min: 168.02 - 176.85 2% Min: Galena>> Difficult to estimate. All those minerals are associated most of the time as stringers.											
<<Min: 168.02 - 176.85 3% Min: Chalcopryrite>> And patch.											
<<Min: 168.02 - 176.85 1% Min: Arsenopyrite>>											
<<Alt: 168.02 - 174.29 Moderate (Alt) Cordierite>> Agregated.											
171.07	179.84	OJ	Heavilly disseminated sulphides in proximal altered rock	green-brown							
<p>171.07 - 179.84: Could be mudstone too, strong chlorite ateration obscuring the texture. The sheared zone above the massive sulfide is included in this unit but whithout good argument to.</p>											
<<Alt: 171.07 - 176.85 Strong (Alt) Chlorite>> Proximal alteration.											
<<Struc: 176.83 - 185 Intense (Alt) Fault>> Major fault. Faukt gouge, large sherared zone, including massive sulfide zone.											
179.84	181.88	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides								
<p>179.84 - 181.88: OB.</p>											

171.07	172.50	1.43	B00264725	37.2	0.224	0.64	1.28	2.23
--------	--------	------	-----------	------	-------	------	------	------

172.50	174.00	1.50	B00264726	8.4	0.092	0.16	0.35	0.8
174.00	175.50	1.50	B00264727	5.3	0.014	0.09	0.16	0.67

175.50	176.84	1.34	B00264728	3.9	0.032	0.12	0.03	0.12
176.84	178.34	1.50	B00264729	7	0.032	0.13	0.03	0.06
178.34	179.84	1.50	B00264731	19	0.287	0.2	0.43	1.01
179.84	180.84	1.00	B00264732	84	0.823	0.05	2.76	7.32



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-238

From (m) To (m) Rocktype & Description

<<Min: 179.91 - 182.88 15% Min: Sphalerite>>

<<Min: 179.91 - 182.88 80% Min: Pyrite>>

<<Min: 179.91 - 182.88 2% Min: Galena>>

181.88 196.29 MAFI Mafic Intrusions (primarily green footwall mafic intrusion)

181.88 - 196.29: BI rich, leucoxene. Altered gree/grey (proximity of felsic dyke?).

<<Alt: 182.88 - 190 Strong (Alt) Chlorite>> Foliation.

<<Alt: 185.1 - 190 Moderate (Alt) Biotite>> High density at contact with fault zone.

<<Alt: 190.58 - 196.29 Moderate (Alt) Silicification>> MU/SI alteration. In Mafi.

<<Struc: 183.5 - 183.6 Strong (Alt) Shear>> Average, no orientation line.

<<Struc: 190.99 - 191 dominant foliation>>

<<Struc: 193.7 - 193.76 Weak (Alt) Fault>> Minor fault. GL/PY in fault gouge.

196.29 197.54 RHYI Aphanitic Rhyolite (intrusion) beige

196.29 - 197.54: Short unit classified as aphanitic dyke. Tear drop shape QZ.

<<Struc: 196.38 - 196.4 Weak (Alt) Fault>> Minor Fault. PY maybe be GL mineralized.

197.54 222.50 MAFI Mafic Intrusions (primarily green footwall mafic intrusion)

197.54 - 222.5: Locally altered green/grey, CI appears at 205.75. Obscured by CL alteration from 209 to 210.11m and 219.19 to 222.5m. But real evidence of the primary lithology.

<<Min: 209 - 210.1 1% Min: Pyrrhotite>> Stringers

<<Min: 209 - 210.1 1% Min: Chalcopyrite>> Stringers

<<Min: 210.4 - 210.52 5% Min: Pyrrhotite>> Associated with QZ vein.

<<Min: 210.4 - 210.52 5% Min: Chalcopyrite>> Associated with QZ vein.

<<Alt: 199.13 - 205.1 Moderate (Alt) Silicification>> MU/SI alteration.

<<Alt: 205.75 - 245 Moderate (Alt) Cordierite>> Agregate.

<<Alt: 209 - 210.1 Strong (Alt) Chlorite>> With CP/PO stringers.

<<Alt: 219.19 - 222.5 Strong (Alt) Chlorite>> With PO stringers.

<<Vein: 200.04 - 200.21 Quartz-Pyrite>> QZ/SP/PY/GL

<<Vein: 217.5 - 218.12 Quartz>> QZ/dolomite massive vein

<<Struc: 200.6 - 200.62 dominant foliation>> PY stringer.

<<Struc: 202.5 - 202.51 dominant foliation>> PY/GL veinlet in foliation.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
180.84	181.44	0.60	B00264733	96	1.05	0.54	2.71	6.43
181.44	181.88	0.44	B00264734	50.8	0.395	0.46	0.41	1.64

181.88	183.38	1.50	B00264735	1.5	0.014	0.01	0.09	0.15
--------	--------	------	-----------	-----	-------	------	------	------

183.38	184.88	1.50	B00264736	-0.3	0.013	-0.01	-0.01	0.01
184.88	186.38	1.50	B00264737	-0.3	-0.005	-0.01	-0.01	0.01

209.00	210.00	1.00	B00264738	6.3	0.008	0.31	0.02	0.09
--------	--------	------	-----------	-----	-------	------	------	------

210.00	211.00	1.00	B00264739	15.9	-0.005	0.77	-0.01	0.09
211.00	212.00	1.00	B00264741	-0.3	0.011	-0.01	-0.01	0.01



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-238

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<p><<Struc: 205.38 - 225.27 Moderate (Alt) Shear>> Angle estimated. Broken zone, sandy and clay gouge. Alternate with proximal CL alteration. Missing core. Some fragment of MAFi. Locally brecciated associated with QZ vein and CP/PO mineralization.</p> <p><<Struc: 208.1 - 208.12 Weak (Alt) Fault>> Angle estimated. Minor fault.</p> <p><<Struc: 208.8 - 208.81 dominant foliation>></p> <p><<Struc: 210.15 - 211.3 Strong (Alt) Shear>> Breaccia, QZ/CP/PO, CL altered MAFi (?).</p> <p><<Struc: 215 - 215.05 Strong (Alt) Fault>> No orientation line. Fault gouge.</p> <p><<Struc: 220.95 - 220.96 Moderate (Alt) Fault>> Dominant fracture.</p> <p><<Struc: 221.3 - 232.3 Moderate (Alt) Fault>> Angle estimated. Fault gouge.</p> <p><<Struc: 221.5 - 222.3 Strong (Alt) Fault>> No orientation line. Major shear zone.</p>											
222.50	230.00	RHYvl Lapilli tuff									
222.5 - 230: Silicified. Could be RHYcq. QZ eyes.											
<p><<Min: 222.5 - 236.69 3% Min: Pyrrhotite>> Elongated along the foliation.</p> <p><<Alt: 222.55 - 227.47 Moderate (Alt) Silicification>> Maybe MU/SI green/grey alteration.</p> <p><<Struc: 225.1 - 226.26 Moderate (Alt) Fault>> Fault gouge.</p> <p><<Struc: 229.31 - 229.68 Moderate (Alt) Fault>> Fault gouge, clay.</p>											
230.00	236.69	RHY undifferentiated rhyolite									
230 - 236.69: QZ eyes. Pick up CL alteration. CA from 231m.											
<p><<Min: 230.72 - 245 2% Min: Calcite>> Along the foliation.</p> <p><<Alt: 231.1 - 245 Weak (Alt) Chlorite>> Dark green color intensified by BI concentration. Locally CL replacing lapili. QZ crystal unaffected by foliation.</p> <p><<Struc: 232.7 - 232.71 dominant foliation>></p>											
236.69	245.00	RHYvl Lapilli tuff									
236.69 - 245: Lapili, QZ eyes, locally concentrated, BI and CL. TML as small aggregates. 245.00 E.O.H..											
<p><<Vein: 240.51 - 240.57 Quartz-Chlorite-Tourmaline>> QZ/CL/TML/PY vein</p> <p><<Vein: 241.33 - 241.39 Quartz-Sulphide>> QZ/TML/PO/CP</p> <p><<Struc: 242.42 - 242.43 dominant foliation>> BI in foliation.</p>											
End of Hole @ 245											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-238W1

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	30-Aug-15
UTM Easting	414901.586	Core Size:	HQ3	Azimuth:	180.17	Date Logging Complete:	31-Aug-15
UTM Northing:	6815741.065	Casing Pulled?:	Yes	Dip:	-58	Drill Company:	Geotech
UTM Elev. (m):	1388.746	Casing Depth (m):	6	Length (m):	194	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	29-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	30-Aug-15
Local Elev. (m):						Purpose:	Metallurgical Wedge
Comments:						Parent Hole:	K15-238

Hole K15-238W1 (wedge hole of K15-238 from 154.2m to 194m) was drilled to collect samples of the MET6 domain. The hanging-wall consists of strongly muscovite altered carbonaceous rhyolite transitioning into wavy sulfide stringers, followed by strong chlorite alteration from 168.04m to 178.87m CP, PY, SP, GL and AS mineralization. The massive sulfide zone is discontinuous, hosted in a shear zone and is intersected from 181.59m to 187.3m. It is made up of OJ, OI, OB, OH and OD domains. Its thickness is about 4.5m (thicker than in K15-238). The footwall consists of a strongly sheared mafic sill.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	180.17	0	180.17	APS	Cooper Campbell	25-Aug-15		<input checked="" type="checkbox"/>	Values copied from K15-238
26	-58.9	163.8	22.5	186.3	ReflexEVS	Geotech	26-Aug-15	5766	<input checked="" type="checkbox"/>	Values copied from K15-238
50	-59.1	164	22.5	186.5	ReflexEVS	Geotech	26-Aug-15	5726	<input checked="" type="checkbox"/>	Values copied from K15-238
75	-59.3	164.7	22.5	187.2	ReflexEVS	Geotech	26-Aug-15	5747	<input checked="" type="checkbox"/>	Values copied from K15-238
101	-59.9	166.2	22.5	188.7	ReflexEVS	Geotech	26-Aug-15	5795	<input checked="" type="checkbox"/>	Values copied from K15-238
125	-60.5	165.3	22.5	187.8	ReflexEVS	Geotech	26-Aug-15	5752	<input checked="" type="checkbox"/>	Values copied from K15-238
152	-60.2	169.4	22.5	191.9	ReflexEVS	Geotech	26-Aug-15	5828	<input checked="" type="checkbox"/>	Values copied from K15-238
156.2	-58.4	164	22.5	186.5	ReflexEVS	Geotech	29-Aug-15	5771	<input checked="" type="checkbox"/>	Wedge start; value copied from first wedge survey at 164m
164	-58.4	164	22.5	186.5	ReflexEVS	Geotech	29-Aug-15	5771	<input checked="" type="checkbox"/>	
176	-58.2	166.7	22.5	189.2	ReflexEVS	Geotech	29-Aug-15	5735	<input checked="" type="checkbox"/>	
194	-58.6	167.7	22.5	190.2	ReflexEVS	Geotech	30-Aug-15	5751	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
156.20	164.90	RHYcw Curdy textured-flow banded (flows, subvolcanics)	162.90	163.90	1.00						
156.2 - 164.9: Silicified. PO/PY stringers, CP trace.											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-238W1

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
		<<Min: 156.2 - 168.04 5% Min: Pyrite>> Stringers, medium grain locally.	163.90	164.90	1.00						
		<<Min: 156.2 - 168.04 5% Min: Pyrrhotite>> Stringers.									
		<<Min: 156.2 - 168.04 2% Min: Arsenopyrite>>									
		<<Alt: 156.2 - 167.1 Strong (Alt) Muscovite>> Very strong close to QZ veins									
		<<Alt: 156.2 - 168.04 Strong (Alt) Silicification>> 20 cm of mudstone non affected by silicification.									
		<<Vein: 159 - 164.9 Pyrite>> PY and PO veinlets, folded (stringers)									
		<<Vein: 164.37 - 164.83 Quartz-Carbonate-Sulphide>> QZ/dolomite vein irregular, PY, GL trace, CL									
164.90	168.04	MDS Rhyolite tuff dominant mudstone	164.90	165.90	1.00						
164.9 - 168.04: Silicified. Muscovite rich. Minor mudstone (30 cm).											
		<<Min: 167.91 - 178.87 3% Lith: Cordierite>> Aggregated.	165.90	166.90	1.00						
		<<Alt: 167.91 - 174.14 Moderate (Alt) Cordierite>> Aggregated.	166.90	168.04	1.14						
168.04	168.89	OI Heavily disseminated sulphides in host schist	168.04	168.89	0.85						
168.04 - 168.89: Could be flow banded locally. Texture obscured by CL proximal alteration. Cordierite from 168.04. Wispy and patchy mineralization.											
		<<Min: 168.04 - 178.87 8% Min: Sphalerite>>									
		<<Min: 168.04 - 178.87 5% Min: Pyrite>> Sulfides are associated in patch frequently laminated.									
		<<Min: 168.04 - 178.87 3% Min: Pyrrhotite>>									
		<<Min: 168.04 - 178.87 2% Min: Chalcocopyrite>>									
		<<Min: 168.04 - 178.87 3% Min: Arsenopyrite>>									
		<<Alt: 168.04 - 178.87 Strong (Alt) Chlorite>>									
		<<Vein: 168.04 - 178.79 Massive Sulphide/Sulphides undifferentiated>> Stringers, multisulphides (CP, SP, PY, SP, AS)									
168.89	178.87	OJ Heavily disseminated sulphides in proximal altered rock	168.89	169.50	0.61						
168.89 - 178.87: Wispy mineralization. CI from 168.89 to 174.14m, yellow patina.											
		<<Struc: 172.43 - 172.44 Weak (Alt) Fault>> Minor fault with CL fault gouge..	169.50	170.00	0.50						
			170.00	171.00	1.00						
			171.00	171.77	0.77						
			171.77	172.43	0.66						

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-238W1
From (m) **To (m)** **Rocktype & Description**

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
172.43	173.63	1.20						
173.63	174.14	0.51						
174.14	175.00	0.86						
175.00	176.00	1.00						
176.00	177.00	1.00						
177.00	178.00	1.00						
178.00	178.87	0.87						
178.87	179.87	1.00						

178.87 181.59 RHY undifferentiated rhyolite

178.87 - 181.59: Sheared zone, lithology obscured by sericite/clay alteration.

<<Struc: 178.87 - 181.59 Strong (Alt) Shear>> With yellowish (argillitic?) progressive alteration at upper contact.

179.87	180.87	1.00
180.87	181.59	0.72
181.59	182.28	0.69

181.59 182.28 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

181.59 - 182.28: Weakly laminated.

<<Min: 181.59 - 182.28 3% Min: Sphalerite>>

<<Min: 181.59 - 182.28 60% Min: Pyrite>>

<<Min: 181.59 - 182.28 2% Min: Galena>> Associated with BA?/SI patch.

182.28 183.32 RHY undifferentiated rhyolite

182.28 - 183.32: Lithology undetermined, could be the mafic raft of mafic intrusion.

<<Alt: 182.28 - 183.32 Strong (Alt) Muscovite>> In shear zone.

<<Struc: 182.28 - 183.32 Moderate (Alt) Shear>> Sheared in schist, intense MU alteration.

182.28	183.32	1.04
--------	--------	------

183.32 184.32 OD Brecciated sulphides

183.32 - 184.32: BA?/SI in matrix associated with GL.

<<Min: 183.32 - 184.32 5% Min: Sphalerite>>

<<Min: 183.32 - 184.32 40% Min: Pyrite>>

<<Min: 183.32 - 184.32 5% Min: Galena>> Associated with BA?/SI patch.

<<Min: 183.32 - 184.32 5% Min: Chalcopryite>>

<<Min: 184.2 - 184.32 3% Min: Magnetite>> At contact avec OH.

183.32	184.32	1.00
--------	--------	------

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-238W1

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
184.32	187.30	OH Fine grained, megascopically homogeneous pyrite rock	184.32	185.00	0.68						
184.32 - 187.3: No lamination, poor SP. Brecciated at lower contact with few CP and GL associated with Ba?/Sl patch.											
<<Min: 184.32 - 187.32 90% Min: Pyrite>>											
<<Min: 184.32 - 187.32 1% Min: Galena>> In brecciated contact with MAFi.											
<<Min: 184.32 - 187.32 0.5% Min: Chalcopryite>> In brecciated contact with MAFi.											
187.30	194.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	185.00	185.80	0.80						
187.3 - 194: Sheared, grey clay and mafic intrusion light green (clay/sericite?). 194.00 E.O.H.											
<<Min: 189.8 - 194 0.5% Min: Calcite>> In foliation of the MAFi.											
<<Struc: 187.3 - 187.32 Strong (Alt) Fault>> Brecciated contact MXSX with MAFi.											
<<Struc: 187.3 - 189.8 Strong (Alt) Fault>> Fault gouge, grey clay. Thickness evaluated, probably core loss by washing the fine.											
<<Struc: 189.8 - 194 Strong (Alt) Shear>> Argilitic, CL and few CA.											
End of Hole @ 194											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-239

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Cooper Campbell
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	28-Aug-15
UTM Easting	414751.369	Core Size:	NQ3	Azimuth:	180.82	Date Logging Complete:	31-Aug-15
UTM Northing:	6815544.149	Casing Pulled?:	Yes	Dip:	-70	Drill Company:	Geotech
UTM Elev. (m):	1407.974	Casing Depth (m):	6	Length (m):	192	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	27-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	29-Aug-15
Local Elev. (m):						Purpose:	Resource Confirmation
Comments:						Parent Hole:	

The purpose of this whole was to twin the historical hole K94-040.

The first 98.2 m of K15-239 consists of a thick package of rhyolitic volcanics (xtl/lpl) and flows (+/- carbonaceous material), and carbonaceous mudstones.

The shallowest of two massive sulphide intercepts consisting of OB, and OI ore types was intersected between 98.24-104.81 m (6.57 m total thickness). The two massive sulphide intercepts are separated by MU-CL-CI altered RHY and RHYcw from 104.81-122.13 m. The lower massive sulphide intercept, consisting of OA, OB, OC, OF, OH and OI ore types, was intersected between 122.13-136.66 m (14.53 m total thickness).

The structural footwall consists of MAFi intruded by RHYi, both of which sit stratigraphically above RHYva and RHYvl. The footwall was intersected between 136.66-192.0 m.

Syngenetic alteration of the structural hanging wall felsic volcanics is characterized by moderate MU alteration over the first 90.58 m. From 90.58-101.94m MU-CL-CI alteration increases with proximity to the sulphide zone becoming very intense from 100.82-101.94m. From 104.0-126.09 m MU-CL alteration is generally moderate and increases in intensity at the upper and lower contact with the sulphide zones. Strong CI alteration was logged between 104-104.81 m and 124.54-126.09 m.

Syngenetic alteration of the footwall has been eliminated by MAFi and RHYi units. Alteration of the footwall is characterized by a moderate to strong CL-BI overprint in MAFi as well as intense silicification associated with RHYi. RHYv units of the footwall are weakly to moderately overprinted by MU-CL-BI.

The most notable mineralized interceptions included: 20 % CP OC 126.09-127.72m, 15 % SP/5% GL OA 134.9-136.66 m.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-70	180.82	0	180.82	APS	Cooper Campbell	27-Aug-15		<input checked="" type="checkbox"/>	
33	-71.5	159.1	22.5	181.6	ReflexEVS	Geotech	27-Aug-15	5760	<input checked="" type="checkbox"/>	
57	-71.2	161.6	22.5	184.1	ReflexEVS	Geotech	27-Aug-15	5724	<input checked="" type="checkbox"/>	
84	-71.3	160.1	22.5	182.6	ReflexEVS	Geotech	28-Aug-15	5666	<input checked="" type="checkbox"/>	
111	-70.9	171.4	22.5	193.9	ReflexEVS	Geotech	28-Aug-15	5963	<input checked="" type="checkbox"/>	
136	-70.7	146.9	22.5	169.4	ReflexEVS	Geotech	28-Aug-15	5879	<input checked="" type="checkbox"/>	
162	-70.6	160.1	22.5	182.6	ReflexEVS	Geotech	29-Aug-15	5808	<input checked="" type="checkbox"/>	
192	-70.6	163.3	22.5	185.8	ReflexEVS	Geotech	29-Aug-15	5790	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	5.49	OVBN Overburden									



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-239

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
5.49	6.33	MDS _c Carbonaceous dominant mudstone									
<<Min: 5.49 - 15.43 0.01% Min: Pyrrhotite>>											
<<Min: 5.49 - 59.21 0.5% Min: Calcite>>											
<<Alt: 5.49 - 90.58 Moderate (Alt) Muscovite>>											
6.33	15.43	MDS _t Rhyolite tuff dominant mudstone									
6.33 - 15.43: QZ eyes											
15.43	19.87	RHY _{vl} Lapilli tuff									
<<Min: 15.43 - 19.87 1% Min: Pyrrhotite>>											
<<Alt: 15.43 - 19.87 Trace (Alt) Chlorite>>											
<<Alt: 15.43 - 19.87 Weak (Alt) Biotite>>											
19.87	20.72	MDS _c Carbonaceous dominant mudstone									
<<Min: 19.87 - 31.81 0.01% Min: Pyrrhotite>>											
20.72	23.00	MDS _t Rhyolite tuff dominant mudstone									
20.72 - 23: QZ eyes											
23.00	28.50	RHY _{cw} Curdy textured-flow banded (flows, subvolcanics)									
23 - 28.5: QZ eyes											
28.50	29.50	MDS _w Coherent rhyolite flow with carbonaceous content									
29.50	57.70	RHY _{cw} Curdy textured-flow banded (flows, subvolcanics)									
<<Min: 31.81 - 59.21 0.01% Min: Sphalerite>>											
<<Min: 31.81 - 59.21 3% Min: Pyrite>>											
<<Min: 31.81 - 59.21 1% Min: Pyrrhotite>>											
<<Alt: 31.81 - 57.7 Weak (Alt) Chlorite>>											
<<Alt: 31.81 - 57.7 Trace (Alt) Biotite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-239

From (m) To (m) Rocktype & Description

57.70 59.21 MDSt Rhyolite tuff dominant mudstone

59.21 60.66 MDSc Carbonaceous dominant mudstone

<<Min: 59.21 - 90.58 0.5% Min: Pyrite>>

60.66 62.82 MDSt Rhyolite tuff dominant mudstone

62.82 66.00 MDSc Carbonaceous dominant mudstone

66.00 90.58 MDSt Rhyolite tuff dominant mudstone

66 - 90.58: QZ eyes.

<<Struc: 87.4 - 87.41 dominant foliation>>

90.58 98.24 RHY undifferentiated rhyolite

<<Min: 90.58 - 98.24 3% Min: Sphalerite>>

<<Min: 90.58 - 98.24 0.5% Min: Pyrite>> PY BL partially replace by PO

<<Min: 90.58 - 98.24 1% Min: Pyrrhotite>>

<<Min: 90.58 - 98.24 1% Min: Chalcopyrite>>

<<Min: 92.1 - 100.18 0.5% Min: Calcite>>

<<Alt: 90.58 - 101.94 Strong (Alt) Muscovite>>

<<Alt: 91.69 - 100.82 Weak (Alt) Cordierite>>

<<Alt: 92.1 - 100.82 Weak (Alt) Chlorite>>

<<Alt: 92.1 - 100.82 Trace (Alt) Biotite>>

<<Struc: 93.37 - 93.38 dominant foliation>>

<<Struc: 94.37 - 94.38 Foliation>>

<<Struc: 94.91 - 94.92 dominant foliation>>

<<Struc: 95.92 - 95.93 dominant foliation>>

<<Struc: 96.76 - 96.77 dominant foliation>>

<<Struc: 97.02 - 97.03 dominant foliation>>

<<Struc: 97.23 - 97.24 dominant foliation>>

<<Struc: 97.88 - 97.89 dominant foliation>>

<<Struc: 98.08 - 98.09 dominant foliation>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
92.50	94.00	1.50	B00266672	8.5	0.037	0.23	0.35	3.07
94.00	95.50	1.50	B00266673	3.7	0.056	0.17	0.12	0.62
95.50	97.00	1.50	B00266674	4.9	0.085	0.23	0.05	0.31
97.00	98.24	1.24	B00266675	33.2	0.851	0.41	0.14	0.98



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-239

From (m) To (m) Rocktype & Description

98.24 101.94 OI Heavily disseminated sulphides in host schist

<<Min: 100.18 - 101.94 10% Min: Calcite>>

<<Alt: 100.82 - 101.94 Moderate (Alt) Chlorite>>

<<Alt: 100.82 - 101.94 Strong (Alt) Cordierite>>

<<Vein: 100.82 - 101.94 100% Quartz-Chlorite-Carbonate 50 deg. >> QZ, CA, DO, CL, SP, GL, PY, PO, CP

<<Struc: 98.7 - 98.71 dominant foliation>>

101.94 104.00 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

MG

104.00 104.81 OI Heavily disseminated sulphides in host schist

<<Alt: 104 - 104.81 Weak (Alt) Chlorite>>

<<Alt: 104 - 104.81 Strong (Alt) Cordierite>>

<<Alt: 104 - 112.24 Strong (Alt) Muscovite>>

<<Vein: 104 - 104.81 100% Quartz-Chlorite-Carbonate 25 deg. >> QZ, CA, DO, CL, SP, GL, PY, PO, CP

104.81 112.24 RHYcw Curdy textured-flow banded (flows, subvolcanics)

<<Min: 104.81 - 112.24 0.01% Min: Sphalerite>>

<<Min: 104.81 - 112.24 0.5% Min: Pyrite>>

<<Min: 104.81 - 112.24 0.5% Min: Pyrrhotite>>

<<Struc: 105.65 - 105.66 dominant foliation>>

<<Struc: 106.26 - 106.27 dominant foliation>>

<<Struc: 107.9 - 107.91 dominant foliation>>

<<Struc: 108.29 - 108.3 dominant foliation>>

<<Struc: 109.53 - 109.54 dominant foliation>>

112.24 115.72 RHY undifferentiated rhyolite

<<Min: 112.24 - 115.72 0.5% Min: Sphalerite>>

<<Min: 112.24 - 115.72 1% Min: Pyrite>>

<<Min: 112.24 - 115.72 3% Min: Pyrrhotite>>

<<Min: 112.24 - 115.72 0.01% Min: Galena>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
98.24	99.00	0.76	B00266676	12.4	0.276	0.68	0.47	9.99

99.00	100.00	1.00	B00266677	14.6	0.248	0.31	0.6	6.84
100.00	101.00	1.00	B00266678	38.8	0.256	0.09	0.59	2.3
101.00	101.94	0.94	B00266679	39.7	0.27	0.48	0.1	1.62

101.94	102.50	0.56	B00266681	271	2.43	0.62	2.24	7.32
--------	--------	------	-----------	-----	------	------	------	------

102.50	103.50	1.00	B00266682	231	0.818	0.32	4.05	9.64
103.50	104.00	0.50	B00266683	321	16.45	0.44	4.93	11.6
104.00	104.81	0.81	B00266684	76	0.049	0.23	1.17	2.49

104.81	106.00	1.19	B00266685	1.9	0.011	-0.01	0.02	0.02
--------	--------	------	-----------	-----	-------	-------	------	------

106.00	107.50	1.50	B00266686	3.4	0.036	-0.01	0.06	0.09
107.50	109.00	1.50	B00266687	4	0.116	0.02	0.02	0.53



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-239

From (m) To (m) Rocktype & Description

<<Min: 112.24 - 115.72 1% Min: Chalcopryite>>
<<Alt: 112.24 - 115.72 Moderate (Alt) Muscovite>>
<<Alt: 112.24 - 115.72 Moderate (Alt) Chlorite>>
<<Alt: 112.24 - 115.72 Weak (Alt) Cordierite>>

115.72 119.58 RHYcw Curdy textured-flow banded (flows, subvolcanics)

<<Min: 115.72 - 119.58 1% Min: Pyrite>>
<<Min: 115.72 - 119.58 0.5% Min: Pyrrhotite>>
<<Alt: 115.72 - 119.58 Strong (Alt) Muscovite>>

119.58 122.13 RHY undifferentiated rhyolite

<<Min: 119.58 - 122.13 1% Min: Sphalerite>>
<<Min: 119.58 - 122.13 1% Min: Pyrite>>
<<Min: 119.58 - 122.13 2% Min: Pyrrhotite>>
<<Min: 119.58 - 122.13 0.01% Min: Chalcopryite>>
<<Alt: 119.58 - 124.54 Moderate (Alt) Chlorite>>
<<Alt: 119.58 - 124.54 Moderate (Alt) Cordierite>>
<<Alt: 119.58 - 124.7 Moderate (Alt) Muscovite>>

122.13 126.09 OI Heavily disseminated sulphides in host schist

122.13 - 126.09: Likely RHY protolith.

<<Min: 124 - 126.09 0.01% Min: Calcite>>
<<Alt: 124.54 - 126.09 Strong (Alt) Chlorite>>
<<Alt: 124.54 - 126.09 Strong (Alt) Cordierite>>
<<Vein: 123.22 - 123.54 100% Quartz-Carbonate-Sulphide 60 deg. >> CA, GL

126.09 127.72 OC Chalcopryite-pyrrhotite net textured sulphides

<<Min: 126.09 - 127.72 20% Min: Chalcopryite>>
<<Struc: 127.01 - 127.02 dominant foliation>>
<<Struc: 127.53 - 127.54 dominant foliation>>

127.72 128.88 OA Magnetite bearing sulphides

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
118.08	119.58	1.50	B00266688	1.7	0.032	-0.01	0.01	0.05
119.58	120.75	1.17	B00266689	6.7	0.032	0.07	0.08	1.13
120.75	122.13	1.38	B00266691	0.8	0.023	0.01	-0.01	0.07
122.13	123.13	1.00	B00266692	26.1	0.086	0.64	0.02	4.97
123.13	124.13	1.00	B00266693	2.3	0.013	-0.01	0.01	0.25
124.13	125.13	1.00	B00266694	7.8	0.016	0.02	0.13	0.35
125.13	126.09	0.96	B00266695	126	1.51	3.44	0.16	0.42
126.09	127.09	1.00	B00266696	349	6.14	11.2	0.23	1.11
127.09	127.72	0.63	B00266697	277	4.06	9.55	0.12	0.84
127.72	128.32	0.60	B00266698	118	1.29	2.82	0.4	0.68
128.32	128.88	0.56	B00266699	39.4	0.408	0.6	0.53	3.04

MG

MG



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-239

From (m)	To (m)	Rocktype & Description											
128.88	130.41	OH	Fine grained, megascopically homogeneous pyrite rock	MG	128.88	129.88	1.00	B00266701	58.9	0.431	0.1	1.49	7.14
130.41	132.73	OA	Magnetite bearing sulphides	MG	129.88	130.41	0.53	B00266702	62.7	0.288	0.15	1.51	4.99
<<Struc: 131.1 - 131.2 dominant foliation>>				MG	130.41	130.91	0.50	B00266703	36.5	0.331	0.43	0.64	6.85
<<Struc: 131.73 - 131.74 dominant foliation>>					130.91	131.91	1.00	B00266704	50.5	0.475	0.4	2.13	10.7
<<Struc: 132.51 - 132.52 dominant foliation>>					131.91	132.73	0.82	B00266705	63.1	0.447	0.57	2.62	11.7
132.73	134.90	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	132.73	133.25	0.52	B00266706	136	1.39	0.45	2.05	7.73
134.90	136.60	OF	Pyrrhotite rich sulphides	MG	133.25	134.00	0.75	B00266707	130	1.49	0.38	3.29	8.83
<<Min: 134.9 - 136.66 15% Min: Sphalerite>>				MG	134.00	134.90	0.90	B00266708	137	1.22	0.33	3.33	8.53
<<Min: 134.9 - 136.66 5% Min: Galena>>					134.90	135.90	1.00	B00266709	62.3	0.23	0.48	3.99	10.2
136.60	140.80	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)		135.90	136.60	0.70	B00266711	121	0.296	0.41	3.95	12.1
<<Min: 136.6 - 140.8 0.01% Min: Pyrite>>				MG	136.60	138.10	1.50	B00266712	4.2	0.006	0.02	0.12	0.24
<<Min: 136.6 - 140.8 15% Min: Calcite>>					138.10	139.60	1.50	B00266713	-0.3	0.005	-0.01	-0.01	0.33
<<Alt: 136.6 - 138.4 Weak (Alt) Muscovite>>					139.60	140.80	1.20	B00266714	1	0.014	-0.01	-0.01	0.08
<<Alt: 136.6 - 138.4 Moderate (Alt) Chlorite>>													
<<Alt: 136.6 - 138.4 Weak (Alt) Biotite>>													
<<Alt: 138.4 - 140.54 Moderate (Alt) Muscovite>>													
<<Alt: 140.54 - 146.82 Strong (Alt) Silicification>>													
<<Alt: 140.54 - 146.82 Weak (Alt) Muscovite>>													
<<Vein: 140.54 - 151.47 5% Quartz-Carbonate-Sulphide 70 deg. >>				QZ-CA-SP-PY. Massive to hairline veins roughly parallel to foliation.									
140.80	146.82	RHYi	Aphanitic Rhyolite (intrusion)										
140.8 - 146.82: MAFi xenoliths													
<<Min: 140.8 - 150.2 5% Min: Calcite>>													
<<Min: 140.8 - 151.47 1% Min: Sphalerite>>				SP, GL, PO, PY all occur together in foliation parallel wisps.									
<<Min: 140.8 - 151.47 0.01% Min: Pyrite>>				SP, GL, PO, PY all occur together in foliation parallel wisps.									
<<Min: 140.8 - 151.47 0.5% Min: Pyrrhotite>>				SP, GL, PO, PY all occur together in foliation parallel wisps.									



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-239

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
		<<Min: 140.8 - 151.47 0.01% Min: Galena>> SP, GL, PO, PY all occur together in foliation parallel wisps.									
		<<Struc: 145.72 - 145.73 Vein>>									
		<<Struc: 145.74 - 145.75 dominant foliation>>									
146.82	165.71	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
		<<Min: 150.2 - 165.71 15% Min: Calcite>>									
		<<Min: 151.47 - 156.78 3% Min: Pyrite>> Partially replaced by PO									
		<<Min: 151.47 - 156.78 0.01% Min: Pyrrhotite>> Partially replaces PY blebs									
		<<Min: 156.78 - 165.71 0.01% Min: Pyrite>>									
		<<Min: 156.78 - 165.71 0.01% Min: Pyrrhotite>>									
		<<Alt: 146.82 - 151.47 Moderate (Alt) Silicification>>									
		<<Alt: 146.82 - 156.19 Moderate (Alt) Muscovite>>									
		<<Alt: 152.57 - 156.19 Moderate (Alt) Biotite>>									
		<<Alt: 152.57 - 161.2 Weak (Alt) Chlorite>>									
		<<Alt: 156.19 - 161.2 Strong (Alt) Biotite>>									
		<<Alt: 161.2 - 165.71 Moderate (Alt) Chlorite>>									
		<<Alt: 161.2 - 165.71 Weak (Alt) Biotite>>									
		<<Struc: 152.05 - 152.06 dominant foliation>>									
		<<Struc: 153.5 - 153.51 dominant foliation>>									
		<<Struc: 157.5 - 157.51 dominant foliation>>									
165.71	169.47	RHYv Rhyolite volcanoclastic									
		165.71 - 169.47: Heavily chloritized margin at contact with MAFi.									
		<<Min: 165.71 - 170.35 1% Min: Pyrrhotite>>									
		<<Min: 165.71 - 178.72 0.01% Min: Calcite>>									
		<<Alt: 165.71 - 166.19 Strong (Alt) Chlorite>>									
		<<Alt: 166.19 - 169.47 Moderate (Alt) Muscovite>>									
		<<Vein: 168.7 - 169.1 100% Quartz-Carbonate-Sulphide 50 deg. >> QZ-CA-PY									
169.47	175.48	MDSt Rhyolite tuff dominant mudstone									
		169.47 - 175.48: QZ eyes									
		<<Min: 170.35 - 175.48 0.01% Min: Pyrrhotite>>									
		<<Alt: 169.47 - 175.48 Moderate (Alt) Chlorite>>									

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-239

From (m) To (m) Rocktype & Description

<<Alt: 169.47 - 178.72 Weak (Alt) Muscovite>>

175.48 178.72 RHYva Coarse grained to ash tuff

<<Min: 175.48 - 178.72 0.5% Min: Pyrite>>

<<Min: 175.48 - 178.72 0.5% Min: Pyrrhotite>>

<<Min: 175.48 - 178.72 0.01% Min: Chalcopyrite>>

<<Alt: 175.48 - 178.72 Moderate (Alt) Muscovite>>

178.72 192.00 RHYvl Lapilli tuff

<<Min: 178.72 - 184.88 5% Min: Calcite>>

<<Min: 178.72 - 191.22 0.01% Min: Pyrrhotite>>

<<Min: 184.88 - 192 0.01% Min: Calcite>>

<<Min: 191.22 - 192 0.5% Min: Pyrrhotite>>

<<Min: 191.22 - 192 0.01% Min: Chalcopyrite>>

<<Alt: 178.72 - 187.76 Weak (Alt) Muscovite>>

<<Alt: 178.72 - 187.76 Moderate (Alt) Chlorite>>

<<Alt: 178.72 - 187.76 Trace (Alt) Biotite>>

<<Alt: 187.76 - 191.22 Moderate (Alt) Muscovite>>

<<Alt: 187.76 - 191.22 Trace (Alt) Chlorite>>

<<Alt: 191.22 - 192 Weak (Alt) Muscovite>>

<<Alt: 191.22 - 192 Moderate (Alt) Chlorite>>

End of Hole @ 192

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-240

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	David Nuttal
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	30-Aug-15
UTM Easting	414952.327	Core Size:	NQ3	Azimuth:	180	Date Logging Complete:	30-Aug-15
UTM Northing:	6815425.337	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1383.411	Casing Depth (m):	9	Length (m):	110	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	29-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	30-Aug-15
Local Elev. (m):						Purpose:	Resource/Met
Comments:						Parent Hole:	

This hole is designed to infill and define the resource between historic holes K95-064 & K95-065. Sulphide intervals with O-type ore classification are present from 45.3m to 53.8m (OA, OB), from 62.34m to 65.5m (OI, OA, OB) and from 72.3m to 74.57m (OJ, OI, OB). Two anomolous OJ intervals are present from 68.84m to 69.28m and from 69.9m to 70.5m. The structural hanging wall is composed of a package of felsic metavolcaniclastic rocks that exhibit increasing muscovite alteration intensity towards the massive sulphide intervals. Calcite/carbonate content is unusually high in the top of this hole with values ranging from 2% to 10%. The structural footwall is composed of a package of mafic intrusive rocks that exhibit a range of chlorite alteration that intensifies towards the massive sulphide lenses. Silicification is pervasive in discrete intervals within the mafic intrusive rocks. Weak muscovite alteration is also present in the structural footwall rock packages.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	179.92	0	179.92	APS	David Nuttal	29-Aug-15		<input checked="" type="checkbox"/>	
32	-59.2	143.3	22.5	165.8	ReflexEVS	Geotech	29-Aug-15	2328	<input type="checkbox"/>	Chose not to accept values due to very low magnetic field.
62	-59.4	159.8	22.5	182.3	ReflexEVS	Geotech	29-Aug-15	5700	<input checked="" type="checkbox"/>	
87	-58.6	160.3	22.5	182.8	ReflexEVS	Geotech	29-Aug-15	5702	<input checked="" type="checkbox"/>	
110	-58.8	162.7	22.5	185.2	ReflexEVS	Geotech	29-Aug-15	5719	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	9.00	CASN Casing									
<<Min: 0 - 32 5% Min: Calcite>>											
<<Min: 8.5 - 37.36 2% Min: Pyrite>>											
<<Alt: 8.5 - 21 Weak (Alt) Muscovite>>											
9.00	37.36	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
9 - 37.36: Large quartz vein from 31.5m to 32.6m											
<<Min: 32 - 51.8 1% Min: Calcite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-240

From (m) To (m) Rocktype & Description

<<Alt: 21 - 41 Moderate (Alt) Muscovite>>

<<Vein: 21.85 - 33.9 10% Quartz>>

37.36 39.65 MDSt Rhyolite tuff dominant mudstone

<<Min: 37.36 - 45.3 1% Min: Pyrite>>

39.65 45.30 RHYcw Curdy textured-flow banded (flows, subvolcanics)

<<Min: 44.8 - 45.3 1% Min: Galena>>

<<Min: 44.8 - 45.3 0.5% Min: Chalcopryrite>>

<<Alt: 41 - 45.3 Strong (Alt) Muscovite>>

<<Struc: 40.13 - 40.13 dominant foliation>>

45.30 45.47 OA Magnetite bearing sulphides

<<Struc: 45.3 - 45.3 dominant foliation>>

45.47 47.25 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

47.25 49.82 OA Magnetite bearing sulphides

49.82 53.80 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Min: 51.8 - 53.8 5% Min: Calcite>>

53.80 58.30 RHYvx Quartz and/or feldspar crystal tuff

53.8 - 58.3: High calcite content (~10%)

<<Min: 53.8 - 60 10% Min: Calcite>>

<<Min: 53.8 - 62.34 0.25% Min: Sphalerite>>

<<Min: 53.8 - 62.34 2% Min: Pyrite>>

<<Min: 53.8 - 62.34 0.25% Min: Arsenopyrite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
40.80	42.30	1.50	B00268599	0.3	0.012	-0.01	0.02	0.03
42.30	43.80	1.50	B00268601	0.7	0.017	-0.01	0.05	0.06
43.80	45.30	1.50	B00268602	5.4	0.039	0.12	0.05	0.66
45.30	46.30	1.00	B00268603	95.9	1.66	0.4	1.23	9.05
46.30	47.25	0.95	B00268604	112	2.11	0.57	0.98	10.5
47.25	48.25	1.00	B00268605	65.1	0.496	0.39	1.2	9.37
48.25	49.25	1.00	B00268606	55.6	0.597	0.71	0.56	10.2
49.25	49.82	0.57	B00268607	88.6	0.62	0.75	1.42	10.3
49.82	50.82	1.00	B00268608	227	2.41	0.54	2.97	5.78
50.82	51.82	1.00	B00268609	375	5.79	0.71	0.73	4.63
51.82	52.82	1.00	B00268612	306	8.43	0.31	1.8	6.6
52.82	53.80	0.98	B00268613	297	2.45	0.13	3.47	8.78
53.80	55.30	1.50	B00268614	1	-0.005	-0.01	-0.01	0.02
55.30	56.80	1.50	B00268615	-0.3	-0.005	-0.01	-0.01	-0.01
56.80	58.30	1.50	B00268616	0.3	-0.005	-0.01	-0.01	-0.01



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-240

From (m) To (m) Rocktype & Description

<<Alt: 53.8 - 60 Strong (Alt) Muscovite>>

58.30 62.34 RHY undifferentiated rhyolite

58.3 - 62.34: High calcite (~10 - 15%) and PY/SP sulphide lenses or pods

<<Min: 60 - 62 20% Min: Calcite>>

<<Min: 62 - 74.5 2% Min: Calcite>>

<<Alt: 60 - 64.11 Moderate (Alt) Muscovite>>

<<Struc: 58.7 - 58.7 dominant foliation>>

62.34 64.11 OI Heavily disseminated sulphides in host schist

62.34 - 64.11: PY, SP, CP sulphides concentrated in thick bands or otherwise heavily disseminated.

64.11 64.82 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Alt: 64.11 - 69.9 Weak (Alt) Muscovite>>

<<Struc: 64.18 - 64.18 dominant foliation>>

64.82 65.25 OA Magnetite bearing sulphides

<<Struc: 65 - 65.1 Weak (Alt) Fault>>

65.25 65.50 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

65.50 68.84 RHYvl Lapilli tuff

65.5 - 68.84: dark matrix

<<Min: 65.5 - 68.84 0.5% Min: Sphalerite>>

<<Min: 65.5 - 68.84 1% Min: Pyrite>>

<<Min: 65.5 - 68.84 0.5% Min: Chalcopyrite>>

<<Alt: 65.5 - 68.84 Moderate (Alt) Chlorite>>

<<Struc: 67.87 - 67.87 dominant foliation>>

grey-green

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
60.00	60.84	0.84	B00268617	1.4	0.015	-0.01	0.02	0.01
60.84	62.34	1.50	B00268618	1	0.006	-0.01	-0.01	-0.01
62.34	63.30	0.96	B00268619	42.6	1.3	0.35	0.35	0.99
63.30	64.11	0.81	B00268621	51.7	0.796	1.34	0.15	0.86
64.11	64.82	0.71	B00268622	456	3.77	0.49	4.89	11.5
64.82	65.50	0.68	B00268623	439	1.92	1.3	6.63	13.5
65.50	67.00	1.50	B00268624	8.9	0.026	0.03	0.13	0.26
67.00	68.00	1.00	B00268625	3.9	0.018	0.14	0.02	0.53
68.00	68.84	0.84	B00268626	3.6	-0.005	0.03	0.03	0.44



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-240

From (m) To (m) Rocktype & Description

68.84 69.28 OJ Heavily disseminated sulphides in proximal altered rock

68.84 - 69.28: ~20% CP, PO, PY and SP in strong chlorite altered tuff

<<Alt: 68.84 - 69.28 Strong (Alt) Chlorite>>

69.28 69.90 RHYv Rhyolite volcanoclastic

69.28 - 69.9: strong chloritic alteration

<<Min: 69.28 - 69.9 1% Min: Pyrite>>

<<Min: 69.28 - 69.9 1% Min: Pyrrhotite>>

<<Min: 69.28 - 69.9 0.25% Min: Chalcopyrite>>

<<Alt: 69.28 - 69.9 Moderate (Alt) Chlorite>>

69.90 70.50 OJ Heavily disseminated sulphides in proximal altered rock

69.9 - 70.5: ~20% PY, PO, CP in strong chloritic alteration

<<Alt: 69.9 - 74.57 Strong (Alt) Chlorite>>

70.50 72.93 RHY undifferentiated rhyolite

<<Min: 70.5 - 72.93 3% Min: Sphalerite>>

<<Min: 70.5 - 72.93 0.25% Min: Chalcopyrite>>

<<Struc: 71.5 - 71.63 Moderate (Alt) Fault>>

<<Struc: 72.12 - 72.2 Moderate (Alt) Fault>>

72.93 73.48 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

72.93 - 73.48: high SP ~20%

73.48 73.86 OI Heavily disseminated sulphides in host schist

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
68.84	69.28	0.44	B00268627	36.5	0.244	1.35	0.06	5.27

69.28	69.90	0.62	B00268628	5.2	-0.005	0.04	0.02	0.6
-------	-------	------	-----------	-----	--------	------	------	-----

69.90	70.50	0.60	B00268629	75.8	0.227	0.67	0.36	2.72
-------	-------	------	-----------	------	-------	------	------	------

70.50	71.50	1.00	B00268631	45.3	0.437	0.19	0.01	3.02
-------	-------	------	-----------	------	-------	------	------	------

71.50	72.93	1.43	B00268632	18.9	0.19	0.62	0.03	0.19
-------	-------	------	-----------	------	------	------	------	------

72.93	73.48	0.55	B00268633	158	0.612	0.43	2.73	10.5
-------	-------	------	-----------	-----	-------	------	------	------

73.48	73.86	0.38	B00268634	71.7	0.093	0.13	1.39	6.21
-------	-------	------	-----------	------	-------	------	------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-240

From (m) To (m) Rocktype & Description

73.86 74.57 OJ **Heavily disseminated sulphides in proximal altered rock**

73.86 - 74.57: high CP ~10-15%

<<Min: 74.5 - 80.75 25% Min: Calcite>>

74.57 80.75 MAFi **Mafic Intrusions (primarily footwall mafic intrusion)**

<<Min: 74.57 - 80.75 0.5% Min: Pyrite>>

<<Alt: 74.57 - 80.75 Moderate (Alt) Chlorite>>

<<Struc: 75.39 - 75.43 Moderate (Alt) Fault>>

<<Struc: 79.15 - 79.15 dominant foliation>>

<<Struc: 79.25 - 79.25 dominant foliation>>

80.75 90.80 MAFi **Mafic Intrusions (primarily footwall mafic intrusion)** **grey-green**

80.75 - 90.8: silicified mafic dike

<<Min: 80.75 - 90.8 0.25% Min: Pyrite>>

<<Min: 80.75 - 90.8 20% Min: Calcite>>

<<Alt: 80.75 - 90.8 Moderate (Alt) Silicification>>

<<Struc: 81.71 - 81.76 Weak (Alt) Fault>>

<<Struc: 82 - 82.13 Weak (Alt) Fault>> Three small foliation parallel faults <2cm diameter

<<Struc: 82.61 - 82.63 Weak (Alt) Fault>>

<<Struc: 85.8 - 85.8 dominant foliation>>

<<Struc: 88.2 - 88.25 Moderate (Alt) Fault>>

<<Struc: 88.9 - 88.9 dominant foliation>>

90.80 92.18 MAFi **Mafic Intrusions (primarily footwall mafic intrusion)** **melanocratic**

<<Min: 90.8 - 92.18 0.25% Min: Pyrite>>

<<Min: 90.8 - 92.18 0.5% Min: Pyrrhotite>>

<<Min: 90.8 - 92.18 15% Min: Calcite>>

<<Alt: 90.8 - 92.18 Moderate (Alt) Chlorite>>

<<Struc: 91.92 - 91.92 dominant foliation>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
73.86	74.57	0.71	B00268635	76.9	0.594	2.55	0.14	0.74

74.57	76.17	1.60	B00268636	0.7	-0.005	-0.01	-0.01	0.03
-------	-------	------	-----------	-----	--------	-------	-------	------

76.17	77.67	1.50	B00268637	0.3	-0.005	0.01	-0.01	0.01
-------	-------	------	-----------	-----	--------	------	-------	------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-240

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
92.18	99.82	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)		grey-green						
92.18 - 99.82: silicified mafic dike. Bottom contact sharp at fault and massive quartz vein.											
<<Min: 92.18 - 99.82 0.5% Min: Pyrite>>											
<<Min: 92.18 - 99.82 15% Min: Calcite>>											
<<Min: 99.35 - 99.82 1% Min: Sphalerite>>											
<<Alt: 92.18 - 99.82 Moderate (Alt) Silicification>>											
<<Vein: 99.35 - 101.77 40% Quartz-Carbonate-Sulphide>> Sphalerite, galena											
<<Struc: 99.78 - 99.82 Moderate (Alt) Fault>>											
99.82	101.77	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)		salt + pepper						
99.82 - 101.77: Mafic dike, distinguished from mafic interval below by high calcite content and mopre speckled biotite texture.											
<<Min: 99.82 - 101 20% Min: Calcite>>											
<<Min: 99.82 - 110 0.5% Min: Pyrite>>											
<<Min: 101 - 110 5% Min: Calcite>>											
<<Alt: 99.82 - 110 Moderate (Alt) Chlorite>>											
101.77	110.00	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)		green						
101.77 - 110: blebs or pods of biotite in chloritic matrix.											
End of Hole @ 110											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-241

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	David Nuttal
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	30-Aug-15
UTM Easting	414952.382	Core Size:	HQ3	Azimuth:	179.85	Date Logging Complete:	01-Sep-15
UTM Northing:	6815425.373	Casing Pulled?:	Yes	Dip:	-65	Drill Company:	Geotech
UTM Elev. (m):	1383.307	Casing Depth (m):	7.5	Length (m):	35	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	29-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	30-Aug-15
Local Elev. (m):						Purpose:	Metallurgical Twin
Comments:						Parent Hole:	K15-240

This drill hole was aborted at 35m depth. What little was drilled of this hole is composed of felsic coherent volcanics and does not intersect massive sulphide mineralization.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-65	179.85	0	179.85	APS	David Nuttal	29-Aug-15		<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	------------------------	----------	--------	-------	--------	--------	--------	------	------	------

0.00 7.50 CASN Casing

<<Min: 6.5 - 35 2% Min: Pyrite>>

<<Min: 6.5 - 35 3% Min: Calcite>>

<<Alt: 6.5 - 21 Weak (Alt) Muscovite>>

7.50 35.00 RHYcw Curdy textured-flow banded (flows, subvolcanics)

<<Alt: 21 - 35 Moderate (Alt) Muscovite>>

<<Vein: 9.33 - 9.67 98% Quartz-Carbonate>>

<<Vein: 20.44 - 33 13% Quartz>>

<<Struc: 13.68 - 14 Strong (Alt) Fault>>

<<Struc: 19.65 - 19.9 Weak (Alt) Fault>>

End of Hole @ 35



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-241R

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	David Nuttal
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	01-Sep-15
UTM Easting	414952.057	Core Size:	HQ3	Azimuth:	179.8	Date Logging Complete:	02-Sep-15
UTM Northing:	6815422.013	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1383.379	Casing Depth (m):	7	Length (m):	65	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	30-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	01-Sep-15
Local Elev. (m):						Purpose:	Metallurgical Twin
Comments:						Parent Hole:	K15-240

Sulphide intervals are present in this hole from 43.42m to 52.5m (containing MET2 and MET7 domains), and from 61.6m to 63.6m (containing MET6 and MET7 domains). The structural hanging wall is composed of a package of felsic metavolcanic rocks dominated by litho-code RHYcw and MDSw (rhyolite flow with carbonaceous component). The structural footwall is also composed of felsic metavolcanic rocks dominated by RHYcw. This hole contains a high modal % calcite/carbonate through the structural hanging wall rocks and through the massive sulphide lenses. Calcite/carbonate mineralization commonly occurs with quartz in veins adjacent to massive sulphide. Muscovite alteration increases in intensity towards the massive sulphide lenses and adjacent to large quartz veins. Weak chlorite alteration is present within the massive sulphide lenses and in trace amounts within veins proximal to massive sulphide.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	179.8	0	179.8	APS	David Nuttal	30-Aug-15		<input type="checkbox"/>	
14	-64.3	150.9	22.5	173.4	ReflexEVS	Geotech	30-Aug-15	5037	<input type="checkbox"/>	Not accepted values due to low magnetic field.
14.1	-61.5	179.5	0	179.5	ReflexEVS	Geotech	30-Aug-15	5823	<input checked="" type="checkbox"/>	
39	-61.4	157.5	22.5	180	ReflexEVS	Geotech	30-Aug-15	5762	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	7.00	CASN Casing									
7.00	35.50	RHYcw Curdy textured-flow banded (flows, subvolcanics) light grey									
<<Min: 7 - 36 0.5% Min: Sphalerite>>											
<<Min: 7 - 36 2% Min: Pyrite>>											
<<Min: 7 - 36 3% Min: Calcite>>											
<<Min: 19.8 - 33.8 0.5% Min: Galena>>											
<<Min: 19.8 - 33.8 0.25% Min: Chalcopyrite>>											
<<Alt: 7 - 24 Weak (Alt) Muscovite>>											
<<Alt: 24 - 41 Moderate (Alt) Muscovite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-241R

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Vein: 9.65 - 10 98% Quartz>>											
<<Vein: 19.77 - 33.5 20% Quartz>> sulphides: Galena, sphalerite, chalcopyrite, pyrite.											
<<Struc: 21.4 - 21.54 Strong (Alt) Fault>>											
<<Struc: 21.9 - 21.96 Moderate (Alt) Fault>>											
<<Struc: 24.35 - 24.41 Moderate (Alt) Fault>>											
<<Struc: 35 - 35.12 Weak (Alt) Fault>>											
35.50	40.56	MDSw	Coherent rhyolite flow with carbonaceous content	38.56	39.56	1.00					
<<Min: 36 - 40.56 0.5% Min: Pyrite>>											
<<Min: 36 - 40.56 1% Min: Calcite>>											
40.56	43.42	RHYcw	Curdy textured-flow banded (flows, subvolcanics)	40.56	41.56	1.00					
<<Min: 40.56 - 43.42 0.5% Min: Sphalerite>>											
<<Min: 40.56 - 43.42 2% Min: Pyrite>>											
<<Min: 40.56 - 43.42 2% Min: Calcite>>											
<<Alt: 41 - 43.73 Strong (Alt) Muscovite>>											
<<Vein: 43 - 43.73 50% Quartz>> CP, PO, GL, SP											
<<Struc: 42.3 - 42.35 Moderate (Alt) Fault>>											
43.42	43.73	OC	Chalcopyrite-pyrrhotite net textured sulphides	43.42	43.73	0.31					
43.73	43.93	OA	Magnetite bearing sulphides	43.73	43.93	0.20					
<<Alt: 43.73 - 52.5 Weak (Alt) Chlorite>>											
43.93	45.62	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	43.93	44.95	1.02					
<<Min: 43.93 - 45.62 1% Min: Pyrite>>											
<<Min: 43.93 - 45.62 1% Min: Calcite>>											
45.62	48.09	OA	Magnetite bearing sulphides	44.95	45.62	0.67					
<<Min: 45.62 - 48.09 1% Min: Pyrite>>											
<<Min: 45.62 - 48.09 1% Min: Calcite>>											
48.09	52.50	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	45.62	46.62	1.00					
<<Min: 48 - 52.5 15% Min: Calcite>>											
<<Min: 48 - 52.5 15% Min: Pyrite>>											
<<Min: 48 - 52.5 15% Min: Calcite>>											
48.09	52.50	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	46.62	47.30	0.68					
<<Min: 48.09 - 52.50 1% Min: Pyrite>>											
<<Min: 48.09 - 52.50 1% Min: Calcite>>											
<<Vein: 49 - 51.84 2% Calcium carbonate/Carbonate>>											
49.09	50.09			47.30	48.09	0.79					
49.09	50.09			48.09	49.09	1.00					



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-241R

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
			50.09	51.09	1.00						
			51.09	51.84	0.75						
			51.84	52.50	0.66						
			52.50	53.50	1.00						
52.50	61.60	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
52.5 - 61.6: Foliation is anastomosing, dominated by sericite, muscovite and calcite/carbonate. Foliation forms oblate domains of quartz with carbonate replacement suspected to have been mobilized along foliation pathways; may easily be mistaken for porphyry.											
<<Min: 52.5 - 61.6 3% Min: Pyrite>>			53.50	54.50	1.00						
<<Min: 52.5 - 61.6 3% Min: Calcite>>			54.50	55.50	1.00						
<<Min: 52.5 - 61.6 1% Min: Arsenopyrite>>			55.50	56.50	1.00						
<<Alt: 52.5 - 61.6 Moderate (Alt) Muscovite>>			56.50	57.50	1.00						
<<Vein: 56 - 57.6 10% Quartz>>			57.50	58.50	1.00						
<<Struc: 58.14 - 58.4 Moderate (Alt) Fault>>			58.50	59.50	1.00						
			59.50	60.50	1.00						
			60.50	61.60	1.10						
			61.60	62.10	0.50						
61.60	62.08	OI Heavily disseminated sulphides in host schist									
61.6 - 62.08: High CP (~5%)											
<<Min: 61.6 - 65 3% Min: Calcite>>											
62.08	63.00	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	62.10	63.00	0.90						
62.08 - 63: High sphalerite content 10-20% through interval.											
63.00	63.60	OC Chalcopyrite-pyrrhotite net textured sulphides	63.00	63.60	0.60						
63 - 63.6: High CP (~20% +/- 5%) high sphalerite (10-20%), galena (3%), Pyrite (50%), PO (~10% +/- 5%)											
63.60	65.00	RHYcw Curdy textured-flow banded (flows, subvolcanics)	63.60	64.60	1.00						
63.6 - 65: Interval intersected by quartz vein that cuts foliation obliquely (near perpendicular)											
<<Min: 63.6 - 65 0.5% Min: Pyrite>>			64.60	65.00	0.40						



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-241R

From (m) To (m) Rocktype & Description

<<Alt: 63.6 - 65 Weak (Alt) Muscovite>>

<<Vein: 64 - 65 100% Quartz>> Galena, chalcopryrite, pyrite, pyhrrotite

End of Hole @ 65

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-242

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Cooper Campbell
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	31-Aug-15
UTM Easting	415134.726	Core Size:	NQ3	Azimuth:	167.07	Date Logging Complete:	02-Sep-15
UTM Northing:	6815439.024	Casing Pulled?:	Yes	Dip:	-65	Drill Company:	Geotech
UTM Elev. (m):	1400.599	Casing Depth (m):	7.5	Length (m):	161	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	30-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	02-Sep-15
Local Elev. (m):						Purpose:	Resource/Met/Hydro
Comments:						Parent Hole:	

The first 92.09 m of K15-242 consists of a thick package of rhyolitic volcanics (xtl/lpl) and flows +/- carbonaceous material, carbonaceous mudstones, and mafic intrusives.

The massive sulphide zone was intersected between 92.09-117.25 m (25.16 m total thickness) consists of OA, OB, and OC ore types. A Cu rich strong proximal CL-CI altered zone of OC indicates the likely presence of the MET 8 domain, though the unit does contain magnetite suggests that it is actually MET 3. There are other zones of OA that have elevated levels of CP that are likely MET 3. The MET 5 domain was confirmed by the presence of OB with visibly high concentrations of GL.

The structural footwall consists of MAFi intruded by RHYi, both of which sit stratigraphically below a thin unit of RHYcw. The bulk of the stratigraphic footwall is a heterogeneous package of rock that largely consists of RHYi with MAFi xenoliths. The footwall was intersected between 117.25-161.0 m.

Syngenetic alteration of the structural hanging wall felsic volcanics progressively increases in intensity with proximity to the sulphide zone. There was a relatively large weak CL-CI alteration zone in the hanging wall from 76.43-92.09 m that increased in intensity to strong from 92.09-94.33 m.

A thin zone of strongly MU altered RHYcw located directly below the sulphide zone was the only evidence of syngenetic alteration in the footwall. Syngenetic alteration of the footwall has largely been eliminated by MAFi and RHYi units. Alteration of the footwall is characterized by a moderate CL and weak BI overprint in MAFi as well a large section of strong silicification associated with RHYi.

Notable mineralized interceptions included: 15 % CP OC (92.09-94.33 m), 5% GL OB (107.41-108.63 m, 111.7-116.02 m), 5% GL OA (116.02-116.74 m), and 20 % SP (94.33-95.88 m, 98.7-100.81 m, 104.09-116.74 m).

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-65	167.07	0	167.07	APS	Cooper Campbell	30-Aug-15		<input type="checkbox"/>	
20	-65.1	148.6	22.5	171.1	ReflexEVS	Geotech	30-Aug-15	5826	<input checked="" type="checkbox"/>	
41	-65.3	145.8	22.5	168.3	ReflexEVS	Geotech	31-Aug-15	5830	<input checked="" type="checkbox"/>	
65	-64.7	150.2	22.5	172.7	ReflexEVS	Geotech	31-Aug-15	5872	<input checked="" type="checkbox"/>	
92	-64	156.9	22.5	179.4	ReflexEVS	Geotech	01-Sep-15	5969	<input checked="" type="checkbox"/>	
117	-64.2	139	22.5	161.5	ReflexEVS	Geotech	01-Sep-15	5594	<input type="checkbox"/>	Values not accepted, low magnetic field.
143	-63.6	152.1	22.5	174.6	ReflexEVS	Geotech	01-Sep-15	5739	<input checked="" type="checkbox"/>	
161	-63.8	155.6	22.5	178.1	ReflexEVS	Geotech	02-Sep-15	5749	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	------------------------	----------	--------	-------	--------	--------	--------	------	------	------

0.00 7.00 OVBN Overburden
7.00 18.16 MDSt Rhyolite tuff dominant mudstone

7 - 18.16: Heterogeneous package of MDSt with broken crystals, lapilli, and flow banding over short intervals.

<<Min: 7 - 28.3 0.01% Min: Sphalerite>>

<<Min: 7 - 28.3 0.01% Min: Pyrite>>

<<Min: 7 - 28.3 0.01% Min: Pyrrhotite>>

<<Min: 7 - 28.3 1% Min: Calcite>>

<<Alt: 7 - 33.82 Weak (Alt) Muscovite>>

<<Struc: 9.05 - 20.89 Weak (Alt) Fault>> Narrow cm scale faults filled with broken rock and fault gouge. Spaced metres apart.

18.16 23.57 RHYva Coarse grained to ash tuff
23.57 33.82 RHYvi Lapilli tuff

<<Min: 28.3 - 39.76 0.01% Min: Pyrite>>

<<Min: 28.3 - 39.76 0.5% Min: Pyrrhotite>>

<<Min: 28.3 - 49 5% Min: Calcite>>

<<Alt: 28.3 - 33.82 Trace (Alt) Chlorite>>

<<Alt: 28.3 - 33.82 Trace (Alt) Biotite>>

<<Struc: 33.05 - 35.57 Weak (Alt) Fault>> Narrow cm scale faults filled with broken rock and fault gouge. Spaced centimetres apart.

33.82 38.95 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

33.82 - 38.95: RHY xenolith

<<Alt: 33.82 - 38.95 Weak (Alt) Chlorite>>

<<Alt: 33.82 - 38.95 Moderate (Alt) Biotite>>

<<Vein: 36.16 - 36.86 50% Quartz-Carbonate-Sulphide 50 deg. >> QZ-CA-CL-PO

38.95 45.20 RHYva Coarse grained to ash tuff

<<Min: 39.76 - 60.99 0.5% Min: Pyrite>>

<<Min: 39.76 - 60.99 1% Min: Pyrrhotite>>

<<Alt: 38.95 - 48.27 Trace (Alt) Chlorite>>

<<Alt: 38.95 - 69.94 Moderate (Alt) Muscovite>>

45.20 78.69 MDSw Coherent rhyolite flow with carbonaceous content

<<Min: 60.99 - 69.94 1% Min: Pyrite>>

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-242

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 60.99 - 69.94 0.5% Min: Pyrrhotite>>											
<<Min: 69.94 - 76.43 0.01% Min: Sphalerite>>											
<<Min: 69.94 - 76.43 5% Min: Pyrite>>											
<<Min: 69.94 - 76.43 0.5% Min: Pyrrhotite>>											
<<Min: 69.94 - 76.43 0.01% Min: Galena>>											
<<Min: 76.43 - 86.73 0.01% Min: Sphalerite>>											
<<Min: 76.43 - 86.73 3% Min: Pyrrhotite>>											
<<Min: 76.43 - 86.73 0.01% Min: Chalcopyrite>>											
<<Alt: 69.94 - 76.43 Strong (Alt) Muscovite>>											
<<Alt: 76.43 - 89.59 Moderate (Alt) Muscovite>>											
<<Alt: 76.43 - 92.09 Weak (Alt) Chlorite>>											
<<Alt: 76.43 - 92.09 Weak (Alt) Cordierite>>											
<<Alt: 76.43 - 92.09 Trace (Alt) Biotite>>											
<<Struc: 46.53 - 78.69 Moderate (Alt) Fault>>			Narrow cm scale faults filled with broken rock and fault gouge. Spaced metres apart.								
78.69	86.73	MDSc Carbonaceous dominant mudstone									
<<Min: 79.74 - 85.3 0.01% Min: Calcite>>											
86.73	92.09	MDSw Coherent rhyolite flow with carbonaceous content	87.59	89.09	1.50	B00266715	1.4	0.006	-0.01	-0.01	-0.01
<<Min: 86.73 - 92.09 0.01% Min: Sphalerite>>			89.09	90.59	1.50	B00266716	1.9	0.047	-0.01	-0.01	0.01
<<Min: 86.73 - 92.09 0.01% Min: Pyrite>>			90.59	92.09	1.50	B00266717	1.7	0.007	0.02	-0.01	0.04
<<Min: 86.73 - 92.09 0.01% Min: Pyrrhotite>>											
<<Min: 91.65 - 93.64 5% Min: Calcite>>											
<<Alt: 89.59 - 92.09 Strong (Alt) Muscovite>>											
<<Struc: 89.23 - 89.24 dominant foliation>>											
92.09	94.33	OJ Heavilly disseminated sulphides in proximal altered rock	92.09	92.60	0.51	B00266718	26.4	0.188	0.91	0.12	2.62
92.09 - 94.33: High CP content. MET 8 domain.											
<<Min: 92.09 - 94.33 15% Min: Chalcopyrite>>			92.60	93.60	1.00	B00266719	111	1.75	3.81	0.11	0.51
<<Alt: 92.09 - 94.33 Strong (Alt) Chlorite>>			93.60	94.33	0.73	B00266721	133	1.29	3.98	0.35	3.56
<<Alt: 92.09 - 94.33 Strong (Alt) Cordierite>>											

MG



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-242

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %	
<<Struc: 92.12 - 92.13 dominant foliation>>												
<<Struc: 92.43 - 92.44 dominant foliation>>												
<<Struc: 94.15 - 94.16 dominant foliation>>												
94.33	95.88	OA Magnetite bearing sulphides	MG	94.33	95.33	1.00	B00266722	75.7	0.772	1.35	0.7	6.63
<<Min: 94.33 - 95.88 20% Min: Sphalerite>>				95.33	95.88	0.55	B00266723	148	0.314	0.66	3.76	7.03
<<Struc: 95.59 - 95.6 dominant foliation>>												
95.88	98.70	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	95.88	96.88	1.00	B00266724	64.2	1.03	0.2	1	4.59
<<Struc: 96.81 - 96.82 dominant foliation>>												
<<Struc: 97.4 - 97.41 dominant foliation>>												
98.70	100.81	OA Magnetite bearing sulphides	MG	98.70	99.25	0.55	B00266727	83	0.535	0.35	1.82	7.06
<<Min: 98.7 - 100.81 20% Min: Sphalerite>>				99.25	100.25	1.00	B00266728	116	0.497	0.23	3.49	9.44
100.81	104.09	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	100.25	100.81	0.56	B00266729	150	4.37	2.77	4.96	10.6
				100.81	101.50	0.69	B00266732	85.7	1.38	0.36	1.13	4.87
<<Struc: 102.98 - 102.99 dominant foliation>>												
104.09	107.41	OA Magnetite bearing sulphides	MG	101.50	102.50	1.00	B00266733	123	0.431	0.07	4.16	9.25
				102.50	103.50	1.00	B00266734	260	3.47	1	2.17	7.5
				103.50	104.09	0.59	B00266735	82.4	1.07	0.47	1.12	2.71
				104.09	104.75	0.66	B00266736	124	1.01	0.86	1.79	7.28
				104.75	105.75	1.00	B00266737	40.7	0.543	0.47	0.49	6.43
				105.75	106.75	1.00	B00266738	33.4	0.445	0.49	0.31	12.6
<<Struc: 105.26 - 105.27 dominant foliation>>				106.75	107.41	0.66	B00266739	150	0.952	0.65	3.25	14.2
<<Struc: 105.5 - 105.51 dominant foliation>>												
<<Struc: 106.74 - 106.75 dominant foliation>>												
107.41	108.63	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	107.41	108.00	0.59	B00266741	260	2.13	0.16	4.3	9.73
<<Min: 107.41 - 108.63 5% Min: Galena>>												
108.63	111.70	OA Magnetite bearing sulphides	MG	108.00	108.63	0.63	B00266742	330	1.76	0.19	5.17	12.1
				108.63	109.63	1.00	B00266743	35.9	0.501	0.64	0.3	11.1
				109.63	110.63	1.00	B00266744	35.1	0.699	0.83	0.21	13.3
				110.63	111.13	0.50	B00266745	135	0.956	1.56	2.24	12.5



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-242

From (m) To (m) Rocktype & Description

111.70 116.02 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Min: 111.7 - 116.02 5% Min: Galena>>

<<Struc: 114.44 - 114.45 dominant foliation>>

<<Struc: 114.8 - 114.81 dominant foliation>>

116.02 116.74 OA Magnetite bearing sulphides

<<Min: 116.02 - 116.74 5% Min: Galena>>

<<Struc: 116.55 - 116.56 dominant foliation>>

116.74 117.25 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

117.25 123.12 RHYcw Curdy textured-flow banded (flows, subvolcanics)

<<Min: 117.25 - 123.12 0.01% Min: Sphalerite>>

<<Min: 117.25 - 123.12 0.5% Min: Pyrite>>

<<Min: 117.25 - 123.12 0.5% Min: Pyrrhotite>>

<<Min: 117.25 - 123.12 0.01% Min: Galena>>

<<Min: 117.25 - 123.12 1% Min: Calcite>>

<<Min: 120.07 - 124.22 0.01% Min: Galena>>

<<Alt: 117.25 - 118.82 Strong (Alt) Muscovite>>

<<Alt: 118.82 - 123.12 Moderate (Alt) Muscovite>>

<<Vein: 120.07 - 124.22 25% Quartz-Carbonate-Sulphide 50 deg. >> QZ-CA-CL-GL

<<Struc: 117.25 - 124.55 Weak (Alt) Fault>> Narrow cm scale faults filled with broken rock and fault gouge. Spaced metres apart.

123.12 134.70 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

<<Min: 123.12 - 129.15 10% Min: Calcite>>

<<Min: 123.12 - 133.07 0.5% Min: Sphalerite>>

<<Min: 123.12 - 133.07 0.5% Min: Pyrite>>

<<Min: 123.12 - 133.07 0.5% Min: Pyrrhotite>>

FG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
111.13	111.70	0.57	B00266746	190	0.501	0.48	4.96	12.1
111.70	112.25	0.55	B00266747	190	2.04	0.33	3.17	12

MG

112.25	113.25	1.00	B00266748	200	2	0.19	3.35	8.98
113.25	114.25	1.00	B00266749	180	1.97	0.15	2.94	7.35
114.25	115.25	1.00	B00266751	230	1.8	0.17	3.71	11.3
115.25	116.02	0.77	B00266752	320	2.01	0.25	4.22	10.4
116.02	116.74	0.72	B00266753	230	0.522	0.28	7.74	11.4

MG

116.74	117.25	0.51	B00266754	123	0.396	0.42	2.58	7.69
--------	--------	------	-----------	-----	-------	------	------	------

117.25	118.75	1.50	B00266755	13.9	0.013	0.09	0.25	0.69
--------	--------	------	-----------	------	-------	------	------	------

118.75	120.25	1.50	B00266756	1.8	0.007	-0.01	0.04	0.12
120.25	121.75	1.50	B00266757	4.5	0.008	0.02	0.06	0.28



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-242

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 123.12 - 134.7 0.01% Min: Galena>> <<Min: 129.15 - 134.7 3% Min: Calcite>> <<Min: 133.07 - 134.7 1% Min: Sphalerite>> <<Min: 133.07 - 134.7 1% Min: Pyrite>> <<Min: 133.07 - 134.7 3% Min: Pyrrhotite>> <<Min: 133.07 - 134.7 0.01% Min: Chalcopryite>> <<Alt: 123.12 - 134.7 Trace (Alt) Muscovite>> <<Alt: 123.12 - 134.7 Moderate (Alt) Chlorite>> <<Alt: 123.12 - 134.7 Weak (Alt) Biotite>> <<Alt: 126.41 - 136.67 Moderate (Alt) Silicification>> <<Vein: 134.17 - 134.65 20% Quartz-Chlorite-Carbonate 65 deg. >> QZ-CA-CL <<Struc: 124.55 - 125.05 Intense (Alt) Fault>> Intense fault gauge. <<Struc: 130.23 - 130.24 dominant foliation>> <<Struc: 131.91 - 131.92 dominant foliation>>											
134.70 159.05 RHYi Aphanitic Rhyolite (intrusion) 134.7 - 159.05: Heterogeneous package of RHYi with abundant MAFi xenoliths. Highly silicified.											
<<Min: 134.7 - 141.68 0.01% Min: Calcite>> <<Min: 134.7 - 155.05 0.5% Min: Pyrite>> <<Min: 141.68 - 145.59 3% Min: Calcite>> <<Min: 145.59 - 158.31 1% Min: Calcite>> <<Min: 155.05 - 161 0.01% Min: Sphalerite>> <<Min: 155.05 - 161 0.01% Min: Pyrite>> VN <<Min: 155.05 - 161 0.01% Min: Galena>> <<Min: 158.31 - 161 2% Min: Calcite>> <<Alt: 134.7 - 159.45 Weak (Alt) Muscovite>> <<Alt: 134.7 - 159.45 Trace (Alt) Chlorite>> <<Alt: 136.67 - 159.45 Strong (Alt) Silicification>> <<Vein: 134.7 - 161 2% Pyrite 50 deg. >> PY-SP <<Vein: 156.15 - 156.53 100% Quartz-Carbonate-Sulphide 65 deg. >> QZ-CA-PY-GL											
159.05 161.00 RHY undifferentiated rhyolite 159.05 - 161: Original character of rock obscured by alteration associated with adjacent RHYi and brecciation. Possible RHYcw.											
<<Alt: 159.45 - 161 Moderate (Alt) Muscovite>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-242

From (m) To (m)

Rocktype & Description

From (m)

To (m)

Width

Sample

Ag PPM

Au PPM

Cu %

Pb %

Zn %

End of Hole @ 161

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-243

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	01-Sep-15
UTM Easting	414801.777	Core Size:	HQ3	Azimuth:	180.04	Date Logging Complete:	04-Sep-15
UTM Northing:	6815776.435	Casing Pulled?:	Yes	Dip:	-65	Drill Company:	Geotech
UTM Elev. (m):	1403.945	Casing Depth (m):	6	Length (m):	221	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	31-Aug-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	03-Sep-15
Local Elev. (m):						Purpose:	Resource/Met
Comments:						Parent Hole:	

The purpose of hole K15-243 was to test continuity and the extension of massive sulphide lens (MET7 Domain).

The hole encountered a shear zone from 173.85 to 179.4m within the primary mineralized zone from 165.2 to 185.4m.

The hole shows progressive muscovite alteration in the hanging-wall followed by strong to intense proximal cordierite alteration from 170 to 189.63m. Mineralization consists dominantly of CP (characterized by OC and OG domains), SP/GL/PY mineralization (OB domain) as well as OA, OJ and OI domains on the edge of the unit.

The footwall consists of a strongly chlorite altered unit with CP stringers below the main massive sulfide zone and, crosscut by a mafic sill at 185.4m and underlain by rhyolite.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-65	180.04	0	180.04	APS	Jerome de Pasquale	30-Aug-15		<input checked="" type="checkbox"/>	
26	-64.2	161.1	22.5	183.6	ReflexEVS	Geotech	01-Sep-15	5797	<input checked="" type="checkbox"/>	
50	-64.4	162.1	22.5	184.6	ReflexEVS	Geotech	01-Sep-15	5660	<input checked="" type="checkbox"/>	
75	-64.5	162.5	22.5	185	ReflexEVS	Geotech	02-Sep-15	5724	<input checked="" type="checkbox"/>	
77	-64.6	163.8	22.5	186.3	ReflexEVS	Geotech	01-Sep-15	5775	<input checked="" type="checkbox"/>	
101	-64.9	164.6	22.5	187.1	ReflexEVS	Geotech	01-Sep-15	5680	<input checked="" type="checkbox"/>	
125	-64.6	165	22.5	187.5	ReflexEVS	Geotech	01-Sep-15	5642	<input checked="" type="checkbox"/>	
152	-64.8	162.5	22.5	185	ReflexEVS	Geotech	01-Sep-15	5703	<input checked="" type="checkbox"/>	
175	-64.9	165	22.5	187.5	ReflexEVS	Geotech	01-Sep-15	5503	<input checked="" type="checkbox"/>	
200	-65.3	167.3	22.5	189.8	ReflexEVS	Geotech	02-Sep-15	5788	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	6.00	CASN Casing									
<<Min: 5 - 50 0.5% Min: Calcite>> And at contact with mafic dykes.											
<<Min: 5 - 110.5 1% Min: Pyrrhotite>> Stringers. More concentrated in the flow banded zone. Elongated along the foliation..											
<<Min: 5 - 155 0.1% Min: Pyrite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-243

From (m)	To (m)	Rocktype & Description			From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
6.00	10.95	RHYvx	Quartz and/or feldspar crystal tuff	grey-green									
6 - 10.95: Fragmental at contact with dyke													
10.95	14.00	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)	medium grey									
10.95 - 14: Phenos, weakly foliated, CA at contact, BI. Some lapili and flow interbedded.													
14.00	17.18	RHY	undifferentiated rhyolite	grey-green									
14 - 17.18: Flow banded locally, QZ eyes. Could be RHY vx.													
<<Vein: 14 - 14.08 Quartz>> QZ at lower contact with mafic dyke.													
17.18	18.30	RHYcw	Curdy textured-flow banded (flows, subvolcanics)	grey-green									
17.18 - 18.3: Flow banded and lapili tuff interbedded..													
18.30	19.40	RHYvx	Quartz and/or feldspar crystal tuff	grey-green									
18.3 - 19.4: QZ eyes.													
19.40	27.40	RHYvl	Lapilli tuff	grey-green									
19.4 - 27.4: Narrow phenoblastic dyke (21.07m), flow banded at lower contact.													
<<Vein: 24.6 - 27.4 Pyrrhotite>> PY/PO stringers in flow banded rhyolite.													
27.40	30.51	RHY	undifferentiated rhyolite	grey-green									
27.4 - 30.51: QZ eyes, trace of CA													
30.51	31.78	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)	grey									
30.51 - 31.78: Dark green dyke, weakly foliated, with phenoplasts, CA.. Weak CL alteration													
31.78	34.01	MDSst	Rhyolite tuff dominant mudstone	medium grey									
31.78 - 34.01: Lapili and few carbonaceous band.													

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-243

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
34.01	37.19	RHYv Rhyolite volcaniclastic									
34.01 - 37.19: Few lapili and ashes. Few PO stringers in the foliation.											
37.19	40.21	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
37.19 - 40.21: Flow banded. Dyke BI at upper and probably at lower contact. 2 QZ vein (5cm wide).											
<<Vein: 38.18 - 38.24 Quartz>> QZ, CL trace											
<<Vein: 39.23 - 39.28 Quartz>> QZ, CL trace, BI, few dolomite.											
40.21	50.00	RHYv Rhyolite volcaniclastic									
40.21 - 50: Few lapili and ash. Speck of TML.											
50.00	54.33	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
50 - 54.33: Dyke, weakly foliated, with phenoblasts and QZ vein. Few CA. Purple color at upper contact. CL altered. Similar than dyke at 30.51m.											
54.33	56.52	RHYvl Lapilli tuff									
54.33 - 56.52: Fracturated along the core axis											
56.52	58.16	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
56.52 - 58.16: Mafic dyke, same composition than dyke at 50m. Phenoblats, purple color.											
58.16	77.70	RHYvl Lapilli tuff									
58.16 - 77.7: Maybe pseudofragmenetal. Ash from 65.7 to 66.55m. Mafic dyke from 63.05 to 63.94m.											
77.70	89.32	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
77.7 - 89.32: Curdy texture. Maybe locally lapilitic or pseudofragmenetal.											
<<Alt: 82.36 - 116.58 Weak (Alt) Muscovite>>											
<<Vein: 86 - 86.01 Quartz-Tourmaline-Sulphide>> QZ/TML, PY, CP and GL trace.											
<<Struc: 86 - 86.01 Vein>> QZ vein containing TML, few CP, few GL. Lineation: 40 degrees/core axis.											
<<Struc: 86.43 - 86.44 Vein>> Late vein maybe chlorite crosscuttin the dominant foliation.											
<<Struc: 86.55 - 86.56 dominant foliation>> QZ elongated.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-243

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
89.32	98.80	RHYcq Quartz porphyry grey-green									
89.32 - 98.8: Probably fragmental.											
<<Min: 91.3 - 105.5 0.5% Min: Calcite>> in fracture dominantly.											
<<Struc: 89.32 - 98 Weak (Alt) Shear>> Fragmental, muscovite rich, broken zone.											
<<Struc: 98 - 98.8 Strong (Alt) Fault>> Major fault, gouge (clay/sandy), core loss.											
98.80	111.97	RHYvx Quartz and/or feldspar crystal tuff grey-green									
98.8 - 111.97: Sheared, broken. Probably altered felspar.											
<<Min: 110.5 - 127 1% Min: Pyrrhotite>> Elongated along the foliation.											
<<Struc: 105.3 - 110.2 Strong (Alt) Shear>> Major broken zone. Fault gouge (clay) at around 105.35 and 107.0m											
111.97	120.87	RHYva Coarse grained to ash tuff medium grey									
111.97 - 120.87: BI rich at lower contact, maybe some carbonaceous material. PO in foliation. Weak CL alteration.											
<<Struc: 112.92 - 112.95 Weak (Alt) Fault>> Minor fault,											
120.87	134.25	RHYvx Quartz and/or feldspar crystal tuff grey-green									
120.87 - 134.25: Feldspar and QZ phenos.											
<<Min: 127 - 144.1 3% Min: Pyrrhotite>>											
<<Vein: 122.9 - 123 Quartz-Tourmaline-Sulphide 18 deg. >> QZ/TML/PO (see structure)											
<<Struc: 122.9 - 123 Vein>> QZTML//PO vein.											
134.25	139.73	RHY undifferentiated rhyolite grey-green									
134.25 - 139.73: Weak foliation, ghost phenoblasts. MU alteration.											
<<Vein: 139 - 139.05 Quartz-Pyrite 15 deg. >> QZ/PY vein offsetting the foliation.											
<<Struc: 139.21 - 139.22 dominant foliation>> QZ and PO elongated.											
139.73	144.10	MDSr Rhyolite tuff dominant mudstone medium grey									
139.73 - 144.1: Dominantly rhyolitic, weakly carbonaceous, folded at lower contact.											
<<Struc: 139.73 - 139.74 dominant foliation>> Dark blue, maybe carbonaceous band.											
<<Struc: 142 - 144.2 Weak (Alt) Shear>> Carbonaceous, folded, weakly sheared.											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-243

From (m)			To (m)			Rocktype & Description						From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %			
144.10			149.07			RHY undifferentiated rhyolite						grey-green											
144.1 - 149.07: Texture obscured by MU alteration. PO in disseminated partch.																							
<<Min: 144.1 - 155 3% Min: Pyrrhotite>> Stringers in the foliation																							
<<Alt: 144.1 - 158.26 Moderate (Alt) Muscovite>> Locally strong.																							
<<Struc: 144.4 - 144.41 dominant foliation>>																							
149.07			155.57			RHYcw Curdy textured-flow banded (flows, subvolcanics)						grey-green											
149.07 - 155.57: Light blue color, maybe du to carbonaceous material. PO/PY stringers in foliation from 144.10m.																							
155.57			165.20			RHYvx Quartz and/or feldspar crystal tuff						grey-green											
155.57 - 165.2: QZ EYES. Strong MU alteration from 159.0 to 168.15. QZ veins, few patch of GL/SP.																							
<<Alt: 158.26 - 168.15 Strong (Alt) Muscovite>> In a shear zone.																							
<<Vein: 161.6 - 162.36 Quartz>> QZ																							
<<Struc: 159 - 161 Strong (Alt) Shear>> Shear zone, angle estimated., notable folding.																							
165.20			168.15			OI Heavilly disseminated sulphides in host schist																	
<<Min: 165.2 - 168.15 2% Min: Sphalerite>>																							
<<Min: 165.2 - 168.15 2% Min: Galena>>																							
<<Min: 165.2 - 168.15 5% Min: Chalcopryite>>																							
<<Struc: 165.65 - 169.5 Strong (Alt) Shear>> Containing semi-massive sulfide (OB domain).																							
168.15			168.66			OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides																	
168.15 - 168.66: Semi massive.																							
<<Min: 168.15 - 168.66 70% Min: Pyrite>>																							
<<Min: 168.15 - 168.66 1% Min: Galena>>																							
<<Min: 168.15 - 168.66 2% Min: Chalcopryite>>																							
168.66			173.85			OJ Heavilly disseminated sulphides in proximal altered rock																	
<<Min: 168.66 - 173.85 10% Min: Sphalerite>>																							

162.20	163.70	1.50	B00264761	5.3	0.015	-0.01	0.23	0.34
--------	--------	------	-----------	-----	-------	-------	------	------

163.70	165.20	1.50	B00264762	2.7	-0.005	0.04	0.06	0.22
--------	--------	------	-----------	-----	--------	------	------	------

165.20	166.80	1.60	B00264763	69.6	0.353	2.1	0.13	1.74
--------	--------	------	-----------	------	-------	-----	------	------

166.80	168.15	1.35	B00264764	23.8	0.115	0.28	0.13	0.53
--------	--------	------	-----------	------	-------	------	------	------

168.15	168.66	0.51	B00264765	101	1.61	1.96	0.35	1.32
--------	--------	------	-----------	-----	------	------	------	------

168.66	170.00	1.34	B00264766	3.4	0.051	0.03	0.04	0.64
--------	--------	------	-----------	-----	-------	------	------	------

170.00	171.00	1.00	B00264767	8.8	0.16	0.06	0.19	0.31
--------	--------	------	-----------	-----	------	------	------	------

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-243
From (m) To (m) Rocktype & Description

<<Min: 168.66 - 173.85 10% Min: Pyrrhotite>>

<<Min: 168.66 - 173.85 1% Min: Galena>>

<<Min: 168.66 - 173.85 3% Min: Chalcopryrite>>

<<Alt: 170 - 172 Strong (Alt) Cordierite>> Cordierite aggregated.

<<Alt: 170 - 185.79 Strong (Alt) Chlorite>>

173.85 174.35 OG Chalcopryrite rich sulphides

173.85 - 174.35: MET3

<<Min: 173.85 - 174.35 5% Min: Pyrrhotite>>

<<Min: 173.85 - 174.35 3% Min: Magnetite>>

<<Min: 173.85 - 174.35 30% Min: Chalcopryrite>>

<<Min: 173.86 - 174.35 5% Min: Sphalerite>>

<<Min: 173.86 - 174.35 0.5% Min: Galena>>

**174.35 175.63 OJ Heavilly disseminated
sulphides in proximal altered
rock**

174.35 - 175.63: MET7

<<Min: 174.35 - 175.63 10% Min: Sphalerite>>

<<Min: 174.35 - 175.63 2% Min: Galena>>

<<Min: 174.35 - 175.63 2% Min: Chalcopryrite>>

<<Struc: 175.04 - 175.05 >> Lamination in sulfide zone.

**175.63 178.89 OB Wispy laminate, fine
buckshot textured, non-
magnetite bearing sulphides**

175.63 - 178.89: MET5, with CP. CL vein along the core axis, brecciated texture. GL rich-MET7

<<Min: 175.63 - 178.89 35% Min: Sphalerite>>

<<Min: 175.63 - 178.89 40% Min: Pyrite>>

<<Min: 175.63 - 178.89 3% Min: Galena>>

<<Min: 175.63 - 178.89 1% Min: Calcite>> In veinlet, irregular.

<<Min: 175.63 - 188.89 3% Min: Chalcopryrite>>

<<Struc: 176.27 - 176.28 >> SP lamination

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
171.00	172.00	1.00	B00264768	30.9	0.57	0.54	0.14	1.08
172.00	173.00	1.00	B00264769	42.5	0.971	1.02	0.13	0.37
173.00	173.85	0.85	B00264771	160	2.73	2.36	0.71	1.51

173.85	174.35	0.50	B00264772	297	6.61	5.92	0.82	3.68
--------	--------	------	-----------	-----	------	------	------	------

174.35	175.63	1.28	B00264773	209	3.92	1.26	0.74	1.89
--------	--------	------	-----------	-----	------	------	------	------

175.63	177.00	1.37	B00264774	351	2.45	0.34	10.9	16.4
--------	--------	------	-----------	-----	------	------	------	------

177.00	178.00	1.00	B00264775	241	2.16	0.33	4.82	12.4
178.00	178.89	0.89	B00264776	99	1.35	0.24	1.85	7.33

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-243

From (m) To (m) Rocktype & Description

178.89 179.40 OA Magnetite bearing sulphides

178.89 - 179.4: MET2

<<Min: 178.89 - 179.4 10% Min: Magnetite>>

<<Min: 178.89 - 179.4 0.5% Min: Galena>>

<<Struc: 179.21 - 179.22 >> MG lamination.

179.40 180.10 OJ Heavily disseminated sulphides in proximal altered rock

179.4 - 180.1: MET6

<<Min: 179.4 - 180.8 8% Min: Sphalerite>>

<<Min: 179.4 - 180.8 0.5% Min: Galena>>

<<Min: 179.4 - 180.8 1% Min: Chalcopyrite>>

180.10 183.46 OI Heavily disseminated sulphides in host schist

180.1 - 183.46: MET8

<<Min: 180.8 - 183.46 10% Min: Sphalerite>>

<<Struc: 182.25 - 182.44 Weak (Alt) Shear>> rumble.

183.46 184.39 OC Chalcopyrite-pyrrhotite net textured sulphides

183.46 - 184.39: MET8 in dark chlorite alteration.

<<Min: 183.46 - 184.39 0.5% Min: Sphalerite>>

<<Min: 183.46 - 184.39 3% Min: Pyrrhotite>>

<<Min: 183.46 - 184.39 30% Min: Chalcopyrite>>

184.39 185.00 OI Heavily disseminated sulphides in host schist

<<Min: 184.39 - 185.07 0.5% Min: Sphalerite>>

<<Min: 184.39 - 185.07 1% Min: Chalcopyrite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
178.89	179.40	0.51	B00264777	130	3.75	3.05	0.89	3.42

179.40	180.10	0.70	B00264778	89.1	1.14	2.89	0.17	2.44
--------	--------	------	-----------	------	------	------	------	------

180.10	181.00	0.90	B00264779	30.9	0.15	0.93	0.09	0.38
--------	--------	------	-----------	------	------	------	------	------

181.00	182.50	1.50	B00264781	99.7	0.921	3.26	0.17	0.71
182.50	183.46	0.96	B00264782	103	0.822	3.19	0.22	0.26
183.46	184.39	0.93	B00264783	186	3.3	7.65	0.2	0.68

184.39	185.00	0.61	B00264784	15.4	0.098	0.37	0.08	0.3
--------	--------	------	-----------	------	-------	------	------	-----



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-243

From (m) To (m) Rocktype & Description

185.00 185.52 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

185 - 185.52: MET7

<<Min: 185.07 - 185.4 20% Min: Sphalerite>>

<<Min: 185.07 - 185.4 3% Min: Galena>>

185.52 189.63 MAFi Mafic Intrusions (primarily footwall mafic intrusion) green

185.52 - 189.63: Texture obscured by CL alteration.

<<Alt: 185.79 - 189.63 Moderate (Alt) Chlorite>>

<<Struc: 186.06 - 186.16 Weak (Alt) Shear>> In host rock (mineralized zone).

<<Struc: 187.72 - 187.74 Vein>> Maybe with TML.

<<Struc: 189.44 - 189.46 Weak (Alt) Fault>> Infilled fracture.

189.63 215.15 MAFi Mafic Intrusions (primarily footwall mafic intrusion) green

189.63 - 215.15: Mafic sill, BI. Fractured quartz veins, green-grey alteration associated with. Regarding K15-243W1 it might not be aphytic felsic dyke but could be related to.

<<Min: 189.63 - 215.15 25% Min: Calcite>>

<<Alt: 189.63 - 215.15 Moderate (Alt) Chlorite>> Mafic sill.

<<Alt: 200.51 - 201.32 Moderate (Alt) Silicification>> Green-grey alteration (felsic dyke).

<<Vein: 193.27 - 193.44 Quartz-Pyrite>> QZ and coarse grain PY.

<<Vein: 209.75 - 213.4 Quartz-Carbonate>> multiple QZ/CA veins.

<<Struc: 195.88 - 195.89 dominant foliation>> CA.

<<Struc: 202.01 - 202.2 Weak (Alt) Fault>> Fault Gouge, clay.

<<Struc: 205.7 - 205.71 Vein>> Set of CA veinlet (crenulated) crosscutting the dominant foliation.

<<Struc: 205.76 - 205.77 dominant foliation>>

<<Struc: 207.97 - 207.98 dominant foliation>> BI.

215.15 221.00 RHY undifferentiated rhyolite grey-green

215.15 - 221: QZ eyes. QZ vein irregular. 221.00 E.O.H..

<<Vein: 218.02 - 218.19 Quartz>> QZ, TML at upper contact, few PY.

<<Vein: 220 - 221 Quartz-Pyrite>> 3 QZ veins, few PY and Poon the edge.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
185.00	185.52	0.52	B00264785	68.5	0.192	0.08	2.28	8.6

185.52	187.00	1.48	B00264786	2	-0.005	0.01	0.08	0.19
--------	--------	------	-----------	---	--------	------	------	------

187.00	188.50	1.50	B00264787	2.7	0.008	0.02	0.14	0.39
--------	--------	------	-----------	-----	-------	------	------	------

188.50	189.63	1.13	B00264788	4.8	-0.005	0.06	0.06	0.13
--------	--------	------	-----------	-----	--------	------	------	------

189.63	191.00	1.37	B00264789	-0.3	-0.005	-0.01	-0.01	0.01
--------	--------	------	-----------	------	--------	-------	-------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-243

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
End of Hole @ 221											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-243W1

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	05-Sep-15
UTM Easting	414801.777	Core Size:	HQ3	Azimuth:	180.4	Date Logging Complete:	06-Sep-15
UTM Northing:	6815776.435	Casing Pulled?:	Yes	Dip:	-63	Drill Company:	Geotech
UTM Elev. (m):	1403.945	Casing Depth (m):	6	Length (m):	200	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	04-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	06-Sep-15
Local Elev. (m):						Purpose:	Metallurgical Wedge
Comments:						Parent Hole:	K15-243

Hole K15-243W1 was wedged in hole K15-243 from 149m to 200m for metallurgical samples (MET7 Domain).

Hole K15-243W1 encountered primarily rhyolite, a massive sulphide zone and a strongly chlorite altered unit. The massive sulfide was intersected from 173.65m to 180.1m with a main mineralized zone from 167.48m to 185.54m.

The hole shows progressive muscovite alteration in the hanging-wall followed by strong to intense proximal alteration from 170 to 190.55m (cordierite). Mineralization consists of SP/GL/PY (OB domain) as well as OA, OJ and OI domains on the edge of the unit.

The footwall consists of strongly chlorite altered unit with CP stringers below the main massive sulfide zone and a narrow chlorite altered rhyolitic unit crosscut by mafic sill at 190.55m.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-65	180.04	0	180.04	APS	Jerome de Pasquale	30-Aug-15		<input checked="" type="checkbox"/>	Values copied from K15-243
26	-64.2	161.1	22.5	183.6	ReflexEVS	Geotech	01-Sep-15	5797	<input checked="" type="checkbox"/>	Values copied from K15-243
50	-64.4	162.1	22.5	184.6	ReflexEVS	Geotech	01-Sep-15	5660	<input checked="" type="checkbox"/>	Values copied from K15-243
75	-64.5	162.5	22.5	185	ReflexEVS	Geotech	02-Sep-15	5724	<input checked="" type="checkbox"/>	Values copied from K15-243
77	-64.6	163.8	22.5	186.3	ReflexEVS	Geotech	01-Sep-15	5775	<input checked="" type="checkbox"/>	Values copied from K15-243
101	-64.9	164.6	22.5	187.1	ReflexEVS	Geotech	01-Sep-15	5680	<input checked="" type="checkbox"/>	Values copied from K15-243
125	-64.6	165	22.5	187.5	ReflexEVS	Geotech	01-Sep-15	5642	<input checked="" type="checkbox"/>	Values copied from K15-243
149	-63.2	162.3	22.5	184.8	ReflexEVS	Geotech	04-Sep-15	5796	<input checked="" type="checkbox"/>	Wedge start; value copied from first wedge survey at 155m
155	-63.2	162.3	22.5	184.8	ReflexEVS	Geotech	04-Sep-15	5796	<input checked="" type="checkbox"/>	
176	-63.4	161.7	22.5	184.2	ReflexEVS	Geotech	04-Sep-15	5226	<input checked="" type="checkbox"/>	
200	-64.5	167.5	22.5	190	ReflexEVS	Geotech	04-Sep-15	5777	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
149.00	149.76	RHYv Rhyolite volcanoclastic									
149 - 149.76: Probably ash, PY elongated.											
grey-green											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-243W1
From (m) **To (m)** **Rocktype & Description**
149.76 165.15 RHY undifferentiated rhyolite grey-green

149.76 - 165.15: Muscovite altered, strong foilation, maybe cabonaceous, dark band with pyrite might be primarily carbonaceous. Folded locally.

<<Alt: 149.8 - 158.81 Moderate (Alt) Muscovite>>

<<Alt: 158.81 - 167.91 Strong (Alt) Muscovite>>

<<Vein: 149.76 - 165.15 Pyrite>> PY in dark bedm maybe originaly carbonaceous.

<<Vein: 162.26 - 163.8 Quartz-Sulphide>> QZ, few GL

165.15 165.76 OI Heavilly disseminated sulphides in host schist grey-green

165.15 - 165.76: CP in fracture, brecciated.

<<Min: 165.15 - 165.76 2% Min: Sphalerite>>

<<Min: 165.15 - 165.76 2% Min: Pyrrhotite>>

<<Min: 165.15 - 165.76 1% Min: Galena>>

<<Min: 165.15 - 165.76 15% Min: Chalcopryite>> Brecciated in schist.

<<Min: 165.75 - 167.48 0.1% Min: Galena>>

165.76 167.48 RHY undifferentiated rhyolite grey-green

165.76 - 167.48: Sheared.

<<Min: 165.76 - 167.48 0.1% Min: Sphalerite>>

<<Struc: 165.76 - 167.48 Moderate (Alt) Shear>>

167.48 168.96 OI Heavilly disseminated sulphides in host schist

167.48 - 168.96: Locally OB, laminated, faulted with off set.

<<Min: 167.48 - 168.25 2% Min: Sphalerite>>

<<Min: 167.48 - 168.25 30% Min: Pyrite>>

<<Min: 167.48 - 168.25 2% Min: Chalcopryite>>

<<Min: 168.25 - 173.64 2% Min: Pyrrhotite>>

<<Min: 168.25 - 173.64 3% Min: Galena>>

<<Min: 168.25 - 173.64 0.5% Min: Arsenopyrite>>

<<Min: 168.25 - 173.65 5% Min: Sphalerite>>

<<Alt: 167.48 - 173.64 Strong (Alt) Cordierite>>

<<Alt: 167.48 - 189.86 Strong (Alt) Chlorite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
160.15	161.15	1.00						

161.15	162.15	1.00
162.15	163.15	1.00
163.15	164.15	1.00
164.15	165.15	1.00
165.15	165.76	0.61

165.76	166.76	1.00
--------	--------	------

166.76	167.48	0.72
--------	--------	------

167.48	168.96	1.48
--------	--------	------

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-243W1
From (m) **To (m)** **Rocktype & Description**

168.96 173.64 OJ Heavily disseminated sulphides in proximal altered rock

<<Min: 173.63 - 176.14 50% Min: Pyrite>>

<<Min: 173.63 - 176.14 5% Min: Magnetite>>

<<Min: 173.63 - 176.14 3% Min: Galena>>

<<Min: 173.63 - 176.14 2% Min: Chalcopyrite>>

173.64 176.14 OA Magnetite bearing sulphides

173.64 - 176.14: Semi massive MET2

176.14 178.80 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

176.14 - 178.8: Ca in matrix and veinlet, high SP.

<<Min: 176.14 - 178.8 30% Min: Sphalerite>>

<<Min: 176.14 - 178.8 5% Min: Galena>>

<<Min: 176.14 - 178.8 0.5% Min: Chalcopyrite>>

178.80 180.10 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

178.8 - 180.1: Contaning MG, MET2 or 4

<<Min: 178.8 - 180.1 2% Min: Sphalerite>>

<<Min: 178.8 - 180.1 60% Min: Pyrrhotite>>

<<Min: 178.8 - 180.1 2% Min: Galena>>

<<Min: 178.8 - 180.1 3% Min: Chalcopyrite>>

180.10 185.86 OJ Heavily disseminated sulphides in proximal altered rock

180.1 - 185.86: MET8. CP stringers.

<<Min: 180.1 - 185.86 3% Min: Sphalerite>>

<<Min: 180.1 - 185.86 1% Min: Pyrrhotite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
168.96	170.00	1.04						

170.00	171.00	1.00
171.00	172.00	1.00
172.00	173.00	1.00
173.00	173.64	0.64
173.64	175.00	1.36

175.00	176.14	1.14
176.14	177.00	0.86

177.00	178.00	1.00
178.00	178.80	0.80

178.80	180.10	1.30
--------	--------	------

180.10	181.00	0.90
--------	--------	------

181.00	182.00	1.00
182.00	183.00	1.00

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-243W1

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 180.1 - 185.86 2% Min: Galena>>			183.00	184.00	1.00						
<<Min: 180.1 - 185.86 10% Min: Chalcopryrite>>			184.00	185.00	1.00						
<<Min: 180.1 - 185.86 0.5% Min: Arsenopyrite>>			185.00	185.86	0.86						
<<Vein: 180.1 - 185.86 Massive Sulphide/Sulphides undifferentiated>> CP stringers											
185.86	190.55	RHY undifferentiated rhyolite	185.86	186.86	1.00						
185.86 - 190.55: Obscured by CL alteration, could be mudstone.											
<<Alt: 189.86 - 190.55 Moderate (Alt) Chlorite>>			186.86	187.86	1.00						
			187.86	188.86	1.00						
			188.86	189.86	1.00						
			189.86	190.55	0.69						
190.55	200.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
190.55 - 200: Locally altered by QZ vein, BI. CL decrease on the last metre of the hole.											
<<Min: 190.55 - 200 2% Min: Pyrite>> Euhedral, secondary.											
<<Min: 190.55 - 200 20% Min: Calcite>>											
<<Alt: 190.55 - 200 Strong (Alt) Chlorite>>											
End of Hole @ 200											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-244

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	David Nuttal
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	03-Sep-15
UTM Easting	415050.949	Core Size:	NQ3	Azimuth:	179.93	Date Logging Complete:	05-Sep-15
UTM Northing:	6815419.589	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1386.572	Casing Depth (m):	21	Length (m):	119	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	01-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	04-Sep-15
Local Elev. (m):						Purpose:	Resource/Met
Comments:						Parent Hole:	

This was designed to infill the resource between historic hole K95-087 & K95-088.

The structural hanging wall is composed of a package of felsic coherent/volcaniclastic rocks and intercalated carbonaceous/tuffaceous mudstones. Sulphide intercepts are from 60.39m to 69.1m and contain OD and OB sulphide mineralization with pervasive calcite (10-20%) and isolated intervals of trace magnetite. The sulphide interval is confirmed to be of the MET7 domain. The structural footwall is a package of felsic coherent/volcaniclastic rocks underlain by a mafic intrusive (Mafi) and cross cut by a felsic/rhyolite glassy dike (Rhyi).

Muscovite alteration is pervasive in the structural hangingwall and footwall and increases in intensity towards the massive sulphide lens. Cordierite porphyroblasts were isolated in the MDS unit adjacent to the massive sulphide in the structural hanging wall. Trace chlorite alteration is observed proximal to the massive sulphide lens. Chlorite overprinting is moderate to strong in the mafic shists. Silicification is moderate to strong and is proximal to the felsic intrusion; the alteration front forms sharp contacts.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	179.93	0	179.93	APS	David Nuttal	01-Sep-15		<input checked="" type="checkbox"/>	
25	-62	159.8	22.5	182.3	ReflexEVS	Geotech	02-Sep-15	5830	<input checked="" type="checkbox"/>	
50	-61.2	160.7	22.5	183.2	ReflexEVS	Geotech	03-Sep-15	5753	<input checked="" type="checkbox"/>	
77	-61.4	166.9	22.5	189.4	ReflexEVS	Geotech	03-Sep-15	1708	<input type="checkbox"/>	Values not accepted due to very low magnetic field.
107	-61.2	162	22.5	184.5	ReflexEVS	Geotech	03-Sep-15	5720	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	20.70	CASN									
20.70	45.52	RHYvl									
		Casing									
		Lapilli tuff									
		light grey									
20.7 - 45.52: High pyrite ~3-4%. Large quartz vein intersection 38.77m to 43.25m, MEB changed from RHYc to RHYvl											
<<Min: 21 - 29.5 2% Min: Pyrrhotite>>											
<<Min: 21 - 48.5 1% Min: Calcite>>											
<<Min: 25 - 60.39 3% Min: Pyrite>>											
<<Min: 29.5 - 60.39 0.25% Min: Pyrrhotite>>											
<<Min: 39 - 44.2 0.25% Min: Galena>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-244

From (m)	To (m)	Rocktype & Description										From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<div><<Min: 39.7 - 40.2 4% Min: Sphalerite>></div> <div><<Alt: 21 - 60.39 Weak (Alt) Muscovite>> Muscovite alteration intensity does not increase proximal to the massive sulphide interval.</div> <div><<Vein: 38.77 - 44.33 60% Quartz>> sulphides: galena, chalcopyrite, pyrite.</div> <div><<Struc: 24.85 - 24.92 Weak (Alt) Fault>></div> <div><<Struc: 31.9 - 31.93 Weak (Alt) Fault>></div> <div><<Struc: 33.4 - 33.51 Moderate (Alt) Fault>></div> <div><<Struc: 37.75 - 37.75 dominant foliation>></div> <div><div>45.5248.88MDSw</div><div>Coherent rhyolite flow with carbonaceous content</div></div> <div><<Min: 48.5 - 51 3% Min: Calcite>></div> <div><<Vein: 47.8 - 50.8 10% Quartz>></div> <div><<Struc: 46.75 - 46.75 dominant foliation>></div> <div><div>48.8852.64MDS</div><div>Carbonaceous dominant mudstone</div><div>dark grey</div></div> <div><<Min: 48.88 - 53 0.25% Min: Chalcopyrite>></div> <div><<Min: 51 - 60.39 0.25% Min: Calcite>></div> <div><<Struc: 52.54 - 52.59 Moderate (Alt) Fault>></div> <div><div>52.6460.39MDS</div><div>Carbonaceous Mudstone & Tuffaceous Mudstone</div></div> <div><<Struc: 55.9 - 60.39 Moderate (Alt) Fault>> Fault/fracture interval</div> <div><div>60.3961.35OD</div><div>Brecciated sulphides</div></div> <div>60.39 - 61.35: Pyrite rich brecciated sulphides with approximately 10-15% SP. MET7 domain (patchy Pb/Cu poor massive sulphide).</div> <div><<Min: 60.39 - 69.1 12% Min: Calcite>> Also present within fractures and veins within massive sulphide interval.</div> <div><div>61.3569.10OB</div><div>Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides</div></div> <div>61.35 - 69.1: MET7 domain: Patchy Pb/Cu poor massive sulphide.</div>																				
55.90	57.39	1.49	B00268638	2.1	0.076	-0.01	0.03	0.17												
57.39	58.89	1.50	B00268639	3.5	0.051	-0.01	0.05	0.05												
58.89	60.39	1.50	B00268641	14.9	0.24	0.27	0.06	0.06												
60.39	61.35	0.96	B00268642	109	0.94	1.39	0.66	5.84												
61.35	62.30	0.95	B00268643	160	1.39	0.35	1.62	8.35												
62.30	63.30	1.00	B00268644	97.6	1.15	0.11	1.09	6.98												
63.30	64.30	1.00	B00268645	150	1.72	0.61	2.08	7.69												
64.30	65.30	1.00	B00268646	220	1.74	0.3	2.19	7.19												

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-244

From (m) To (m) Rocktype & Description

69.10 74.00 RHY undifferentiated rhyolite

<<Min: 69.1 - 73 10% Min: Calcite>>

<<Min: 69.1 - 74 2% Min: Pyrite>>

<<Min: 73 - 86.5 3% Min: Calcite>>

<<Alt: 69.1 - 74 Moderate (Alt) Muscovite>>

<<Vein: 72.64 - 72.92 90% Quartz>> galena

74.00 77.70 OJ Heavily disseminated sulphides in proximal altered rock

<<Alt: 74 - 77.7 Moderate (Alt) Cordierite>>

<<Alt: 76 - 77 Moderate (Alt) Chlorite>>

<<Alt: 77 - 84 Moderate (Alt) Muscovite>>

77.70 80.00 RHY undifferentiated rhyolite

77.7 - 80: Intensely altered interval

<<Min: 77.7 - 85.5 3% Min: Pyrite>>

80.00 80.35 OA Magnetite bearing sulphides

80.35 82.56 RHY undifferentiated rhyolite

80.35 - 82.56: Flow textures are recognized in small sections of this interval.

<<Alt: 81.4 - 84.1 Weak (Alt) Chlorite>>

<<Struc: 81.8 - 82.3 Weak (Alt) Fault>> faulted interval

82.56 86.53 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

<<Min: 85.5 - 93.28 0.5% Min: Pyrite>>

<<Min: 85.5 - 93.28 2% Min: Pyrrhotite>>

<<Min: 86.5 - 93.28 20% Min: Calcite>>

<<Alt: 84 - 86 Weak (Alt) Muscovite>>

<<Struc: 85.95 - 85.95 dominant foliation>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
65.30	66.30	1.00	B00268647	200	1.16	0.19	1.79	5.62
66.30	67.30	1.00	B00268648	200	1.72	0.22	2.9	10.9
67.30	68.30	1.00	B00268649	210	1.74	0.37	4.06	12.2
68.30	69.10	0.80	B00268652	280	1.05	0.15	5.44	10.1
69.10	70.60	1.50	B00268653	73.9	0.326	0.05	0.9	2.47
70.60	72.10	1.50	B00268654	1.5	-0.005	-0.01	0.01	0.04
72.10	73.00	0.90	B00268655	1.3	-0.005	-0.01	-0.01	0.02
73.00	74.00	1.00	B00268656	14.9	0.024	0.04	0.25	0.71

74.00	75.00	1.00	B00268657	31.8	0.367	1.07	0.06	0.73
-------	-------	------	-----------	------	-------	------	------	------

75.00	76.00	1.00	B00268658	45.5	0.277	0.48	1.02	4.12
76.00	77.00	1.00	B00268659	57.4	0.749	1.77	0.18	1.47
77.00	78.50	1.50	B00268661	18.9	0.247	0.19	0.2	1.36
78.50	80.00	1.50	B00268662	0.7	-0.005	-0.01	-0.01	-0.01

80.00	81.46	1.46	B00268663	104	0.409	0.27	2.24	5.86
-------	-------	------	-----------	-----	-------	------	------	------

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-244

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
86.53	93.28	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
86.53 - 93.28: moderate to strong chlorite alteration at top of interval											
<<Alt: 86.53 - 91 Moderate (Alt) Chlorite>>											
<<Alt: 86.53 - 119 Weak (Alt) Muscovite>>											
<<Alt: 91 - 93.28 Weak (Alt) Chlorite>>											
<<Vein: 89.58 - 90.25 30% Quartz>>											
93.28	98.20	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
<<Min: 93.28 - 104 3% Min: Calcite>>											
<<Min: 93.28 - 119 2% Min: Pyrite>>											
<<Alt: 93.28 - 94 Strong (Alt) Muscovite>>											
<<Alt: 93.28 - 98.2 Moderate (Alt) Silicification>>											
98.20	115.00	RHYi	Aphanitic Rhyolite (intrusion)								
<<Min: 98.2 - 115 0.5% Min: Sphalerite>>											
<<Min: 104 - 119 0.5% Min: Galena>>											
<<Min: 104 - 119 6% Min: Calcite>>											
<<Alt: 98.2 - 113 Strong (Alt) Silicification>>											
<<Alt: 113 - 119 Moderate (Alt) Silicification>>											
<<Vein: 103.67 - 104 99% Quartz>>											
<<Struc: 102 - 102.08 Weak (Alt) Fault>>											
115.00	116.00	RHYc	Rhyolite coherant volcanics								
116.00	119.00	RHYv	Rhyolite volcaniclastic								
<<Struc: 117.7 - 119 Moderate (Alt) Fault>> faulted interval											
End of Hole @ 119											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-245

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	David Nuttal
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	05-Sep-15
UTM Easting	415050.945	Core Size:	HQ3	Azimuth:	180.25	Date Logging Complete:	05-Sep-15
UTM Northing:	6815416.155	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1386.662	Casing Depth (m):	19.5	Length (m):	70	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	04-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	05-Sep-15
Local Elev. (m):						Purpose:	Metallurgical Twin
Comments:						Parent Hole:	K15-244

This hole was drilled with the objective of collecting samples of MET7 domain for testing, as a twin of K15-244.

The structural hanging wall is composed of a package of felsic coherent/volcaniclastic rocks intercalated by carbonaceous/tuffaceous mudstones. Sulphide intercepts are from 59.21m to 67.15m and contain OB sulphide mineralization with isolated intervals of trace magnetite (<30cm intervals). The structural footwall is a package of felsic coherent/volcaniclastic rocks. Muscovite alteration is pervasive in the structural hangingwall and footwall, and increases in intensity towards the massive sulphide lens. Cordierite porphyroblasts were isolated in the MDS unit adjacent to the massive sulphide in the structural hanging wall. Trace chlorite alteration is observed proximal to the massive sulphide lens. There is a large fault zone present from 45.5m to 59m.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	180	0	180	APS	David Nuttal	04-Sep-15		<input checked="" type="checkbox"/>	
28	-60.2	158.3	22.5	180.8	ReflexEVS	Geotech	04-Sep-15	5767	<input checked="" type="checkbox"/>	
70	-59.8	23.3	22.5	45.8	ReflexEVS	Geotech	05-Sep-15	962	<input type="checkbox"/>	Values not accepted due to very low magnetic field.

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	19.50	CASN Casing									
19.50	37.00	RHYvl Lapilli tuff									
<<Min: 19.5 - 28 1% Min: Pyrite>>											
<<Min: 19.5 - 28 5% Min: Pyrrhotite>>											
<<Min: 28 - 37 3% Min: Pyrite>>											
<<Min: 28 - 37 2% Min: Pyrrhotite>>											
<<Alt: 19.5 - 37.8 Weak (Alt) Muscovite>>											
<<Struc: 27.12 - 27.2 Moderate (Alt) Fault>>											
<<Struc: 29.83 - 30 Moderate (Alt) Fault>>											
<<Struc: 31.15 - 31.25 Moderate (Alt) Fault>>											
<<Struc: 35.43 - 36.67 Moderate (Alt) Fault>> Fault zone interval. Three faults spaced by less than one meter intervals. Faults are less than 15cm wide.											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-245

From (m)			To (m)			Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
37.00			49.00			MDSw	Coherent rhyolite flow with carbonaceous content								
37 - 49: very weakly crb															
<<Min: 37 - 59.21 2% Min: Pyrite>>															
<<Alt: 37.8 - 59.21 Moderate (Alt) Muscovite>>															
<<Vein: 37 - 48 20% Quartz>>															
<<Struc: 45.5 - 59 Moderate (Alt) Fault>> Fault zone interval. Rocks have been subjected to a major event resulting in brittle failure across different lithologies.															
49.00			50.50			MDS	Carbonaceous dominant mudstone								
50.50			59.21			MDS	Carbonaceous Mudstone & Tuffaceous Mudstone								
<<Alt: 58.9 - 59 Moderate (Alt) Cordierite>>															
59.21			67.15			OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides								
59.21 - 67.15: met7 dfomain															
67.15			70.00			RHY	undifferentiated rhyolite								
<<Min: 67.15 - 70 4% Min: Pyrite>>															
<<Alt: 67.15 - 70 Strong (Alt) Muscovite>>															
End of Hole @ 70															

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-246

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Cooper Campbell
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	03-Sep-15
UTM Easting	415134.011	Core Size:	HQ3	Azimuth:	167.24	Date Logging Complete:	05-Sep-15
UTM Northing:	6815441.807	Casing Pulled?:	Yes	Dip:	-65	Drill Company:	Geotech
UTM Elev. (m):	1400.731	Casing Depth (m):	7.5	Length (m):	129	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	02-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	03-Sep-15
Local Elev. (m):						Purpose:	Metallurgical Twin
Comments:						Parent Hole:	K15-242

The purpose of hole K15-246 was to twin K15-242 in order to provide material for sampling MET8, MET 3, and MET 5 domains.

The first 92.09 m of K15-242 consists of a thick package of rhyolitic volcanics (xtl/lpl) and flows +/- carbonaceous material, carbonaceous mudstones, and mafic intrusives.

The massive sulphide zone was intersected between 95.36-120.63 m (25.27 m total thickness) and consists of OA, OB, OC, OH, and OJ ore types. A Cu rich strong proximal CL-CI altered zone of OC may have confirmed the presence of the MET 8 domain. This unit contains magnetite though which may indicate that it is actually MET 3. There are other zones of MG bearing OC that are true massive sulphide that lack the CL-CI alteration and are likely MET 8. The MET 5 domain was confirmed by the presence of OB with visibly high concentrations of GL.

The structural footwall consists of MAFi intruded by RHYi, both of which sit stratigraphically below a thin unit of RHYcw. The footwall was intersected between 120.63-129.0 m.

Syngenetic alteration of the structural hanging wall felsic volcanics progressively increases in intensity with proximity to the sulphide zone. There was a relatively large weak CL-CI alteration zone in the hanging wall from 80.03-96.0 m that increased in intensity to strong from 93.94-96.52 m.

A thin zone of strongly MU altered RHYcw was located directly below the sulphide zone was the only evidence of syngenetic alteration in the footwall. Syngenetic alteration of the footwall has largely been eliminated by MAFi. Alteration of the footwall is characterized by a moderate CL and weak BI overprint in MAFi.

Notable mineralized interceptions included: 15 % CP (96.52-97.22 m, 106.86-107.83 m), 10% CP (109.28-110.24 m, 112.75-113.92 m, 119.43-120.63 m), 5% GL (95.36-96.52 m, 113.92-119.43 m), and 20 % SP (97.22-104 m, 106.86-109.28 m, 106.86-113.92 m).

OC logged in this hole was not logged in the parent hole K15-242. This may be due to subtle changes in mineralogy between OA and OC ore types.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-65	167.24	0	167.24	APS	Cooper Campbell	02-Sep-15		<input checked="" type="checkbox"/>	
36	-65.2	147.4	22.5	169.9	ReflexEVS	Geotech	03-Sep-15	5777	<input checked="" type="checkbox"/>	
66	-65.5	146.8	22.5	169.3	ReflexEVS	Geotech	03-Sep-15	5813	<input checked="" type="checkbox"/>	
90	-65.4	148.3	22.5	170.8	ReflexEVS	Geotech	03-Sep-15	5956	<input checked="" type="checkbox"/>	
114	-65.3	137.5	22.5	160	ReflexEVS	Geotech	03-Sep-15	4975	<input type="checkbox"/>	Values not accepted due to low magnetic field.
129	-65.2	147.9	22.5	170.4	ReflexEVS	Geotech	03-Sep-15	5675	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	------------------------	----------	--------	-------	--------	--------	--------	------	------	------

0.00 6.72 OVBN Overburden
6.72 11.00 RHYvl Lapilli tuff

6.72 - 11: Heterogeneous package of RHYva, vl possible epiclastic beds, broken crystals, lapilli, MAFi, and flow banding over short intervals.

<<Min: 6.72 - 26.63 1% Min: Calcite>>

<<Min: 6.72 - 28.15 0.01% Min: Pyrite>>

<<Min: 6.72 - 28.15 0.01% Min: Pyrrhotite>>

<<Alt: 6.72 - 36.02 Weak (Alt) Muscovite>>

<<Alt: 6.72 - 36.02 Trace (Alt) Chlorite>> Patchy associated with MAFi.

<<Alt: 6.72 - 36.02 Trace (Alt) Biotite>> Patchy associated with MAFi.

**11.00 12.60 RHYcw Curdy textured-flow banded
(flows, subvolcanics)**

<<Min: 11.05 - 12.56 0.01% Min: Sphalerite>>

12.60 19.00 RHYvl Lapilli tuff

12.6 - 19: Heterogeneous package of RHYva, vl possible epiclastic beds, broken crystals, lapilli, MAFi, and flow banding over short intervals.

<<Struc: 15.8 - 22.29 Weak (Alt) Fault>> Narrow faults filled with broken rock and gouge. Spaced metres apart.

**19.00 20.04 RHYcw Curdy textured-flow banded
(flows, subvolcanics)**

19 - 20.04: dyke

20.04 23.53 RHYva Coarse grained to ash tuff
**23.53 24.60 RHYcw Curdy textured-flow banded
(flows, subvolcanics)**

23.53 - 24.6: dyke

24.60 36.02 RHYvl Lapilli tuff

<<Min: 26.63 - 58.24 5% Min: Calcite>>

<<Min: 28.15 - 49.04 0.01% Min: Pyrite>>

<<Min: 28.15 - 49.04 0.5% Min: Pyrrhotite>>

**36.02 39.77 MAFi Mafic Intrusions (primarily
footwall mafic intrusion)**

36.02 - 39.77: Xenoliths of RHYcw

<<Alt: 36.02 - 39.77 Strong (Alt) Muscovite>>

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-246

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 36.02 - 39.77 Weak (Alt) Chlorite>>											
<<Alt: 36.02 - 39.77 Moderate (Alt) Biotite>>											
<<Vein: 37.76 - 38.14 100% Quartz-Carbonate-Sulphide 30 deg. >> QZ-CA-MS-MU-PY. Possible trace talc.											
<<Struc: 38.86 - 61 Weak (Alt) Fault>> Narrow faults filled with broken rock and gouge. Spaced metres apart.											
39.77	62.50	RHYvl Lapilli tuff									
<<Min: 49.04 - 60.14 0.5% Min: Pyrite>>											
<<Min: 49.04 - 60.14 1% Min: Pyrrhotite>>											
<<Min: 58.24 - 70.64 0.01% Min: Calcite>>											
<<Min: 60.14 - 71.61 5% Min: Pyrite>>											
<<Min: 60.14 - 71.61 3% Min: Pyrrhotite>>											
<<Alt: 39.77 - 49.04 Trace (Alt) Chlorite>>											
<<Alt: 39.77 - 71.17 Moderate (Alt) Muscovite>>											
<<Vein: 56.7 - 56.91 100% Quartz-Tourmaline-Sulphide 35 deg. >> Wheat sheaves of tourmaline.											
<<Struc: 61 - 61.72 Strong (Alt) Fault>> Zone of highly broken rock and trace gouge.											
62.50	71.00	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
71.00	78.00	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
71 - 78: 15-20% wispy pyrite interflow bands??											
<<Min: 71.61 - 81.02 15% Min: Pyrite>>											
<<Min: 71.61 - 81.02 1% Min: Pyrrhotite>>											
<<Alt: 71.17 - 81.02 Strong (Alt) Muscovite>>											
<<Struc: 76.5 - 93 Strong (Alt) Fault>> Narrow faults filled with broken rock and gouge. Spaced metres apart.											
78.00	81.00	MDSw Coherent rhyolite flow with carbonaceous content									
<<Alt: 80.03 - 93.94 Weak (Alt) Chlorite>>											
<<Alt: 80.03 - 93.94 Trace (Alt) Biotite>>											
<<Alt: 80.03 - 96 Weak (Alt) Cordierite>>											
81.00	82.20	MDSc Carbonaceous dominant mudstone									
<<Min: 81.02 - 89.55 0.01% Min: Sphalerite>>											
<<Min: 81.02 - 89.55 3% Min: Pyrrhotite>>											
<<Min: 81.02 - 89.55 0.01% Min: Chalcopyrite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-246

From (m)			To (m)			Width			Sample			Ag PPM			Au PPM			Cu %			Pb %			Zn %		
<<Alt: 81.02 - 89.55 Moderate (Alt) Muscovite>>																										
82.20			85.50			MDSw			Coherent rhyolite flow with carbonaceous content																	
<<Min: 83.06 - 92.95 0.01% Min: Calcite>>																										
85.50			95.36			MDSst			Rhyolite tuff dominant mudstone																	
<<Min: 89.55 - 95.36 0.01% Min: Sphalerite>>																										
<<Min: 89.55 - 95.36 0.01% Min: Pyrite>>																										
<<Min: 89.55 - 95.36 1% Min: Pyrrhotite>>																										
<<Min: 89.55 - 95.36 0.01% Min: Chalcopyrite>>																										
<<Min: 92.95 - 96.52 5% Min: Calcite>>																										
<<Alt: 89.55 - 96 Strong (Alt) Muscovite>>																										
<<Alt: 93.94 - 96.52 Strong (Alt) Chlorite>>																										
<<Alt: 93.94 - 96.52 Moderate (Alt) Biotite>>																										
<<Vein: 93.84 - 94.55 25% Quartz-Carbonate-Sulphide 58 deg. >> QZ-DO-CA-PO																										
95.36			96.52			OJ			Heavilly disseminated sulphides in proximal altered rock																	
<<Min: 95.36 - 96.52 5% Min: Galena>>																										
<<Alt: 96 - 96.52 Strong (Alt) Cordierite>>																										
96.52			97.22			OC			Chalcopyrite-pyrrhotite net textured sulphides																	
<<Min: 96.52 - 97.22 15% Min: Chalcopyrite>>																										
97.22			101.08			OB			Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides																	
<<Min: 97.22 - 104 20% Min: Sphalerite>>																										
101.08			104.00			OA			Magnetite bearing sulphides																	

MG
MG
MG

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-246

From (m)	To (m)	Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
104.00	104.52	OC Chalcopyrite-pyrrhotite net textured sulphides	MG	104.00	104.52	0.52						
<<Min: 104 - 104.52 5% Min: Chalcopyrite>>												
104.52	106.86	OH Fine grained, megascopically homogeneous pyrite rock	FG	104.52	105.25	0.73						
				105.25	106.25	1.00						
				106.25	106.86	0.61						
106.86	107.83	OC Chalcopyrite-pyrrhotite net textured sulphides	MG	106.86	107.83	0.97						
<<Min: 106.86 - 107.83 15% Min: Chalcopyrite>>												
<<Min: 106.86 - 113.92 20% Min: Sphalerite>>												
107.83	109.28	OA Magnetite bearing sulphides	MG	107.83	108.50	0.67						
				108.50	109.28	0.78						
109.28	110.24	OC Chalcopyrite-pyrrhotite net textured sulphides	MG	109.28	110.24	0.96						
<<Min: 109.28 - 110.24 10% Min: Chalcopyrite>>												
110.24	112.75	OA Magnetite bearing sulphides	MG	110.24	111.24	1.00						
				111.24	112.75	1.51						
112.75	113.92	OC Chalcopyrite-pyrrhotite net textured sulphides	MG	112.75	113.25	0.50						
<<Min: 112.75 - 113.92 10% Min: Chalcopyrite>>												
113.92	119.43	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	113.92	114.92	1.00						
<<Min: 113.92 - 119.43 5% Min: Galena>>												
				114.92	115.92	1.00						
				115.92	116.92	1.00						
				116.92	117.92	1.00						
				117.92	118.92	1.00						
				118.92	119.43	0.51						
119.43	120.63	OC Chalcopyrite-pyrrhotite net textured sulphides	MG	119.43	120.00	0.57						
<<Min: 119.43 - 120.63 10% Min: Chalcopyrite>>												
				120.00	120.63	0.63						



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-246
From (m) **To (m)** **Rocktype & Description**

120.63 122.60 RHYcw Curdy textured-flow banded (flows, subvolcanics)

<<Min: 120.63 - 125.08 0.5% Min: Pyrite>>

<<Min: 120.63 - 125.08 1% Min: Calcite>>

<<Alt: 120.63 - 122.6 Strong (Alt) Muscovite>>

<<Alt: 120.63 - 124.91 Weak (Alt) Chlorite>>

<<Struc: 120.63 - 123.7 Moderate (Alt) Fault>> Moderate intensity faults filled with broken rock and gouge space cm apart.

122.60 129.00 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

<<Min: 125.08 - 129 1% Min: Sphalerite>>

<<Min: 125.08 - 129 0.5% Min: Pyrite>> BL. Partially replaced by PO.

<<Min: 125.08 - 129 1% Min: Pyrrhotite>> Partially replacing PY.

<<Min: 125.08 - 129 0.01% Min: Galena>>

<<Min: 125.08 - 129 10% Min: Calcite>>

<<Alt: 124.91 - 129 Moderate (Alt) Chlorite>>

<<Alt: 124.91 - 129 Weak (Alt) Biotite>>

<<Vein: 122.6 - 125.08 25% Quartz-Carbonate-Sulphide 65 deg. >> QZ-CA-PO-SP

End of Hole @ 129

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
120.63	121.63	1.00						
121.63	122.60	0.97						
122.60	123.60	1.00						
123.60	124.60	1.00						
124.60	125.60	1.00						

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-247

Prospect:	GP4F	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Murray Jones
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	05-Sep-15
UTM Easting	418952.703	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	14-Sep-15
UTM Northing:	6813685.432	Casing Pulled?:	No	Dip:	-85	Drill Company:	Geotech
UTM Elev. (m):	1476.501	Casing Depth (m):	2.3	Length (m):	414	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	03-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	13-Sep-15
Local Elev. (m):						Purpose:	Exploration
Comments:						Parent Hole:	

This hole intersected a series of altered quartz crystal tuffs, quartz crystal, lithic lapilli tuffs, and minor ash tuffs (335.8m-379.2m). This unit marked the onset of weak to moderate, pervasive, sericite alteration cut by zones (5-20cm) of moderate to locally strong chlorite alteration with fine grained disseminated chalcopyrite (locally up to 1%) and thin (<1cm) bands of sphalerite. Weak mineralization (sphalerite-chalcopyrite) and associated moderate chlorite alteration continued below the quartz crystal tuff (379.2-414.0m). Several quartz-chlorite veins (10-20cm) with trace chalcopyrite were intersected near the bottom of the hole. The hole terminated in biotite-quartz-chlorite, pelitic meta-sediment. Downhole EM did not indicate a significant conductor at the end of the hole.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-85	157.5	22.5	180	ReflexEVS	Geotech	03-Sep-15	5705	<input checked="" type="checkbox"/>	
48	-84.8	159.8	22.5	182.3	ReflexEVS	Geotech	05-Sep-15	5714	<input checked="" type="checkbox"/>	
75	-84.8	155.6	22.5	178.1	ReflexEVS	Geotech	05-Sep-15	5688	<input checked="" type="checkbox"/>	
99	-83.8	156.3	22.5	178.8	ReflexEVS	Geotech	06-Sep-15	5682	<input checked="" type="checkbox"/>	
126	-82.7	157.6	22.5	180.1	ReflexEVS	Geotech	06-Sep-15	5702	<input checked="" type="checkbox"/>	
150	-82.7	152.2	22.5	174.7	ReflexEVS	Geotech	07-Sep-15	5691	<input checked="" type="checkbox"/>	
175	-82.3	152.3	22.5	174.8	ReflexEVS	Geotech	06-Sep-15	5705	<input checked="" type="checkbox"/>	
204	-82.3	154.7	22.5	177.2	ReflexEVS	Geotech	08-Sep-15	5689	<input checked="" type="checkbox"/>	
228	-81.8	155.3	22.5	177.8	ReflexEVS	Geotech	08-Sep-15	5678	<input checked="" type="checkbox"/>	
253	-81.6	159.8	22.5	182.3	ReflexEVS	Geotech	09-Sep-15	5702	<input checked="" type="checkbox"/>	
294	-81.3	160.6	22.5	183.1	ReflexEVS	Geotech	10-Sep-15	5766	<input checked="" type="checkbox"/>	
321	-81	162	22.5	184.5	ReflexEVS	Geotech	10-Sep-15	5896	<input checked="" type="checkbox"/>	
346	-80.6	152.9	22.5	175.4	ReflexEVS	Geotech	11-Sep-15	5786	<input checked="" type="checkbox"/>	
384	-80.4	159.1	22.5	181.6	ReflexEVS	Geotech	11-Sep-15	5791	<input checked="" type="checkbox"/>	
399	-80.5	160.6	22.5	183.1	ReflexEVS	Geotech	11-Sep-15	5893	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-247

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0	2.32	Overburden.									
2.32	5.60	RHYcq Quartz porphyry									
2.32 - 5.6: abundant light coloured felsic lenses in MU-rich matrix/partings, probably QZ-FP domains, but also looks like QZ phenos, up to 5 mm diameter.flattened severely. Minor Banding with BI. Oxidized locally											
5.60	24.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
5.6 - 24: speckled unit, massive, homogeneous, BI pblasts t/o. CL-BI in groundmass,											
<<Min: 5.6 - 24 5% Min: Calcite>> pervasive to fracture and vein control											
<<Vein: 14.1 - 14.75 80% Quartz-Carbonate>> QZ-CB											
<<Struc: 18 - 25 Strong (Alt) Fault>> broken rock, poor recovery											
24.00	32.32	SED undifferentiated Sediment	black	FG							
24 - 32.32: Might be a RHY, quite silica-rich, textures in altered section at bottom look like flow bands, spherules, massive, homogeneous, tiny white specks t/o-leucoxene?, fol'd rock, hard groundmass with BI also BI speckles											
<<Min: 24 - 28.15 0.5% Min: Pyrite>>											
<<Min: 24 - 28.15 0.5% Min: Pyrrhotite>> along foln											
<<Min: 24 - 28.15 1% Min: Calcite>> minor lens											
<<Alt: 28.15 - 32.32 Strong (Alt) Silicification>> progressive up to dyke contact, bands near 28.15, QV lenses											
<<Alt: 28.15 - 32.32 Weak (Alt) Muscovite>>											
<<Struc: 26.1 - 26.11 Moderate (Alt) dominant foliation>>											
32.32	37.20	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	brown								
32.32 - 37.2: massive dyke, fg, well fol'd, CA-QZ vns common, planar gnerally i.e. not intensely fol'd. some early deformed QZ-CA vns											
<<Min: 32.32 - 37.2 3% Min: Calcite>> and in veins											
<<Alt: 32.32 - 37.2 Weak (Alt) Chlorite>> envelopes to veins											
<<Vein: 35.7 - 36.3 30% Quartz-Carbonate>> QZ-CB with CL envelopes											
37.20	42.56	RHYif feldspar and quartz porphyry intrusions	buff	VFG							
37.2 - 42.56: looks like glassy dyke, may extend above dyke i.e. SI'd SED above											
<<Alt: 37.2 - 42.6 Moderate (Alt) Silicification>>											
<<Alt: 37.2 - 42.6 Weak (Alt) Muscovite>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-247

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 37.2 - 42.6 Trace (Alt) Garnet>>											
<<Struc: 37.2 - 37.21 Moderate (Alt) Contact>>											
42.56	74.25	SED	undifferentiated Sediment	grey							
42.56 - 74.25: BI bands common, groundmass is QZ-rich, also locally QZ clasts(?) -overall this does not look like igneous rock but locally maybe tuff intervals,?, CL or AC locally, weakly calcareous?, no TO though, - quite broken section, faulted and numerous dykes t/o, faulting increases in lower half of interval, TO along fractures? Or MnOxide?, at upper contact, commonly contains tiny white specks -leucoxene-like?- conc'd in CL-rich dykelets (diamond shaped, beige colour, high relief, no fizz) possibly AK pblasts?											
<<Min: 42.56 - 51.5 3% Min: Calcite>> fracs, veins, envelopes to QV's											
<<Min: 42.56 - 68.18 0.5% Min: Pyrite>> scattered, locally weathered and exclusive of dykes											
<<Min: 51.5 - 68.18 0.01% Min: Pyrite>> blebs in rare QZ-CB veins, with CL locally											
<<Min: 51.5 - 71 1% Min: Calcite>> fracs mostly, small sections with 10%											
<<Min: 68.18 - 74.25 0.01% Min: Pyrite>>											
<<Min: 71 - 74.25 3% Min: Calcite>> contact margin of dyke											
<<Min: 72.35 - 73.3 0.5% Min: Ankerite>> AK?, doesn't fizz, rhomboid											
<<Alt: 42.6 - 74.25 Trace (Alt) Chlorite>> locally on fractures											
<<Alt: 73.68 - 74.25 Moderate (Alt) Muscovite>> bleaches rock, along with CA											
<<Struc: 42.9 - 46.25 Moderate (Alt) Fault>> attitude measured on gouge zone											
<<Struc: 51 - 63.8 Strong (Alt) Fault>> to 50, measured on slips, gouge contacts, very rough section, lots of crushed and oxidized rock, several small dykes within SED, tough ground, lost core											
74.25	82.96	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)	brown							
74.25 - 82.96: minor RHYcf entrained, also, CL-AC alt'd sed (lt to dark green), QZ-CA veins in fault one											
<<Min: 74.25 - 80.73 0.5% Min: Pyrite>> on dry fracs in dyke											
<<Min: 74.25 - 80.73 5% Min: Calcite>> fracs, veinlets, MAFi dyke											
<<Min: 80.73 - 101.06 0.01% Min: Pyrite>>											
<<Alt: 78.92 - 80.73 Weak (Alt) Muscovite>> related to QZ-TO veinlet											
<<Vein: 82.9 - 84.5 5% Quartz-Tourmaline 15 deg. >> QZ-CA, QZ-TO veining/altn											
<<Struc: 77.4 - 77.41 Moderate (Alt) Foliation>> banding											
82.96	100.22	RHYcf	Feldspar & feldspar quartz porphyry	grey							
82.96 - 100.22: variably deformed, strongly strained clasts/boudins of felsic material or phenos, local blue QE's, locally banding due to flow of more massive rhyolite, micaceous groundmass, BI and MU, banding common and locally strongly schistose, blue-grey colour locally due to MU around QZ and QZ-TO veinlets, weak bleaching and oxidation locally.											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-247

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<div><<Alt: 98.78 - 101.06 Moderate (Alt) Muscovite>> in groundmass, TO occurs around fractures locally</div> <div><<Alt: 98.78 - 101.06 Weak (Alt) Chlorite>> in groundmass and bands after BI</div> <div><<Struc: 83.9 - 83.91 Moderate (Alt) Vein>> QZ-TO veinlet, alt,n envelope about 5 cm wide, remains in core over about 1 m</div> <div><<Struc: 85.26 - 85.32 Strong (Alt) Vein>> QZ-CA, on fol'n, weakly deformed</div> <div><<Struc: 89.9 - 89.91 Strong (Alt) dominant foliation>></div> <div><div>100.22101.06RHYvx</div><div>Quartz and/or feldspar crystal</div><div>dark grey tuff</div></div> <div>100.22 - 101.06: bed? Characterized by blue QZ eyes.</div> <div><div>101.06105.40SED</div><div>undifferentiated Sediment</div><div>blackFG</div></div> <div>101.06 - 105.4: weakly laminated, black sediment, with BI bands common, wispy sx, CA in groundmass and veins, MAFi cuts, QZ-CA veins common, carbonaceous?</div> <div><<Min: 101.06 - 111.4 0.5% Min: Pyrite>> on fol'n, fractures</div> <div><<Min: 101.06 - 111.4 0.5% Min: Pyrrhotite>> as PY</div> <div><<Min: 101.06 - 111.4 5% Min: Calcite>> in sediment and dyke, more evenly distributed in dyke</div> <div><<Struc: 101.3 - 101.31 Moderate (Alt) Contact>></div> <div><<Struc: 105.3 - 114.3 Strong (Alt) Fault>> long section of broken core, gouge, particularly thick stretch of gouge from 11.5-114.3</div> <div><div>105.40114.30RHYi</div><div>Aphanitic Rhyolite (intrusion)</div><div>yellow</div></div> <div>105.4 - 114.3: strongly oxidized, fol'd dyke?, coincides with fault zone almost end to end. Small QZ eyes in groundmass (could be QZ grains in sed), generally massive, not laminated like sediment surrounding unit</div> <div><div>114.30118.60MDS</div><div>Carbonaceous Mudstone & Tuffaceous Mudstone</div><div>black</div></div> <div>114.3 - 118.6: AS above RHYi unit</div> <div><<Min: 114.3 - 118.6 0.5% Min: Pyrite>></div> <div><<Min: 114.3 - 133.6 0.01% Min: Calcite>></div> <div><div>118.60133.60MDSt</div><div>Rhyolite tuff dominant mudstone</div><div>grey</div></div> <div>118.6 - 133.6: banded siliceous/micaceous rock, originally Chert/sed?, siliceous, bx'd, muddy matrix, locally mudstone, minor MAFi, possible CI? And fibrous mineral? Alt'd?, granular tx, re-crystallized sed?, there are graphitic slips locally within the unit (graphitic section from 119 to 121 m).</div> <div><<Min: 118.6 - 133.6 0.5% Min: Pyrite>> and fractures</div>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-247

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %						
<<Struc: 122.6 - 122.61 Moderate (Alt) Contact>> dykelet, slightly oblique to fol'n																	
133.60	166.10	MDS	Carbonaceous dominant	dark grey	FG												
			mudstone														
133.6 - 166.1: dark massive MDS bands, commonly graphitic, with lighter coloured layers, silty originally?, locally siliceous with deformed QZ-rich bands, weakly turbiditic?																	
<<Min: 133.6 - 156.53 0.5% Min: Pyrite>> blebs																	
<<Min: 133.6 - 156.53 1% Min: Pyrrhotite>> especially in dark MDS sections, reduced?																	
<<Min: 133.6 - 156.53 10% Min: Calcite>> pervasive and in bands and veins																	
<<Min: 156.53 - 159.86 0.5% Min: Pyrite>> blebs and coatings																	
<<Min: 159.86 - 166.1 1% Min: Pyrrhotite>> along fol'n, conc'd in dark bands																	
<<Min: 159.86 - 166.1 5% Min: Calcite>> in veins, bands, pervasive																	
<<Alt: 138.1 - 138.7 Weak (Alt) Muscovite>> bleaches core, 142.5																	
<<Struc: 137.85 - 137.86 Weak (Alt) Shear>> .5 cm gouge																	
<<Struc: 142.5 - 142.51 Strong (Alt) dominant foliation>>																	
<<Struc: 150 - 150.9 Moderate (Alt) Fault>> gougy fault, carbonaceous, broken																	
166.10	170.30	RHYcq	Quartz porphyry														
166.1 - 170.3: almost equigranular non-foliated with no QZ eyes																	
<<Min: 166.1 - 170.3 0.01% Min: Pyrite>>																	
<<Alt: 166.1 - 168.5 Weak (Alt) Biotite>> from dykes?																	
170.30	175.08	MAFi	Mafic Intrusions (primarily	green-brown													
			footwall mafic intrusion)														
170.3 - 175.08: or calc-silicate skarn,																	
<<Min: 170.3 - 175.08 0.5% Min: Pyrite>>																	
<<Min: 170.3 - 175.08 0.01% Min: Calcite>>																	
175.08	177.80	RHYcq	Quartz porphyry	grey-green	FMG												
175.08 - 177.8: greenish groundmass due to alt'n? Alt'n increases to lower contact, no QE																	
<<Min: 175.08 - 185.5 0.5% Min: Pyrite>> and blebs, lenses,																	
<<Min: 175.08 - 189 0.01% Min: Calcite>>																	
<<Alt: 175.08 - 182.48 Weak (Alt) Chlorite>> in groundmass, after FP?																	
177.80	184.00	RHYcq	Quartz porphyry														
177.8 - 184: QE again visible																	

Project:
KZK
Hole Number:
K15-247

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 182.48 - 184 Moderate (Alt) Chlorite>> at contact with RHYcf <<Struc: 179.01 - 179.02 Weak (Alt) Vein>> QZ-CA-TO-PY veinlet, several, CL alt'n ssoc'd <<Struc: 180 - 180.1 Moderate (Alt) dominant foliation>>											
184.00	192.81	RHYcf Feldspar & feldspar quartz porphyry									
184 - 192.81: highly strained, phenos or boudins?, tiny diss'd white specks -leucoxene?, grey siliceous and micaceous groundmass, PY/PO as small wisps in groundmass <<Min: 184 - 187 0.5% Min: Pyrrhotite>> scattered wisps <<Min: 187 - 200 0.01% Min: Pyrite>> <<Min: 189 - 193 3% Min: Calcite>> <<Alt: 192.8 - 225.5 Moderate (Alt) Biotite>> <<Vein: 190.2 - 190.55 90% Quartz 18 deg. >> 5 cm wide QZ vn with CL in fractures, TO selvage <<Struc: 189 - 189.1 Moderate (Alt) dominant foliation>>											
192.81	206.30	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
192.81 - 206.3: distinctive unit ranges from drk brn-gry to medium gry-brn weakly fol equigranular moderately foliatd with prominent drk brown 2-4cm BI rich schlieran that resemble BI-rich dykes, locally 1-2mm diffuse FD phenos, could be intermed-felsic <<Min: 193 - 225.5 3% Min: Calcite>> <<Min: 200 - 225.5 0.01% Min: Pyrite>>											
206.30	208.60	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
208.60	225.55	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
208.6 - 225.55: same as 192-206 <<Min: 225.5 - 241 5% Min: Calcite>> <<Min: 225.5 - 251 3% Min: Pyrite>> <<Alt: 225.5 - 229.6 Moderate (Alt) Muscovite>> green sericite associated with SI-CA-PY vein <<Vein: 225.5 - 261 5% Quartz-Carbonate 25 deg. >> sparse 1-5mm discordand stringers of QZ-CA+/-PY with associated MS alter 20-30 to CA <<Struc: 211 - 211.1 Moderate (Alt) dominant foliation>>											
225.55	234.50	RHYcf Feldspar & feldspar quartz porphyry									

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-247

From (m)		To (m)		Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %	
<<Struc: 228 - 228.1 Moderate (Alt) dominant foliation>>															
234.50	236.40	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)												
234.5 - 236.4: BIAC schist															
236.40	251.00	RHYcf	Feldspar & feldspar quartz porphyry												
<<Min: 241 - 261 3% Min: Calcite>>															
<<Alt: 241 - 258 Weak-Moderate (Alt) Muscovite>> green sericite associated with SI-CA-PY vein															
<<Struc: 243 - 243.1 Moderate (Alt) dominant foliation>>															
251.00	254.70	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)												
254.70	265.80	RHYcf	Feldspar & feldspar quartz porphyry												
<<Min: 254.7 - 261 3% Min: Pyrite>> patchy and late veins and fractures															
<<Struc: 258 - 258.1 Moderate (Alt) dominant foliation>>															
<<Struc: 263 - 263.1 Moderate (Alt) dominant foliation>>															
265.80	267.00	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)										green-brown		
265.8 - 267: Green-brown, well foliated, biotite-chlorite-carbonate schist. Sharp upper and lower contacts. Logged by Gilles Dessureau															
<<Min: 265.8 - 267 5% Min: Calcite>>															
267.00	279.10	RHYvl	Lapilli tuff	grey		FG									
267 - 279.1: Grey, well foliated, fine grained, quartz-muscovite schist/ash tuff to fine crystal lapilli tuff. Trace pyrite. Abundant small (<1mm) euhedral white, wedge shaped porphyroblasts?)															
<<Alt: 279 - 286 Moderate (Alt) Muscovite>> muscovite (clay) alteration associatd with fault zone.															
<<Struc: 270 - 270.1 Moderate (Alt) dominant foliation>>															
279.10	286.00	RHYvl	Lapilli tuff	grey-green		FMG									
279.1 - 286: Light grey to greenish grey, faulted, quartz-muscovite schist/fine to medium grained lapilli ash tuff. Well developed fault gouge within broken core. Alteration is pervasive sericite alteration associated with the fault zone.															
<<Struc: 279.1 - 286 Strong (Alt) Fault>> well developed fault with abundant fault gouge. Lower contact of fault is parallel to foliation @70o ca. This fault also includes several high angle fractures (@15o ca.).															

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-247

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
286.00	297.00	RHYva Coarse grained to ash tuff grey FMG									
286 - 297: Light grey, fine to medium grained, well foliated quartz-muscovite schist/rhyolite ash tuff to lapilli ash tuff. Weakly altered with pervasive sericite-pyrite alteration with locally up to 5% pyrite in narrow bands (5-10cms).											
<<Min: 289 - 297 2% Min: Pyrite>> patchy and late vein pyrite											
<<Alt: 286 - 297 Weak (Alt) Muscovite>> weak pervasive muscovite pyrite alteration.											
<<Vein: 292 - 293 90% Pyrite 50 deg. >> narrow pyrite veinlets.											
297.00	300.00	MAFi Mafic Intrusions (primarily green-brown FG footwall mafic intrusion)	298.50	299.50	1.00	B00269083	0.6	-0.005	-0.01	-0.01	0.02
297 - 300: Brown to green, fine grained, well foliated, biotite-chlorite-carbonate schist/mafic dyke.											
<<Min: 297 - 300.9 5% Min: Calcite>>											
<<Alt: 299 - 302.5 Weak (Alt) Chlorite>> weak pachy chlorite alteration											
300.00	310.30	RHYvl Lapilli tuff light grey FMG	299.50	300.00	0.50	B00269084	0.5	-0.005	-0.01	-0.01	0.02
300 - 310.3: Light grey, medium grained, well foliated, quartz-muscovite schist/lapilli tuff. Weak to moderate, pervasive, sericite (muscovite), pyrite alteration (locally up to 0.5% very fine. Cut by large quartz vein (301.8-302.4m).											
<<Min: 300.75 - 301 10% Min: Pyrrhotite>> two narrow (1-2cm) pyrrhotite veins											
<<Alt: 300.9 - 310.3 Weak (Alt) Muscovite>> weak pervasive muscovite pyrite alteration.											
<<Vein: 300.75 - 301 10% Pyrrhotite 45 deg. >> two narrow pyrrhotite veins.											
<<Vein: 301.8 - 302.4 95% Quartz 50 deg. >> massive quartz vein											
<<Struc: 300 - 300.1 Moderate (Alt) dominant foliation>>											
<<Struc: 303 - 303.1 Moderate (Alt) dominant foliation>>											
<<Struc: 305.8 - 305.9 Moderate-Strong (Alt) dominant foliation>>											
310.30	313.70	MAFi Mafic Intrusions (primarily grey-green FG footwall mafic intrusion)	300.00	300.90	0.90	B00269085	0.6	0.005	-0.01	-0.01	0.02
310.3 - 313.7: Dark grey and dark green, fine grained, well foliated biotite-actinolite-chlorite- carbonate schist/mafic intrusion. Cut by abundant carbonate veinlets. Trace to locally 0.5% fine wispy pyrrhotite.											
<<Min: 310.3 - 313.7 5% Min: Calcite>> carbonate veins in mafic intrusion.											
<<Vein: 310.3 - 313.7 10% Quartz-Carbonate 70 deg. >> quartz carbonate veins											
<<Vein: 310.3 - 313.7 5% Calcite 75 deg. >> carbonate veins											
313.70	326.60	RHYvl Lapilli tuff grey FMG									
313.7 - 326.6: Light grey to light greenish grey, well foliated medium grained, quartz-muscovite schist/rhyolite lapilli tuff. 323.0-326.6m increased pyrite locally up to 5% in narrow 5-10cm bands.											
<<Alt: 313.7 - 326.6 Weak (Alt) Muscovite>> weak, pervasive sericite alteration.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-247

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 321 - 321.1 Moderate-Strong (Alt) dominant foliation>>											
<<Struc: 326.2 - 326.6 Moderate-Strong (Alt) Fault>> fault gouge at contact of mafic dike.											
326.60	329.55	MAFi Mafic Intrusions (primarily grey-green FG footwall mafic intrusion)									
326.6 - 329.55: Dark grey and dark green, fine grained, well foliated biotite-actinolite-chlorite-carbonate schist/mafic intrusion. Cut by abundant carbonate veinlets. Trace to locally 0.5% fine wispy pyrrhotite.											
<<Min: 326.6 - 329.55 5% Min: Calcite>>											
<<Vein: 326.6 - 329.55 10% Quartz-Carbonate 70 deg. >> quartz carbnte veins											
329.55	334.00	RHYvi Lapilli tuff grey-green FMG									
329.55 - 334: Light to medium greenish grey, well foliated, fine to medium grained, quartz-muscovite (chlorite) schist/alterd rhyolite lapilli tuff. Alteration is weak pervasive sericite-chlorite alteration.											
<<Alt: 329.55 - 335.8 Weak (Alt) Muscovite>> weak, pervsive sericite alteration.											
<<Struc: 330 - 330.1 Strong (Alt) dominant foliation>>											
<<Struc: 333 - 333.1 Strong (Alt) dominant foliation>>											
334.00	335.80	RHYv Rhyolite volcanoclastic light grey FG									
334 - 335.8: Light grey, well foliated, fine grained, quartz biotite schist/rhyolite ash tuff or epiclastic sediment. Gradational upper contact with rhyolite lapilli tuff. Quartz vein and possible fault contact at the lower contact.											
335.80	342.20	RHYvx Quartz and/or feldspar crystal grey-green FMG tuff									
335.8 - 342.2: Green-grey, well foliated, altered, medium grained, quartz-muscovite-chlorite schist/quartz crystal, lapilli tuff or quartz porphyry. Abundant 0.5-1cm blue quartz crystals and occasional 1cm feldspar crystals and/or siliceous lapilli in a fine grained chlorite-muscovite altered matrix. Alteration is weak to moderate, pervasive chlorite-sericite alteration. Cut by abundant quartz veins at upper contact.											
<<Alt: 335.8 - 342.2 Weak-Moderate (Alt) Muscovite>> weak to moderate, pervasive, sericite alteration											
<<Alt: 335.8 - 342.2 Weak-Moderate (Alt) Chlorite>> weak to moderate, pervasive, chlorite alteration											
<<Vein: 335.8 - 336 95% Quartz 75 deg. >> quartz-chlorite vein											
<<Vein: 336.8 - 337.3 90% Quartz 70 deg. >> quartz-chlorite vein											
<<Struc: 335.8 - 336 Intense (Alt) Vein>> quartz vein											
<<Struc: 336.8 - 337.3 Intense (Alt) Vein>> quartz vein											
<<Struc: 339.5 - 339.6 Intense (Alt) dominant foliation>>											
<<Struc: 342 - 342.1 Intense (Alt) dominant foliation>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-247

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
342.20	343.80	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	grey-brown	FG							
342.2 - 343.8: Grey-brown, well foliated, fine grained, biotite-actinolite-carbonate schist/mafic dyke.											
<<Min: 342.2 - 343.8 5% Min: Calcite>>											
<<Vein: 342.2 - 343.8 5% Quartz-Carbonate 70 deg. >> quartz carbamate veins											
343.80	348.60	RHYvi Lapilli tuff	grey-green	MCG							
343.8 - 348.6: Medium grey to greenish-grey, well foliated, medium to coarse grained, quartz-feldspar-muscovite schist/quartz-feldspar crystal, lapilli tuff. Abundant 1cm elongated siliceous lapilli with occasional <0.5cm quartz (weakly bluish) crystals in an altered matrix. Alteration is weak to moderate sericite-chlorite alteration. No visible mineralization but increasing alteration down hole.											
<<Alt: 343.85 - 355.3 Weak (Alt) Muscovite>> weak, pervasive sericite alteration											
<<Alt: 343.85 - 355.3 Weak (Alt) Chlorite>> weak, pervasive chlorite alteration											
<<Vein: 345.8 - 346 95% Quartz 65 deg. >> quartz vein											
<<Struc: 345 - 345.1 Intense (Alt) dominant foliation>>											
348.60	355.53	RHYvx Quartz and/or feldspar crystal tuff	grey-green	FMG	352.40	353.40	1.00	B00269086	0.5	0.007	-0.01 -0.01 0.02
348.6 - 355.53: Medium grey to greenish-grey, well foliated, medium grained, moderately altered, quartz-muscovite schist/rhyolite lapilli, quartz crystal tuff. Alteration is weak to moderate, pervasive sericite and chlorite alteration. Alteration is increasing down hole. This unit is cut by several small fault zones and is commonly broken core with minor gouge.											
<<Alt: 355.3 - 360.15 Moderate (Alt) Muscovite>> weak to moderate pervasive sericite alteration											
<<Alt: 355.3 - 360.15 Strong (Alt) Chlorite>> patchy stringers of strong to intense chlorite alteration.											
<<Struc: 348.6 - 348.8 Moderate-Strong (Alt) Fault>> very broken rock in fault zone.											
<<Struc: 350.3 - 350.7 Intense (Alt) Fault>> well developed fault gouge											
<<Struc: 351.3 - 351.6 Strong (Alt) Fault>>											
<<Struc: 352.2 - 352.4 Strong (Alt) Fault>>											
355.53	360.15	RHYvx Quartz and/or feldspar crystal tuff	grey-green	FMG	355.53	356.53	1.00	B00269089	1.7	0.01	0.09 -0.01 0.18
355.53 - 360.15: Greenish grey, well foliated, moderately to strongly altered, fine to medium grained, quartz-muscovite schist/quartz crystal tuff. Alteration is patchy stringer zones (up to 20cm) of intense chlorite alteration in a pervasive, moderate, chlorite-sericite alteration. Mineralization is trace to locally 1% fine grained chalcopyrite associated with the intense chlorite altered stringers.											
<<Min: 355.53 - 360.15 0.5% Min: Chalcopyrite>> fine chalcopyrite associated with intense chlorite alteration.											
<<Struc: 355.53 - 355.85 Moderate-Strong (Alt) Vein>> quartz-chlorite-chalcopyrite vein.											
<<Struc: 359 - 359.4 Moderate-Strong (Alt) Fault>>											



From (m) To (m) Rocktype & Description

360.15 361.00 RHYvx Quartz and/or feldspar crystal grey-green FMG tuff

360.15 - 361: Grey, strongly altered, strongly faulted, fault zone in quartz-muscovite schist/quartz crystal tuff.

<<Alt: 360.15 - 361 Moderate-Strong (Alt) Muscovite>> moderate to strong sericite alteration

<<Struc: 360.15 - 361 Strong (Alt) Fault>>

361.00 367.00 RHYvx Quartz and/or feldspar crystal grey-green FMG tuff

361 - 367: Light to dark greenish-grey, well foliated, moderately to strongly altered, fine to medium grained, quartz-muscovite-chlorite schist/quartz crystal lapilli tuff. Alteration is patchy stringer zones (up to 20cm) of intense chlorite alteration in a pervasive, moderate, chlorite-sericite alteration. Mineralization is trace to locally 1% fine grained chalcopryite associated with the intense chlorite altered stringers. Chl-cpy stringer at 362.2-362.4m with up to 1% cpy.

<<Min: 361 - 367 0.25% Min: Sphalerite>> fine sphalerite veinlets associated with intense chlorite alteration.

<<Min: 361 - 367 0.5% Min: Chalcopryite>> fine chalcopryite associated with intense chlorite alteration.

<<Alt: 361 - 367.85 Moderate (Alt) Muscovite>> weak to moderate pervasive sericite alteration

<<Alt: 361 - 367.85 Intense (Alt) Chlorite>> patchy stringers of chlorite alteration

<<Vein: 361.4 - 361.5 95% Quartz 75 deg. >> quartz vein

<<Struc: 361.4 - 361.5 Strong (Alt) Vein>> quartz vein

367.00 368.35 RHYI Aphanitic Rhyolite (intrusion) cream FG

367 - 368.35: Light grey to greenish grey, massive to weakly foliated, fine grained, moderately silicified, rhyolite dyke. Cut by 1cm wide quartz vein with silicification.

<<Alt: 367.85 - 368.35 Weak-Moderate (Alt) Silicification>> silicification associated with quartz vein

368.35 373.10 RHYvx Quartz and/or feldspar crystal grey-green FMG tuff

368.35 - 373.1: Grey to green, moderately to strongly foliated, fine grained, moderately to strongly altered, quartz-muscovite-chlorite schist/quartz crystal tuff. Alteration is moderate to strong chlorite stringer alteration in a pervasive sericite and weak chlorite alteration. Mineralization is trace to 0.5%, finely disseminated chalcopryite associated with the chlorite stringers with a few narrow zones (<0.5cm) of sphalerite (and trace galena).

<<Min: 368.35 - 373 0.25% Min: Sphalerite>> fine sphalerite veinlets associated with intense chlorite alteration.

<<Min: 368.35 - 373 0.5% Min: Chalcopryite>> fine chalcopryite associated with intense chlorite alteration.

<<Alt: 368.35 - 373.1 Moderate (Alt) Muscovite>> moderate pervasive sericite alteration

<<Alt: 368.35 - 373.1 Intense (Alt) Chlorite>> patchy chlorite alteration associated with stringers

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
359.53	360.15	0.62	B00269094	-0.3	-0.005	-0.01	-0.01	0.01
360.15	361.00	0.85	B00269095	-0.3	-0.005	-0.01	-0.01	0.05

361.00	362.00	1.00	B00269096	1.2	0.113	0.04	-0.01	0.64
--------	--------	------	-----------	-----	-------	------	-------	------

362.00	363.00	1.00	B00269097	3.5	0.027	0.27	-0.01	0.23
363.00	364.00	1.00	B00269098	-0.3	-0.005	-0.01	-0.01	0.01
364.00	365.00	1.00	B00269099	-0.3	0.006	-0.01	-0.01	0.01
365.00	366.00	1.00	B00269101	-0.3	-0.005	-0.01	-0.01	-0.01
366.00	367.00	1.00	B00269102	-0.3	-0.005	-0.01	-0.01	-0.01

367.00	367.85	0.85	B00269103	-0.3	-0.005	0.02	-0.01	-0.01
--------	--------	------	-----------	------	--------	------	-------	-------

367.85	368.35	0.50	B00269104	-0.3	-0.005	0.01	-0.01	-0.01
368.35	369.35	1.00	B00269105	-0.3	-0.005	-0.01	-0.01	0.03

369.35	370.35	1.00	B00269106	-0.3	-0.005	0.02	-0.01	0.12
370.35	371.35	1.00	B00269107	0.3	-0.005	0.03	-0.01	0.21
371.35	372.35	1.00	B00269108	1.2	0.007	0.06	-0.01	0.38
372.35	373.10	0.75	B00269109	-0.3	-0.005	-0.01	-0.01	0.07



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-247

From (m) To (m) Rocktype & Description

373.10 375.10 RHYvx Quartz and/or feldspar crystal grey-green FMG
tuff

373.1 - 375.1: Light grey, strongly foliated, strongly altered, fault zone in quartz crystal tuff.

<<Min: 374.8 - 379.2 0.25% Min: Chalcopryite>> fine chalcopryite associated with intense chlorite alteration.

<<Alt: 373.1 - 374.8 Moderate-Strong (Alt) Muscovite>> moderate to strong, pervasive, sericite alteration.

<<Alt: 373.1 - 374.8 Moderate (Alt) Chlorite>> patchy chlorite alteration associated with stringers

<<Alt: 374.8 - 379.2 Moderate (Alt) Muscovite>> moderate to strong, pervasive, sericite alteration.

<<Alt: 374.8 - 379.2 Strong (Alt) Chlorite>> patchy chlorite alteration associated with stringers

<<Struc: 373.1 - 374.8 Intense (Alt) Fault>> fault zone - core angle varies from 70o at upper contact to 10o at lower contact

375.10 379.20 RHYvx Quartz and/or feldspar crystal grey-green FMG
tuff

375.1 - 379.2: Light grey, well foliated, fine grained, weakly to moderately altered, quartz muscovite schist/ quartz crystal tuff. Alteration is weak to moderate pervasive sericite alteration with narrow zones of moderate to intense chlorite alteration (stringers). Mineralization is trace chalcopryite (+ sphalerite) associated with chlorite alteration.

379.20 380.60 RHYva Coarse grained to ash tuff grey-green FG

379.2 - 380.6: Light grey, well foliated, fine grained, quartz-muscovite-biotite schist/rhyolitic ash tuff. Quartz eyes have disappeared. Alteration is weak to moderate pervasive sericite (muscovite) alteration.

<<Min: 379.2 - 388.8 0.5% Min: Pyrite>> scattered in stringers

<<Min: 379.2 - 388.8 0.5% Min: Chalcopryite>> in stringers with PY

<<Alt: 379.2 - 380.6 Moderate (Alt) Muscovite>> moderate sericite alteration

380.60 381.80 MAFi Mafic Intrusions (primarily grey-brown FG
footwall mafic intrusion)

380.6 - 381.8: Grey-brown, well foliated, fine grained, biotite-carbonate schist/mafic dyke. Quartz vein at 381.2-381.4m.

<<Vein: 381.3 - 381.5 95% Quartz 75 deg. >> quartz vein

<<Struc: 381.3 - 381.5 Intense (Alt) Vein>> quartz vein

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
373.10	374.10	1.00	B00269111	1.1	-0.005	0.04	-0.01	0.22

374.10	375.10	1.00	B00269112	0.4	-0.005	0.02	-0.01	0.02
--------	--------	------	-----------	-----	--------	------	-------	------

375.10	376.10	1.00	B00269113	-0.3	-0.005	-0.01	-0.01	0.03
--------	--------	------	-----------	------	--------	-------	-------	------

376.10	377.10	1.00	B00269114	1.2	0.013	0.12	-0.01	0.24
377.10	378.10	1.00	B00269115	-0.3	-0.005	0.02	-0.01	0.19
378.10	379.20	1.10	B00269116	1.1	-0.005	0.02	-0.01	0.19
379.20	380.60	1.40	B00269117	-0.3	-0.005	0.02	-0.01	0.06

380.60	381.80	1.20	B00269118	-0.3	-0.005	-0.01	-0.01	0.02
--------	--------	------	-----------	------	--------	-------	-------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-247

From (m) To (m) Rocktype & Description

381.80 404.40 RHYva Coarse grained to ash tuff grey FG

381.8 - 404.4: Light grey, well foliated, fine grained, quartz-muscovite-biotite schist/rhyolite ash tuff. Alteration is weak to moderate pervasive sericite alteration, with narrow (5-10cm) zones of moderate to intense chlorite alteration associated with stringer zones.

<<Min: 390.8 - 394.7 3% Min: Pyrite>> along fol'n

<<Min: 392.5 - 394.7 0.5% Min: Sphalerite>> fine sphalerite veinlets associated with intense chlorite alteration.

<<Min: 397.35 - 398.65 0.25% Min: Chalcopryrite>> fine chalcopryrite associated with quartz vein

<<Alt: 381.8 - 392.5 Moderate (Alt) Chlorite>> patchy chlorite alteration associated with stringers

<<Alt: 381.8 - 408 Moderate (Alt) Muscovite>> moderate sericite alteration

<<Alt: 392.5 - 394.7 Intense (Alt) Chlorite>> intense CL alt'n

<<Alt: 402 - 408 Moderate (Alt) Chlorite>> bands of CL-BI alteration

<<Vein: 385.7 - 385.9 95% Quartz 45 deg. >> quartz vein

<<Vein: 397.35 - 397.45 95% Quartz-Chalcopryrite 75 deg. >> quartz vein with tr cpy

<<Vein: 398.5 - 398.65 95% Quartz-Chalcopryrite 60 deg. >> quartz vein with tr cpy

<<Vein: 402.3 - 402.6 95% Quartz-Chalcopryrite 80 deg. >> quartz vein with tr cpy

<<Vein: 403 - 403.15 95% Quartz-Chalcopryrite 80 deg. >> quartz vein with tr cpy

<<Vein: 404.1 - 404.2 95% Quartz-Chalcopryrite 80 deg. >> quartz vein with tr cpy

<<Vein: 404.1 - 404.3 95% Quartz-Chalcopryrite 80 deg. >> quartz vein with tr cpy

<<Struc: 385.7 - 385.9 Intense (Alt) Vein>> quartz vein with trace spalerite

404.40 407.20 MAFt Mafic Volcaniclastics green-brown FG

404.4 - 407.2: Dark green, weakly foliated, fine grained, chlorite-biotite schist/basalt flow or basalt tuff? Chlorite rich matrix with small porphyroblastic biotite and/or actinolite crystals. The chlorite doesn't look like alteration in this rock it looks like a metamorphosed mafic rock (i.e. basalt).

<<Min: 405 - 408 0.5% Min: Chalcopryrite>> finely disseminated chalcopryrite, also in stringers with PO-PY

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
381.80	382.80	1.00	B00269119	-0.3	-0.005	-0.01	-0.01	0.03

382.80	383.80	1.00	B00269121	-0.3	-0.005	-0.01	-0.01	0.03
383.80	384.80	1.00	B00269122	0.4	-0.005	0.01	-0.01	0.14
384.80	385.80	1.00	B00269123	0.3	-0.005	0.02	0.01	0.21
385.80	386.80	1.00	B00269124	5.6	-0.005	-0.01	0.08	1.67
386.80	387.80	1.00	B00269125	0.6	-0.005	0.01	-0.01	0.1
387.80	388.80	1.00	B00269126	-0.3	-0.005	-0.01	-0.01	0.04
388.80	389.80	1.00	B00269127	-0.3	-0.005	-0.01	-0.01	0.04
389.80	390.80	1.00	B00269128	1.9	-0.005	0.02	0.02	0.03
390.80	391.80	1.00	B00269129	1.3	0.006	0.07	-0.01	0.49
391.80	392.80	1.00	B00269131	-0.3	-0.005	0.01	-0.01	0.22
392.80	393.80	1.00	B00269132	1.3	-0.005	0.03	0.01	0.67
393.80	394.80	1.00	B00269133	0.5	-0.005	-0.01	-0.01	0.05
394.80	395.80	1.00	B00269134	-0.3	-0.005	-0.01	-0.01	0.03
395.80	396.80	1.00	B00269135	-0.3	-0.005	-0.01	-0.01	0.05
396.80	397.80	1.00	B00269136	0.6	-0.005	0.01	-0.01	0.14
397.80	399.00	1.20	B00269137	-0.3	-0.005	0.01	-0.01	0.12
399.00	400.00	1.00	B00269138	-0.3	-0.005	0.02	-0.01	0.08
400.00	401.00	1.00	B00269139	-0.3	-0.005	0.01	-0.01	0.06
401.00	402.00	1.00	B00269141	0.7	-0.005	-0.01	-0.01	0.05
402.00	403.90	1.90	B00269142	0.6	-0.005	0.02	-0.01	0.04
403.90	404.40	0.50	B00269143	1.8	-0.005	0.05	-0.01	0.06
404.40	405.40	1.00	B00269144	2.2	-0.005	0.05	0.01	0.11

405.40	406.40	1.00	B00269145	1.5	-0.005	0.03	0.01	0.16
406.40	407.20	0.80	B00269146	3.8	0.006	-0.01	0.02	0.1



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-247

From (m) To (m) Rocktype & Description

407.20 414.00 SED undifferentiated Sediment green-brown FG

407.2 - 414: Dark grey to brown, well foliated, fine grained biotite-quartz-chlorite schist/meta-pelite. This pelitic metasediment is interbedded with several small bands of siliceous siltstone. This unit is cut by several large 10-20cm quartz veins.

<<Min: 413.8 - 414 0.25% Min: Galena>> fine silver mineral within quartz vein (galena?)

<<Alt: 408 - 414 Strong (Alt) Chlorite>> CL-BI SCHS, pervasive alteration, siliceous bands

<<Vein: 413.4 - 413.7 90% Quartz 75 deg. >> quartz vein

<<Vein: 413.8 - 414 90% Quartz 75 deg. >> quartz vein with trace fine silver mineralization (galena?)

End of Hole @ 414

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
407.20	408.20	1.00	B00269147	1.9	0.005	0.09	-0.01	0.04

408.20	409.20	1.00	B00269148	-0.3	-0.005	-0.01	-0.01	0.02
409.20	410.20	1.00	B00269149	1.8	0.007	0.1	-0.01	0.03
410.20	411.20	1.00	B00269151	-0.3	-0.005	-0.01	-0.01	0.02
411.20	412.20	1.00	B00269152	-0.3	-0.005	-0.01	-0.01	0.02
412.20	413.20	1.00	B00269153	-0.3	-0.005	-0.01	-0.01	-0.01
413.20	414.00	0.80	B00269154	-0.3	-0.005	-0.01	-0.01	-0.01

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-248

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Cooper Campbell
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	05-Sep-15
UTM Easting	415203.339	Core Size:	HQ3	Azimuth:	0.53	Date Logging Complete:	12-Sep-15
UTM Northing:	6815282.948	Casing Pulled?:	Yes	Dip:	-75	Drill Company:	Geotech
UTM Elev. (m):	1424.375	Casing Depth (m):	18	Length (m):	278.5	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	04-Sep-15
Local Northing:		Cemented?:	VWP	Core Storage Loc.:	KZK Camp	Drill Completed:	10-Sep-15
Local Elev. (m):						Purpose:	Resource/Hydro
Comments:						Parent Hole:	

Drill hole DDH K15-248 was drilled to test possible mineralization in a down-dropped fault block to the southeast of the main deposit. From top to bottom, the hole intersects carbonaceous sediments and tuffs, coarse crystal lithic tuff and felsic tuff. Broken rock and fault gouge sections are common above 156.88m. A strongly disseminated and semi-massive sulphide horizon occurs at the base of the tuff near the contact with the underlying mafic tuff and may correlate with the ore horizon. Three intervals of glassy rhyolite intrude the sequence. The bottom of the hole is composed of felsic tuff and ash, cut by a fault zone marked with strong muscovite alteration and intense brecciation and fault gouge.

20-130m: carbonaceous mudstone/tuff sequence (MDSc and MDSt)
Includes 93-117: Glassy rhyolite dyke (RHYi)

130-134m: mafic dyke or tuff (MAFi).

134-199m: coarse xtal lithic tuff (or fspar porphyry) (RHYif), with local bands of heavy sulphide disseminations, also includes a few mafic intervals (1 to 3m thick).

199-204.7m: glassy rhyolite dyke (RHYi).

204.7-207.5m: Felsic tuff (RHY), loc w bands of heavy sulphide disseminations, including a 25 cm semi-massive band of po-py, possibly a weak expression of the main sulphide horizon.

207.5 - 224m: mafic tuff.

Includes 211.5-217: glassy rhyolite dyke, strongly veined and silicified with silicified selvages. Qtz-po-py-tourm veins.

224m to 278.5m (eoh): felsic lapilli and ash tuff (RHYvl, RHYva and RHY) w 1-4% diss py-po. Short sections of fault gouge are present every 2 to 3m.

Includes 244 to 266.5m: Fault zone marked by intense brecciation, fault gouge, strong sericite and diss pyrite(quartz) (overprint?) alteration.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-75	0.53	0	0.53	APS	Cooper Campbell	08-Sep-15		<input checked="" type="checkbox"/>	
42	-77.3	351.6	22.5	14.1	ReflexEVS	Geotech	05-Sep-15	5746	<input checked="" type="checkbox"/>	
69	-77.8	350.7	22.5	13.2	ReflexEVS	Geotech	06-Sep-15	5750	<input checked="" type="checkbox"/>	
93	-79.2	347.6	22.5	10.1	ReflexEVS	Geotech	06-Sep-15	5772	<input checked="" type="checkbox"/>	
117	-79.3	347.3	22.5	9.8	ReflexEVS	Geotech	07-Sep-15	5744	<input checked="" type="checkbox"/>	
141	-79.9	347.3	22.5	9.8	ReflexEVS	Geotech	07-Sep-15	5234	<input checked="" type="checkbox"/>	
165	-81.2	347.1	22.5	9.6	ReflexEVS	Geotech	08-Sep-15	5754	<input checked="" type="checkbox"/>	



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-248

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
195	-81.5	349.8	22.5	12.3	ReflexEVS	Geotech	08-Sep-15	5769	<input checked="" type="checkbox"/>	
219	-82.6	348.2	22.5	10.7	ReflexEVS	Geotech	08-Sep-15	5758	<input checked="" type="checkbox"/>	
246	-84	347.5	22.5	10	ReflexEVS	Geotech	09-Sep-15	5763	<input checked="" type="checkbox"/>	
278.5	-85.6	355.6	22.5	18.1	ReflexEVS	Geotech	08-Sep-15	5751	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	21.00	OVBN Overburden									
21.00	25.00	MDU carbonaceous mudstone upper sequence									
<<Min: 21 - 38.92 15% Min: Calcite>>											
<<Min: 21 - 49.7 0.01% Min: Pyrite>>											
<<Min: 21 - 49.7 2% Min: Pyrrhotite>> WIS/VN											
<<Alt: 21 - 49.7 Moderate (Alt) Muscovite>>											
<<Alt: 21.43 - 211.58 Weak (Alt) Chlorite>>											
<<Vein: 21.88 - 48 15% Quartz-Chlorite 50 deg. >> QZ-CA-CL-PO-PY											
<<Struc: 21 - 54.3 Strong (Alt) Fault>> Zone with abundant foliation parallel fractures and faults filled with broken rock and gouge. Strong gouge zones up to 50 cm. Faults spaced cm apart.											
25.00	30.38	MDU carbonaceous mudstone upper sequence									
30.38	49.70	MDU carbonaceous mudstone upper sequence									
30.38 - 49.7: Narrow zone of MDSw. Too small for scale of section.											
<<Min: 38.92 - 52.16 1% Min: Calcite>>											
49.70	93.26	RHYvl Lapilli tuff									
49.7 - 93.26: #####											
<<Min: 49.7 - 73.4 0.01% Min: Sphalerite>>											
<<Min: 49.7 - 73.4 0.01% Min: Pyrite>> VN											
<<Min: 49.7 - 73.4 0.5% Min: Pyrrhotite>> VN											
<<Min: 49.7 - 73.4 0.01% Min: Chalcopryite>>											
<<Min: 52.16 - 73.65 5% Min: Calcite>>											
<<Min: 73.4 - 93.26 0.01% Min: Pyrite>> VN											
<<Min: 73.4 - 93.26 0.01% Min: Pyrrhotite>> VN											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-248

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 73.65 - 93.65 10% Min: Calcite>> <<Alt: 49.7 - 54 Strong (Alt) Muscovite>> <<Alt: 49.7 - 58.23 Trace (Alt) Chlorite>> <<Alt: 54 - 73.65 Moderate (Alt) Muscovite>> <<Alt: 58.23 - 89.36 Weak (Alt) Chlorite>> <<Alt: 73.65 - 89.36 Weak (Alt) Muscovite>> <<Alt: 89.36 - 93.26 Moderate (Alt) Muscovite>> <<Alt: 92.18 - 93.26 Moderate (Alt) Silicification>> <<Vein: 49.7 - 52.72 75% Quartz-Carbonate-Sulphide 50 deg. >> QZ-CA-CL-PO-PY-CP <<Vein: 70.36 - 70.82 20% Quartz-Carbonate-Sulphide 50 deg. >> QZ-CA-PY-CL-SP <<Vein: 73.65 - 180.17 15% Quartz-Tourmaline-Sulphide 50 deg. >> QZ-TO-CA-PY <<Vein: 92.88 - 93.41 25% Quartz-Chlorite-Carbonate 60 deg. >> QZ-CL-CA-PY 93.26 116.81 RHYi Aphanitic Rhyolite (intrusion) <<Min: 93.26 - 118.98 0.01% Min: Pyrite>> FD <<Min: 93.26 - 118.98 0.01% Min: Pyrrhotite>> FD, VN, FRA <<Min: 93.65 - 116.81 3% Min: Calcite>> <<Alt: 93.26 - 116.81 Trace (Alt) Muscovite>> <<Alt: 93.26 - 118.98 Strong (Alt) Silicification>> 116.81 129.80 MDSt Rhyolite tuff dominant mudstone 116.81 - 129.8: Possible weak proximal alteration zone. <<Min: 116.81 - 129.8 5% Min: Calcite>> also veins <<Min: 116.81 - 138.6 0.01% Min: Pyrite>> WIS <<Min: 116.81 - 138.6 0.01% Min: Pyrrhotite>> WIS <<Alt: 116.81 - 121.7 Moderate (Alt) Muscovite>> <<Alt: 118.98 - 121.7 Moderate (Alt) Silicification>> <<Alt: 121.7 - 134 Weak (Alt) Muscovite>> <<Alt: 121.7 - 134.61 Weak (Alt) Chlorite>> <<Alt: 126 - 130.23 Weak (Alt) Cordierite>> <<Vein: 117.03 - 118.47 10% Quartz-Carbonate-Sulphide 50 deg. >> QZ-CA-PY-PO <<Vein: 124.73 - 138.6 10% Quartz-Carbonate-Sulphide 55 deg. >> QZ-CA-CHL-PY <<Struc: 118.78 - 119.03 Strong (Alt) Fault>> Fault gouge zone. Strong intensity.											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-248

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
129.80	134.61	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
129.8 - 134.61: Possible weak calcite after Cl alteration.											
<<Min: 129.8 - 134.61 10% Min: Calcite>> also veins											
134.61	138.10	RHYvx	Quartz and/or feldspar crystal tuff								
134.61 - 138.1: Coarse euhedral feldspar xtals. Includes some lapilli? First logged as fspar porphyry intrusion.											
<<Min: 134.61 - 170.1 1% Min: Calcite>>											
<<Alt: 134.61 - 138.1 Moderate (Alt) Muscovite>>											
<<Struc: 134.87 - 144.9 Strong (Alt) Fault>> Faulted zone with faults measuring up to tens of cm. Faults filled with broken rock and abundant gouge. Strong intensity. Spaced tens of cm apart.											
138.10	138.60	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
<<Alt: 138.1 - 138.6 Weak (Alt) Chlorite>>											
138.60	170.10	RHYvx									
138.6 - 170.1: Coarse euhedral feldspar xtals, w some qtz 'eyes'. Includes some lapilli? First logged as fspar porphyry intrusion.											
<<Min: 138.6 - 155.35 0.5% Min: Pyrite>>											
<<Min: 138.6 - 155.35 0.01% Min: Pyrrhotite>>											
<<Min: 155.35 - 160.54 1% Min: Pyrite>>											
<<Min: 160.54 - 170.1 0.5% Min: Pyrite>> FRA, BL											
<<Min: 160.54 - 170.1 0.01% Min: Pyrrhotite>>											
<<Alt: 138.6 - 173.02 Moderate (Alt) Muscovite>>											
<<Vein: 142.2 - 170.3 3% Quartz-Carbonate-Sulphide 55 deg. >> QZ-CA-CHL-PY											
<<Struc: 144.9 - 156.88 Strong (Alt) Fault>> Faulted zone with faults measuring up to tens of cm. Faults filled with broken rock and abundant gouge. Strong intensity. Spaced metres apart.											
170.10	173.02	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
<<Min: 170.1 - 173.02 0.5% Min: Pyrite>>											
<<Min: 171 - 173.02 15% Min: Calcite>>											
<<Vein: 170.3 - 173.02 3% Calcite 60 deg. >> CRENULATED											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-248
From (m) **To (m)** **Rocktype & Description**

173.02 195.32 RHYvx Quartz and/or feldspar crystal tuff

173.02 - 195.32: Coarse euhedral feldspar xtals. Includes some lapilli? Fist logged as fspar porphyry intrusion.

<<Min: 173.02 - 181.6 1% Min: Calcite>>

<<Min: 173.02 - 185 5% Min: Pyrrhotite>>

<<Min: 173.02 - 186.4 1% Min: Pyrite>>

<<Min: 181.6 - 182.03 15% Min: Calcite>>

<<Min: 182.03 - 195.32 1% Min: Calcite>>

<<Min: 185 - 186.4 3% Min: Pyrrhotite>>

<<Min: 186.4 - 195.32 1% Min: Pyrite>>

<<Min: 186.4 - 195.32 3% Min: Pyrrhotite>>

<<Min: 194.32 - 204.67 0.01% Min: Pyrrhotite>> FD & VN

<<Alt: 173.24 - 192.67 Moderate (Alt) Muscovite>>

<<Alt: 184.7 - 186.6 Weak (Alt) Chlorite>> Loc CL replacement of groundmass and some fspars?

<<Vein: 184.35 - 185.81 25% Quartz-Carbonate-Sulphide 40 deg. >> QZ-CA-PO-PY

<<Struc: 174.36 - 174.37 dominant foliation>>

<<Struc: 176.04 - 176.05 Foliation>> foliaform sulphide band

<<Struc: 179.64 - 179.65 dominant foliation>>

195.32 196.44 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

<<Min: 195.32 - 196.44 10% Min: Calcite>>

<<Min: 195.32 - 204.67 0.5% Min: Pyrite>> FD & VN

<<Vein: 195.32 - 196.44 1% Calcite 60 deg. >>

196.44 198.82 RHYvx Quartz and/or feldspar crystal tuff

196.44 - 198.82: more strongly strained, silicified in HW large qtz vein. Coarse euhedral feldspar xtals. Includes some lapilli? First logged as fspar porphyry intrusion.

<<Min: 196.44 - 204.67 2% Min: Calcite>>

<<Alt: 196.44 - 198.82 Weak (Alt) Muscovite>>

198.82 204.67 RHYi Aphanitic Rhyolite (intrusion)

198.82 - 204.67: Fg silicified rx w small diss chl-py flecks and po in veinlets. Glassy dyke. Cut by c.g. qtz-carb-po veins.Tr musc on fractures. No musc in rx.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
178.20	179.70	1.50	B00266758	0.9	-0.005	-0.01	-0.01	-0.01

184.90	186.40	1.50	B00266759	0.6	-0.005	-0.01	-0.01	0.02
--------	--------	------	-----------	-----	--------	-------	-------	------

Project:

KZK

Hole Number:

K15-248

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 198.82 - 204.67 Strong (Alt) Silicification>> overprint from glassy dyke?											
<<Vein: 198.82 - 204.67 30% Quartz-Carbonate-Sulphide 45 deg. >> Variable orientation.											
204.67	207.42	RHY undifferentiated rhyolite	204.67	205.42	0.75	B00266761	-0.3	-0.005	-0.01	-0.01	-0.01
204.67 - 207.42: tuffaceous? May include f.g. biot-rich mafic dyke or tuff (0.8 m w carb alt)? Some vuggy sulphide rich bands (1 cm) plus one 20 cm interval of semi-massive sulphide.											
<<Min: 204.67 - 207.42 5% Min: Pyrite>> tr semi-massive (15 cm)			205.42	206.92	1.50	B00266762	0.4	-0.005	-0.01	-0.01	-0.01
<<Min: 204.67 - 207.42 3% Min: Pyrrhotite>> tr semi-massive			206.92	207.42	0.50	B00266763	0.7	-0.005	-0.01	-0.01	0.01
<<Min: 204.67 - 209.6 15% Min: Calcite>> Also VN											
<<Alt: 204.67 - 207.42 Weak (Alt) Muscovite>>											
<<Alt: 204.67 - 207.42 Weak (Alt) Chlorite>>											
<<Vein: 204.67 - 211.58 1% Carbonate-Chlorite 50 deg. >> CA-QZ-CL 1=10 mm and py-po stringers and heavy diss 1-15 cm											
<<Struc: 207.15 - 207.16 Foliation>> sulphide band approx// to foln. NNW strike, W dip, sl discordant?											
<<Struc: 207.4 - 207.4 dominant foliation>>											
207.42	211.58	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
207.42 - 211.58: flow, tuff or dyke? Carb veinlets and blebs, loc magnetic. From 209.6-210.4: bleached and musc altered or RHYvl?											
<<Min: 207.42 - 209.6 0.5% Min: Pyrite>> Also FDS											
<<Min: 207.42 - 209.6 3% Min: Pyrrhotite>> Also FDS											
<<Min: 209.6 - 210.9 10% Min: Calcite>> pervasive and veinlets											
<<Min: 210.43 - 211.58 1% Min: Pyrite>> also in veinlets											
<<Min: 210.43 - 211.58 1% Min: Pyrrhotite>> also in veinlets											
<<Min: 210.9 - 216.88 4% Min: Calcite>> in qtz veins											
<<Alt: 207.42 - 209.6 Weak (Alt) Muscovite>>											
<<Alt: 209.6 - 211.58 Moderate (Alt) Muscovite>>											
<<Alt: 211.5 - 217.53 Strong (Alt) Silicification>> Associated w glassy rhy dyke. Alt halo 60 cm into lower contact.											
211.58	216.88	RHYi Aphanitic Rhyolite (intrusion)									
211.58 - 216.88: greyish aphanitic v siliceous rx w greenish sericite along fractures. Py Po diss and along discontinuous // fractures,sub //w carbonate veins, both cut by qtz-fspar- brown tourm and qtz-po-(py) veins.											
<<Min: 211.58 - 216.88 3% Min: Pyrite>> also diss											
<<Min: 211.58 - 216.88 3% Min: Pyrrhotite>> also diss											



From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<p><<Vein: 211.58 - 216.88 5% Quartz-Carbonate-Sulphide 60 deg. >> earliest? Mm- to rare cm- sized qtz-po-py-(brown tourm) veins w strong alteration halo. Sulphides appear remobilized and/or deformed: follow vein foliation and are interstitial to deformed gangue grains.</p> <p><<Vein: 211.58 - 216.88 2% Quartz-Carbonate 40 deg. >></p> <p><<Vein: 211.58 - 216.88 0.5% Pyrrhotite 30 deg. >> irregular stringers</p> <p>216.88 223.80 MAFi Mafic Intrusions (primarily footwall mafic intrusion)</p> <p>216.88 - 223.8: w carbonate veinlets and blebs, loc poss amygdules, calcareous.</p> <p><<Min: 216.88 - 223.5 1% Min: Pyrite>> includes two sections py 2-5% over 20cm</p> <p><<Min: 216.88 - 223.5 1% Min: Pyrrhotite>> includes two sections py 2-5% over 20cm</p> <p><<Min: 216.88 - 223.8 10% Min: Calcite>> pervasive and in veins</p> <p><<Alt: 216.88 - 223.8 Weak (Alt) Muscovite>></p> <p><<Vein: 216.88 - 219.1 1% Quartz-Carbonate 50 deg. >> Planar, roughly foliaform, 1-1.5 cm, from RHYi?</p> <p><<Vein: 216.88 - 223.8 2% Quartz-Carbonate 60 deg. >> mostly carbonate</p> <p><<Struc: 218.4 - 218.41 dominant foliation>></p> <p>223.80 235.25 RHYvl Lapilli tuff</p> <p>223.8 - 235.25: Faint discontinuous fx and/ or bands (lapilli?), rare qtz. (possible altered mafic rx, obscured by sericitic alteration caused by faulting?)</p> <p><<Min: 223.8 - 255 1% Min: Calcite>></p> <p><<Min: 231 - 237.45 0.5% Min: Pyrite>> loc 1%</p> <p><<Min: 231 - 237.45 0.5% Min: Pyrrhotite>> loc 1%</p> <p><<Alt: 223.8 - 243.8 Moderate (Alt) Muscovite>> musc-ser increases w deformation, locintense ass w fault gouge.</p> <p>235.25 243.80 RHYva Coarse grained to ash tuff</p> <p>235.25 - 243.8: Finer grained, w short sections of lapilli tuff, w short very flat po seams // to foln (selective replacement of fx (fiamme?) or dismembered veinlet.</p> <p><<Min: 237.45 - 243.65 1% Min: Pyrite>> thin flat py-po seams // foln (dismembered?)</p> <p><<Min: 237.45 - 243.65 1% Min: Pyrrhotite>> thin flat py-po seams // foln (dismembered?)</p> <p><<Min: 243.65 - 278.5 3% Min: Pyrite>> Irregular grey patches of qtz w diss py, ranging between 1 and 3 %, with sort sections of bands of 5% fg diss py.</p> <p><<Struc: 239.85 - 239.86 dominant foliation>> E-W strike/ 30N</p> <p>243.80 278.50 RHY undifferentiated rhyolite</p> <p>243.8 - 278.5: Strong sericite alteration and faulting obscures textures. Greenish, w common grey patches and bands of fg qtz-sulph</p>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-248

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 255 - 261 3% Min: Calcite>> on fractures											
<<Min: 261 - 278.5 0.5% Min: Calcite>>											
<<Alt: 247.84 - 271.2 Strong (Alt) Muscovite>> Greenish, associated w fault.											
<<Alt: 271.2 - 278.5 Moderate (Alt) Muscovite>> Greenish, associated w fault.											
<<Struc: 250.8 - 257.8 Strong (Alt) Fault>> Fault zone, intense gouge, brecciation and core loss, w some sections of competent rock. At approx 253m: 0.4 m of carbonaceous clayey slicked material. Rx more competent from 263 but still core loss and some gouge sections. Lower contact of gouge at 266.5 is discordant at 60 deg CA, i.e.perpendicular to dominant foliation.											
<<Struc: 260.4 - 262.2 Strong (Alt) Fault>>											
<<Struc: 260.8 - 260.85 dominant foliation>>											
<<Struc: 269.7 - 269.71 dominant foliation>> E-W strike/ 40N											
<<Struc: 278.25 - 278.26 dominant foliation>>											
End of Hole @ 278.5											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-249

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	David Nuttal	
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	06-Sep-15	
UTM Easting	415047.545	Core Size:	NQ3	Azimuth:	180.16	Date Logging Complete:	07-Sep-15	
UTM Northing:	6815301.286	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech	
UTM Elev. (m):	1385.397	Casing Depth (m):	9	Length (m):	68	Drill Rig:	Hydracore	
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	06-Sep-15	
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	07-Sep-15	
Local Elev. (m):						Purpose:	Resource Definition	
Comments:							Parent Hole:	

The purpose of this hole is to test the near surface extension of the massive sulphide lens (MET7 Domain). Results confirm the presence of this extension of the massive sulphide lens (MET7) to surface interface. Massive sulphide is present at the top of hole from 10.95m and extends to 14.26m (OA, OB) (MET7), from 17.94m to 18.64m (OB) and from 20.43m to 20.63m (OA). The structural hanging wall is composed of mafic rocks intruded by a grey, glassy felsic dike. Muscovite alteration increases towards the massive sulphide lens. Chlorite alteration is pervasive in the mafic units. Silicification is pervasive in proximity to the felsic intrusive.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	180.16	0	180.16	APS	David Nuttal	05-Sep-15		<input checked="" type="checkbox"/>	
20	-62	157.5	22.5	180	ReflexEVS	Geotech	05-Sep-15	5714	<input checked="" type="checkbox"/>	
45	-63.4	160.4	22.5	182.9	ReflexEVS	Geotech	06-Sep-15	5832	<input checked="" type="checkbox"/>	
68	-62.9	160.2	22.5	182.7	ReflexEVS	Geotech	06-Sep-15	5743	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	9.00	CASN Casing									
9.00	10.95	OVBN Overburden									
9 - 10.95: Mafic biotite, chlorite, garnet schist. Unusual to deposit lithologies and considered to be overburden.											
<<Min: 9 - 15 3% Min: Calcite>>											
10.95	14.26	OA Magnetite bearing sulphides	10.95	11.95	1.00	B00268664	196	1.49	2.51	2.46	13
10.95 - 14.26: MET3 - Magnetite bearing, Pb poor, Cu rich massive sulphide.											
			11.95	12.81	0.86	B00268665	195	0.865	0.62	6.83	18.4
			12.81	13.40	0.59	B00268666	140	2.28	2.37	1.61	3.62
			13.40	14.26	0.86	B00268667	164	1.1	2.58	3.36	10.7

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-249
From (m) **To (m)** **Rocktype & Description**
14.26 17.94 RHY undifferentiated rhyolite

14.26 - 17.94: Strong Mu/Ms alteration and calcite bands or flattened clots.

<<Min: 14.26 - 17.94 3% Min: Pyrite>>

<<Min: 15 - 20.66 10% Min: Calcite>>

<<Alt: 14.26 - 17.94 Weak (Alt) Muscovite>>

<<Struc: 14.4 - 20 Weak (Alt) Fault>> fracture/fault zone contains 4 gouge locations, each less than 1 meter apart.

**17.94 18.64 OB Wispy laminate, fine
buckshot textured, non-
magnetite bearing sulphides**

17.94 - 18.64: MET7 - Non magnetite bearing, Pb poor, Cu poor

18.64 20.43 RHYcq Quartz porphyry

18.64 - 20.43: Calcite bands and minor chlorite present - skeptical about Felsic/Mafic origins.

<<Min: 18.64 - 20.43 3% Min: Pyrite>>

<<Alt: 18.64 - 20.43 Moderate (Alt) Muscovite>>

20.43 20.63 OA Magnetite bearing sulphides

20.43 - 20.63: MET4 - Cu poor, Pb poor, magnetite bearing.

**20.63 45.08 MAFi Mafic Intrusions (primarily
footwall mafic intrusion)**

20.63 - 45.08: From 32.12m to 35.7m possible felsic intercept.

<<Min: 20.66 - 29 20% Min: Calcite>>

<<Min: 20.66 - 45.08 0.5% Min: Pyrite>>

<<Min: 20.66 - 45.08 0.5% Min: Pyrrhotite>>

<<Min: 29 - 32 30% Min: Calcite>>

<<Min: 32 - 45 20% Min: Calcite>>

<<Min: 45 - 60 12% Min: Calcite>>

<<Alt: 20.66 - 30.3 Moderate (Alt) Chlorite>>

<<Alt: 30.3 - 32 Weak (Alt) Chlorite>>

<<Alt: 32 - 35.75 Trace (Alt) Muscovite>>

<<Alt: 32 - 35.75 Trace (Alt) Chlorite>>

<<Alt: 35.75 - 37 Weak (Alt) Chlorite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
14.26	15.76	1.50	B00268668	3.4	0.017	0.02	0.06	0.12

15.76	17.26	1.50	B00268669	11.2	0.067	0.02	0.02	0.11
17.26	17.94	0.68	B00268671	0.9	0.008	-0.01	-0.01	0.01

17.94	18.64	0.70	B00268672	140	0.608	0.37	2.91	6.85
-------	-------	------	-----------	-----	-------	------	------	------

18.64	19.84	1.20	B00268673	6.7	0.064	0.18	0.04	0.11
-------	-------	------	-----------	-----	-------	------	------	------

19.84	20.43	0.59	B00268674	16.9	0.114	0.14	0.22	0.75
-------	-------	------	-----------	------	-------	------	------	------

20.43	21.43	1.00	B00268675	57	0.133	0.04	0.9	2.42
-------	-------	------	-----------	----	-------	------	-----	------

21.43	22.93	1.50	B00268676	0.3	0.005	-0.01	-0.01	0.01
-------	-------	------	-----------	-----	-------	-------	-------	------

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-249

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 37 - 44 Moderate (Alt) Chlorite>>											
<<Alt: 44 - 45.08 Weak (Alt) Chlorite>>											
<<Struc: 22.6 - 25 Weak (Alt) Fault>> 2 small fractures/faults (<5cm)											
<<Struc: 25.88 - 25.88 dominant foliation>>											
<<Struc: 30.52 - 30.52 dominant foliation>>											
<<Struc: 31.16 - 31.16 dominant foliation>>											
<<Struc: 40.55 - 40.55 dominant foliation>>											
45.08 68.00 RHYi Aphanitic Rhyolite (intrusion)											
45.08 - 68: Red subround to sub angular Fe-oxide altered porphyroblasts, 0.5 - 1mm diameter. Foliation is closely spaced near bottom of the interval adjacent to structurally overlying fault.											
<<Min: 45.08 - 68 3% Min: Pyrite>>											
<<Alt: 45.08 - 48 Moderate (Alt) Silicification>>											
<<Alt: 48 - 53 Strong (Alt) Silicification>>											
<<Alt: 50 - 68 Weak (Alt) Muscovite>>											
<<Alt: 53 - 68 Moderate (Alt) Silicification>>											
<<Vein: 49.7 - 53 20% Quartz>>											
<<Struc: 48.3 - 58 Weak (Alt) Fault>> fault zone: rock interval is heavily fractured and abundant with rock gouge.											
<<Struc: 66.3 - 66.9 Weak (Alt) Fault>> 2 small faults (<5cm gouge)											
End of Hole @ 68											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-250

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	06-Sep-15
UTM Easting	414702.206	Core Size:	NQ3	Azimuth:	180	Date Logging Complete:	08-Sep-15
UTM Northing:	6815768.295	Casing Pulled?:	Yes	Dip:	-51	Drill Company:	Geotech
UTM Elev. (m):	1420.535	Casing Depth (m):	6	Length (m):	251	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	05-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	08-Sep-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

Hole K15-250 was drilled to test the continuity and the extension of the lower sulphide lens (MET7).

The upper units are made up coherent and lapilitic rhyolite crosscut by mafic dykes. Above a shear zone, the massive sulphide is intersected from 183.48m to 187.81m within a mineralized zone (PY/CP/PO/SP/MG/GL/AS) extending from 180.42m to 190.90m. Both the hanging-wall and footwalls show strong chlorite alteration with CP/PO stringers. The ore body, made up of OA and Ob as well as OI and OJ domains on the edge, lies directly above by a narrow rhyolitic unit crosscut by a mafic sill at 205.20m. A short felsic dyke (extending from 207.51m to 208.08m) intrudes this unit. A mafic unit from 217.20m to 229.80m hosts green-grey alteration associated with a felsic aphanitic dyke (RHYi). Rhyolite, present from 235.63m to EOH at 251.0 is strongly muscovite altered. The thickness of the green-grey alteration zone is particularly significant in hole K15-250.

Hole K15-250 (dip: 51) is part of a fan including hole K15-253 (dip: 65) and hole K15-257 (dip: 81).

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-51	181.06	0	181.06	APS	Jerome de Pasquale	06-Sep-15		<input checked="" type="checkbox"/>	
26	-51.4	159.1	22.5	181.6	ReflexEVS	Geotech	06-Sep-15	5757	<input checked="" type="checkbox"/>	
50	-52.6	160.2	22.5	182.7	ReflexEVS	Geotech	06-Sep-15	5865	<input checked="" type="checkbox"/>	
75	-54	163	22.5	185.5	ReflexEVS	Geotech	06-Sep-15	5775	<input checked="" type="checkbox"/>	
101	-54.9	164.1	22.5	186.6	ReflexEVS	Geotech	06-Sep-15	5710	<input checked="" type="checkbox"/>	
125	-55.3	163.4	22.5	185.9	ReflexEVS	Geotech	06-Sep-15	5709	<input checked="" type="checkbox"/>	
152	-54.9	161.1	22.5	183.6	ReflexEVS	Geotech	06-Sep-15	5740	<input checked="" type="checkbox"/>	
176	-54.9	160.8	22.5	183.3	ReflexEVS	Geotech	06-Sep-15	5802	<input checked="" type="checkbox"/>	
201	-55.6	166.6	22.5	189.1	ReflexEVS	Geotech	06-Sep-15	5663	<input checked="" type="checkbox"/>	
227	-56.1	170.9	22.5	193.4	ReflexEVS	Geotech	06-Sep-15	5817	<input checked="" type="checkbox"/>	
251	-56.3	171.2	22.5	193.7	ReflexEVS	Geotech	06-Sep-15	5829	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	6.60	CASN Casing									



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-250

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
6.60	26.43	RHYvx Quartz and/or feldspar crystal tuff									
6.6 - 26.43: QZ eyes. Curdy texture and flow locally.											
<<Min: 6.6 - 35.53 0.5% Min: Pyrite>>											
<<Min: 6.6 - 35.53 0.5% Min: Pyrrhotite>> Elongated, rare veinlets.											
<<Min: 6.6 - 83 2% Min: Calcite>> and selective replacement. In MAFi and also in flow banding											
<<Vein: 17.24 - 17.52 Quartz-Carbonate>> QZ/CA vein with oxidation trace.											
<<Vein: 26.33 - 27.45 Calcite>> CA veinig in MAFi.											
<<Struc: 22.8 - 22.81 dominant foliation>>											
26.43	28.48	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
26.43 - 28.48: Two dykes, two different composition. No BI on the margins. CA veining, weak schistosity..											
28.48	33.66	RHYvx Quartz and/or feldspar crystal tuff									
28.48 - 33.66: QZ eyes. Flow and curdy. Dyke from 31.84 to 32.07m containing AK.											
<<Min: 31.84 - 32.07 10% Min: Ankerite>> Probably also AK in rhyolite.											
<<Struc: 29.19 - 29.2 dominant foliation>>											
<<Struc: 32.07 - 32.08 Contact>> Between MAFi and RHYcw.											
33.66	35.33	RHYvi Lapilli tuff									
33.66 - 35.33: Sharpe upper contact.											
<<Struc: 34.77 - 34.78 dominant foliation>>											
35.33	38.21	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
35.33 - 38.21: Flow banded.											
<<Min: 35.53 - 83 2% Min: Calcite>> Veining and probably selective replacement.											
<<Min: 35.53 - 149 2% Min: Pyrrhotite>> Elongated, in the foliation.											
38.21	48.94	RHYvx Quartz and/or feldspar crystal tuff									
38.21 - 48.94: QZ eyes.											
<<Struc: 42.2 - 44.48 Moderate (Alt) Fault>> Fault gouge, angle estimated. Core loss. Major.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-250

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
48.94	67.51	RHYvl Lapilli tuff									
grey-green											
48.94 - 67.51: Strongly lapilitic from 59m or fragmented flow. CL altered, weakly.											
<<Alt: 62.49 - 72.27 Weak (Alt) Chlorite>> Stronger at dyke proximity.											
<<Vein: 50.15 - 52.3 Quartz-Carbonate>> QZ/CA and brown BI, lower contact vwith mafic dyke.											
<<Vein: 57 - 57.05 Tourmaline 20 deg. >> TML veinlet.											
<<Struc: 52.85 - 52.86 dominant foliation>>											
<<Struc: 56 - 56.01 dominant foliation>>											
<<Struc: 61.65 - 61.66 dominant foliation>>											
<<Struc: 64.5 - 64.51 Foliation>> Secondary foliation.											
<<Struc: 64.6 - 64.61 dominant foliation>>											
67.51	72.27	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
grey-green											
67.51 - 72.27: Speudofragmental flow, CL intense at contact with dyke, secondary foliation. Could be lapili.											
72.27	79.41	RHYva Coarse grained to ash tuff									
grey-green											
72.27 - 79.41: Including mafic dyke frpm 75.80 ro 76.69m, CL altered.											
<<Struc: 73.6 - 73.61 dominant foliation>>											
79.41	82.22	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
grey-brown											
79.41 - 82.22: With AK, large chill margin, BI. Purple.											
<<Min: 79.41 - 82.22 5% Min: Ankerite>> In mafic dyke.											
82.22	96.79	RHYv Rhyolite volcaniclastic									
grey-green											
<<Min: 83 - 155 0.1% Min: Calcite>> Local.											
<<Vein: 91.45 - 91.5 Quartz-Tourmaline-Sulphide 25 deg. >> QZ/TML, few PY											
<<Struc: 82.65 - 82.66 dominant foliation>>											
<<Struc: 91.85 - 91.86 dominant foliation>>											
96.79	107.04	RHY undifferentiated rhyolite									
grey-green											
96.79 - 107.04: Dominantly RHYcw. Weak CL.											
<<Struc: 104 - 104.21 Weak (Alt) Fault>> Light brown clay.											
<<Struc: 104.01 - 104.02 dominant foliation>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-250

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
107.04	112.81	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
107.04 - 112.81: Curdy and flow banded. Folded. PY/PO wavy stringers.											
<<Vein: 107.04 - 111.6 Pyrite>> Dark wavy veins (4/metre) in flow/curdy RHY, containing PY.											
<<Struc: 107.1 - 107.11 dominant foliation>>											
112.81	119.42	RHY undifferentiated rhyolite									
112.81 - 119.42: Dominantly RHYcw, flow.											
<<Struc: 113.04 - 113.06 dominant foliation>>											
119.42	126.37	RHYvl Lapilli tuff									
<<Struc: 125.1 - 125.11 dominant foliation>>											
126.37	136.69	RHYva Coarse grained to ash tuff									
126.37 - 136.69: Locally BI rich (maybe dyke) with whitish QZ eyes at upper contact, vein TML/few CA and PY along the core axis.											
<<Vein: 129.4 - 129.45 Tourmaline-Sulphide>> Probably TML/PY, shallow angle<10											
<<Struc: 128 - 128.01 dominant foliation>>											
136.69	158.16	RHYvl Lapilli tuff									
136.69 - 158.16: Granular texture where sheared and maybe feldspar (whitish mineral) xl. CL in shear zone. and more PY/PO.											
<<Min: 149 - 155 3% Min: Pyrite>> Concentrated in shear zone and discontinuous veinlets.											
<<Min: 149 - 155 3% Min: Pyrrhotite>> Associated with PY.											
<<Alt: 137.38 - 153.38 Weak (Alt) Chlorite>>											
<<Alt: 153.38 - 200 Moderate (Alt) Muscovite>> Starting after a shear zone.											
<<Struc: 149 - 149.01 Foliation>>											
<<Struc: 151.41 - 151.42 Shear>>											
<<Struc: 151.51 - 155 Moderate (Alt) Fault>> Multiple fault, Average angle.											
<<Struc: 152.5 - 152.51 Strong (Alt) Fault>>											
<<Struc: 153 - 153.2 Strong (Alt) Fault>> Fault gouge. Sheared. PyY vein at contact.											
<<Struc: 155.2 - 155.21 dominant foliation>>											
<<Struc: 156.3 - 157.5 Crenulation cleavage>>											
<<Struc: 157.9 - 157.91 dominant foliation>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-250

From (m) To (m) Rocktype & Description

181.60 183.48 OJ Heavily disseminated sulphides in proximal altered rock

181.6 - 183.48: Few CI from 182.95 to 183.40m. CP stringers.

<<Min: 181.6 - 183.48 2% Min: Sphalerite>>

<<Min: 181.6 - 183.48 3% Min: Pyrrhotite>>

<<Min: 181.6 - 183.48 3% Min: Chalcopyrite>>

<<Alt: 181.6 - 183.6 Strong (Alt) Chlorite>>

<<Alt: 182.85 - 183.36 Weak (Alt) Cordierite>>

<<Struc: 182.01 - 182.02 dominant foliation>>

183.48 184.66 OA Magnetite bearing sulphides

183.48 - 184.66: Semi-massive

<<Min: 183.48 - 184.66 10% Min: Sphalerite>>

<<Min: 183.48 - 184.66 3% Min: Pyrrhotite>>

<<Min: 183.48 - 184.66 3% Min: Galena>>

<<Min: 183.48 - 184.66 0.5% Min: Arsenopyrite>>

184.66 186.87 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

184.66 - 186.87: Locally vuggy.

<<Min: 184.66 - 186.87 10% Min: Sphalerite>>

<<Min: 184.66 - 186.87 4% Min: Galena>>

186.87 187.81 OA Magnetite bearing sulphides

<<Min: 186.87 - 187.81 0.5% Min: Sphalerite>>

<<Min: 186.87 - 187.81 2% Min: Galena>>

<<Min: 186.87 - 187.81 0.1% Min: Chalcopyrite>>

187.81 190.00 OJ Heavily disseminated sulphides in proximal altered rock

187.81 - 190: CP stringers

<<Min: 187.81 - 190 10% Min: Chalcopyrite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
181.60	182.47	0.87	B00264814	67	0.494	2.87	0.12	0.27

182.47	183.48	1.01	B00264815	11.2	0.062	0.38	0.03	0.52
--------	--------	------	-----------	------	-------	------	------	------

FG

183.48	184.66	1.18	B00264816	25.1	0.128	0.46	0.31	4.61
--------	--------	------	-----------	------	-------	------	------	------

MG

184.66	185.79	1.13	B00264817	63.3	0.391	0.04	2.5	7.93
--------	--------	------	-----------	------	-------	------	-----	------

FG

185.79	186.87	1.08	B00264818	91.4	0.345	0.08	3.63	10.1
--------	--------	------	-----------	------	-------	------	------	------

186.87	187.81	0.94	B00264819	58.7	0.391	1.02	1.34	7.76
--------	--------	------	-----------	------	-------	------	------	------

187.81	189.00	1.19	B00264821	37.1	0.394	1.35	0.1	0.23
--------	--------	------	-----------	------	-------	------	-----	------

189.00	190.00	1.00	B00264822	53.1	0.398	3.01	0.07	0.24
--------	--------	------	-----------	------	-------	------	------	------

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-250
From (m) **To (m)** **Rocktype & Description**

<<Min: 187.81 - 190 0.5% Min: Arsenopyrite>>

<<Alt: 187.81 - 194.51 Strong (Alt) Chlorite>>

190.00 201.73 RHY undifferentiated rhyolite

190 - 201.73: Texture obscured by CL alteration, no evidence of the lithology.

<<Alt: 197.75 - 201.46 Moderate (Alt) Muscovite>> locally strong.

<<Struc: 190.95 - 190.96 dominant foliation>>

<<Struc: 196.56 - 196.62 Moderate (Alt) Fault>> Minor fault gouge.

201.73 202.34 OJ Heavily disseminated sulphides in proximal altered rock

<<Min: 201.73 - 202.34 1% Min: Sphalerite>>

<<Min: 201.73 - 202.34 3% Min: Pyrrhotite>>

<<Min: 201.73 - 202.34 15% Min: Chalcopyrite>>

<<Alt: 201.73 - 203 Strong (Alt) Chlorite>>

202.34 205.20 RHY undifferentiated rhyolite

202.34 - 205.2: Texture obscured by alteration.

<<Alt: 204.42 - 206.52 Moderate (Alt) Silicification>> Green-grey alteration.

205.20 228.36 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

205.2 - 228.36: Locally altered green/grey RHYi from 207.51 to 208.08 associated with QZ vein.

<<Min: 205.2 - 228.36 25% Min: Calcite>>

<<Alt: 214.5 - 215.5 Moderate (Alt) Biotite>>

<<Alt: 215.5 - 217.2 Strong (Alt) Biotite>> Sharpe lower contact, fault with of set.

<<Alt: 217.2 - 229.8 Moderate (Alt) Silicification>> Green-grey alteration.

<<Vein: 216 - 216.8 Quartz-Carbonate>> QZ/CA

<<Struc: 208.08 - 208.09 Contact>> See foliation.

<<Struc: 208.9 - 208.91 dominant foliation>>

<<Struc: 209.6 - 209.61 dominant foliation>>

<<Struc: 220.95 - 220.96 dominant foliation>>

green
grey-green
green

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
190.00	190.90	0.90	B00264823	18.4	0.058	0.51	0.3	1.06
190.90	192.40	1.50	B00264824	1.9	0.006	0.05	0.02	0.07
192.40	193.90	1.50	B00264825	0.5	0.007	0.02	-0.01	0.05
193.90	195.40	1.50	B00264826	0.4	0.007	-0.01	-0.01	0.04
199.00	200.00	1.00	B00264827	2.6	-0.005	0.05	0.03	1.88
200.00	201.00	1.00	B00264828	0.5	-0.005	-0.01	0.01	0.06
201.00	201.73	0.73	B00264829	3.9	0.011	0.02	0.05	0.11
201.73	202.34	0.61	B00264831	53.8	0.51	5.55	0.13	0.26

202.34	203.84	1.50	B00264832	6.1	0.036	0.41	0.04	1.79
203.84	205.20	1.36	B00264833	1.6	-0.005	0.02	0.08	0.23

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-250

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 227.2 - 227.21 Contact>> contact between strongly baltered BI mafic dyke and gree-grey altered dyke (off set).											
<<Struc: 228.35 - 228.36 dominant foliation>>											
228.36	247.90	RHY undifferentiated rhyolite									
228.36 - 247.9: Contact blurry by alteration, arbitrary at the limit of the CA in rock composition. QZ eyes at 241.5.											
<<Min: 228.36 - 251 2% Min: Pyrite>> Or in discontinuous veins.											
<<Min: 228.36 - 251 2% Min: Pyrrhotite>> Elontated along the foliation.											
<<Alt: 235.63 - 251 Moderate (Alt) Muscovite>> Locally strong.											
<<Struc: 242 - 249.3 Shear>>											
<<Struc: 242.05 - 242.06 dominant foliation>> Alpha angle changing, shallower closeto the shear zone.											
<<Struc: 246.5 - 246.6 Moderate (Alt) Fault>>											
247.90	251.00	RHY undifferentiated rhyolite									
247.9 - 251: QZ eyes. Probably feldspar replaced loocally by green mineral.											
End of Hole @ 251											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-251

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	07-Sep-15
UTM Easting	415048.804	Core Size:	NQ3	Azimuth:	179	Date Logging Complete:	08-Sep-15
UTM Northing:	6815338.608	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1386.006	Casing Depth (m):	9	Length (m):	86	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	06-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	07-Sep-15
Local Elev. (m):						Purpose:	Resource/Met
Comments:						Parent Hole:	

K15-251 was drilled to twin historic hole K95-092 and confirm the resource here. Overburden was encountered to a depth of 13.5 m, where an undifferentiated, Mu-altered rhyolite unit begins. The rhyolite unit continues to a depth of 17 m. There is a semi-continuous MSXS zone from 17-33 m, consisting of interbedded OI, OB, OA, and OJ. In the footwall, a CL-CA-BI schist (MAFi) cross-cut by an intrusive rhyolite continues to the end of the hole at 86 m.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	179	0	179	APS	David Nuttal	06-Sep-15		<input type="checkbox"/>	
14	-38.9	181.7	22.5	204.2	ReflexEVS	Geotech	06-Sep-15	2048	<input type="checkbox"/>	Values not accepted due to low magnetic field.
14.1	-58.4	175.1	22.5	197.6	ReflexEVS	Geotech	06-Sep-15	3178	<input type="checkbox"/>	Values not accepted due to low magnetic field.
15	-57.7	211.7	22.5	234.2	ReflexEVS	Geotech	07-Sep-15	1984	<input type="checkbox"/>	Values not accepted due to low magnetic field.
38	-58.8	201.8	22.5	224.3	ReflexEVS	Geotech	06-Sep-15	2357	<input type="checkbox"/>	Values not accepted due to low magnetic field.
38.1	-58.6	185.5	0	185.5	ReflexEVS	Geotech	07-Sep-15	5761	<input checked="" type="checkbox"/>	
65	-58.7	185.4	0	185.4	ReflexEVS	Geotech	07-Sep-15	5775	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	9.00	CASN Casing									
9.00	13.50	OVBN Overburden									
13.50	17.00	RHY undifferentiated rhyolite									
13.5 - 17: No original coherent or volcanoclastic texture is visible due to Mu-alteration			13.50	14.00	0.50	B00268677	0.4	0.005	-0.01	-0.01	-0.01
<<Min: 13.5 - 17 1% Min: Pyrite>>			14.00	15.50	1.50	B00268678	0.5	-0.005	-0.01	-0.01	-0.01
<<Min: 13.5 - 17 1% Min: Pyrrhotite>>			15.50	17.00	1.50	B00268679	1.8	0.021	-0.01	-0.01	-0.01
<<Alt: 13.5 - 17.5 Strong (Alt) Muscovite>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-251

From (m) To (m) Rocktype & Description

17.00 17.50 OJ **Heavily disseminated sulphides in proximal altered rock**

17 - 17.5: Heavily disseminated sulphide (PY+/-SP+/-GL+/-CP) in MU-schist

17.50 18.20 OB **Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides**

17.5 - 18.2: zone with high CP (10%). Maybe OC?

<<Min: 17.5 - 18.3 10% Min: Chalcopyrite>>

<<Min: 17.5 - 30.8 5% Min: Calcite>>

18.20 19.40 OA **Magnetite bearing sulphides**

18.2 - 19.4: Wispy laminated PY+PO+SP+GL+CP with MG-buckshot (cg) texture. ~30 cm zone in the middle without MG.

19.40 21.90 OB **Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides**

19.4 - 21.9: Wispy laminated PY+SP+GL+/-CP. Calcite fracture filling.

<<Struc: 20.4 - 20.41 dominant foliation>>

21.90 22.70 OA **Magnetite bearing sulphides**

21.9 - 22.7: fine wispy laminated PY +/- SP +/- GL with buckshot MG (cg) and minor CA+SI bands.

22.70 26.10 OB **Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides**

22.7 - 26.1: laminated with bands of cg PY+SP+GL and bands of mg PY

<<Struc: 23.34 - 23.35 dominant foliation>>

26.10 26.50 OA **Magnetite bearing sulphides**

26.1 - 26.5: laminated PY+SP+GL+MG with cg buckshot PY

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
17.00	17.50	0.50	B00268681	94	0.494	1.17	0.59	1.44

CG

17.50	18.20	0.70	B00268682	365	2.79	9.84	0.29	1.11
-------	-------	------	-----------	-----	------	------	------	------

CG

18.20	18.80	0.60	B00268683	176	2.19	3.07	0.64	5.58
-------	-------	------	-----------	-----	------	------	------	------

MG

18.80	19.40	0.60	B00268684	142	1.49	2.18	0.93	6.07
19.40	20.30	0.90	B00268685	151	2	0.74	2.07	8.73

MCG

20.30	21.20	0.90	B00268686	185	2.24	0.46	1.28	6.25
21.20	21.90	0.70	B00268687	92.9	1.67	1.5	0.56	4.98
21.90	22.70	0.80	B00268688	147	1.06	1.66	0.66	2.64

CG

22.70	23.40	0.70	B00268689	187	0.586	0.49	1.4	4.38
-------	-------	------	-----------	-----	-------	------	-----	------

CG

23.40	24.40	1.00	B00268692	110	0.548	0.24	0.96	4.33
24.40	26.10	1.70	B00268693	130	0.64	0.3	4.72	9.89
26.10	26.50	0.40	B00268694	180	1.46	1.13	6.02	14.4

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-251

From (m) To (m) Rocktype & Description

26.50 28.00 OI Heavily disseminated sulphides in host schist

26.5 - 28: Heavily disseminated PY+SP+GL in MU schist. Poor recovery in this unit.

<<Alt: 26.5 - 28 Strong (Alt) Muscovite>>

28.00 30.30 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

MCG

28 - 30.3: Wispy laminated PY+SP+GL+/-PO+/-MG with cg PY buckshot texture. Some minor QZ-carb veins that have recrystallized vcg sulphides within.

30.30 30.80 OA Magnetite bearing sulphides

MCG

30.3 - 30.8: Laminated massive PY with interstitial SP+GL+MG+/-CP with bands containing cg PY. QZ-carb vein with recrystallized vcg CP./

30.80 33.00 OJ Heavily disseminated sulphides in proximal altered rock

30.8 - 33: MU-CL schist with bands of massive to heavily disseminated sulphide. MU appears to be overprinting CL alteration

<<Alt: 30.8 - 33 Strong (Alt) Muscovite>>

<<Alt: 30.8 - 33 Moderate (Alt) Chlorite>>

33.00 58.60 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

33 - 58.6: CL-BI-CA schist. From ~39-55 local zones of less schistosity, that resembles an original porphyritic/gabbroic texture.

<<Min: 33 - 55.9 15% Min: Calcite>>

<<Min: 33 - 58.6 1% Min: Pyrite>>

<<Min: 55.9 - 58.6 10% Min: Calcite>>

<<Alt: 33 - 55.9 Strong (Alt) Chlorite>>

<<Alt: 33 - 55.9 Strong (Alt) Biotite>>

<<Alt: 55.9 - 58.6 Strong (Alt) Silicification>>

<<Alt: 55.9 - 58.6 Strong (Alt) Muscovite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
26.50	28.00	1.50	B00268695	27.7	0.282	0.5	0.27	1.1

28.00	28.90	0.90	B00268696	166	0.858	0.23	3.73	8.19
-------	-------	------	-----------	-----	-------	------	------	------

28.90	29.90	1.00	B00268697	182	0.572	0.06	4.09	9.5
29.90	30.30	0.40	B00268698	109	0.429	0.17	2.28	4.62
30.30	30.80	0.50	B00268699	172	1.44	0.89	3.89	7.59

30.80	31.60	0.80	B00268701	23.9	0.093	0.11	0.43	2.43
-------	-------	------	-----------	------	-------	------	------	------

31.60	32.10	0.50	B00268702	0.7	0.009	-0.01	-0.01	-0.01
32.10	33.00	0.90	B00268703	71.1	0.338	0.29	1.08	3.87
33.00	34.50	1.50	B00268704	0.4	-0.005	-0.01	-0.01	0.02

34.50	36.00	1.50	B00268705	0.9	-0.005	-0.01	-0.01	0.03
36.00	37.50	1.50	B00268706	0.4	-0.005	-0.01	-0.01	0.01



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-251

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 33.66 - 33.67 dominant foliation>>											
<<Struc: 34.7 - 34.71 dominant foliation>>											
<<Struc: 40.9 - 40.91 dominant foliation>>											
<<Struc: 46.37 - 46.38 dominant foliation>>											
<<Struc: 48.5 - 48.51 dominant foliation>>											
<<Struc: 49.46 - 49.47 dominant foliation>>											
<<Struc: 52.8 - 52.81 dominant foliation>>											
58.60	82.10	RHYi	Aphanitic Rhyolite (intrusion)								
58.6 - 82.1: From 58.6–69 m the unit is characterized by dominantly aphanitic, relatively un-schistose, grey glassy siliceous rock with elongated QZ-phenocrysts. From ~69-82.1 the unit is characterized as a QZ-MU schist with a strong planar schistosity.											
<<Min: 58.6 - 64.4 2% Min: Sphalerite>>											
<<Min: 58.6 - 64.4 5% Min: Pyrite>>											
<<Min: 64.4 - 82.1 2% Min: Pyrite>>											
<<Min: 64.4 - 82.1 5% Min: Calcite>>											
<<Alt: 64.4 - 84.6 Strong (Alt) Silicification>>											
<<Alt: 64.4 - 84.6 Strong (Alt) Muscovite>>											
<<Struc: 66.6 - 66.8 Trace (Alt) Fault>> weakly faulted zone											
<<Struc: 79.7 - 79.9 Trace (Alt) Fault>> weakly faulted zone											
82.10	86.00	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
82.1 - 86: Locally Mu-QZ-CA schist from 82.1-84.6 m and BI-CL-CA schist from 84.6-86 m.											
<<Min: 82.1 - 84.6 10% Min: Calcite>>											
<<Min: 82.1 - 86 1% Min: Pyrite>>											
<<Min: 84.6 - 86 20% Min: Calcite>>											
<<Alt: 84.6 - 86 Strong (Alt) Chlorite>>											
<<Alt: 84.6 - 86 Strong (Alt) Biotite>>											
<<Struc: 83.6 - 84.1 Trace (Alt) Fault>> weakly faulted zone with minor fault gouge											
End of Hole @ 86											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-252

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	08-Sep-15
UTM Easting	415048.949	Core Size:	HQ3	Azimuth:	180.44	Date Logging Complete:	09-Sep-15
UTM Northing:	6815336.681	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1386.143	Casing Depth (m):	14	Length (m):	41	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	07-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	08-Sep-15
Local Elev. (m):						Purpose:	Metallurgical Twin
Comments:						Parent Hole:	K15-251

K15-252 was drilled as a mettallurgical twin of K15-251 in order to collect samples of the MET3 and MET7 domains in the near surface oxidized zone. Overburden was encountered to a depth of 14 m. From 14-16.8 m undifferentiated MU-altered rhyolite was encountered. MSXS was intercepted from 16.8-27.7 and 30-32.1 m with an intercept of strongly MU-altered undifferentiated rhyolite between. The footwall consists of MAFi.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	180.44	0	180.44	APS	Dillon Hume	08-Sep-15		<input checked="" type="checkbox"/>	
20	-58.6	183.2	0	183.2	ReflexEVS	Geotech	08-Sep-15	5987	<input checked="" type="checkbox"/>	
41	-58.7	183.4	0	183.4	ReflexEVS	Geotech	08-Sep-15	5761	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	13.90	OVBN Overburden									
<<Min: 13.5 - 16.8 0.01% Min: Pyrite>>											
13.90	16.80	RHY undifferentiated rhyolite	13.90	14.90	1.00						
13.9 - 16.8: Texture completely obscured by alteration											
<<Alt: 13.9 - 16.8 Strong (Alt) Muscovite>>											
16.80	17.70	OA Magnetite bearing sulphides	14.90	15.90	1.00						
16.8 - 17.7: Zone of high CP (5-10%) at the beginning of the intercept (16.8-17.1 m). Bands with MG+PY+/-PO+/-SP. Local cg euhedral PY. Fair amount of oxidized grains.											
<<Min: 16.8 - 17.1 5% Min: Chalcopyrite>>											
<<Min: 16.8 - 32.1 5% Min: Calcite>>											
		MCG	15.90	16.80	0.90						
			16.80	17.70	0.90						



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-252

From (m)	To (m)	Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
17.70	18.10	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MCG	17.70	18.10	0.40					
17.7 - 18.1: Oxidized laminated non-magnetic zone with PY+SP+/-GL												
18.10	19.30	OA	Magnetite bearing sulphides		18.10	18.70	0.60					
18.1 - 19.3: Wispy laminated PY+MG+SP+/-GL+/-CP with buckshot MG+PY.												
19.30	20.50	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MCG	18.70	19.30	0.60					
19.3 - 20.5: laminated PY+SP+/-CP+/-GL. Oxidized sulphide minerals within zone.												
20.50	21.50	OA	Magnetite bearing sulphides	MCG	19.90	20.50	0.60					
20.5 - 21.5: Massive PY+/-CP+/-SP with buckshot MG												
21.50	24.00	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	21.50	22.30	0.80					
21.5 - 24: Laminated PY+SP+GL+CP with minor CA groundmass. High-grade zone of SP and GL.												
<<Min: 21.5 - 24 15% Min: Sphalerite>>												
<<Min: 21.5 - 24 5% Min: Galena>>												
24.00	27.70	OA	Magnetite bearing sulphides	MCG	23.10	24.00	0.90					
24 - 27.7: laminated PY+MG+SP+/-GL+/-CP with good euhedral PY buckshot texture.												
<<Alt: 27.4 - 30 Strong (Alt) Muscovite>>												
<<Vein: 25.3 - 25.6 95% Quartz>> QZ-vein in massive sulphide with recrystallized cg CP												
27.70	30.00	RHY	undifferentiated rhyolite		27.00	27.70	0.70					
27.7 - 30: Strongly MU-altered rhyolite (?). Poor core recovery in this zone. Texture completely obscured by alteration.												
<<Min: 27.7 - 30 10% Min: Pyrite>>												
<<Struc: 27.7 - 29.3 Moderate (Alt) Fault>> Moderate fault gouge zone with poor core recovery												
					28.70	29.50	0.80					
					29.50	30.00	0.50					



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-252

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
30.00	31.00	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	30.00	31.00	1.00						
30 - 31: laminated PY+SP+GL+CA with cg PY buckshot texture. Small band (~10 cm) magnetite-bearing sulphide.											
31.00	32.10	OJ Heavily disseminated sulphides in proximal altered rock	31.00	32.10	1.10						
31 - 32.1: MU-CL altered rhyolite with patches of semi-to-massive sulphide. The bottom of the unit (21.9-32.1 m) would be better described as OB. <<Alt: 31 - 32.1 Strong (Alt) Muscovite>> <<Alt: 31 - 32.1 Moderate (Alt) Chlorite>>											
32.10	41.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	32.10	33.10	1.00						
32.1 - 41: CL-CA-BI mafi schist <<Min: 32.1 - 41 20% Min: Calcite>> <<Alt: 32.1 - 41 Strong (Alt) Chlorite>> <<Alt: 32.1 - 41 Strong (Alt) Biotite>>			33.10	34.10	1.00						
			34.10	35.10	1.00						
			35.10	36.60	1.50						
End of Hole @ 41											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-253

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	09-Sep-15
UTM Easting	414702.191	Core Size:	NQ3	Azimuth:	180	Date Logging Complete:	10-Sep-15
UTM Northing:	6815768.298	Casing Pulled?:	Yes	Dip:	-65	Drill Company:	Geotech
UTM Elev. (m):	1420.553	Casing Depth (m):	6	Length (m):	230	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	08-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	10-Sep-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

Hole K15-250 was drilled to test the continuity and the extension of the lower sulphide lens (MET7).
The upper units of this hole are coherent and lapilitic rhyolite, crosscut by mafic dykes. Below this, the mineralized unit (OJ domain) is intersected from 182 to 183.42m (hosts PO/PY/CP/SP/GL).
The hole ends at 230m with rhyolitic units crosscut by mafic sill from 202.26 to 216.1m
The hole shows progressive muscovite alteration in the hanging-wall (strong from 150.65 to 179.06m).
The massive sulfide is not intersected but the proximal alteration is observed.
Hole K15-253 (dip: -65) is part of a fan including hole K15-250(dip: -51) and hole K15-257 (dip: -81).

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-65	181.06	0	181.06	APS	Jerome de Pasquale	08-Sep-15		<input checked="" type="checkbox"/>	
25	-64.5	160.9	22.5	183.4	ReflexEVS	Geotech	08-Sep-15	5775	<input checked="" type="checkbox"/>	
50	-64.3	161.6	22.5	184.1	ReflexEVS	Geotech	08-Sep-15	5738	<input checked="" type="checkbox"/>	
75	-64.5	162.5	22.5	185	ReflexEVS	Geotech	08-Sep-15	5724	<input checked="" type="checkbox"/>	
101	-65	159.9	22.5	182.4	ReflexEVS	Geotech	08-Sep-15	5719	<input checked="" type="checkbox"/>	
125	-64.7	160.5	22.5	183	ReflexEVS	Geotech	08-Sep-15	5715	<input checked="" type="checkbox"/>	
150	-65	162.5	22.5	185	ReflexEVS	Geotech	08-Sep-15	5770	<input checked="" type="checkbox"/>	
176	-65.3	166.1	22.5	188.6	ReflexEVS	Geotech	08-Sep-15	5710	<input checked="" type="checkbox"/>	
200	-65.1	165.9	22.5	188.4	ReflexEVS	Geotech	08-Sep-15	5761	<input checked="" type="checkbox"/>	
224	-65.2	166	22.5	188.5	ReflexEVS	Geotech	08-Sep-15	5774	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	6.50	CASN Casing									

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-253

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
6.50	18.92	RHYvx Quartz and/or feldspar crystal tuff									
6.5 - 18.92: QZ eyes.											
<<Min: 6.5 - 80 1% Min: Calcite>> In vein, mostly associated with mafic dyke.											
<<Alt: 11.2 - 106.48 Weak (Alt) Muscovite>>											
<<Vein: 17.15 - 17.35 Quartz-Carbonate>> QZ-CA in fracture.											
18.92	23.60	RHYvx Quartz and/or feldspar crystal tuff									
18.92 - 23.6: Blue, thin schistosity, maybe due to BI enrichment. Weakly carbonaceous. Qz eyes.											
<<Min: 22 - 230 0.1% Min: Galena>>											
<<Vein: 18.98 - 19 Quartz-Carbonate>> QZ/CA											
<<Struc: 19.7 - 19.71 dominant foliation>>											
23.60	24.78	RHYvl Lapilli tuff									
<<Min: 23.6 - 35.2 1% Min: Pyrite>>											
<<Min: 23.6 - 35.2 2% Min: Pyrrhotite>> Elongated in foliation.											
<<Alt: 23.6 - 63.96 Weak (Alt) Chlorite>>											
24.78	27.52	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
24.78 - 27.52: Large chill margin, maybe two dykes.											
27.52	29.01	RHYvl Lapilli tuff									
29.01	31.56	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
29.01 - 31.56: Flow banded. Could be due to mafic dyke proximity.											
31.56	35.20	RHYvl Lapilli tuff									
31.56 - 35.2: Qz eyes.											
35.20	47.00	RHYcf Feldspar & feldspar quartz porphyry									
35.2 - 47: Qz eyes. Mafic dyke from 46.49m to 47.00m. QZ eyes and probably feldspar. Light shearing from 41.83 to 42.73m. Mafic dyke also from 41.83 to 42.73m (BI/CA).											
<<Min: 35.2 - 118 0.5% Min: Pyrite>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-253

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 35.2 - 118 2% Min: Pyrrhotite>> Some discontinuous vein and elongated in foliation.											
<<Struc: 38 - 40 Shear>> Locally fault gouge.											
47.00	49.00	RHY undifferentiated rhyolite									
47 - 49: Narrow unit, dark color. Could be flow banded but pseudo fragmental due to a secondary foliation.											
49.00	57.28	RHYva Coarse grained to ash tuff									
49 - 57.28: QZ eyes. Could be RHYvx (ash).											
57.28	68.59	RHYvl Lapilli tuff									
57.28 - 68.59: Could be pseudofragmental (secondary foliation). Locally flow (dyke proximity effect?).											
<<Alt: 63.96 - 81.74 Moderate (Alt) Chlorite>>											
<<Struc: 61.3 - 61.31 dominant foliation>>											
<<Struc: 61.35 - 61.36 Foliation>> Crosscut by Dfol											
<<Struc: 61.61 - 61.62 dominant foliation>>											
<<Struc: 61.65 - 61.66 Foliation>> Crosscut by Dfol											
68.59	69.75	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
68.59 - 69.75: Dyke, large chill margin, CL overprint.											
<<Struc: 68.59 - 68.6 Contact>> Mafic dyke upper contact.											
69.75	73.55	RHY undifferentiated rhyolite									
69.75 - 73.55: Weakly curdy or strongly lapilitic?											
73.55	77.55	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
73.55 - 77.55: Dyke, purple colored, AK-CA, CL altered.											
<<Struc: 75.55 - 75.76 Contact>> Mafic dyke upper contact.											
<<Struc: 77.35 - 77.36 Contact>> Mafic dyke lower contact.											
77.55	81.74	RHY undifferentiated rhyolite									
77.55 - 81.74: Weakly curdy or strongly lapilitic?											
<<Vein: 79 - 79.01 Pyrrhotite 10 deg. >> Late fracture filled.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-253

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
81.74	92.64	RHYva Coarse grained to ash tuff									
81.74 - 92.64: Dominantly ash. Speck of TML											
92.64	96.33	RHY undifferentiated rhyolite									
92.64 - 96.33: Could be curdy.											
<<Vein: 94 - 94.01 Tourmaline-Sulphide 8 deg. >> Late fracture filled. Tml-GL-CA											
96.33	106.48	RHYva Coarse grained to ash tuff									
96.33 - 106.48: Dominantly ash.											
106.48	130.13	RHYvl Lapilli tuff									
106.48 - 130.13: Maybe feldspar xl. Broken, sheared at lower contact. Local xenolith? Granular texture.											
<<Min: 118 - 142 2% Min: Pyrite>> Aggregated.											
<<Alt: 106.48 - 150.64 Moderate (Alt) Muscovite>>											
<<Struc: 107 - 116 Shear>> Core loss, locally fault gouge, accentuated by granular texture of the rock.											
<<Struc: 128 - 135.3 Shear>> Locally fault gouge.											
130.13	159.00	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
130.13 - 159: QZ eyes.											
<<Min: 142 - 149 5% Min: Pyrite>> and stringers, folded.											
<<Alt: 150.65 - 179.05 Strong (Alt) Muscovite>>											
<<Alt: 150.65 - 201.8 Moderate (Alt) Silicification>>											
<<Vein: 134.05 - 134.2 Quartz>> QZ											
<<Vein: 142 - 149 Pyrite>> PY stringers, wavy											
159.00	173.43	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
159 - 173.43: Blue color, possibly minor carbonaceous material marked in thin foliation.											
<<Min: 164 - 179 3% Min: Sphalerite>> and patch.											
<<Min: 164 - 179 5% Min: Pyrrhotite>> Stringers.											
<<Min: 164 - 179 0.5% Min: Galena>> Associated with SP.											
<<Min: 164 - 179 0.5% Min: Chalcopyrite>>											
<<Alt: 173.13 - 179.05 Moderate (Alt) Chlorite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-253

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %	
<<Vein: 165 - 165.01 Tourmaline-Sulphide 10 deg. >> Black vein, maybe TML and PY, creating local deformation of the foliation (late vein).												
<<Struc: 172.8 - 172.81 dominant foliation>>												
173.43	182.00	MDSw Coherent rhyolite flow with carbonaceous content	medium grey	179.00	180.50	1.50	B00264834	4.1	0.006	0.02	0.03	0.21
173.43 - 182: Silicified.												
<<Min: 179 - 183.43 1% Min: Sphalerite>>												
<<Min: 179 - 183.43 6% Min: Pyrrhotite>>												
<<Min: 179 - 183.43 4% Min: Chalcopyrite>>												
<<Min: 179 - 202.26 1% Min: Sphalerite>> Associatec with PY.												
<<Min: 179 - 202.26 4% Min: Pyrite>> Fine grain, and veinlets.												
<<Min: 179 - 202.26 0.5% Min: Galena>>												
<<Min: 179 - 202.26 0.1% Min: Arsenopyrite>>												
<<Alt: 179.05 - 185.15 Strong (Alt) Chlorite>>												
<<Struc: 177.85 - 177.86 dominant foliation>>												
<<Struc: 178.18 - 178.19 dominant foliation>>												
<<Struc: 181.25 - 181.26 dominant foliation>>												
182.00	183.48	OJ Heavilly disseminated sulphides in proximal altered rock	green	182.00	182.60	0.60	B00264836	24.4	0.066	1.64	0.15	0.29
182 - 183.48: RHY or MDSw unit altered CL and SI.												
183.48	188.12	MDSc Carbonaceous dominant mudstone	black	182.60	183.48	0.88	B00264837	19	0.057	1.28	0.11	0.53
				183.48	184.95	1.47	B00264838	1.6	0.005	0.05	0.02	0.25
183.48 - 188.12: Altered CL and SI. Carbonaceous from 184 to 184.45m. Flow/mudstone sequense sugesting top down.												
<<Alt: 185.15 - 187.93 Moderate (Alt) Chlorite>>												
<<Vein: 187.92 - 188.12 Quartz>> QZ, probably at contact between two units.												
<<Struc: 186.85 - 186.86 dominant foliation>>												
<<Struc: 187.35 - 187.36 dominant foliation>>												
188.12	202.26	RHYcw Curdy textured-flow banded (flows, subvolcanics)	grey-green	184.95	186.45	1.50	B00264839	4.7	0.019	0.22	0.04	0.26
				186.45	187.93	1.48	B00264841	1.3	-0.005	0.05	0.01	0.06
188.12 - 202.26: QZ eyes, patchy PY/AS/SP.												



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-253

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 201.26 - 213.78 10% Min: Calcite>> Mafic sill. <<Alt: 199.48 - 201.8 Moderate (Alt) Chlorite>> <<Alt: 201.26 - 216.33 Moderate (Alt) Chlorite>> <<Vein: 188.12 - 201 Massive Sulphide/Sulphides undifferentiated>> PY and PO stringers, few SP <<Struc: 193.92 - 193.93 dominant foliation>> <<Struc: 194.21 - 194.22 dominant foliation>> <<Struc: 194.95 - 194.96 dominant foliation>> <<Struc: 199.3 - 199.33 Weak (Alt) Fault>> Minor fault. Fracture filled with PY/SP/GL. <<Struc: 199.89 - 199.9 dominant foliation>>			212.10	213.60	1.50	B00264842	2	0.024	-0.01	0.03	0.22
202.26 216.10 MAFI Mafic Intrusions (primarily green footwall mafic intrusion)			213.60	215.10	1.50	B00264843	4.2	0.014	0.02	0.02	0.13
202.26 - 216.1: Green-grey alteration on the edge, strong BI at upper contact. Mineralized at lower contact. CA. <<Min: 211 - 213.88 1% Min: Sphalerite>> and patch. <<Min: 211 - 230 3% Min: Pyrite>> fine to medium grain. <<Min: 215.1 - 216.1 1% Min: Sphalerite>> <<Min: 215.1 - 216.1 3% Min: Pyrrhotite>> <<Min: 215.1 - 216.1 0.1% Min: Galena>> <<Min: 215.1 - 216.1 2% Min: Chalcopyrite>> <<Alt: 202.26 - 207.58 Moderate (Alt) Silicification>> Green-grey alteration. <<Alt: 207.58 - 215.1 Strong (Alt) Silicification>> Green-grey alteration <<Alt: 215.1 - 216.1 Moderate (Alt) Chlorite>> <<Struc: 203.45 - 203.47 Moderate (Alt) Fault>> At contact with BI alteration patch. <<Struc: 205.95 - 205.96 dominant foliation>> <<Struc: 212.62 - 212.63 dominant foliation>> <<Struc: 213.33 - 213.34 dominant foliation>> <<Struc: 214 - 214.05 Moderate (Alt) Fault>> Minor fault. <<Struc: 215.39 - 215.4 dominant foliation>>			215.10	216.10	1.00	B00264844	12.4	0.093	0.25	0.05	0.52
216.10 230.00 RHYcw Curdy textured-flow banded grey-green (flows, subvolcanics)			216.10	217.60	1.50	B00264845	4.9	0.035	0.17	0.04	0.43
216.1 - 230: QZ eyes, locally folded. From 228.04 to 228.25m, the rock looks different with PO (?). <<Alt: 216.1 - 230 Weak (Alt) Muscovite>> Strong at contact with CL alteration. <<Struc: 217.6 - 217.8 Weak (Alt) Fault>> Minor broken zone.			217.60	219.10	1.50	B00264846	-0.3	-0.005	-0.01	-0.01	0.01



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-253

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 219.69 - 219.7 dominant foliation>>											
<<Struc: 220.24 - 220.25 dominant foliation>>											
<<Struc: 220.67 - 220.68 dominant foliation>>											
<<Struc: 223.95 - 223.96 dominant foliation>>											
<<Struc: 227.41 - 227.42 dominant foliation>>											
End of Hole @ 230											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-254

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	09-Sep-15
UTM Easting	415050.927	Core Size:	NQ3	Azimuth:	179.86	Date Logging Complete:	10-Sep-15
UTM Northing:	6815377.977	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1386.875	Casing Depth (m):	12	Length (m):	100	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	08-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	09-Sep-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

K15-254 was drilled as a resource infill hole between historic holes K94-002 and K95-087. Overburden was encountered to a depth of 19 m. The hanging wall of the MSXS (19-39.3 m) consists of mixed MU-altered felsic volcanics and minor carbonaceous units. The first MSXS was intercepted from 39.3-40.3 and consisted of the OC ore type. Below this there is an undifferentiated Mu-altered rhyolite unit to a depth of 42.1 m. From 42.1-51.7 m MSXS was encountered, consisting of ore types OB, OA, and OJ. Below this final ore intercept there was MU-CL+/-Cl altered felsic volcanics to a depth of 54.3 m. The footwall consists of MAFi, RHYi, and a minor interval of MU-altered RHYv.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	179.86	0	179.86	APS	Dillon Hume	09-Sep-15		<input checked="" type="checkbox"/>	Rig set-up azimuth
53	-60	172.2	22.5	194.7	ReflexEVS	Geotech	09-Sep-15	5613	<input checked="" type="checkbox"/>	
80	-58.4	161.4	22.5	183.9	ReflexEVS	Geotech	09-Sep-15	5691	<input checked="" type="checkbox"/>	
100	-58.5	166.1	22.5	188.6	ReflexEVS	Geotech	09-Sep-15	5728	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	19.00	OVBN Overburden									
19.00	21.20	MDSt Rhyolite tuff dominant mudstone									
19 - 21.2: minor (~5%) carbonaceous material within the well foliated schist											
<<Min: 19 - 25.1 2% Min: Pyrite>>											
<<Min: 19 - 25.1 1% Min: Pyrrhotite>>											
<<Alt: 19 - 38.3 Strong (Alt) Muscovite>>											
21.20	25.10	RHYv Rhyolite volcanoclastic									
21.2 - 25.1: strongly foliated MU-QZ schist. Very hard to determine the original texture (volcanoclastic vs coherent) due to alteration.											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-254

From (m)		To (m)		Rocktype & Description									
<<Vein: 23.5 - 24.1 40% Quartz>>		Zone with multiple QZ-AK veins											
<<Struc: 22.93 - 22.94 dominant foliation>>													
25.10	28.00	MDS	t	Rhyolite tuff dominant mudstone									
25.1 - 28: Minor carbonaceous component (~10%) within well foliated MU-schist. Appears to be volcanoclastic.													
<<Min: 25.1 - 28 5% Min: Pyrite>>													
28.00	35.60	RHY	v	Rhyolite volcanoclastic									
28 - 35.6: Mu-QZ schist. Hard to determine original texture due to MU-alteration, but there appears to be minor volcanoclastic textures present.													
<<Min: 28 - 39.3 3% Min: Pyrite>>													
<<Min: 28 - 39.3 2% Min: Pyrrhotite>>													
<<Struc: 28.7 - 28.71 dominant foliation>>													
<<Struc: 34.89 - 34.9 dominant foliation>>													
35.60	37.10	MDS	t	Rhyolite tuff dominant mudstone	35.60	37.10	1.50	B00268707	0.8	0.014	-0.01	0.01	0.03
35.6 - 37.1: ~15% carbonaceous material in GR-MU-QZ schist.													
<<Struc: 35.7 - 35.8 Strong (Alt) Fault>>		weak-moderate fault gouge zone											
37.10	39.30	RHY	v	Rhyolite volcanoclastic	37.10	38.20	1.10	B00268708	1.7	0.022	0.01	0.02	0.03
37.1 - 39.3: MU-QZ+/-CA schist from 39.1-39.3 m there appears to be a fg ~equigranular texture possibly related to a dyke (?)													
<<Min: 39.1 - 39.3 15% Min: Calcite>>													
<<Alt: 39.2 - 40.5 Strong (Alt) Cordierite>>													
<<Struc: 37.68 - 37.69 dominant foliation>>													
39.30	40.30	OC		Chalcopyrite-pyrrhotite net textured sulphides	39.30	40.30	1.00	B00268712	330	3.98	10.2	0.17	1.08
39.3 - 40.3: Good CP+PO+MG net texture. MU+CI groundmass.													
<<Min: 39.3 - 40.3 10% Min: Chalcopyrite>>		CP-PO net textured rock											
<<Min: 39.3 - 51.7 5% Min: Calcite>>													
<<Alt: 39.3 - 40.5 Moderate (Alt) Chlorite>>													

CG

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-254
From (m) **To (m)** **Rocktype & Description**

40.30 42.10 RHY undifferentiated rhyolite

40.3 - 42.1: Original texture obscured by alteration. Moderate-heavily disseminated PY+PO+/-CP near the top and bottom of the unit

<<Min: 40.3 - 42.1 5% Min: Pyrite>>

<<Min: 40.3 - 42.1 2% Min: Pyrrhotite>>

<<Min: 40.3 - 42.1 2% Min: Chalcopyrite>>

<<Alt: 40.5 - 41.9 Strong (Alt) Muscovite>>

<<Alt: 41.9 - 42.2 Moderate (Alt) Chlorite>>

<<Alt: 41.9 - 42.2 Strong (Alt) Cordierite>>

<<Struc: 41.43 - 41.44 dominant foliation>>

42.10 42.80 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

42.1 - 42.8: laminated massive PY+SP. Patchy AP and CI from 42.1-42.2 m.

<<Min: 42.1 - 42.2 2% Min: Arsenopyrite>>

42.80 43.40 OA Magnetite bearing sulphides

42.8 - 43.4: Laminated PY+SP+MG

43.40 48.30 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

43.4 - 48.3: laminated-banded PY+SP+GL+/-CP. High grade SP & GL from 46.7-49.1 m (~20% SP and ~3-4% GL).

<<Min: 46.6 - 49.1 20% Min: Sphalerite>>

<<Min: 46.6 - 49.1 4% Min: Galena>>

<<Struc: 43.54 - 43.55 dominant foliation>>

<<Struc: 47.33 - 47.34 dominant foliation>>

48.30 49.10 OA Magnetite bearing sulphides

48.3 - 49.1: laminated PY+SP+GL+CA with some cg PY buckshot texture mostly confined to SP bands.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
40.30	41.20	0.90	B00268713	60.7	0.209	1.26	0.28	0.57

41.20	42.10	0.90	B00268714	38.7	0.288	0.91	0.29	0.58
-------	-------	------	-----------	------	-------	------	------	------

42.10	42.80	0.70	B00268715	171	1.36	0.91	1.68	10.9
-------	-------	------	-----------	-----	------	------	------	------

42.80	43.40	0.60	B00268716	120	0.591	0.22	1.69	8.55
-------	-------	------	-----------	-----	-------	------	------	------

43.40	44.40	1.00	B00268717	233	1.47	0.24	2.36	9.06
-------	-------	------	-----------	-----	------	------	------	------

44.40	45.40	1.00	B00268718	152	1.18	0.3	1.78	10.1
45.40	46.40	1.00	B00268719	103	0.813	0.19	0.54	3.62
46.40	47.40	1.00	B00268721	295	2.29	0.57	3.87	10.8
47.40	48.30	0.90	B00268722	301	1.08	0.31	4.47	13.4
48.30	49.10	0.80	B00268723	128	0.622	0.34	3.41	13.9



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-254

From (m)	To (m)	Rocktype & Description											From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %	
49.10	50.60	OJ	Heavilly disseminated sulphides in proximal altered rock									MCG	49.10	49.90	0.80	B00268724	74.6	1.38	1.75	0.71	2.89	
49.1 - 50.6: Py+/-CP stringers withing CL+MU+CI altered schist																						
<<Alt: 49.1 - 49.5 Moderate (Alt) Cordierite>>																						
<<Alt: 49.1 - 50.6 Moderate (Alt) Muscovite>>																						
<<Alt: 49.1 - 50.6 Moderate (Alt) Chlorite>>																						
<<Struc: 49.75 - 49.76 dominant foliation>>																						
<<Struc: 50.3 - 50.4 Strong (Alt) Fault>> weak-moderate fault gouge zone																						
50.60	51.10	OA	Magnetite bearing sulphides									MCG	50.60	51.70	1.10	B00268726	98.2	0.619	0.31	1.92	9.35	
50.6 - 51.1: Banded/laminated mg PY and cg PY+SP. First ~10 cm has no magnetite (OB).																						
51.10	51.70	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides									MCG										
51.1 - 51.7: Laminated cg and mg PY and SP. Local PY buckshot texture. Trace patchy AP.																						
51.70	54.30	RHY	undifferentiated rhyolite										51.70	53.20	1.50	B00268727	17.4	0.09	0.07	0.34	1.26	
51.7 - 54.3: Strong Mu-alteration in rhyolite, with a band of OA (52.2-52.3 m) and OJ (53.8-54.1 m). Disseminated PY+/-AP in the MU-schist component.																						
<<Min: 51.7 - 54.4 10% Min: Calcite>>																						
<<Min: 52.2 - 52.3 80% Min: Pyrite>> Zone of MSXS (OA)																						
<<Min: 52.3 - 53.8 5% Min: Pyrite>>																						
<<Min: 52.3 - 53.8 0.5% Min: Arsenopyrite>>																						
<<Min: 53.8 - 54.1 5% Min: Sphalerite>>																						
<<Min: 53.8 - 54.1 15% Min: Pyrite>>																						
<<Min: 53.8 - 54.1 1% Min: Galena>>																						
<<Alt: 51.7 - 52.2 Moderate (Alt) Muscovite>>																						
<<Alt: 51.7 - 52.2 Moderate (Alt) Chlorite>>																						
<<Alt: 52.3 - 53.8 Strong (Alt) Muscovite>>																						
<<Alt: 53.8 - 54.1 Moderate (Alt) Chlorite>>																						
<<Alt: 54.1 - 54.3 Strong (Alt) Muscovite>>																						
<<Struc: 53.7 - 53.8 Weak (Alt) Fault>> weak-moderate fault gouge zone																						
												53.20	54.30	1.10	B00268728	26.1	0.137	0.18	0.33	1.67		



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-254

From (m) To (m) Rocktype & Description

54.30 83.00 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

54.3 - 83: CL-BI-CA schist

<<Min: 54.4 - 80.3 0.01% Min: Pyrrhotite>>

<<Min: 54.4 - 80.3 20% Min: Calcite>>

<<Min: 80.3 - 83 1% Min: Pyrite>>

<<Min: 80.3 - 84 1% Min: Sphalerite>>

<<Min: 80.3 - 84 0.5% Min: Galena>>

<<Min: 80.3 - 84 5% Min: Calcite>>

<<Alt: 54.3 - 80.3 Strong (Alt) Chlorite>>

<<Alt: 54.3 - 80.3 Strong (Alt) Biotite>>

<<Alt: 80.3 - 96.3 Strong (Alt) Silicification>>

<<Alt: 80.3 - 96.3 Strong (Alt) Muscovite>>

<<Struc: 61.8 - 61.81 dominant foliation>>

<<Struc: 65.05 - 65.06 dominant foliation>>

<<Struc: 68.2 - 68.21 dominant foliation>>

<<Struc: 71.37 - 71.38 dominant foliation>>

<<Struc: 80.4 - 82.5 Weak (Alt) Fault>> moderate-strong fault gouge zone with significant core loss

83.00 84.00 RHYi Aphanitic Rhyolite (intrusion)

83 - 84: mixture of aphanitic rhyolite and QZ-MU schist.

<<Min: 83 - 84 2% Min: Pyrite>>

84.00 84.50 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

84 - 84.5: MU-CA-CL schist with a similar texture to the CL-BI-CA schist

<<Min: 84 - 84.5 10% Min: Calcite>>

<<Min: 84 - 88.9 1% Min: Pyrite>>

84.50 85.70 RHYi Aphanitic Rhyolite (intrusion)

84.5 - 85.7: QZ-MU schist

<<Min: 84.5 - 85.7 5% Min: Calcite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
54.30	55.80	1.50	B00268729	1.4	0.013	-0.01	0.03	0.11

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-254

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
85.70	88.90	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
85.7 - 88.9: MU-altered and silicified MAFi, with a 30 cm RHYi from 88-88.3 m											
<<Min: 85.7 - 88.9 10% Min: Calcite>>											
88.90	95.00	RHYi	Aphanitic Rhyolite (intrusion)								
88.9 - 95: Massive aphanitic rhyolite with local zones of QZ-MU schist and QZ-veining											
<<Min: 88.9 - 96.3 3% Min: Pyrite>>											
<<Min: 88.9 - 100 5% Min: Calcite>>											
<<Vein: 93.7 - 94.3 40% Quartz>> zone with multiple QZ-AK veins											
95.00	100.00	RHYv	Rhyolite volcaniclastic								
95 - 100: Strong MU-alteration of volcaniclastic rocks											
<<Min: 96.3 - 100 1% Min: Pyrite>>											
<<Alt: 96.3 - 100 Strong (Alt) Muscovite>> Hard to determine whether this is overprint alteration associated with the RHYi or original alteration associated with the mineralizing event											
End of Hole @ 100											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-255

From (m) To (m) Rocktype & Description

15.90 17.10 OA Magnetite bearing sulphides

MCG

15.9 - 17.1: laminated PY+SP+GL+MG

<<Min: 15.9 - 20 20% Min: Sphalerite>> Bands of high-grade SP+GL in MSXS

<<Min: 15.9 - 20 5% Min: Galena>> Bands of high-grade SP+GL in MSXS

17.10 21.70 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

MCG

17.1 - 21.7: laminated PY+SP+GL+/-CA. Many bands of high grade SP+GL. Lower contact with MAFi appears fairly sharp, with the MAFi having minor alteration (?).

<<Min: 18.7 - 19.4 15% Min: Calcite>>

<<Min: 19.4 - 21.7 5% Min: Calcite>>

<<Struc: 17.11 - 17.12 dominant foliation>> sulphide lamination

<<Struc: 18.52 - 18.53 dominant foliation>> sulphide lamination

<<Struc: 19.61 - 19.62 dominant foliation>> sulphide lamination

<<Struc: 20 - 20.1 Weak (Alt) Fault>> fault gouge zone in MSXS

21.70 64.90 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

21.7 - 64.9: From 21.7-25.2 m the unit is the typical CL-BI-CA schist MAFi. There is much less CA from 25.2-64.9 m. Foliation changes from ~perpendicular to the core axis to ~parallel to the core axis, from 42-64.9 m.

<<Min: 21.7 - 25.2 20% Min: Calcite>>

<<Min: 21.7 - 80 0.5% Min: Pyrite>> trace PY

<<Min: 25.2 - 63.5 5% Min: Calcite>>

<<Min: 63.5 - 67 30% Min: Calcite>>

<<Alt: 21.7 - 64.9 Strong (Alt) Chlorite>>

<<Alt: 21.7 - 64.9 Strong (Alt) Biotite>>

<<Struc: 22.95 - 22.96 dominant foliation>> CA band in MAFi

<<Struc: 34.75 - 34.76 dominant foliation>>

<<Struc: 40.71 - 40.72 dominant foliation>>

<<Struc: 42.5 - 42.51 dominant foliation>> BT foliation in MAFi

<<Struc: 45.9 - 45.91 Foliation>> BT foliation in MAFi

<<Struc: 48.1 - 48.11 Foliation>> BT foliation in MAFi

<<Struc: 49.3 - 53 Moderate (Alt) Fault>> moderately broken/faulted rock

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
15.90	16.50	0.60	B00268736	380	3.15	0.47	4.06	11.8
16.50	17.10	0.60	B00268737	233	2.01	0.39	2.82	12.1
17.10	18.00	0.90	B00268738	324	2.5	0.25	4.9	10.1
18.00	19.00	1.00	B00268739	454	4.37	0.45	4.41	9.24
19.00	20.00	1.00	B00268741	135	1.25	0.11	2.33	8.51
20.00	21.00	1.00	B00268742	133	0.636	0.11	2.69	8.98
21.00	21.70	0.70	B00268743	288	1.4	3.02	4.79	9.62
21.70	23.20	1.50	B00268744	0.8	0.012	0.02	-0.01	0.03
23.20	24.70	1.50	B00268745	-0.3	0.006	-0.01	-0.01	0.01
24.70	26.20	1.50	B00268746	0.6	0.01	-0.01	-0.01	0.02



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-255

From (m)		To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 50 - 50.01 Foliation>>												
<<Struc: 53.5 - 53.51		Foliation>>	BT foliation in MAFi									
<<Struc: 55.8 - 55.81		Foliation>>	BT foliation in MAFi									
<<Struc: 58.8 - 58.81		Foliation>>	BT foliation in MAFi									
<<Struc: 60.8 - 60.81		Foliation>>	BT foliation in MAFi									
<<Struc: 63.8 - 63.81		Foliation>>	BT foliation in MAFi									
64.90		67.00	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
64.9 - 67: Strongly faulted MAFi(?). Deformation appears to be between ductile and brittle. Better described as a cataclasite/protomylonite												
<<Alt: 64.9 - 74 Moderate (Alt) Chlorite>>												
<<Struc: 64.9 - 67 Strong (Alt) Fault>> strongly faulted and healed rock. Appears to be between brittle and ductile deformation.												
67.00		77.40	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
67 - 77.4: QZ-CA-CL schist. Has intrusive granular texture. Appears more dioritic in composition than the typical MAFi. Strong CL-alteration with no mineralization from 74-77.4 m.												
<<Min: 67 - 76.8 15% Min: Calcite>>												
<<Min: 76.8 - 80 30% Min: Calcite>>												
<<Alt: 74 - 77.4 Strong (Alt) Chlorite>>												
<<Struc: 67.9 - 67.91		Foliation>>	CL foliation in MAFi									
<<Struc: 69.8 - 69.81		Foliation>>	CL foliation in MAFi									
<<Struc: 73.63 - 73.64 dominant foliation>>												
<<Struc: 76.9 - 80 Strong (Alt) Fault>> strongly faulted and healed rock. Appears to be between brittle and ductile deformation.												
77.40		80.00	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
77.4 - 80: Strongly faulted MAFi(?). Deformation appears to be between ductile and brittle. Better described as a cataclasite/protomylonite												
<<Alt: 77.4 - 80 Moderate (Alt) Chlorite>>												
End of Hole @ 80												

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-256

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	12-Sep-15
UTM Easting	415100.747	Core Size:	HQ3	Azimuth:	180.76	Date Logging Complete:	12-Sep-15
UTM Northing:	6815309.079	Casing Pulled?:	Yes	Dip:	-50	Drill Company:	Geotech
UTM Elev. (m):	1393.181	Casing Depth (m):	11.5	Length (m):	32	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	11-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	11-Sep-15
Local Elev. (m):						Purpose:	Metallurgical Twin
Comments:						Parent Hole:	K15-255

K15-256 was drilled as a twin of K15-255 (ABM43) in order to collect a sample of and test MET5 domain. The hole was cased to a depth of 11.5 m, where bedrock is encountered. From 11.5-12.6 m a highly oxidized and Mu-altered rhyolite is encountered. MSXS is intercepted from 12.6-22.6 m, consisting of OI, OA, and OB ore types. The structural footwall consists of a CL-BI+/-CA schist (MAFi) unit.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-50	180.76	0	180.76	APS	Dillon Hume	11-Sep-15		<input checked="" type="checkbox"/>	Drill rig alignment azimuth
17	-49.8	160.9	22.5	183.4	ReflexEVS	Geotech	11-Sep-15	5725	<input checked="" type="checkbox"/>	
32	-50.4	161.1	22.5	183.6	ReflexEVS	Geotech	11-Sep-15	5738	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	11.50	OVBN Overburden									
11.50	12.60	RHY undifferentiated rhyolite	11.50	12.60	1.10						
11.5 - 12.6: Hard to determine original texture due to alteration and near surface fracturing and oxidation											
<<Alt: 11.5 - 13.2 Strong (Alt) Muscovite>>											
12.60	13.20	OI Heavily disseminated sulphides in host schist	12.60	13.20	0.60						
12.6 - 13.2: Heavily disseminated PY+SP+GL+/-CP in MU-schist											
13.20	14.20	OA Magnetite bearing sulphides	13.20	14.20	1.00						
13.2 - 14.2: laminated PY+SP+GL with cg MG buckshot texture											
MCG											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-256

From (m)	To (m)	Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
14.20	17.10	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	14.20	15.20	1.00					
14.2 - 17.1: Laminated PY+SP+GL+/-CA. Bands with concentrated SP+GL.												
<<Min: 15.1 - 21.4 20% Min: Sphalerite>>					15.20	16.20	1.00					
<<Min: 15.1 - 21.4 5% Min: Galena>>					16.20	17.10	0.90					
17.10	18.10	OA	Magnetite bearing sulphides	MG	17.10	18.10	1.00					
17.1 - 18.1: Laminated PY+SP+GL+MG+CA+/-CP												
<<Min: 17.1 - 22.6 5% Min: Calcite>>												
18.10	22.10	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MCG	18.10	19.10	1.00					
18.1 - 22.1: Laminated PY+SP+GL+/-CA+/- Minor cg PY buckshot texture												
<<Vein: 18.7 - 19 85% Quartz>> QZ-carb vein in MSXS					19.10	20.10	1.00					
					20.10	21.10	1.00					
					21.10	22.10	1.00					
					22.10	22.60	0.50					
22.10	22.60	OI	Heavily disseminated sulphides in host schist									
22.1 - 22.6: Heavily disseminated to semi-massive PY+SP+GL+CP in Mu-schist												
<<Alt: 22.1 - 22.6 Strong (Alt) Muscovite>>												
<<Vein: 22.1 - 22.5 50% Quartz>> QZ-carb vein in semi-massive sulphide												
22.60	32.00	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)									
22.6 - 32: Typical CL-BI-CA schist (MAFi) from 22.6-26.6 m. From 26.6-32 m there is only CA in fractures and the schistosity appears less continuous.												
<<Min: 22.6 - 26.6 20% Min: Calcite>>												
<<Min: 22.6 - 32 0.5% Min: Pyrite>>												
<<Min: 26.6 - 32 5% Min: Calcite>>												
<<Alt: 22.6 - 32 Strong (Alt) Chlorite>>												
<<Alt: 22.6 - 32 Strong (Alt) Biotite>>												

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-256

From (m) To (m)

Rocktype & Description

From (m)

To (m)

Width

Sample

Ag PPM

Au PPM

Cu %

Pb %

Zn %

End of Hole @ 32

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-257

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	11-Sep-15
UTM Easting	414702.244	Core Size:	NQ3	Azimuth:	181.06	Date Logging Complete:	13-Sep-15
UTM Northing:	6815768.299	Casing Pulled?:	Yes	Dip:	-81	Drill Company:	Geotech
UTM Elev. (m):	1420.532	Casing Depth (m):	6	Length (m):	218	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	10-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	12-Sep-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

Hole K15-257 was drilled to test the continuity and the extension of the lower sulphide lens (MET7).

Hole K15-257 is made up of primarily rhyolitic units (RHYcw and RHYvl) including two mudstone units. The top of the hole is marked by mafic dykes.

The hole shows progressive muscovite alteration in the hanging-wall, with the footwall intersecting a rhyolite unit.

A narrow chlorite alteration zone from 206.27 to 206.76m hosts PO/CP/PY. The hole shows progressive muscovite alteration in the hanging-wall (strong from 203.52 to 206.27m). This drill hole encountered a significant fault (74.4m to 77.2m) below a mafic dyke. Hole K15-257 ends at 218m with a muscovite altered rhyolite unit.

The massive sulfide is not intersected and the proximal alteration is intersected deeper than expected.

Hole K15-257 (dip: -81) is part of a fan including hole K15-250 (dip: -51) and hole K15-253 (dip: -65).

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-81	181.06	0	181.06	APS	Jerome de Pasquale	09-Sep-15		<input checked="" type="checkbox"/>	
26	-81.1	160.4	22.5	182.9	ReflexEVS	Geotech	10-Sep-15	5750	<input checked="" type="checkbox"/>	
50	-80.2	158.9	22.5	181.4	ReflexEVS	Geotech	10-Sep-15	5764	<input checked="" type="checkbox"/>	
74	-79.6	160.6	22.5	183.1	ReflexEVS	Geotech	10-Sep-15	5744	<input checked="" type="checkbox"/>	
101	-79.4	162.4	22.5	184.9	ReflexEVS	Geotech	10-Sep-15	5753	<input checked="" type="checkbox"/>	
125	-78.9	163.4	22.5	185.9	ReflexEVS	Geotech	10-Sep-15	5684	<input checked="" type="checkbox"/>	
150	-78	163.8	22.5	186.3	ReflexEVS	Geotech	10-Sep-15	5775	<input checked="" type="checkbox"/>	
175	-77.8	164.2	22.5	186.7	ReflexEVS	Geotech	10-Sep-15	5700	<input checked="" type="checkbox"/>	
200	-77.2	163.6	22.5	186.1	ReflexEVS	Geotech	10-Sep-15	5768	<input checked="" type="checkbox"/>	
218	-77.2	165.9	22.5	188.4	ReflexEVS	Geotech	10-Sep-15	5740	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	5.75	CASN									
		Casing									
5.75	9.29	RHYva									
		Coarse grained to ash tuff									
		grey-green									
5.75 - 9.29: QZ eyes.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-257

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<div><<Min: 6 - 58.95 1% Min: Pyrrhotite>> Elongated in foliation, few stringers.</div> <div><<Min: 6 - 63 3% Min: Calcite>></div> <div><<Min: 6 - 100 0.1% Min: Pyrite>></div>											
9.29	10.32	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)			light grey					
9.29 - 10.32: Dyke, foliated.											
<div><<Alt: 9.29 - 61 Trace (Alt) Muscovite>></div> <div><<Struc: 10.3 - 10.31 dominant foliation>></div>											
10.32	14.45	RHYvl	Lapilli tuff			grey-green					
10.32 - 14.45: QZ eyes.											
<div><<Vein: 10.32 - 10.33 Quartz-Tourmaline-Sulphide 40 deg. >> QZ-probably TML, PY/GL large xtl.</div> <div><<Struc: 10.32 - 10.33 Vein>> QZ/GL/PY</div>											
14.45	15.47	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)			light grey					
14.45 - 15.47: Dyke, foliated.											
15.47	18.02	RHYvl	Lapilli tuff			grey-green					
15.47 - 18.02: QZ eyes. Few sulfide stringers.											
<div><<Struc: 16.16 - 16.17 dominant foliation>></div> <div><<Struc: 16.68 - 16.69 dominant foliation>></div>											
18.02	23.30	MDSt	Rhyolite tuff dominant mudstone			medium grey					
18.02 - 23.3: QZ eyes. Probably carbonaceous, thin foliation, blueish color.											
<<Struc: 22.64 - 22.65 dominant foliation>>											
23.30	25.52	RHYvl	Lapilli tuff								
23.3 - 25.52: QZ eyes.											
<div><<Vein: 23.32 - 23.35 Quartz-Tourmaline-Sulphide 25 deg. >> QZ maybe TML, GL probably reactivated.</div> <div><<Struc: 23.3 - 23.31 Vein>> QZ-PY</div>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-257

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
25.52	28.16	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
25.52 - 28.16: 2 dykes? Purple color.Large chill margin.											
28.16	40.39	RHYvl Lapilli tuff									
28.16 - 40.39: Crosscut by mafic dyke from 30.41 to 31.00m, CA running until 34.79m, and dyke from 39.53 to 39.89m.											
<<Struc: 28.78 - 28.79 dominant foliation>>											
<<Struc: 37.2 - 37.24 Weak (Alt) Fault>> minor fault											
40.39	58.73	RHYva Coarse grained to ash tuff									
40.39 - 58.73: Dark green RHYcw or chill margin from 47.00 to 48.73m, proximity of dyke. Lightly carbonaceous from 53.15 to 56.08m. Dyke with AK-CA weak CL from 41.66 to 43.00m.											
<<Vein: 45.74 - 46.24 Quartz>> QZ											
<<Vein: 53.7 - 53.71 Quartz-Sulphide 25 deg. >> QZ, PY											
<<Vein: 57.9 - 58.2 Quartz-Sulphide>> QZ vein or pod, incorporating host rock, GL, vuggy.											
<<Struc: 43.25 - 43.26 dominant foliation>>											
58.73	74.40	RHYvl Lapilli tuff									
58.73 - 74.4: Strongly lapilitic or curdy texture, dyke proximity effect. Dyke from 62.87 to 63.46m and 71.04 to 74.40m (same nature than dyke at 62.87m).											
<<Min: 58.95 - 61 2% Min: Pyrrhotite>> And patchy.											
<<Min: 58.95 - 61 0.5% Min: Chalcopyrite>> Associated with PO.											
<<Min: 63 - 100 1% Min: Calcite>> and associated with mafic dyke, few veins.											
<<Alt: 61 - 100 Weak (Alt) Chlorite>> Accentuated close to and in the mafic dyke.											
74.40	83.00	MDSt Rhyolite tuff dominant mudstone									
74.4 - 83: Granular texture, white mineral feldspar shape (2 to 5mm) QZ vein/pod incorporating host rock. Missing core from 74.4 to 77.00, fault gouge gone.											
<<Vein: 81.5 - 83 Quartz>> QZ pod incorporating host vrock											
<<Struc: 74.4 - 77.2 Strong (Alt) Fault>> Major, fault gouge missing about 2.5m of core.											
<<Struc: 74.4 - 80 Weak (Alt) Shear>> Shear zone, in carbonaceous unit, QZ pod, sericite in fracture, some facturation along the core axis (10 degrees).											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-257

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
83.00	90.30	RHYcf Feldspar & feldspar quartz porphyry									
83 - 90.3: Could be RHYvl with feldspar xtl. Dominantly coherent curdy or strongly lapilitic.											
<<Min: 83 - 90.3 1% Min: Pyrrhotite>> Elongated in foliation.											
90.30	92.80	RHYvl Lapilli tuff									
90.3 - 92.8: Dominantly RHYvl.											
92.80	97.13	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
92.8 - 97.13: Dominantly curdy texture.											
<<Struc: 95.4 - 95.45 Moderate (Alt) Fault>> minor fault.											
97.13	130.27	RHYvl Lapilli tuff									
97.13 - 130.27: Feldspar?. Rare QZ eyes, dominantly RHYvl, locally flow banded.											
<<Min: 128 - 130 2% Min: Pyrrhotite>> Elongated in foliation.											
<<Vein: 103.24 - 103.26 Quartz-Carbonate 85 deg. >> QZ-dolomite or AK											
<<Struc: 100.75 - 100.76 dominant foliation>>											
<<Struc: 109.92 - 109.93 dominant foliation>> Dominant fracture.											
<<Struc: 112.31 - 112.35 Weak (Alt) Fault>> minor.											
<<Struc: 114.74 - 114.76 Moderate (Alt) Fault>> minor, few fault gouge.											
<<Struc: 115.6 - 115.61 dominant foliation>>											
<<Struc: 127.83 - 127.84 dominant foliation>>											
130.27	132.10	MDSt Rhyolite tuff dominant mudstone									
130.27 - 132.1: QZ eyes.											
<<Struc: 130.81 - 130.82 dominant foliation>>											
132.10	158.53	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
132.1 - 158.53: QZ eyes. Locally wavy PY stringers.											
<<Min: 136.4 - 144.28 1% Min: Sphalerite>>											
<<Min: 136.4 - 144.28 3% Min: Pyrite>>											
<<Min: 136.4 - 144.28 0.4% Min: Galena>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-257

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 136.4 - 174.21 1% Min: Pyrite>> <<Min: 136.4 - 174.21 1% Min: Pyrrhotite>> <<Alt: 134.9 - 143 Strong (Alt) Muscovite>> <<Alt: 143 - 145.42 Moderate (Alt) Muscovite>> <<Alt: 145.52 - 149.26 Strong (Alt) Muscovite>> <<Alt: 149.26 - 155 Moderate (Alt) Muscovite>> <<Vein: 132.1 - 132.58 Quartz-Pyrite>> QZ-cubic PY <<Struc: 151.25 - 151.28 Weak (Alt) Fault>> minor . <<Struc: 153.26 - 153.28 Weak (Alt) Fault>> minor. <<Struc: 153.96 - 153.97 dominant foliation>>											
158.53	165.11	MDSw Coherent rhyolite flow with carbonaceous content									
158.53 - 165.11: QZ eyes. Could be MDSt. Blue corlor.											
<<Struc: 163.95 - 163.96 dominant foliation>> Dominante fracture.											
165.11	168.01	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
165.11 - 168.01: Few carbonaceous material from 178,6 to 179.59m.											
<<Alt: 167 - 203.52 Moderate (Alt) Muscovite>>											
<<Struc: 166.2 - 166.24 Weak (Alt) Fault>> minor.											
168.01	174.21	RHYvl Lapilli tuff									
168.01 - 174.21: Thin foliation.											
174.21	197.97	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
174.21 - 197.97: Pseudofragmental locally. Whitish, deformed, "gneissic" tecture.											
<<Min: 174.21 - 202 2% Min: Pyrite>> or discontinuous veinlets.											
<<Min: 174.21 - 202 2% Min: Pyrrhotite>>											
<<Vein: 182.26 - 182.35 Quartz-Sulphide>> QZ-GL											
<<Struc: 177.2 - 177.24 Weak (Alt) Fault>> minor											
<<Struc: 178.82 - 178.83 dominant foliation>>											
<<Struc: 181.9 - 181.91 dominant foliation>>											
<<Struc: 185.9 - 185.94 Weak (Alt) Fault>> minor											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-257

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 189.48 - 189.59 dominant foliation>>											
<<Struc: 193.65 - 193.66 dominant foliation>>											
<<Struc: 196.9 - 196.91 dominant foliation>>											
197.97	206.27	RHYcw Curdy textured-flow banded (flows, subvolcanics) grey-green	201.50	203.00	1.50	B00264847	10.7	0.007	0.02	0.28	0.69
197.97 - 206.27: QZ eyes.											
<<Min: 202 - 206.27 2% Min: Sphalerite>>			203.00	204.50	1.50	B00264848	-0.3	-0.005	-0.01	-0.01	-0.01
<<Min: 202 - 206.27 3% Min: Pyrite>>			204.50	206.00	1.50	B00264849	2.4	0.016	0.09	0.02	0.06
<<Min: 202 - 206.27 2% Min: Pyrrhotite>>			206.00	207.00	1.00	B00264851	5.6	0.013	0.09	0.04	0.13
<<Min: 202 - 206.27 0.5% Min: Galena>>											
<<Min: 202 - 206.27 2% Min: Chalcopyrite>> Stringers											
<<Alt: 203.52 - 206.27 Strong (Alt) Muscovite>>											
<<Struc: 200.1 - 200.11 dominant foliation>>											
206.27	206.76	OJ Heavilly disseminated sulphides in proximal altered rock green									
206.27 - 206.76: PO/CP stringers, SP, might be proximal alteration with retrograde BI.											
<<Min: 206.27 - 206.76 1% Min: Pyrite>>											
<<Min: 206.27 - 206.76 5% Min: Pyrrhotite>> Stringers											
<<Min: 206.27 - 206.76 0.5% Min: Chalcopyrite>>											
<<Alt: 206.27 - 206.76 Strong (Alt) Chlorite>>											
206.76	218.00	RHYcw Curdy textured-flow banded (flows, subvolcanics) grey-green	207.00	208.50	1.50	B00264852	1.1	0.005	0.01	-0.01	0.02
206.76 - 218: QZ eyes. E.O.H.											
<<Min: 206.76 - 217 3% Min: Pyrite>>			208.50	210.00	1.50	B00264853	0.4	-0.005	-0.01	-0.01	-0.01
<<Min: 206.76 - 217 0.5% Min: Pyrrhotite>>											
<<Min: 217 - 218 0.5% Min: Pyrite>>											
<<Min: 217 - 218 1% Min: Pyrrhotite>>											
<<Alt: 207.15 - 218 Moderate (Alt) Muscovite>>											
<<Vein: 207 - 212 Quartz>> QZ, 2 veins per metre, 3 to 8 cm wide.											
<<Struc: 208.32 - 208.33 dominant foliation>>											
<<Struc: 217.64 - 217.65 dominant foliation>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-257

From (m) To (m)

Rocktype & Description

From (m)

To (m)

Width

Sample

Ag PPM

Au PPM

Cu %

Pb %

Zn %

End of Hole @ 218

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-258

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Daniele Heon
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	13-Sep-15
UTM Easting	415203.217	Core Size:	NQ3	Azimuth:	176	Date Logging Complete:	16-Sep-15
UTM Northing:	6815275.085	Casing Pulled?:	Yes	Dip:	-53	Drill Company:	Geotech
UTM Elev. (m):	1424.283	Casing Depth (m):	21	Length (m):	299	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	11-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	14-Sep-15
Local Elev. (m):						Purpose:	Exploration
Comments:						Parent Hole:	

The target of this hole is a deep extension of a sulphide lens on the southeast fault block, interpreted to be down-dropped from main ore body. This hole collared in upper sequence metasediments: black argillite(MDSc)followed by mafic tuffs till 48m, followed by a thick sequence of felsic lapilli and crystal tuff with some ash-dominant sections till 205.95m. This sequence is unusually dark and silicified from 48 to 73m, possibly due to the altering effect of the rhyolite dyke intruding the sequence below from 73-79.8m. A mafic dyke with porphyroblastic biotite also intrudes this sequence from 103 to 107m. Dark carbonaceous felsic tuff (MDSt) occurs from 205.95 to 213.5m, followed by strong to intense muscovite-altered generic rhyolite (no primary textures), with intensity of alteration increasing towards its lower contact with the massive sulphide zone (228.64 to 231.24). It consists of 30% fg diss py w 10% galena, 2% sphalerite, and one cm-bleb of cp (total <1%). The average recovery for this zone is very poor at 47%. Below the sulphides at 231.24, the hole transitions again into rhyolite till 265m. The typical footwall mafic intrusion occurs from 265 to 272.3m, where the contact with the underlying felsic tuff is caught in a large breccia and deformation zone marked by fault gouge and breccia but also by blocky sections with extremely poor recovery but not showing deformation. The rhyolite continues to EOH at 299m, with moderate muscovite alteration.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-53	176	0	176	APS	Daniele Heon	15-Sep-15		<input checked="" type="checkbox"/>	
56	-53.4	155.8	22.5	178.3	ReflexEVS	Geotech	12-Sep-15	3785	<input checked="" type="checkbox"/>	
89	-54.4	158.4	22.5	180.9	ReflexEVS	Geotech	13-Sep-15	5735	<input checked="" type="checkbox"/>	
119	-55	158.4	22.5	180.9	ReflexEVS	Geotech	13-Sep-15	5764	<input checked="" type="checkbox"/>	
149	-55.2	160.1	22.5	182.6	ReflexEVS	Geotech	13-Sep-15	5744	<input checked="" type="checkbox"/>	
209	-55.8	158.4	22.5	180.9	ReflexEVS	Geotech	14-Sep-15	5789	<input checked="" type="checkbox"/>	
239	-55.8	161.5	22.5	184	ReflexEVS	Geotech	14-Sep-15	5752	<input checked="" type="checkbox"/>	Azimuth deviates in zone of rubbly rock and core loss.
299	-55.3	165.5	22.5	188	ReflexEVS	Geotech	15-Sep-15	5785	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	20.00	OVBN Overburden									
0 - 20: Depth of start of hole not marked, calculated back from lower blocks.											
<<Min: 11.9 - 120.4 0.05% Min: Pyrrhotite>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-258

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
20.00	35.30	MDU carbonaceous mudstone upper sequence black									
20 - 35.3: Sooty argillite, calcareous, tightly folded and crenulated includes few 10-30 cm intervals of greenish ash or sed.											
<<Min: 20 - 29.3 15% Min: Calcite>> also pervasive											
<<Min: 20 - 91.75 0.5% Min: Pyrite>>											
<<Min: 20 - 91.75 0.5% Min: Pyrrhotite>>											
<<Alt: 30 - 32 Moderate (Alt) Silicification>> Silicified argillite or cherty argillite											
<<Vein: 20 - 28 2% Calcite 70 deg. >> Thin mm cc-qtz veinlets in argillite.											
<<Vein: 21.3 - 37.5 10% Quartz 70 deg. >> Coarse grained qtz-cc veins, loc w sericite, 3 to 30 cm thick.											
<<Struc: 32 - 32.01 dominant foliation>>											
<<Struc: 33.9 - 34 Weak (Alt) Fault>> clayey fault gouge											
35.30	48.00	MAFt Mafic Volcaniclastics green-brown									
35.3 - 48: Banded mafic tuff or epiclastic sed? Banding defined by variable grain size and varying biotite/ sericite ratio.											
<<Min: 35.4 - 45.2 3% Min: Calcite>>											
<<Min: 45.2 - 49.1 10% Min: Calcite>>											
<<Alt: 35.3 - 42.38 Moderate (Alt) Muscovite>>											
<<Alt: 35.3 - 48 Weak (Alt) Chlorite>>											
<<Alt: 42.38 - 48 Weak (Alt) Muscovite>>											
<<Vein: 39 - 60.4 10% Quartz-Tourmaline-Chlorite 60 deg. >> Coarse, clear grey qtz-cc-chl veins +/- tourmaline w diss py po up to 1% in veins. One large qtz-tourm vein 41.75- 42.5m.											
<<Struc: 46.4 - 47 Moderate (Alt) Fault>> clayey fault gouge, core loss											
48.00	73.00	RHYvl Lapilli tuff dark grey									
48 - 73: And RHYva. Very dark,siliceous w broken xtals or amydules. Pyritic dk grey sericite foliae, silicified.											
<<Min: 49.1 - 54.9 5% Min: Calcite>>											
<<Min: 54.9 - 62 2% Min: Calcite>>											
<<Min: 62.2 - 73 5% Min: Calcite>>											
<<Alt: 48 - 73 Moderate (Alt) Silicification>>											
<<Alt: 48 - 73 Muscovite>>											
<<Vein: 71.3 - 82.3 Quartz-Carbonate>> Qtz-carb-chl vein at upper contact of RHYi (0.5m l box, core loss) and two 2cm qtz-carb veins, one with large bleb of sphalerite in lower selvage.											
<<Struc: 48 - 48.01 dominant foliation>>											
<<Struc: 58.45 - 58.46 dominant foliation>> sub-horizontal?											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-258

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 60.13 - 60.76 Strong (Alt) Fault>> clayey fault gouge											
73.00	79.80	RHYi Aphanitic Rhyolite (intrusion) grey									
73 - 79.8: grey glassy rhyolite dyke, with thin irregular greenish fractures w sericite pyrite.											
<<Min: 73.5 - 79.8 1% Min: Calcite>>											
79.80	81.60	RHYva Coarse grained to ash tuff grey									
79.8 - 81.6: Grey w faint lapilli? replaced by calcite, in creamy grey sericitic matrix.											
<<Min: 79.8 - 81.5 3% Min: Calcite>>											
<<Alt: 79.8 - 81.6 Weak (Alt) Chlorite>>											
81.60	81.75	RHYi Aphanitic Rhyolite (intrusion) grey									
<<Alt: 81.6 - 82.4 Moderate (Alt) Silicification>>											
<<Alt: 81.6 - 82.4 Weak (Alt) Muscovite>>											
81.75	95.00	RHYva Coarse grained to ash tuff grey									
81.75 - 95: And lapilli. Fine grained grey sericitic rx w no to weak porphyroblastic biotite and irregular lensoid calcite lenses and bands interpreted as lapilli. 91.75- 92.5: more abundant calcite patches, and diss po-py 1%. 93-93.5: biot-qtz-rich section: sed?											
<<Min: 82.3 - 82.32 10% Min: Sphalerite>> cm-sized sphalerite bleb in 2cm qtz vein in lower silicfed selvage of RHYi											
<<Min: 82.4 - 103.05 5% Min: Calcite>> replaces amydulesor xtals and lapilli											
<<Min: 91.75 - 92.5 1% Min: Pyrrhotite>> in zone of abundant mygdules or lapilli											
<<Alt: 81.8 - 103.05 Weak (Alt) Chlorite>>											
<<Alt: 82.4 - 103.05 Moderate (Alt) Muscovite>> micacous foliation planes											
<<Alt: 91.75 - 92.5 Moderate (Alt) Chlorite>>											
<<Struc: 91.75 - 91.76 dominant foliation>> flat											
95.00	103.05	RHYvx Quartz and/or feldspar crystal tuff grey									
95 - 103.05: Also w lapilli. Grey f.g. sericitic rx w 5% 0.5-1 cm fspar xtals, replaced by calcite. Groundmass not calcareous. Weak to no biotite porphyroblasts.											
<<Min: 95 - 103.5 1% Min: Pyrite>>											
<<Min: 95 - 103.5 1% Min: Pyrrhotite>>											
103.05	107.00	MAFi Mafic Intrusions (primarily green-brown footwall mafic intrusion)									
103.05 - 107: Weakly foliated greenish weak chl-ser rock peppered w biotite porphyroblasts and small calcite grains (replacing fspars?)											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-258

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 103.5 - 111.9 7% Min: Calcite>>											
<<Alt: 103.5 - 107 Weak (Alt) Muscovite>>											
107.00	109.40	RHYcw Curdy textured-flow banded beige (flows, subvolcanics)									
107 - 109.4: Foliated dismembered sericite-altered rhyolite flow? Strong beige sericite, qtz, and weak py-cc veinlets. Lower contact vfg.											
<<Alt: 107 - 109.4 Moderate (Alt) Muscovite>>											
109.40	111.90	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
109.4 - 111.9: granular rx w stretched qtz outlined by biot foliae.											
111.90	115.40	RHYi Aphanitic Rhyolite (intrusion)									
111.9 - 115.4: Ugly version of RHYi (or other granitic intrusion?), cut and altered by qtz-fspar-carb-sulphide-musc +/- tourmaline vein system. Dyke material is bleached at contact w qtz. May include altered footwall rock. Upper contact marked by 10 cm intense chl-ser?											
<<Min: 111.9 - 115.4 2% Min: Pyrite>>											
<<Min: 111.9 - 115.4 0.5% Min: Pyrrhotite>>											
<<Min: 111.9 - 115.4 0.01% Min: Galena>>											
<<Min: 111.9 - 123 10% Min: Calcite>>											
<<Alt: 111.9 - 115.4 Moderate (Alt) Silicification>>											
<<Alt: 111.9 - 119.5 Moderate (Alt) Muscovite>>											
<<Vein: 112.25 - 115.08 10% Quartz-Carbonate-Sulphide>> White and grey blocky qtz-carb-chl-py-po vein ass w glassy rhyolite? Tr galena.											
115.40	119.55	RHYcw Curdy textured-flow banded beige (flows, subvolcanics)									
115.4 - 119.55: Foliated sericite-qtz schist w elongate fspathic patches and bands. More massive at UC and smaller fragments(or stronger dismemberment going downhole. Could also be or transition into xtal lapilli tuff.											
<<Alt: 119.2 - 119.4 Trace (Alt) Chlorite>>											
<<Alt: 119.4 - 166 Weak (Alt) Muscovite>>											
119.55	122.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion) grey-brown									
119.55 - 122: fine grained grey-green silt (?) to coarser qtz-chl-porphyroblastic biotite, gradational contacts.											
<<Vein: 119.9 - 123.3 2% Calcite 50 deg. >>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-258

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
122.00	135.90	RHYva Coarse grained to ash tuff									
grey 122 - 135.9: Includes section of f.g. granitic rock, sucrosic, w interpreted wall rock altered, bleached and w foliation disrupted at contacts (123.8-124.1). <<Min: 123 - 137.4 3% Min: Calcite>> <<Struc: 127.8 - 128.9 dominant foliation>> <<Struc: 128 - 128.01 dominant foliation>>											
135.90	138.40	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
brown 135.9 - 138.4: Fine grained reddish brown biotite-rich rock, calcareous. <<Min: 137.4 - 145.1 5% Min: Calcite>>											
138.40	158.00	RHYvi Lapilli tuff									
medium grey <<Min: 145.1 - 164 3% Min: Calcite>> <<Min: 156.1 - 159.2 2% Min: Pyrite>> Foliaform 1-10 cm bands of heavily disseminated py (up to 5%). Corresponds to silicified zone. <<Alt: 156.1 - 159.2 Moderate (Alt) Silicification>> corresponds to zone of py bands. <<Struc: 140.8 - 142.2 Fault>> fault gouge 10 cm followed by crackle breccia, recessive matrix (brownish calcareous: siderite?). <<Struc: 143 - 147 Vein>> fracture coated with slicked calcite w loc py. Almost // to CA. <<Struc: 145.9 - 145.91 dominant foliation>> <<Struc: 154.45 - 154.51 dominant foliation>>											
158.00	181.35	RHYva Coarse grained to ash tuff									
158 - 181.35: Dominantly ash tuff w lapilli (and possibly lithic fx?), varying proportions of each. <<Min: 158 - 160 1% Min: Pyrite>> silicified <<Min: 158 - 160 2% Min: Pyrrhotite>> silicified <<Min: 164 - 170 1% Min: Calcite>> <<Min: 170 - 236 0.01% Min: Calcite>> <<Alt: 166 - 167 Moderate (Alt) Muscovite>> <<Struc: 166.1 - 167.9 Fault>> Zone of broken rock. Some fault gouge w competent rx in clayey groundmass. <<Struc: 176.9 - 177.35 Fault>> Broken rx, fault gouge. <<Struc: 180.34 - 181 Fault>> Broken rx, fault gouge.											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-258

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
181.35	185.20	MAFi Mafic Intrusions (primarily footwall mafic intrusion) 181.35 - 185.2: Fine grained, muddy green-grey ash or sed. Cutby foliaform calcite veinlets and quartz veinlets, as well as by 0.3m coarse qtz-carb veins. Calcareous. <<Vein: 182.95 - 216.2 3.3% Quartz 60 deg. >> grey qtz veins, cm to dcm, loc w py po <<Struc: 184.3 - 184.31 dominant foliation>>									
185.20	189.90	RHYcw Curdy textured-flow banded (flows, subvolcanics) 185.2 - 189.9: Siliceous roxk w strong sericite imprint on foliation and strong crenulation, could be competent flow? Or maybe silicified ash. No visible lapilli or xtals. <<Alt: 185.5 - 216.2 Strong (Alt) Muscovite>>									
189.90	199.30	RHYv Rhyolite volcanoclastic 189.9 - 199.3: Banded RHYv w dk po-qtz bands and diss po, generellly strongly crenulated and strong sericite on foliae and pervasive. Nose of small fold structure? <<Struc: 190.8 - 190.81 dominant foliation>> <<Struc: 194 - 194.01 dominant foliation>>									
199.30	205.95	RHYva Coarse grained to ash tuff 199.3 - 205.95: finely dissected felsic tuff, greenish sericite. <<Struc: 199.9 - 199.91 dominant foliation>>									
205.95	213.45	MDSst Rhyolite tuff dominant mudstone 205.95 - 213.45: strongly foliated, crenulated and muscovite-altered. Common bands of diss py-po. <<Min: 209.5 - 215.7 1% Min: Pyrite>> <<Min: 209.5 - 215.7 2% Min: Pyrrhotite>> <<Struc: 212.6 - 212.61 dominant foliation>>									
213.45	228.64	RHY undifferentiated rhyolite 213.45 - 228.64: strongly foliated grey rhyolite with strong greenish yellow muscovite partings. Few clayey fault gouges. <<Min: 215.7 - 217 0.5% Min: Pyrite>> <<Min: 217 - 228.64 0.05% Min: Pyrite>> <<Alt: 216.2 - 228.64 Intense (Alt) Muscovite>> <<Struc: 223.7 - 224.3 Fault>> Two 30 cm sections of broken rx, fault gouge.	223.00	224.00	1.00	B00266764	-0.3	-0.005	-0.01	-0.01	-0.01
			224.00	225.50	1.50	B00266765	0.5	-0.005	-0.01	-0.01	-0.01
			225.50	227.00	1.50	B00266766	-0.3	-0.005	-0.01	-0.01	-0.01
			227.00	228.64	1.64	B00266767	0.3	-0.005	-0.01	-0.01	-0.01



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-258

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
228.64	231.24	OB Wispy laminate, fine black buckshot textured, non-magnetite bearing sulphides	228.64	229.50	0.86	B00266768	162	1.3	0.49	3.9	9.61
228.64 - 231.24: Very dark massive sulphide horizon, consisting of semi-massive fg diss py in silicate matrix, w some diss sph and galena and one cm-sized bleb of cp. Faintly laminated, but but dominant texture is brecciated, and loc cemented by sulphides and or recessive			229.50	230.00	0.50	B00266769	161	0.792	0.14	3.79	10.7
<<Min: 228.64 - 231.24 2% Min: Sphalerite>>			230.00	231.24	1.24	B00266771	122	0.77	0.37	2.47	8.68
<<Min: 228.64 - 231.24 30% Min: Pyrite>>											
<<Min: 228.64 - 231.24 1% Min: Pyrrhotite>> guesstimate based on weak magnetism											
<<Min: 228.64 - 231.24 10% Min: Galena>>											
<<Min: 228.64 - 231.24 0.5% Min: Chalcopyrite>>											
231.24	265.00	RHY undifferentiated rhyolite grey	231.24	232.10	0.86	B00266772	2.4	0.01	-0.01	0.04	0.08
231.24 - 265: Muscovite-qtz schist, variably sheared, faulted and brecciated. Competent blocky section between 237-257 loc has bands of diss py // to foliation and seems to get darker grey towards lowr bounding fault. From 257 to 265: intense breccia gouge.			232.10	234.00	1.90	B00266773	1.7	-0.005	-0.01	0.04	0.07
<<Min: 236 - 265.5 3% Min: Calcite>>			234.00	236.00	2.00	B00266774	1.3	-0.005	-0.01	0.03	0.06
<<Vein: 251.1 - 251.3 100% Pyrite>>											
<<Vein: 253.8 - 258 10% Quartz-Carbonate>>											
<<Struc: 232 - 237 Fault>> sections of Broken rx, fault gouge.											
<<Struc: 242 - 242.5 Fault>> Broken rx, fault gouge // CA.											
<<Struc: 242.5 - 257 Fault>> Broken rx, core loss											
<<Struc: 257 - 265.5 Fault>> Breccia, clay gouge,orientation of fx 45-// to CA											
265.00	272.30	MAFi Mafic Intrusions (primarily green footwall mafic intrusion)									
265 - 272.3: Deformed chl-biot schist w strong carbonate as veining and pervasive alteration. Mostly blocky with core loss until 272.3m, followed by strong breccia gouge consisting of mafic fragments in chloritic matrix till 274.9m, where it transitions into dominantl											
<<Min: 265.5 - 272.5 10% Min: Calcite>>											
<<Vein: 267 - 272.2 10% Calcite>>											
272.30	274.90	FBX Fault Breccia									
<<Struc: 272.3 - 278 Fault>> Intense breccia and clay gouge. Chloritic and/or carbonaceous groundmass. Core loss.											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-258

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
274.90	299.00	RHY undifferentiated rhyolite grey-green									
<p>274.9 - 299: Finely foliated, musc altered granular qtz-musc schist, no fragmental texture so probably ash. From 273.3-274.9: strong fault gouge continues from above unit with clasts dominantly felsic and carbonaceous groundmass. From 274.9: competent rock finely foli</p>											
End of Hole @ 299											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-259

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	13-Sep-15
UTM Easting	415100.557	Core Size:	NQ3	Azimuth:	134.82	Date Logging Complete:	14-Sep-15
UTM Northing:	6815372.293	Casing Pulled?:	Yes	Dip:	-55	Drill Company:	Geotech
UTM Elev. (m):	1391.551	Casing Depth (m):	9	Length (m):	120	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	11-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	13-Sep-15
Local Elev. (m):						Purpose:	Geotech
Comments:						Parent Hole:	

K15-259 was drilled to characterize the geotechnical properties of the East Fault, as well as to attempt to pierce the upper ore lens (ABM) and the proposed down dropped portion of the deposit. However, due to the azimuth deviating during drilling, the hole was abandoned at 120 m. It was re-drilled at an azimuth of 125 degrees and a dip of 45 degrees, with HQ3 drill rods, in order to maintain a straighter drill trace.

Bedrock was encountered below overburden at 9 m. A felsic volcanic package with a few carbonaceous horizons was encountered from 9-49.1 m. MU-alteration began increasing intensity from 33-51.2 m. Strong restrictive alteration was encountered from 48.3-51.2, consisting of a MU+CI+CL+AB assemblage. From 49.1-60.7 m MSXS was encountered, consisting of OJ, OA, and OB ore types. A small unit of MU-altered rhyolite occurs between 60.7-61.4 m. From 61.4-63.6 m MSXS occurs, consisting of the OB ore type. Below the MSXS an undifferentiated rhyolite interlayered with MAFi is encountered from 63.6-66 m. MAFi is encountered from 66-120 m, with local variations in the foliation angle relative to the core axis.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-55	134.82	0	134.82	APS	Dillon Hume	11-Sep-15		<input checked="" type="checkbox"/>	Drill rig alignment azimuth
18	-56.1	112.4	22.5	134.9	ReflexEVS	Geotech	12-Sep-15	5866	<input checked="" type="checkbox"/>	
48	-56	117.7	22.5	140.2	ReflexEVS	Geotech	12-Sep-15	5796	<input checked="" type="checkbox"/>	
78	-56	122	22.5	144.5	ReflexEVS	Geotech	12-Sep-15	5713	<input checked="" type="checkbox"/>	
106	-57.6	125.8	22.5	148.3	ReflexEVS	Geotech	12-Sep-15	5728	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	9.00	OVBN Overburden									
<<Min: 0 - 59.8 1% Min: Calcite>>											
9.00	19.10	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
9 - 19.1: Good curdy texture from 9-15.5 m.											
<<Min: 9 - 29.5 3% Min: Pyrite>>											
<<Min: 9 - 29.5 2% Min: Pyrrhotite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-259

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
19.10	29.50	RHYvl Lapilli tuff 19.1 - 29.5: volcaniclastic texture with QZ and PY+/-PO lpl									
29.50	36.70	MDSr Rhyolite tuff dominant mudstone 29.5 - 36.7: ~15-20% carbonaceous material mainly restricted cleavage domains <<Min: 29.5 - 48.3 1% Min: Pyrite>> <<Min: 29.5 - 48.3 0.5% Min: Pyrrhotite>> <<Alt: 33 - 48.3 Moderate (Alt) Muscovite>> <<Vein: 32.7 - 33.5 60% Quartz>> QZ-AK veining in MU schist									
36.70	43.00	RHYv Rhyolite volcaniclastic 36.7 - 43: Strongly developed Mu-cleavage makes the original texture difficult to determine. The texture appears mainly volcaniclastic. <<Struc: 38.8 - 41 Strong (Alt) Fault>> Moderately faulted zone with fault gouge <<Struc: 41.97 - 41.98 dominant foliation>> MU cleavage									
43.00	45.00	MDSr Carbonaceous dominant mudstone 43 - 45: 80% carbonaceous, black mudstone. Poor core recovery in this run (42-45 m).									
45.00	46.00	MDSr Rhyolite tuff dominant mudstone 45 - 46: ~15-20% carbonaceous material mainly restricted cleavage domains	45.00	46.00	1.00	B00268747	0.5	-0.005	-0.01	-0.01	0.02
46.00	49.10	RHY undifferentiated rhyolite 46 - 49.1: Well developed schistosity. Alteration increases from moderate MU to strong CL+Cl+AB in this unit. <<Min: 48.3 - 49.1 3% Min: Pyrite>> <<Alt: 48.3 - 51.2 Moderate (Alt) Muscovite>> <<Alt: 48.3 - 51.2 Strong (Alt) Cordierite>> <<Alt: 48.9 - 51.2 Moderate (Alt) Chlorite>> <<Alt: 48.9 - 51.2 Moderate (Alt) Albite>> patches of albite <<Struc: 48.6 - 48.61 dominant foliation>> MU cleavage	46.00	47.50	1.50	B00268748	1.3	0.057	-0.01	0.02	0.03
			47.50	49.10	1.60	B00268749	6.3	0.044	0.21	0.02	0.19

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-259

From (m) To (m) Rocktype & Description

49.10 51.20 OJ Heavily disseminated sulphides in proximal altered rock

49.1 - 51.2: Patchy/blebs of CP+PO and PY (net textured) within strong proximal/restricted alteration

<<Min: 49.1 - 51.2 5% Min: Chalcopyrite>>

<<Struc: 50.87 - 50.88 dominant foliation>> MU cleavage

51.20 52.00 OA Magnetite bearing sulphides

51.2 - 52: laminated PY+MG+/-SP+/-GL+/-CP with minor cg PY buckshot texture

52.00 55.20 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

52 - 55.2: laminated PY with bands of PY+SP+GL. Minor zones of QZ-carb veining with recrystallized SP+GL

<<Struc: 53.94 - 53.95 dominant foliation>> SP band

55.20 55.70 OA Magnetite bearing sulphides

55.2 - 55.7: laminated PY+SP+GL with cg MG buckshot texture

55.70 59.50 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

55.7 - 59.5: laminated PY+SP+GL+CA with bands of higher concentrated SP+GL

59.50 59.80 OA Magnetite bearing sulphides

59.5 - 59.8: laminated PY+MG+SP+GL

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
49.10	50.20	1.10	B00268752	149	1.15	4.39	1.05	1.79
50.20	51.20	1.00	B00268753	113	0.671	3.8	0.14	0.55
51.20	52.00	0.80	B00268754	95.6	0.952	2.37	0.26	0.95
52.00	53.00	1.00	B00268755	51.5	0.589	0.42	0.49	4.59
53.00	53.70	0.70	B00268756	191	1.4	0.64	2.15	10.6
53.70	54.40	0.70	B00268757	386	3.65	0.8	2.35	10.5
54.40	55.20	0.80	B00268758	129	1.82	0.18	1.77	12
55.20	55.70	0.50	B00268759	223	2.73	0.15	4.07	9.34
55.70	56.70	1.00	B00268761	178	1.57	0.3	3.02	8.82
56.70	57.70	1.00	B00268762	252	1.48	0.28	3.98	10.7
57.70	58.70	1.00	B00268763	276	3.21	1.02	3.63	7.59
58.70	59.50	0.80	B00268764	204	2.68	0.6	2.29	10.6
59.50	59.80	0.30	B00268765	168	1.89	0.37	2.24	9.86

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-259

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
59.80	60.70	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	59.80	60.70	0.90	B00268766	245	1.97	0.39	3.01	7.39
59.8 - 60.7: Laminated PY+SP+GL with bands of high concentrations of SP and GL. Small zone from 60.3-60.5 m of massive MU+CL and CI porphyroblasts. <<Min: 59.8 - 60.7 20% Min: Sphalerite>> <<Min: 59.8 - 63.6 10% Min: Calcite>> <<Alt: 60.3 - 60.5 Strong (Alt) Muscovite>> <<Alt: 60.3 - 60.5 Moderate (Alt) Chlorite>> <<Alt: 60.3 - 60.5 Moderate (Alt) Cordierite>> CI porphyroblasts											
60.70	61.40	RHY undifferentiated rhyolite	60.70	61.40	0.70	B00268767	7.4	0.068	0.02	0.1	0.27
60.7 - 61.4: Original texture is obscured by MU-alteration. <<Alt: 60.7 - 61.4 Strong (Alt) Muscovite>>											
61.40	63.60	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	61.40	62.30	0.90	B00268768	387	2.71	0.3	4.64	11.3
61.4 - 63.6: Laminated PY+SP+GL+CA with cg PY buckshot texture. 61.4-62.3 m has high grade SP and GL. <<Min: 61.4 - 62.3 20% Min: Sphalerite>> <<Min: 61.4 - 62.3 5% Min: Galena>> <<Alt: 63.4 - 64.3 Moderate (Alt) Cordierite>> CI porphyroblasts											
63.60	64.90	RHY undifferentiated rhyolite	63.60	64.90	1.30	B00268773	33.4	0.402	0.1	0.79	1.27
63.6 - 64.9: moderate PY+/-CP stringers in MU-CI schist. <<Min: 63.6 - 64.9 5% Min: Calcite>> <<Min: 63.6 - 66 10% Min: Pyrite>> <<Alt: 63.6 - 64.3 Strong (Alt) Muscovite>> <<Alt: 64.3 - 66.5 Moderate (Alt) Muscovite>>											
64.90	65.50	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	64.90	65.50	0.60	B00268774	16.1	0.047	0.02	0.41	0.66
64.9 - 65.5: moderately MU-altered CA-CL-BI schist with discontinuous CA schistosity. <<Min: 64.9 - 74.9 20% Min: Calcite>> <<Alt: 64.9 - 66.5 Moderate (Alt) Chlorite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-259

From (m) To (m) Rocktype & Description

65.50 66.00 RHY undifferentiated rhyolite

65.5 - 66: moderate PY+/-CP stringers in MU-CI schist.

**66.00 74.90 MAFi Mafic Intrusions (primarily
footwall mafic intrusion)**

66 - 74.9: CL-CL-BI schist with an average foliation 45 degrees to core axis

<<Min: 66 - 120 0.5% Min: Pyrite>>

<<Min: 66 - 120 0.5% Min: Pyrrhotite>>

<<Alt: 66.5 - 74.9 Strong (Alt) Muscovite>>

<<Alt: 66.5 - 74.9 Moderate (Alt) Biotite>>

74.90 75.70 RHYvl Lapilli tuff

74.9 - 75.7: MU-altered rhyolite volcanoclastic . Elongated QZ lpl present.

<<Min: 74.9 - 75.7 5% Min: Calcite>>

<<Alt: 74.9 - 75.7 Strong (Alt) Muscovite>>

**75.70 120.00 MAFi Mafic Intrusions (primarily
footwall mafic intrusion)**

75.7 - 120: From 75.7-82 m and 117.3-120 m the unit is a CL-CA-BI schist with an average foliation at 45 degrees to core axis. From 82-117.3 m the unit is a CL-BI schist (with CA restricted to fractures). From ~92-107 m the foliation angle changes from ~45 degrees to

<<Min: 75.7 - 82 20% Min: Calcite>>

<<Min: 82 - 117.3 5% Min: Calcite>>

<<Min: 117.3 - 120 20% Min: Calcite>>

<<Alt: 75.7 - 120 Strong (Alt) Chlorite>>

<<Alt: 75.7 - 120 Strong (Alt) Biotite>>

<<Struc: 86.9 - 86.91 dominant foliation>> Foliation in MAFi

<<Struc: 92.85 - 92.86 Foliation>> Foliation in MAFi

<<Struc: 96.05 - 96.06 Foliation>> Foliation in MAFi

<<Struc: 100.2 - 100.21 Foliation>> Foliation in MAFi

<<Struc: 100.9 - 100.91 Foliation>> Foliation in MAFi

<<Struc: 101.9 - 101.91 Foliation>> Foliation in MAFi

<<Struc: 107.95 - 107.96 dominant foliation>> Foliation in MAFi

<<Struc: 112.1 - 112.11 dominant foliation>> Foliation in MAFi

<<Struc: 113.8 - 113.81 dominant foliation>> Foliation in MAFi

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
65.50	66.00	0.50	B00268775	20	0.093	0.04	0.45	1.54

66.00	67.50	1.50	B00268776	-0.3	-0.005	0.01	-0.01	0.03
-------	-------	------	-----------	------	--------	------	-------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-259

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 117.5 - 117.51 dominant foliation>> Foliation in MAFi											
End of Hole @ 120											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-260

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	13-Sep-15
UTM Easting	414749.033	Core Size:	HQ3	Azimuth:	180.64	Date Logging Complete:	15-Sep-15
UTM Northing:	6815674.459	Casing Pulled?:	Yes	Dip:	-70	Drill Company:	Geotech
UTM Elev. (m):	1411.257	Casing Depth (m):	3	Length (m):	227	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	12-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	14-Sep-15
Local Elev. (m):						Purpose:	Resource/Met
Comments:						Parent Hole:	

Hole K15-260 was drilled to intercept the sulfide zone of the historical hole K94-020.

The hole is made up of primarily rhyolitic units including two mudstone units above the ore deposit. The massive sulfide was intercepted from 156.67 to 172.12m and is hosted within a larger mineralized zone from 153.71 to 182.29m.

The hole shows progressive muscovite alteration in the hanging-wall followed by strong to intense proximal alteration from 155.75 to 157.91m (moderate cordierite) mineralized CP/PO. The massive sulfide consists in OA, OB and OH containing CP/SP/GL/PO/PY and minor AS.

The footwall consists of OI and OJ domains. A mafic sill, underlain by quartz-eye bearing rhyolite crosscuts the mineralization at 182.29m. The hole ends at 227.00m in meta-sedimentary unit. Hole K15-260W1 was wedged at 135.00m for metallurgical samples.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-70	180.64	0	180.64	APS	Jerome de Pasquale	12-Sep-15		<input checked="" type="checkbox"/>	
26	-70.9	156.3	22.5	178.8	ReflexEVS	Geotech	12-Sep-15	5705	<input checked="" type="checkbox"/>	
50	-70	157.5	22.5	180	ReflexEVS	Geotech	12-Sep-15	5775	<input checked="" type="checkbox"/>	
75	-71.4	158.2	22.5	180.7	ReflexEVS	Geotech	12-Sep-15	5705	<input checked="" type="checkbox"/>	
101	-71.6	157.5	22.5	180	ReflexEVS	Geotech	12-Sep-15	5703	<input checked="" type="checkbox"/>	
125	-71.6	163.4	22.5	185.9	ReflexEVS	Geotech	12-Sep-15	5710	<input checked="" type="checkbox"/>	
152	-70.9	160	22.5	182.5	ReflexEVS	Geotech	12-Sep-15	5537	<input checked="" type="checkbox"/>	
176	-71.1	160.2	22.5	182.7	ReflexEVS	Geotech	12-Sep-15	5703	<input checked="" type="checkbox"/>	
200	-71.4	160.7	22.5	183.2	ReflexEVS	Geotech	12-Sep-15	5796	<input checked="" type="checkbox"/>	
227	-71.1	161.9	22.5	184.4	ReflexEVS	Geotech	12-Sep-15	5759	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	1.00	CASN Casing									
1.00	2.09	RHYvl Lapilli tuff									
<<Alt: 1 - 35 Moderate (Alt) Silicification>>											
light grey											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-260

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 1 - 100 Weak (Alt) Muscovite>>											
2.09	6.24	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
2.09 - 6.24: Or MAFta. BI.											
6.24	8.70	RHYva Coarse grained to ash tuff									
6.24 - 8.7: Including narrow MAFi from 8.0 to 8.7m.											
8.70	25.36	RHYvi Lapilli tuff									
8.7 - 25.36: Flow/ash sequense sugesting top down.											
<<Alt: 19.14 - 204.2 Moderate (Alt) Silicification>>											
<<Vein: 10.5 - 31 Tourmaline-Sulphide>> Veinlets set, shallow angle (10 to 30 degre), sometimes filled with TML penetrating the foliation, PY-GL-CA.											
<<Struc: 19.7 - 19.71 Vein>> Veinlet set also fracture set.											
<<Struc: 19.75 - 19.76 dominant foliation>>											
25.36	31.42	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
25.36 - 31.42: QZ-CA-CL rounded mineral, late.											
<<Struc: 25.8 - 25.81 Foliation>>											
31.42	50.48	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
31.42 - 50.48: Curdy texture. Some ash flow locally, folded. Speck of black mineral patchy distributed, could be andalousite ?.											
<<Min: 31.42 - 50 0.5% Min: Pyrrhotite>> Seems to be associated with the secondary late foliation.											
<<Min: 31.42 - 50 0.1% Min: Chalcopyrite>> With PO.											
<<Struc: 41.45 - 41.46 Foliation>>											
<<Struc: 41.5 - 41.51 dominant foliation>> Secondary foliation crosscutting DFOL cerating crenulation.											
<<Struc: 49.95 - 49.96 dominant foliation>>											
50.48	53.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
50.48 - 53: Ash-MAFi alternate sequense.											
<<Min: 50.48 - 63.51 3% Min: Pyrrhotite>> Or discontinuous veinlets.											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-260

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 50.48 - 63.51 0.1% Min: Arsenopyrite>>											
<<Min: 50.48 - 110 0.5% Min: Pyrite>>											
53.00	63.00	RHYva Coarse grained to ash tuff	grey-green								
53 - 63: Sequense lapilitic and ash											
<<Vein: 58 - 58.01 Pyrrhotite 15 deg. >> Veinlets, shallow angle											
<<Vein: 60.4 - 60.41 Pyrrhotite 20 deg. >> Veinlets, shallow angle											
<<Struc: 59.14 - 59.16 dominant foliation>>											
63.00	63.51	RHYvl Lapilli tuff	grey-green								
63 - 63.51: Dominantly lapilitic.											
63.51	64.51	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
63.51 - 64.51: CA, CL, chill margin at lower contact.											
<<Min: 63.51 - 110 2% Min: Pyrrhotite>>											
64.51	69.18	RHYvl Lapilli tuff	grey-green								
64.51 - 69.18: Ash at lower contact											
<<Struc: 65.5 - 65.52 Moderate (Alt) Fault>> Fault gouge, grey clay-sand.											
<<Struc: 65.53 - 65.55 Moderate (Alt) Fault>> Angle mesure in the fault gouge, Brecciated with QZ clasts.											
<<Struc: 67.95 - 67.99 Strong (Alt) Fault>> Fault gouge, Clay. Set of fracture with this angle (3 per metre).											
69.18	87.02	RHYcw Curdy textured-flow banded (flows, subvolcanics)	grey-green								
69.18 - 87.02: Locally lapilitic.											
<<Alt: 72 - 120 Moderate (Alt) Silicification>>											
<<Vein: 70.67 - 70.68 Quartz-Pyrite 55 deg. >> QZ vein, vuggy tecture, recrystalization.											
<<Vein: 75.5 - 75.51 Quartz-Pyrrhotite 28 deg. >> QZ vein											
87.02	94.00	RHYva Coarse grained to ash tuff	grey-green								
87.02 - 94: Dominantly ash.											
<<Vein: 93.93 - 93.94 Calcite 11 deg. >> Dark vein shallow angle, few CA.											
<<Struc: 93.93 - 93.94 Vein>> Shallow angle, part of the veinlet set.											
94.00	95.60	RHYcw Curdy textured-flow banded (flows, subvolcanics)	grey-green								

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-260

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
95.60	113.00	RHYva Coarse grained to ash tuff									
95.6 - 113: Dominantly ash.											
<<Min: 96 - 96.2 5% Min: Sphalerite>> Patch of SP.											
<<Min: 110 - 148 3% Min: Pyrrhotite>> mostly elongated, sometimes patch.											
<<Min: 110 - 153.71 2% Min: Pyrite>> Some aggregated.											
<<Struc: 107.6 - 107.61 Weak (Alt) Fault>> Minor fault, fault gouge.											
113.00	122.80	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
113 - 122.8: Locally flow banded.											
122.80	130.19	MDSr Rhyolite tuff dominant mudstone									
122.8 - 130.19: QZ eyes, folded, crenulation.											
<<Min: 128 - 130.3 3% Min: Calcite>> and CA associated with MAFi.											
<<Alt: 122.8 - 133.2 Moderate (Alt) Muscovite>>											
<<Struc: 123 - 128 Weak (Alt) Fault>> Several smal fault gouge in folded MDSr.											
130.19	153.71	MDSw Coherent rhyolite flow with carbonaceous content									
130.19 - 153.71: QZ eyes. Thin foliation.											
<<Alt: 133.2 - 154.52 Strong (Alt) Muscovite>>											
<<Vein: 136.2 - 137 Quartz-Chlorite>> QZ vein, CL and kind of glassy dyke enclave?											
<<Struc: 132.6 - 132.7 Weak (Alt) Fault>> Vuggy fracture, QZ filled, along the core axis. And tension gouge associated, veinlet set.											
<<Struc: 133.59 - 133.6 Vein>> Veinlet set over 2.50m, associated with fracture along the core axis.											
<<Struc: 137 - 137.55 Shear>> Minor shear zone.											
<<Struc: 139.27 - 139.28 Moderate (Alt) Fault>> Minor. Fault gouge.											
<<Struc: 143.75 - 143.76 Moderate (Alt) Fault>> Minor. Fault gouge.											
<<Struc: 148.95 - 148.96 dominant foliation>>											
153.71	154.52	OI Heavilly disseminated sulphides in host schist									
153.71 - 154.52: In MDSw.											
<<Min: 153.71 - 154.52 5% Min: Pyrrhotite>>											

149.00	150.50	1.50	B00264854	-0.3	-0.005	-0.01	-0.01	-0.01
--------	--------	------	-----------	------	--------	-------	-------	-------

150.50	152.00	1.50	B00264855	0.6	-0.005	-0.01	-0.01	-0.01
152.00	152.71	0.71	B00264856	0.6	0.01	-0.01	0.01	0.02
152.71	153.71	1.00	B00264857	1.8	0.006	0.05	0.03	0.04

153.71	154.52	0.81	B00264858	15	0.034	0.51	0.07	0.26
--------	--------	------	-----------	----	-------	------	------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-260

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 153.71 - 154.52 5% Min: Chalcopryite>> And stringers.											
<<Alt: 154.32 - 156.67 Weak (Alt) Cordierite>>											
<<Struc: 154.14 - 154.16 Vein>> Main orientation of the CP/PO stringers.											
154.52	156.67	OJ Heavily disseminated sulphides in proximal altered rock	154.52	155.52	1.00	B00264859	10.7	0.079	0.65	0.02	0.21
154.52 - 156.67: Proximal alteration of probably MDSw. PO/CP stringers.											
<<Min: 154.52 - 156.67 3% Min: Pyrrhotite>> Stringers.											
<<Min: 154.52 - 156.67 3% Min: Chalcopryite>> Stringers.											
<<Alt: 154.52 - 157.91 Strong (Alt) Chlorite>>											
<<Struc: 154.8 - 154.86 Weak (Alt) Fault>> Oriented along the foliation. Fault gouge.											
156.67	162.59	OA Magnetite bearing sulphides	156.67	157.71	1.04	B00264862	46.4	0.418	1.58	0.11	0.64
156.67 - 162.59: Could be MET 2 if GL underestimated. Brecciated or very coarse grains at upper contact. Laminated MG. QZ and semi massive with coarse grain and CP associated from 156.67 to 158.71m. Recrystalization, Buckshot aspect from 159.45 to 161m.											
<<Min: 156.67 - 162.59 2% Min: Sphalerite>>			157.71	158.71	1.00	B00264863	36.7	0.202	0.54	0.15	2.36
<<Min: 156.67 - 162.59 2% Min: Galena>>			158.71	160.16	1.45	B00264864	39.5	0.289	0.72	0.11	12.4
<<Min: 156.67 - 162.59 3% Min: Chalcopryite>>			160.16	161.00	0.84	B00264865	58.4	0.492	0.68	1.28	12.7
<<Struc: 156.82 - 156.84 Contact>> Contact between coarse grain or brecciated PY/CP/PO and fine lamination in the massive sulfide.			161.00	161.74	0.74	B00264866	69.8	0.938	1.06	1.78	3.44
			161.74	162.59	0.85	B00264867	84.4	0.779	0.94	2.52	4.75
162.59	164.00	OH Fine grained, megascopically homogeneous pyrite rock	162.59	163.39	0.80	B00264868	67.7	0.594	0.44	0.7	1.1
<<Min: 162.59 - 164 95% Min: Pyrite>> fine grain.			163.39	164.00	0.61	B00264869	31.5	0.43	0.06	0.13	3.71
164.00	165.43	OA Magnetite bearing sulphides	164.00	164.74	0.74	B00264871	29.6	0.529	0.27	0.16	2
<<Min: 164 - 172.12 15% Min: Sphalerite>>			164.74	165.43	0.69	B00264872	46.4	0.675	0.43	0.34	2.21
<<Min: 164 - 172.12 3% Min: Galena>> Could be underestimated.											
<<Min: 164 - 172.12 1% Min: Chalcopryite>>											
165.43	169.10	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	165.43	166.12	0.69	B00264873	84	0.647	0.22	0.86	5.96
			166.12	167.00	0.88	B00264874	113	1.61	0.42	1.55	9.19
			167.00	168.00	1.00	B00264875	120	1.28	0.35	1.94	9.87



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-260

From (m) To (m) Rocktype & Description

169.10 169.43 OA Magnetite bearing sulphides

169.1 - 169.43: Buckshot texture with MG.

169.43 172.12 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

172.12 175.83 OJ Heavily disseminated sulphides in proximal altered rock

172.12 - 175.83: MU-BI-TML at contact..

<<Min: 172.12 - 182.29 5% Min: Pyrrhotite>>

<<Min: 172.12 - 182.29 0.1% Min: Galena>>

<<Min: 172.12 - 182.29 8% Min: Chalcopryrite>>

<<Min: 172.12 - 182.29 0.5% Min: Arsenopyrite>>

<<Alt: 172.12 - 182.29 Moderate (Alt) Muscovite>>

<<Alt: 172.12 - 182.29 Moderate (Alt) Chlorite>>

175.83 182.29 OI Heavily disseminated sulphides in host schist

175.83 - 182.29: White contorted lamination, maybe albite. Possibly CI ghost.

182.29 200.00 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

182.29 - 200: Bleached, fault proximity-sheared.

MG

MG

FG

FG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
168.00	169.00	1.00	B00264876	170	1.96	0.45	3.8	9.86
169.00	169.50	0.50	B00264877	83.8	0.439	0.33	2.19	8.99

169.50	170.10	0.60	B00264878	105	0.985	0.28	1.43	9.6
--------	--------	------	-----------	-----	-------	------	------	-----

170.10	171.10	1.00	B00264879	131	0.945	0.22	2.36	13.3
171.10	172.12	1.02	B00264881	161	0.519	0.02	5.01	10.2
172.12	173.00	0.88	B00264882	6.2	0.034	0.04	0.04	0.53

173.00	174.00	1.00	B00264883	105	1.15	1.75	0.18	0.61
174.00	175.00	1.00	B00264884	82.7	0.785	1.83	0.17	0.41
175.00	175.83	0.83	B00264885	104	0.86	2.3	0.24	0.71

175.83	176.85	1.02	B00264886	140	1.25	3.97	0.4	0.44
--------	--------	------	-----------	-----	------	------	-----	------

176.85	177.80	0.95	B00264887	161	2.01	3.54	0.45	0.43
177.80	178.80	1.00	B00264888	85.4	0.66	2.19	0.19	0.43
178.80	179.80	1.00	B00264889	28.4	0.208	1.17	0.07	0.19
179.80	180.80	1.00	B00264892	27.2	0.182	0.96	0.14	0.39
180.80	181.68	0.88	B00264893	4	0.014	0.1	0.08	0.23
181.68	182.29	0.61	B00264894	17.2	0.128	0.93	0.06	0.52
182.29	183.00	0.71	B00264895	-0.3	-0.005	-0.01	-0.01	0.03



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-260

From (m) To (m) Rocktype & Description

<<Min: 182.29 - 227 2% Min: Calcite>> Weak CA until E.O.H.
<<Min: 187 - 190 0.5% Min: Pyrite>>
<<Min: 187 - 190 1% Min: Pyrrhotite>>
<<Min: 187 - 190 0.1% Min: Chalcopyrite>>
<<Min: 193.14 - 203 1% Min: Pyrite>> Locally aggregated.
<<Min: 193.14 - 203 0.1% Min: Pyrrhotite>> Elongated.
<<Alt: 182.29 - 193.14 Moderate (Alt) Chlorite>> Bleached.
<<Alt: 186 - 190 Weak (Alt) Biotite>>
<<Alt: 190 - 201 Moderate (Alt) Muscovite>>
<<Alt: 193.14 - 227 Moderate (Alt) Silicification>>
<<Struc: 183.15 - 185 Strong (Alt) Fault>> Major. Sheared on the edges, fault gouge.
<<Struc: 187.53 - 187.55 dominant foliation>>
<<Struc: 189.4 - 189.41 dominant foliation>>
<<Struc: 194 - 199.14 Weak (Alt) Fault>> Minor faults, One per metre.

200.00 207.70 RHY undifferentiated rhyolite grey-green

200 - 207.7: QZ eyes. Progressive upper and lower contact, .

<<Alt: 203 - 227 Weak (Alt) Chlorite>>
<<Vein: 206.4 - 206.41 Tourmaline>> TML, fractured section over 0.3m. TML penetrating the foliation.
<<Struc: 203.27 - 203.28 dominant foliation>>

207.70 227.00 RHYvx Quartz and/or feldspar crystal green-brown FG tuff

207.7 - 227: Few QZ eyes. Foliated, Silicified. Locally BI rich.

<<Vein: 210.55 - 210.56 Quartz-Tourmaline-Sulphide>> QZ/TML/PO
<<Struc: 208.94 - 208.95 dominant foliation>>
<<Struc: 211.95 - 211.96 dominant foliation>>
<<Struc: 221.13 - 221.14 dominant foliation>>

End of Hole @ 227

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
183.00	184.00	1.00	B00264896	-0.3	-0.005	-0.01	-0.01	0.01
184.00	185.00	1.00	B00264897	0.4	-0.005	-0.01	-0.01	0.01
185.00	186.00	1.00	B00264898	-0.3	-0.005	-0.01	-0.01	0.01
186.00	187.00	1.00	B00264899	-0.3	-0.005	-0.01	-0.01	0.01

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-260W1

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	13-Sep-15
UTM Easting	414749.033	Core Size:	HQ3	Azimuth:	180.64	Date Logging Complete:	15-Sep-15
UTM Northing:	6815674.459	Casing Pulled?:	Yes	Dip:	-70	Drill Company:	Geotech
UTM Elev. (m):	1411.257	Casing Depth (m):	3	Length (m):	196	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	12-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	14-Sep-15
Local Elev. (m):						Purpose:	Metallurgical Wedge
Comments:						Parent Hole:	K15-260

Hole K15-260W1 is a wedge from K15-260, and was drilled from 135.00m of the parent hole in order to collect samples of MET7 domain. The massive sulfide (OA, OB and OH domains) was intercepted from 157.92 to 172.48m within a mineralized zone from 154.98 to 183.80m containing PY/PO/CP/GL/ SP and minor AS. The hanging-wall consists of muscovite altered rhyolitic unit followed by strong to intense proximal chlorite alteration from 155.75 to 157.91m with CP/PO stringers. The footwall is made up of OJ and OI domains. A mafic sill crosscuts the mineralized rhyolitic unit at 183.80m. The hole ends at 196.00m.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-70	180.64	0	180.64	APS	Jerome de Pasquale	12-Sep-15		<input checked="" type="checkbox"/>	Values copied from K15-260
26	-70.9	156.3	22.5	178.8	ReflexEVS	Geotech	12-Sep-15	5705	<input checked="" type="checkbox"/>	Values copied from K15-260
50	-70	157.5	22.5	180	ReflexEVS	Geotech	12-Sep-15	5775	<input checked="" type="checkbox"/>	Values copied from K15-260
75	-71.4	158.2	22.5	180.7	ReflexEVS	Geotech	12-Sep-15	5705	<input checked="" type="checkbox"/>	Values copied from K15-260
101	-71.6	157.5	22.5	180	ReflexEVS	Geotech	12-Sep-15	5703	<input checked="" type="checkbox"/>	Values copied from K15-260
125	-71.6	163.4	22.5	185.9	ReflexEVS	Geotech	12-Sep-15	5710	<input checked="" type="checkbox"/>	Values copied from K15-260
135	-69.5	162.9	22.5	185.4	ReflexEVS	Geotech	15-Sep-15	5582	<input checked="" type="checkbox"/>	Wedge start; value copied from first wedge survey at 147m
147	-69.5	162.9	22.5	185.4	ReflexEVS	Geotech	15-Sep-15	5582	<input checked="" type="checkbox"/>	
171	-69.7	141.4	22.5	163.9	ReflexEVS	Geotech	15-Sep-15	5642	<input type="checkbox"/>	Erratic value.
196	-69.4	159.5	22.5	182	ReflexEVS	Geotech	16-Sep-15	5808	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
135.00	145.45	RHY undifferentiated rhyolite									
135 - 145.45: Probably RHYcw.											
<<Alt: 135 - 154.98 Strong (Alt) Muscovite>>											
<<Vein: 137.25 - 138 Quartz>> QZ massive, irregular											
<<Struc: 139.8 - 141 Weak (Alt) Fault>> Minor, with fault gauge, multiple.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-260W1

From (m)			To (m)			Rocktype & Description			From (m)			To (m)			Width			Sample			Ag PPM			Au PPM			Cu %			Pb %			Zn %		
<<Struc: 143.3 - 145.45 Weak (Alt) Fault>> Minor, with fault gauge, multiple.																																			
145.45			148.32			MDSw			Coherent rhyolite flow with carbonaceous content																										
145.45 - 148.32: QZ eyes.																																			
<<Struc: 145.45 - 145.45 Contact>> Sharp contact RHY and MDS.																																			
148.32			151.44			RHY			undifferentiated rhyolite																										
148.32 - 151.44: QZ eyes.																																			
151.44			152.55			MDSw			Coherent rhyolite flow with carbonaceous content																										
151.44 - 152.55: QZ eyes, locally folded or crenulated.																																			
<<Struc: 152.65 - 153.45 Weak (Alt) Fault>> Minor, with fault gauge, multiple.																																			
152.55			154.98			RHY			undifferentiated rhyolite																										
152.55 - 154.98: Probably RHYcw.																																			
<<Struc: 152.65 - 153.45 Weak (Alt) Fault>> Minor, with fault gauge, multiple.																																			
154.98			155.75			OI			Heavilly disseminated sulphides in host schist																										
154.98 - 155.75: In RHY(cw?).																																			
<<Min: 154.98 - 155.75 5% Min: Pyrite>>																																			
<<Min: 154.98 - 155.75 3% Min: Pyrrhotite>>																																			
<<Min: 154.98 - 155.75 1% Min: Chalcopyrite>>																																			
<<Min: 154.98 - 155.75 0.1% Min: Arsenopyrite>>																																			
<<Alt: 154.98 - 158.3 Moderate (Alt) Cordierite>>																																			
155.75			157.92			OJ			Heavilly disseminated sulphides in proximal altered rock																										
155.75 - 157.92: PO/CP stringers.																																			
<<Min: 155.75 - 157.92 3% Min: Pyrite>>																																			
<<Min: 155.75 - 157.92 5% Min: Pyrrhotite>>																																			
<<Min: 155.75 - 157.92 3% Min: Chalcopyrite>>																																			

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-260W1

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 155.75 - 157.91 Strong (Alt) Chlorite>>											
157.92	160.16	OA Magnetite bearing sulphides	FMG	157.92	158.47	0.55					
157.92 - 160.16: QZ patch and PO. Coarse grain at upper contact (breccia) and associated with QZ.											
<<Min: 157.92 - 160.12 1% Min: Sphalerite>>											
<<Min: 157.92 - 160.12 2% Min: Galena>>											
<<Min: 157.92 - 160.12 3% Min: Chalcopryite>>											
<<Min: 157.92 - 160.16 75% Min: Pyrite>>											
<<Min: 157.92 - 160.16 7% Min: Pyrrhotite>>											
<<Min: 157.92 - 160.16 6% Min: Magnetite>>											
<<Min: 160.12 - 164.05 3% Min: Sphalerite>>											
<<Min: 160.12 - 164.05 75% Min: Pyrite>>											
<<Min: 160.12 - 164.05 3% Min: Pyrrhotite>>											
<<Min: 160.12 - 164.05 3% Min: Galena>>											
<<Min: 160.12 - 164.05 0.5% Min: Chalcopryite>> At 162.30, patch CP.											
160.16	164.05	OA Magnetite bearing sulphides	FMG	160.16	161.00	0.84					
164.05	165.76	OH Fine grained, megascopically homogeneous pyrite rock	FG	164.05	165.00	0.95					
<<Min: 164.05 - 167 0.1% Min: Galena>>											
<<Min: 164.05 - 167 0.1% Min: Chalcopryite>>											
165.76	166.16	OA Magnetite bearing sulphides	FG	165.76	166.16						
165.76 - 166.16: Containing MG.											
166.16	167.00	OH Fine grained, megascopically homogeneous pyrite rock	FG	166.20	167.00	0.80					
167.00	169.59	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG	167.00	168.00	1.00					
<<Min: 167 - 169.59 4% Min: Sphalerite>>											
<<Min: 167 - 169.59 2% Min: Galena>>											
<<Min: 167 - 169.59 0.1% Min: Chalcopryite>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-260W1

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
169.59	170.91	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	169.59	170.18	0.59						
<<Min: 169.59 - 170.76 4% Min: Sphalerite>>			170.18	170.76	0.58						
<<Min: 169.59 - 170.76 5% Min: Galena>>			170.76	171.26	0.50						
<<Min: 170.76 - 171.26 4% Min: Sphalerite>>											
<<Min: 170.76 - 171.26 3% Min: Galena>>											
<<Min: 170.76 - 171.26 6% Min: Chalcopryite>>											
170.91	171.26	OA Magnetite bearing sulphides									
171.26	172.48	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	171.26	171.85	0.59						
<<Min: 171.26 - 172.48 3% Min: Sphalerite>>			171.85	172.48	0.63						
<<Min: 171.26 - 172.48 5% Min: Galena>>											
172.48	175.85	OI Heavilly disseminated sulphides in host schist	172.48	173.30	0.82						
172.48 - 175.85: Probably in RHY(cw?).											
<<Min: 172.48 - 174.2 4% Min: Pyrite>>			173.30	174.20	0.90						
<<Min: 172.48 - 174.2 4% Min: Pyrrhotite>>			174.20	174.92	0.72						
<<Min: 172.48 - 174.2 0.1% Min: Chalcopryite>>			174.92	175.85	0.93						
<<Min: 174.2 - 174.92 4% Min: Sphalerite>>											
<<Min: 174.2 - 174.92 20% Min: Pyrite>>											
<<Min: 174.2 - 174.92 4% Min: Galena>>											
<<Min: 174.92 - 183.1 2% Min: Sphalerite>>											
<<Min: 174.92 - 183.1 4% Min: Pyrite>>											
<<Min: 174.92 - 183.1 2% Min: Galena>>											
<<Min: 174.92 - 183.1 3% Min: Chalcopryite>>											
<<Min: 174.92 - 183.1 0.1% Min: Arsenopyrite>>											
<<Alt: 172.48 - 173.9 Moderate (Alt) Chlorite>>											
<<Alt: 172.48 - 175.85 Moderate (Alt) Chlorite>>											
175.85	177.12	OJ Heavilly disseminated sulphides in proximal altered rock	175.85	176.50	0.65						

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-260W1

From (m) To (m) Rocktype & Description

<<Alt: 175.85 - 177.12 Strong (Alt) Chlorite>>

177.12 183.10 OI Heavily disseminated sulphides in host schist

177.12 - 183.1: Probably in RHY(cw?).

<<Alt: 177.12 - 183.1 Moderate (Alt) Chlorite>>

183.10 183.80 OJ Heavily disseminated sulphides in proximal altered rock

183.1 - 183.8: Coarse grain at lower contact and QZ vein.

<<Min: 183.1 - 183.8 5% Min: Pyrite>>

<<Min: 183.1 - 183.8 1% Min: Pyrrhotite>>

<<Min: 183.1 - 183.8 0.1% Min: Chalcopryite>>

<<Alt: 183.1 - 183.8 Strong (Alt) Chlorite>>

183.80 196.00 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

183.8 - 196: Bleached in the shear zone. Few BI at from 195m, Ca poor. E.O.H.

<<Min: 183.8 - 196 2% Min: Calcite>>

<<Alt: 183.8 - 187.85 Moderate (Alt) Chlorite>>

<<Alt: 187.85 - 192.77 Strong (Alt) Muscovite>> Fushite 4.

<<Alt: 192.77 - 196 Moderate (Alt) Chlorite>> Fushite 2.

<<Struc: 187.85 - 192.77 Strong (Alt) Fault>> Major, fault corridor. 189.3 to 190.28m, fault gauge.

End of Hole @ 196

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
176.50	177.12	0.62						
177.12	178.00	0.88						

178.00	179.00	1.00
179.00	180.00	1.00
180.00	181.00	1.00
181.00	181.67	0.67
181.67	182.28	0.61
182.28	183.10	0.82
183.10	183.80	0.70

FG

183.80	185.30	1.50
--------	--------	------

185.30	186.80	1.50
186.80	188.00	1.20

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-261

Prospect:	GP4F	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Gilles Dessureau
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	15-Sep-15
UTM Easting	419650.76	Core Size:	HQ	Azimuth:	180	Date Logging Complete:	19-Sep-15
UTM Northing:	6813231.17	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1311.2	Casing Depth (m):	9	Length (m):	302	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	14-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	19-Sep-15
Local Elev. (m):						Purpose:	Exploration
Comments:						Parent Hole:	

This hole was drilled to test the eastern extension of the GP4F horizon. This hole intersected rhyolite lapilli tuffs and pelitic metasediments (similar to the hanging wall of the GP4F deposit) from 0-99m including a quartz crystal tuff/porphyry with bluish quartz eyes, which is commonly associated with the GP4F/R15 horizon. A fault at approximately 99m appears to cut-off the lower part of the stratigraphy, including the mineralized horizon. Below the fault zone, this hole intersects quartz-feldspar lapilli tuffs and a quartz feldspar porphyry similar to the quartz porphyries in the hanging wall approximately 100-200m above the GP4F deposit. Very fine grained disseminated sphalerite (narrow bands up to 10% sphalerite) was intersected between 117.15 and 178.3m above intense chlorite+garnet alteration zone (178.3-187.3m) with fine, banded to disseminated sphalerite-galena-pyrrhotite(+/-trace chalcopryrite) mineralization. GP4F style massive sulphide (sphalerite-pyrrhotite-galena-chalcopryrite) mineralization and vein style (sphalerite-pyrrhotite-galena-chalcopryrite) mineralization were intersected at 214.45-214.9m and 214.1-224.3m respectfully. Below the mineralization this hole intersected carbonaceous siltstone and mudstone (and minor mafic intrusive) and heavily faulted ground.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	157.5	22.5	180	ReflexEVS	Geotech	14-Sep-15		<input checked="" type="checkbox"/>	
42	-58.2	158.6	22.5	181.1	ReflexEVS	Geotech	14-Sep-15	5789	<input checked="" type="checkbox"/>	
67	-57.9	159.1	22.5	181.6	ReflexEVS	Geotech	14-Sep-15	5818	<input checked="" type="checkbox"/>	
92	-58	159.8	22.5	182.3	ReflexEVS	Geotech	14-Sep-15	5752	<input checked="" type="checkbox"/>	
132	-58.2	157.3	22.5	179.8	ReflexEVS	Geotech	15-Sep-15	5926	<input checked="" type="checkbox"/>	
160	-58.1	162.5	22.5	185	ReflexEVS	Geotech	16-Sep-15	5739	<input checked="" type="checkbox"/>	
186	-58.2	160	22.5	182.5	ReflexEVS	Geotech	16-Sep-15	5746	<input checked="" type="checkbox"/>	
213	-58.8	156.7	22.5	179.2	ReflexEVS	Geotech	17-Sep-15	5806	<input checked="" type="checkbox"/>	
246	-58.4	161.1	22.5	183.6	ReflexEVS	Geotech	17-Sep-15	5786	<input checked="" type="checkbox"/>	
270	-59.1	162.7	22.5	185.2	ReflexEVS	Geotech	17-Sep-15	5778	<input checked="" type="checkbox"/>	
294	-58.4	164.9	22.5	187.4	ReflexEVS	Geotech	17-Sep-15	5790	<input checked="" type="checkbox"/>	
302	-58.5	164.2	22.5	186.7	ReflexEVS	Geotech	18-Sep-15	5772	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	9.00	CASN Casing									
0 - 9: Casing to 9m.											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-261

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
9.00	12.30	OVBN Overburden									
9 - 12.3: Overburden. Large granite boulders with small rhyolite lapilli tuff boulders.											
12.30	12.80	RHYvl Lapilli tuff	light grey	FMG							
12.3 - 12.8: Light grey, well foliated, fine to medium grained, quartz-muscovite schist/rhyolite lapilli tuff.											
12.80	14.10	INT undifferentiated (granitic) intrusive rocks	light grey	CG							
12.8 - 14.1: Light grey, massive to weakly foliated, coarse grained granitic rock. Intrusive lower contact with rhyolite lapilli tuff, sharp upper contact. Granitic dyke.											
14.10	15.60	RHYvl Lapilli tuff	grey	FMG							
14.1 - 15.6: Grey, well foliated, fine to medium grained, quartz-muscovite schist/rhyolite lapilli tuff. Abundant 1-2cm rhyolite lapilli (70-80%) in a tuffaceous matrix. Very weak, pervasive sericite alteration. Dominant foliation 50o to ca.											
15.60	18.00	SED undifferentiated Sediment	brown	FG							
15.6 - 18: Dark grey to dark brown, well foliated, fine grained, biotite-quartz schist/metapelite. Weakly to moderately calcareous.											
18.00	23.90	RHYvl Lapilli tuff	light grey	FMG							
18 - 23.9: Light grey, well foliated, fine to medium grained, quartz-muscovite schist/rhyolite lapilli tuff. Abundant (~80%), densely packed, 1-2cm rhyolite lapilli. Weak pervasive sericite alteration with very weak silicification. Broken rock between 20-23m.											
<<Struc: 20 - 20.1 Moderate (Alt) dominant foliation>>											
<<Struc: 20 - 23 Weak (Alt) Fault>> weak fault, with broken core. No gouge.											
23.90	24.90	SED undifferentiated Sediment	brown	FG							
23.9 - 24.9: Dark grey to dark brown, well foliated, fine grained, biotite-chlorite-quartz-carbonate schist/metapelite with chlorite rich bands (mafic tuffaceous interbeds?). Weakly to moderately calcareous.											
24.90	30.60	RHYvl Lapilli tuff	grey	FMG							
24.9 - 30.6: Grey, well foliated, fine to medium grained, quartz-muscovite-biotite schist/rhyolite tuff-fine lapilli tuff. Generally finer grained with <1cm lapilli in a fine matrix. Could be a siliceous siltstone or epiclastic.											
30.60	33.30	SED undifferentiated Sediment	brown	FG							
30.6 - 33.3: Dark grey to dark brown, well foliated, fine grained, biotite-quartz schist/metapelite. Weakly to moderately calcareous.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-261

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
33.30	39.40	RHYvl Lapilli tuff	grey	FMG							
33.3 - 39.4: Light to medium grey, well foliated, fine to medium grained, quartz-muscovite schist/rhyolite lapilli (possible feldspar crystals) tuff. Abundant 1-2cm elongated rhyolite lapilli in a fine ash matrix. Several 'fragments' look boxy and could be 2-5mm feldspar crystals. Alteration is weak to very weak, pervasive sericite alteration. Cut by occasional narrow (1-2mm) quartz-tourmaline(?) veinlets at very shallow angles to core axis (10-20o ca.).											
<<Struc: 36.5 - 37 Moderate (Alt) Vein>> narrow 1-2mm quartz tourmaline(?) vein.											
<<Struc: 38.4 - 39 Moderate (Alt) Fault>> weak fault zone.											
39.40	41.45	SED undifferentiated Sediment	brown	FMG							
39.4 - 41.45: Dark grey to dark brown, well foliated, fine grained, biotite-quartz-chlorite-carbonate schist/metapelite with chlorite rich bands (mafic tuffaceous interbeds?). Weakly to moderately calcareous.											
41.45	45.20	RHYvl Lapilli tuff	light grey	FG							
41.45 - 45.2: Light grey, well foliated, fine to medium grained, quartz-muscovite schist/rhyolite lapilli tuff. Abundant 1-2cm rhyolite lapilli decreasing down hole from 50% at the top of the interval to less than 10% down hole with a general fining sequence down hole to coarse ash at the bottom of the interval.											
45.20	45.90	SED undifferentiated Sediment	brown	FG							
45.2 - 45.9: Dark grey to dark brown, well foliated, fine grained, biotite-chlorite-quartz-carbonate schist/metapelite with chlorite rich bands (mafic tuffaceous interbeds?). Weakly to moderately calcareous. Gradational lower contact, broken upper contact.											
45.90	58.90	RHYvl Lapilli tuff	light grey	FG							
45.9 - 58.9: Light grey, well foliated, weakly to moderately altered, fine grained, quartz-muscovite schist/rhyolite ash tuff. Alteration is weak to locally moderate, pervasive to patchy, sericite alteration with very fine disseminated pyrite. Cut by occasional 1-10cm quartz veins.											
<<Alt: 45.9 - 58.9 Weak (Alt) Muscovite>> weak pervasive sericite alteration											
<<Vein: 52.55 - 52.8 100% Quartz 55 deg. >> quartz-sericite vein											
58.90	59.90	SED undifferentiated Sediment	brown	FG							
58.9 - 59.9: Dark grey to dark brown, well foliated, fine grained, biotite-quartz-carbonate schist/metapelite. Weakly to moderately calcareous.											
59.90	67.50	RHYva Coarse grained to ash tuff	light grey	FG							
59.9 - 67.5: Light grey, well foliated, moderately altered, fine grained, quartz-muscovite schist/rhyolite ash tuff. Alteration is moderate, pervasive, sericite alteration with very fine disseminated pyrite (locally up to 1% in 5-10 cm bands). Alteration is increasing in intensity down hole. Cut by occasional 1-10cm quartz veins.											
<<Min: 59.9 - 67.9 1% Min: Pyrite>>											
<<Alt: 59.9 - 67.5 Weak-Moderate (Alt) Muscovite>> weak to moderate pervasive sericite alteration.											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-261

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
95.60	99.00	SED undifferentiated Sediment brown FG									
95.6 - 99: Dark grey to dark brown, well foliated, fine grained, biotite-quartz-carbonate schist/metapelite or tufaceous metapelite. Weakly to moderately calcareous. Very altered lower fault contact.											
99.00	99.80	SED undifferentiated Sediment light grey FG									
99 - 99.8: Light grey, unconsolidated fault gouge with intense sericite alteration. 99.6-99.8m is quartz vein. Heavily sericite altered halo around fault zone.											
<<Struc: 99 - 99.8 Intense (Alt) Fault>> fault gouge.											
99.80	100.10	SED undifferentiated Sediment grey-brown FG									
99.8 - 100.1: Dark grey to dark brown, well foliated, moderately altered, fine grained, biotite-quartz-carbonate schist/metapelite or tufaceous metapelite. Weakly to moderately calcareous. Very altered lower contact with large quartz vein.											
100.10	109.60	SED undifferentiated Sediment grey-brown FG									
100.1 - 109.6: Light grey to dark brown, well foliated, moderately altered, quartz-biotite schist/metapelite interbedded with quartz muscovite schist/rhyolite lapilli-ash tuff. Dominantly biotite-quartz schist. Alteration is patchy, moderate sericite alteration. Mineralization is trace to locally 1% fine grained disseminated pyrite associated with sericite alteration. 100.1-100.6m quartz vein.											
<<Vein: 100.9 - 101.5 100% Quartz 70 deg. >> quartz vein											
<<Struc: 100.9 - 101.6 Strong (Alt) Vein>> quartz vein											
109.60	114.60	RHYvl Lapilli tuff grey FMG									
109.6 - 114.6: Grey, well foliated, fine to medium grained, quartz-muscovite-biotite schist/rhyolite quartz crystal, lapilli tuff. This unit maybe an epiclastic sediment or a tuffaceous sediment with up to 10% foliated biotite within the rock and interbedded with small bands (up to 30cm) of biotite rich metapelite. Alteration is weak pervasive sericite alteration.											
<<Vein: 109.8 - 110 80% Quartz 50 deg. >> quartz vein											
<<Struc: 109.6 - 110 Strong (Alt) Vein>> quartz vein											
114.60	120.00	RHYcf Feldspar & feldspar quartz grey FMG porphyry									
114.6 - 120: Light to medium grey, weakly foliated to massive, quartz-feldspar-muscovite schist/rhyolite quartz-feldspar porphyry. Abundant 0.5-1cm feldspar crystals and abundant 0.5cm quartz crystals in a fine grained matrix. This unit is more foliated in the margins and less foliated in the core. In the core feldspar crystals are still subhedral.											
120.00	121.15	RHYvl Lapilli tuff grey FMG									
120 - 121.15: Grey to greenish grey, well foliated, fine to medium grained, quartz-muscovite-biotite-chlorite schist/rhyolite lapilli tuff. Abundant 0.5cm quartz and feldspar crystals along with 1cm siliceous lithic lapilli in a biotite rich, chlorite-sericite altered matrix. Possibly an epiclastic unit.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-261

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
121.15	122.10	SED undifferentiated Sediment brown FG									
121.15 - 122.1: Light grey to dark brown, well foliated, biotite-quartz schist/metapelite. Locally zones of moderate sericite alteration.											
122.10	124.40	RHYcf Feldspar & feldspar quartz porphyry grey FMG									
122.1 - 124.4: Grey to greenish grey, well foliated, fine to medium grained, quartz-muscovite-biotite-chlorite schist/rhyolite lapilli tuff. Abundant 0.5cm quartz and feldspar crystals along with 1cm siliceous lithic lapilli in a biotite rich, chlorite-sericite altered matrix. Possibly an epiclastic unit. Small zones (5-10cm) of moderate sericite alteration.											
<<Vein: 122.1 - 122.3 100% Quartz 80 deg. >> quartz vein											
<<Struc: 122.1 - 122.3 Strong (Alt) Vein>> quartz vein											
124.40	125.30	SED undifferentiated Sediment grey-brown FG									
124.4 - 125.3: Light grey to dark brown, well foliated, biotite-quartz schist/metapelite.											
125.30	132.00	RHYvl Lapilli tuff grey-brown FMG									
125.3 - 132: Grey to greenish grey, well foliated, fine to medium grained, quartz-muscovite-biotite-chlorite schist/rhyolite lapilli tuff. Abundant 0.5cm quartz and feldspar crystals along with 1cm siliceous lithic lapilli in a biotite rich, chlorite-sericite altered matrix. Possibly an epiclastic unit. Small zones (5-10cm) of moderate sericite alteration. Coarser lapilli at the lower contact which is likely faulted with broken rock.											
<<Struc: 127 - 128 Moderate (Alt) Fault>> fault zone - broken core											
<<Struc: 130.5 - 131.5 Moderate (Alt) Fault>> fault zone - broken core											
132.00	133.70	SED undifferentiated Sediment brown FG									
132 - 133.7: Light grey to dark brown, well foliated, biotite-quartz schist/metapelite.											
133.70	156.60	RHYcf Feldspar & feldspar quartz porphyry grey FMG									
133.7 - 156.6: Light to medium grey, weakly to moderately foliated, fine to course grained, quartz-feldspar-muscovite schist/rhyolite quartz-feldspar porphyry. Abundant 0.5-1.0cm, euhedral to subhedral feldspar crystals with abundant 0.5-1cm euhedral, rounded quartz crystals in a fine grained sericite matrix. Looks a little like a lapilli tuff at the top, but the core looks like a porphyry.											
<<Vein: 151.2 - 151.3 100% Quartz 70 deg. >> quartz vein											
156.60	157.70	RHYvl Lapilli tuff grey FMG									
156.6 - 157.7: Light to medium grey, well foliated, weakly altered, quartz-muscovite schist/rhyolite lapilli tuff. Densely packed 2-3cm elongated rhyolite lapilli in a sericite-chlorite matrix. Alteration is weak pervasive sericite alteration.											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-261

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
157.70	162.30	SED undifferentiated Sediment brown FG									
157.7 - 162.3: Dark brown, well foliated, fine grained, biotite-quartz schist/metapelite. Locally broken core, beginning of a fault zone.											
<<Struc: 161 - 162 Strong (Alt) Fault>> fault zone.											
162.30	165.00	RHYvl Lapilli tuff grey FMG									
162.3 - 165: Light to medium grey, strongly altered, fault zone, with fault gouge.											
<<Struc: 162.3 - 165 Intense (Alt) Fault>> fault gouge.											
165.00	167.70	SED undifferentiated Sediment grey FG									
165 - 167.7: Light grey to brown, well foliated, quartz-biotite-sericite schist/metapelite interbedded with epiclastic sediments. Broken core and likely still in fault zone.											
167.70	173.30	RHYvl Lapilli tuff grey FMG									
167.7 - 173.3: Light to medium grey, strongly altered, fault zone with well developed fault gouge and rubble core. Alteration is pervasive sericite alteration, likely associated with faulting.											
<<Struc: 167.7 - 171.3 Strong (Alt) Fault>> strong fault zone											
173.30	176.40	SED undifferentiated Sediment green-brown FG	173.30	174.40	1.10	B00269216	0.5	-0.005	-0.01	-0.01	0.03
173.3 - 176.4: Brown, green and white, well foliated, fine grained, biotite-chlorite-carbonate schist/interbedded mafic tuff and pelitic sediment?											
176.40	177.15	RHYi Aphanitic Rhyolite (intrusion) light grey FG	174.40	175.40	1.00	B00269217	0.5	-0.005	-0.01	-0.01	-0.01
176.4 - 177.15: Light grey, massive to weakly foliated, fine grained to aphanitic rhyolite dyke (flow?). Sharp upper contact. Very thin, wispy flow bands? Or fragment margins. If fragmental, it is densely packed 'welded' lapilli tuff.											
177.15	178.30	SED undifferentiated Sediment brown FG	175.40	176.40	1.00	B00269218	1	-0.005	-0.01	-0.01	0.02
177.15 - 178.3: Brown to grey to green, well foliated, fine to medium grained, mineralized, biotite-chlorite-garnet-quartz-carbonate schist. Could be interbedded pelitic sediment with mafic tuffs. Small (1-10cm) biotite rich bands interbedded with small (1-10cm) chlorite and/or actinolite bands. Cut by occasional carbonate veinlets. Mineralization is fine grained, disseminated, sphalerite (+/- galena) occurring within narrow (5-10cm) bands.											
<<Min: 177.15 - 178.3 5% Min: Sphalerite>> finely disseminated, weakly laminated sphalerite. Narrow bands up to 10% sphalerite.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-261

From (m) To (m) Rocktype & Description

178.30 187.10 SED undifferentiated Sediment green FG

178.3 - 187.1: Green, well foliated, intensely altered, mineralized, chlorite-garnet schist cutting biotite-chlorite-quartz schist. Footwall stringer zone with intensely chlorite stringers altering a biotite-chlorite-actinolite schist (metapelite interbedded with mafic tuff). Large (up to 2cm) garnet porphyroblasts, occur in the strongest alteration (and smaller ones occur outside the alteration zones). Mineralization is patchy fine grained disseminated pyrrhotite, galena, pyrite with trace chalcopyrite associated with the most altered zones.

<<Min: 178.3 - 187.3 0.5% Min: Sphalerite>>

<<Min: 178.3 - 187.3 1% Min: Pyrrhotite>>

<<Min: 178.3 - 187.3 0.5% Min: Galena>>

<<Min: 178.3 - 187.3 0.5% Min: Chalcopyrite>>

<<Alt: 178.3 - 187.1 Intense (Alt) Chlorite>> Intense, pathcy, stringer zone, chlorite-garnet alteration.

187.10 192.50 SEDc calcareous Sediment brown FG

187.1 - 192.5: Brown to grey to green, well foliated, fine to medium grained, biotite-chlorite-quartz-carbonate schist. Could be interbedded pelitic sediment with mafic tuffs. Small (1-10cm) biotite rich bands interbedded with small (1-10cm) chlorite and/or actinolite bands. Cut by occasional carbonate veinlets.

<<Alt: 187.1 - 192.5 Weak (Alt) Muscovite>> weak sericite alteration

192.50 205.10 SED undifferentiated Sediment light grey FG

192.5 - 205.1: Light grey, well foliated, moderately altered, quartz-muscovite-biotite schist/rhyolite ash tuff or siliceous siltstone. Core is broken with narrow (1-10cm) zones of fault gouge. Alteration is patchy to pervasive, moderate sericite alteration (possibly associated with faulting).

<<Alt: 192.5 - 206 Moderate-Strong (Alt) Muscovite>> moderate sericite alteration. Possiby overprinting alteration asociated with fault zone, possible original sericite alteration associated with VMS mineralization.

<<Vein: 192.5 - 193.7 100% Quartz 70 deg. >> quartz vein

<<Struc: 192.5 - 193.7 Strong (Alt) Vein>> quartz vein

<<Struc: 199 - 201.8 Intense (Alt) Vein>> fault zone.

<<Struc: 201.8 - 202 Strong (Alt) Vein>> quartz vein

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
178.30	179.30	1.00	B00269165	2.6	0.005	0.03	0.12	0.74

179.30	180.30	1.00	B00269166	7.6	0.012	0.04	0.26	2.72
180.30	181.30	1.00	B00269167	4.3	0.009	0.03	0.51	1.61
181.30	182.30	1.00	B00269168	13.9	0.035	0.19	4.05	5.11
182.30	183.30	1.00	B00269169	6.5	0.022	0.1	1.84	5.03
183.30	184.10	0.80	B00269171	0.4	0.005	-0.01	0.03	0.11
184.10	185.10	1.00	B00269172	2.9	0.059	0.07	0.45	1.65
185.10	186.10	1.00	B00269173	9.7	0.024	0.14	0.33	4.61
186.10	187.10	1.00	B00269174	1.9	0.015	0.09	0.01	2.78
187.10	188.10	1.00	B00269175	0.5	-0.005	-0.01	-0.01	0.05

188.10	189.10	1.00	B00269176	1.3	-0.005	0.03	0.02	0.45
189.10	190.10	1.00	B00269177	1	0.007	0.08	-0.01	1.12
190.10	192.50	2.40	B00269178	-0.3	-0.005	-0.01	-0.01	0.06
192.50	193.50	1.00	B00269179	-0.3	-0.005	-0.01	-0.01	0.04

193.50	194.50	1.00	B00269181	0.4	0.025	-0.01	0.02	0.04
194.50	195.50	1.00	B00269182	0.7	0.006	-0.01	0.02	0.1
195.50	196.50	1.00	B00269183	0.4	-0.005	-0.01	0.01	0.04
196.50	197.50	1.00	B00269184	-0.3	-0.005	-0.01	-0.01	0.02
197.50	198.50	1.00	B00269185	-0.3	-0.005	-0.01	-0.01	-0.01
198.50	199.50	1.00	B00269186	-0.3	-0.005	-0.01	-0.01	0.01
199.50	201.50	2.00	B00269187	-0.3	-0.005	-0.01	-0.01	0.01
201.50	202.00	0.50	B00269188	0.6	-0.005	-0.01	-0.01	-0.01
202.00	203.00	1.00	B00269189	-0.3	-0.005	-0.01	-0.01	-0.01



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-261

From (m) To (m) Rocktype & Description

205.10 214.45 RHYvl Lapilli tuff grey-brown FMG

205.1 - 214.45: Medium grey to brownish grey to locally greenish brown, well foliated, fine to medium grained, quartz-muscovite-biotite schist/rhyolite lapilli tuff and rhyolite ash tuff interbedded with metapelite. Could be epiclastic sediment unit as well with several biotite rich bands. Very mottled texture, Alteration is pervasive sericite-pyrite-silica alteration. (very competent core).

<<Alt: 206 - 214.45 Weak-Moderate (Alt) Muscovite>> weak sericite alteration

<<Vein: 206.9 - 207 100% Quartz 75 deg. >> quartz vein

<<Struc: 206.8 - 207 Strong (Alt) Vein>> quartz vein

214.45 214.90 MXSX Massive Sulphide dark grey VFG

214.45 - 214.9: Massive sulphide and quartz vein. Sulphide mineralization is 10cm of massive pyrrhotite/sphalerite with sub-rounded quartz fragments (very similar texture to GP4F and R15) and quartz vein hosted sulphides including pyrrhotite, galena, pyrite and trace chalcopyrite. Upper contact of massive sulphide is sharp and lower contact is convoluted.

<<Min: 214.45 - 214.9 1% Min: Sphalerite>>

<<Min: 214.45 - 214.9 1% Min: Pyrrhotite>>

<<Min: 214.45 - 214.9 1% Min: Galena>>

<<Min: 214.45 - 214.9 0.5% Min: Chalcopyrite>>

<<Alt: 214.45 - 214.9 Intense (Alt) Silicification>> quartz vein associated with mineralization

<<Vein: 214.45 - 214.9 100% Quartz-Pyrrhotite 75 deg. >> quartz-pyrrhotite-chalcopyrite-galena vein

<<Struc: 214.45 - 214.9 Strong (Alt) Vein>> pyrrhotite-galena-chalcopyrite-quartz vein/massive sulphide horizon

214.90 222.90 RHYv Rhyolite volcanoclastic light grey FG

214.9 - 222.9: Light grey, foliated, moderately altered, faulted, quartz-muscovite schist/rhyolite ash tuff. Alteration is moderate, pervasive, sericite alteration. Cut by occasional quartz vein with trace galena.

<<Alt: 214.9 - 222.9 Strong (Alt) Muscovite>> strong sericite ltration

<<Struc: 216 - 222.9 Strong (Alt) Fault>> fault zone with several smaller gouge zones.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
203.00	204.00	1.00	B00269191	0.6	-0.005	-0.01	-0.01	-0.01
204.00	205.10	1.10	B00269192	0.7	-0.005	-0.01	-0.01	-0.01
205.10	207.00	1.90	B00269193	1.3	0.006	-0.01	-0.01	0.04

207.00	208.00	1.00	B00269194	1.9	0.008	-0.01	0.03	0.04
208.00	209.00	1.00	B00269195	1.6	-0.005	-0.01	0.03	0.17
209.00	210.00	1.00	B00269196	1.2	-0.005	-0.01	0.02	0.34
210.00	211.00	1.00	B00269197	0.7	-0.005	-0.01	-0.01	0.04
211.00	212.00	1.00	B00269198	0.9	-0.005	0.01	-0.01	0.12
212.00	213.00	1.00	B00269199	0.6	-0.005	-0.01	-0.01	0.02
213.00	213.80	0.80	B00269201	0.6	0.031	-0.01	-0.01	0.01
213.80	214.45	0.65	B00269202	1.1	-0.005	0.02	-0.01	0.01
214.45	214.90	0.45	B00269203	117	0.036	0.26	2.57	3.91

214.90	215.90	1.00	B00269204	11.6	0.041	-0.01	0.36	0.52
--------	--------	------	-----------	------	-------	-------	------	------

215.90	216.90	1.00	B00269205	7.6	0.018	-0.01	0.37	0.31
216.90	219.00	2.10	B00269206	2.8	-0.005	-0.01	0.13	0.13
219.00	220.00	1.00	B00269207	1.4	-0.005	-0.01	0.17	0.14
220.00	222.00	2.00	B00269208	0.5	-0.005	-0.01	0.04	0.08



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-261

From (m) To (m) Rocktype & Description

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
222.00	222.90	0.90	B00269209	1.5	-0.005	-0.01	0.1	0.17
222.90	224.30	1.40	B00269211	18.5	-0.005	0.1	0.98	1.36

222.90 224.30 RHYva Coarse grained to ash tuff grey FG

222.9 - 224.3: Grey, to dark grey, strongly altered, quartz-muscovite schist/ rhyolite lapilli tuff. Cut by quartz-galena-chalcopryite-pyrrhotite vein. Alteration is strong pervasive chlorite-sericite alteration. Associated with the vein.

<<Min: 224.1 - 224.3 1% Min: Pyrrhotite>>

<<Min: 224.1 - 224.3 1% Min: Galena>>

<<Min: 224.1 - 224.3 1% Min: Chalcopryite>>

<<Alt: 222.9 - 224.3 Moderate-Strong (Alt) Silicification>> strong quartz sericite alteration associated with mineralization

<<Vein: 224.1 - 224.3 100% Quartz-Pyrrhotite 75 deg. >> quartz-pyrrhotite-chalcopryite-galena vein

<<Struc: 224.1 - 224.3 Moderate-Strong (Alt) Vein>> quartz-galena-pyrrhotite-chalcopryite vein

224.30 233.20 RHYvl Lapilli tuff grey FMG

224.3 - 233.2: Grey, foliated, fine grained, weakly carbonaceous, quartz-muscovite schist/carbonaceous rhyolite ash-lapilli tuff.

<<Alt: 224.3 - 237 Moderate (Alt) Silicification>> moderate silica alteration

<<Alt: 224.3 - 237 Moderate (Alt) Muscovite>> moderate sericite alteration

<<Vein: 232.7 - 233.1 100% Quartz-Chlorite 35 deg. >> quartz chlorite vein

<<Struc: 232.7 - 233.1 Intense (Alt) Vein>> quartz vein

224.30	225.30	1.00	B00269212	1.6	-0.005	-0.01	0.08	0.09
225.30	226.30	1.00	B00269213	0.8	-0.005	-0.01	0.03	0.06
226.30	227.30	1.00	B00269214	0.3	-0.005	-0.01	-0.01	0.06
227.30	228.30	1.00	B00269215	0.8	-0.005	-0.01	-0.01	0.04

233.20 237.00 SED undifferentiated Sediment grey FG

233.2 - 237: Medium to dark grey, foliated, fine grained, carbonaceous siltstone interbedded with biotite rich carbonaceous mudstone. Alteration is weak pervasive sericite alteration.

237.00 243.00 MDSc Carbonaceous dominant dark grey FG mudstone

237 - 243: Dark grey, foliated, fine grained, carbonaceous mudstone and siltstone fault zone and fault gouge. Carbonaceous sand, gravel, and fault gouge. Narrow zones of quartz vein material sand and gravel.

<<Struc: 237 - 243 Intense (Alt) Fault>> fault zone.

243.00 269.00 MDSc Carbonaceous dominant dark grey FG mudstone

243 - 269: Dark grey, foliated, fine grained, carbonaceous mudstone and siltstone. Interbedded bands of biotite-quartz schist, quartz-carbonaceous schist and narrow 10-20cm bands of biotite-chlorite-carbonate schist. Cut by occasional quartz veins. Broken core 243-249m.

<<Vein: 243 - 252 10% Quartz 55 deg. >> quartz veins

<<Vein: 262.2 - 262.3 100% Quartz 60 deg. >> quartz vein



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-261

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Vein: 263.2 - 263.5 100% Quartz 70 deg. >> quartz vein											
<<Struc: 248.9 - 249.2 Strong (Alt) Vein>> quartz vein											
<<Struc: 262.2 - 262.3 Moderate-Strong (Alt) Vein>> quartz vein											
<<Struc: 263.2 - 263.5 Intense (Alt) Vein>> quartz vein											
269.00	272.20	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)	dark grey	FMG						
269 - 272.2: Medium green, fine to medium grained, equigranular, weakly foliated, biotite-chlorite-actinolite schist/mafic intrusion (flow?). Sharp upper and lower contacts.											
272.20	288.00	MDSc	Carbonaceous dominant mudstone	dark grey	FG						
272.2 - 288: Dark grey, foliated, fine grained, carbonaceous mudstone and biotite-rich siltstone. Interbedded bands of biotite-quartz schist, quartz-carbonaceous schist and narrow 10-20cm bands of biotite-chlorite-carbonate schist. Cut by occasional quartz veins.											
288.00	291.50	MDSc	Carbonaceous dominant mudstone	dark grey	FG						
288 - 291.5: Dark grey, foliated, fine grained, carbonaceous mudstone. Locally weakly graphitic. Cut by occasional quartz veins.											
291.50	302.00	MDSc	Carbonaceous dominant mudstone	dark grey	FG						
291.5 - 302: Dark grey, foliated, fine grained, carbonaceous mudstone and biotite-rich siltstone. Interbedded bands of biotite-quartz schist, quartz-carbonaceous schist and narrow 10-20cm bands of biotite-chlorite-carbonate schist. Cut by occasional quartz veins.											
<<Struc: 292 - 293 Moderate (Alt) Fault>> fault zone with broken core with minor gouge.											
End of Hole @ 302											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-262

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	15-Sep-15
UTM Easting	415101.047	Core Size:	HQ3	Azimuth:	125.25	Date Logging Complete:	20-Sep-15
UTM Northing:	6815372.083	Casing Pulled?:	Yes	Dip:	-45	Drill Company:	Geotech
UTM Elev. (m):	1391.439	Casing Depth (m):	6	Length (m):	348	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	13-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	19-Sep-15
Local Elev. (m):						Purpose:	Geotech
Comments:						Parent Hole:	

K15-262 was drilled to characterize the geotechnical properties of the East Fault, as well as attempt to pierce the upper ore lens (ABM) and the proposed down dropped portion of the deposit. It was drilled from the same pad as the abandoned K15-259, at a modified azimuth and dip in order to have a better intersection of the fault. The casing was installed to a depth of 6 m. From 6-58.6 m a mixed sequence of felsic volcanics and carbonaceous horizons occur, with MU-alteration increasing from 36-62 m. CI-alteration becomes intense from 58.6-62 m, which coincides with OJ mineralization. MSXS occurs from 58.6-75.4 m, consisting of OJ, OB, OA, and OI. Below the massive sulphide there is a ~3.5 m intercept of MU-altered rhyolite, overlying a large intercept of CL-BI+/-CA schist (MAFi) from 78.8-125.8 m. The foliation within the MAFi unit varies from being a high angle to the core axis to being a low angle to the core axis. The lower contact of the MAFi is an intense ~10 m wide fault consisting of a polythitic fault breccia (East fault?). Below the fault is a sequence of mixed felsic volcanics, mafic dykes and two carbonaceous horizons. No significant mineralization was encountered in the footwall (of the fault) stratigraphy. However, moderate MU-alteration with two bands (~5-10 cm wide) of semi-massive PY+/-SP was encountered between 306-328.4 m.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-45	125.25	0	125.25	APS	Dillon Hume	13-Sep-15		<input type="checkbox"/>	
15	-44.8	104.2	22.5	126.7	ReflexEVS	Geotech	14-Sep-15	5842	<input checked="" type="checkbox"/>	
45	-44.7	108.2	22.5	130.7	ReflexEVS	Geotech	14-Sep-15	5852	<input checked="" type="checkbox"/>	
75	-44.3	108.9	22.5	131.4	ReflexEVS	Geotech	15-Sep-15	5704	<input checked="" type="checkbox"/>	
105	-44.4	108.1	22.5	130.6	ReflexEVS	Geotech	15-Sep-15	5728	<input checked="" type="checkbox"/>	
138	-44.4	108.2	22.5	130.7	ReflexEVS	Geotech	15-Sep-15	5706	<input checked="" type="checkbox"/>	
165	-44.3	110.6	22.5	133.1	ReflexEVS	Geotech	16-Sep-15	5763	<input checked="" type="checkbox"/>	
195	-44.2	110.3	22.5	132.8	ReflexEVS	Geotech	16-Sep-15	5754	<input checked="" type="checkbox"/>	
225	-44.1	110.6	22.5	133.1	ReflexEVS	Geotech	17-Sep-15	5751	<input checked="" type="checkbox"/>	
255	-44	110.9	22.5	133.4	ReflexEVS	Geotech	17-Sep-15	5749	<input checked="" type="checkbox"/>	
285	-43.8	114.9	22.5	137.4	ReflexEVS	Geotech	17-Sep-15	5761	<input checked="" type="checkbox"/>	
315	-44	116.8	22.5	139.3	ReflexEVS	Geotech	19-Sep-15	5770	<input checked="" type="checkbox"/>	
345	-44.1	117.2	22.5	139.7	ReflexEVS	Geotech	19-Sep-15	5774	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-262

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
6.00	24.00	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
6 - 24: Good curdy of flow banded texture.											
<<Min: 6 - 34.1 2% Min: Pyrite>>											
<<Min: 6 - 34.1 2% Min: Pyrrhotite>>											
24.00	34.10	RHYvl Lapilli tuff									
24 - 34.1: fgr grained ash groundmass with PY+/-PO or CA replaced lpl											
<<Struc: 32.6 - 33.2 Strong (Alt) Fault>> wet fault gouge zone											
34.10	38.00	MDSt Rhyolite tuff dominant mudstone									
34.1 - 38: Grades (from bottom of the unit to the top) from a MDSc to a volcanoclastic rhyolite with minor carbonaceous material.											
<<Min: 34.1 - 38 1% Min: Pyrite>>											
38.00	40.80	RHYv Rhyolite volcanoclastic									
38 - 40.8: volcanoclastic rhyolite with minor (~5%) carbonaceous material. QZ-carb vein from ~38-39.3 m. relatively sharp contact with MDSc below.											
<<Min: 38 - 49.7 2% Min: Pyrite>>											
<<Min: 38 - 49.7 2% Min: Pyrrhotite>>											
<<Alt: 38 - 49.7 Weak (Alt) Muscovite>>											
<<Vein: 38 - 39.2 80% Quartz>> Massive QZ-AK veining											
<<Struc: 39.7 - 40 Moderate (Alt) Fault>> moderately fault zone											
40.80	43.60	MDSt Rhyolite tuff dominant mudstone									
40.8 - 43.6: From 40.8-41 m the unit can be defined as a carbonaceous mudstone. From 41-43.6 m the unit is volcanoclastic rhyolite with ~10% carbonaceous material.											
43.60	49.70	RHYv Rhyolite volcanoclastic									
43.6 - 49.7: Well laminated Mu-altered volcanoclastic rhyolite											
<<Struc: 43.96 - 43.97 dominant foliation>> Carbonaceous cleavage											
<<Struc: 45 - 45.01 dominant foliation>> MU cleavage											
<<Struc: 48.15 - 48.16 dominant foliation>> Carbonaceous cleavage											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-262

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
49.70	52.50	MDS Carbonaceous dominant mudstone									
49.7 - 52.5: carbonaceous mudstone with minor siliceous and carbonate laminations.											
<<Min: 49.7 - 58.6 1% Min: Pyrite>>											
<<Struc: 51 - 51.01 dominant foliation>> lamination in MDS											
52.50	56.40	RHY Lapilli tuff	53.60	54.60	1.00						
52.5 - 56.4: Well laminated volcanoclastic rhyolite with PO replaced lpl. Minor carbonaceous material (>5%).											
<<Alt: 52.5 - 57.3 Moderate (Alt) Muscovite>>											
<<Struc: 52.77 - 52.78 dominant foliation>> carbonaceous/MU cleavage											
<<Struc: 53.5 - 53.9 Moderate (Alt) Fault>> wet fault gouge zone											
<<Struc: 54.2 - 56.4 Strong (Alt) Fault>> moderately-strongly faulted zone with poor core recovery											
56.40	57.30	MDS Rhyolite tuff dominant mudstone									
56.4 - 57.3: Tuffaceous rhyolite with ~30% carbonaceous material. Well laminated.											
<<Struc: 56.97 - 56.98 dominant foliation>> carbonaceous cleavage											
57.30	58.60	RHY Rhyolite volcanoclastic	57.60	58.60	1.00						
57.3 - 58.6: strongly MU altered volcanoclastic rhyolite											
<<Alt: 57.3 - 62 Strong (Alt) Muscovite>>											
<<Struc: 58 - 58.1 dominant foliation>> MU cleavage											
58.60	62.00	OJ Heavily disseminated sulphides in proximal altered rock	58.60	59.20	0.60						
58.6 - 62: Semi-massive PY+PO+GL+SP+/-CP with CI porphyroblasts and MU+SI groundmass											
<<Min: 58.8 - 59.1 20% Min: Sphalerite>>											
<<Min: 58.8 - 59.1 20% Min: Pyrite>>											
<<Min: 58.8 - 59.1 40% Min: Pyrrhotite>>											
<<Min: 58.8 - 59.1 10% Min: Galena>>											
<<Min: 59.5 - 60.6 15% Min: Pyrrhotite>>											
<<Alt: 58.6 - 62 Strong (Alt) Cordierite>> Heavily disseminated CI-porphyroblasts											
<<Struc: 59.4 - 59.41 dominant foliation>> MU cleavage											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-262

From (m)	To (m)	Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
62.00	64.10	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	62.00	63.00	1.00						
62 - 64.1: Laminated PY+SP+GL+/-CA. Minor Cl porphyroblasts												
<<Min: 62 - 67.8 1% Min: Calcite>>				63.00	64.10	1.10						
<<Struc: 62.47 - 62.48 dominant foliation>> SP lamination												
64.10	64.50	OJ Heavily disseminated sulphides in proximal altered rock	MCG	64.10	64.50	0.40						
64.1 - 64.5: Semi-massive PY+SP+GL with Cl-porphyroblasts in a MU+CL+SI groundmass												
<<Alt: 64.1 - 64.5 Strong (Alt) Muscovite>>												
<<Alt: 64.1 - 64.5 Moderate (Alt) Chlorite>>												
<<Alt: 64.1 - 64.5 Strong (Alt) Cordierite>> Heavily disseminated Cl-porphyroblasts												
64.50	66.50	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	64.50	65.50	1.00						
64.5 - 66.5: Laminated PY+SP+GL with patchy AS												
<<Min: 66.2 - 66.4 5% Min: Arsenopyrite>>				65.50	66.50	1.00						
<<Struc: 64.97 - 64.98 dominant foliation>> sulphide lamination												
<<Struc: 66.31 - 66.32 dominant foliation>> sulphide lamination												
66.50	67.70	OA Magnetite bearing sulphides	MCG	66.50	67.10	0.60						
66.5 - 67.7: Laminated PY+SP+GL+MG with minor PY buckshot texture												
<<Struc: 67.69 - 67.7 dominant foliation>> sulphide lamination				67.10	67.70	0.60						
67.70	71.00	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	67.70	68.30	0.60						
67.7 - 71: Laminated PY+SP+GL with minor MU+SI groundmass												
<<Min: 67.8 - 71 5% Min: Calcite>>				68.30	69.00	0.70						
<<Alt: 67.7 - 69 Strong (Alt) Muscovite>>				69.00	70.00	1.00						
<<Alt: 67.7 - 69 Strong (Alt) Cordierite>> Disseminated Cl-porphyroblasts				70.00	71.00	1.00						
<<Struc: 70.02 - 70.03 dominant foliation>> sulphide lamination												



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-262

From (m) To (m) Rocktype & Description

71.00 73.00 OI Heavily disseminated sulphides in host schist

71 - 73: Heavily disseminated PY in MU-schist

<<Alt: 71 - 73 Intense (Alt) Muscovite>> Completely altered to MU

<<Struc: 72 - 73 Moderate (Alt) Fault>> Moderately faulted MU schist

73.00 75.40 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

MCG

73 - 75.4: Laminated PY+SP+GL. Locally crosscut by vuggy CA veins. From 74.7-75.4 m there is visible oxidation of sulphide grains (related to fault at 75.4 m). Unit is relatively low grade sulphide.

<<Min: 73 - 75.4 10% Min: Calcite>>

75.40 78.80 RHY undifferentiated rhyolite

75.4 - 78.8: Very strongly faulted from 75.4-78 m. From 78-78.8 m the unit is a QZ-MU schist. The original texture is difficult to determine due to alteration and deformation.

<<Min: 75.4 - 78.8 3% Min: Pyrite>>

<<Min: 75.4 - 78.8 2% Min: Calcite>>

<<Alt: 75.4 - 78.8 Strong (Alt) Muscovite>>

<<Struc: 75.4 - 78 Moderate (Alt) Fault>> Strongly faulted (wet fault gouge) zone with poor core recovery

78.80 125.80 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

78.8 - 125.8: CA-CL-BI schist from 78.8-92.6 m. CL-BI+/-actinolite schist from 92.6-125.8 m. The dominant foliation varies from ~45 degree angle to the core axis from 78.8-125.8 m to near parallel to the core axis ~113-121 m. The variation in foliation appears to be as

<<Min: 78.8 - 85.3 20% Min: Calcite>>

<<Min: 78.8 - 125.8 0.5% Min: Pyrite>>

<<Min: 78.8 - 125.8 0.5% Min: Pyrrhotite>>

<<Min: 85.3 - 92.6 10% Min: Calcite>>

<<Min: 92.6 - 125.8 2% Min: Calcite>>

<<Alt: 78.8 - 125.8 Strong (Alt) Chlorite>>

<<Alt: 78.8 - 125.8 Moderate (Alt) Biotite>>

<<Struc: 82.5 - 82.51 dominant foliation>> CA band in MAFi

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
71.00	72.00	1.00						

72.00	73.00	1.00
-------	-------	------

73.00	73.80	0.80
-------	-------	------

73.80	74.60	0.80
74.60	75.40	0.80
75.40	76.40	1.00

76.40	77.40	1.00
77.40	78.20	0.80
78.20	78.80	0.60

78.80	79.80	1.00
-------	-------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-262

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 86.4 - 89.4 Strong (Alt) Fault>> moderately faulted rocks with some wet fault gouge											
<<Struc: 91 - 91.01 Foliation>> CL-cleavage in MAFi											
<<Struc: 91.65 - 91.66 Foliation>> CL-cleavage in MAFi											
<<Struc: 98.6 - 98.61 Foliation>> CL-cleavage in MAFi											
<<Struc: 105.8 - 105.81 Foliation>> CL-cleavage in MAFi											
<<Struc: 108.3 - 108.31 Foliation>> CL-cleavage in MAFi											
<<Struc: 110.8 - 110.81 Foliation>> CL-cleavage in MAFi											
<<Struc: 123.45 - 123.46 dominant foliation>> CL-cleavage											
<<Struc: 124.5 - 124.51 dominant foliation>> CL-cleavage											
125.80 133.90 FBX Fault Breccia											
125.8 - 133.9: Polyolithic fault breccia. Very strong faulting. Faulted material contains broken/fractured clasts of MAFi, RHY, MDS, and MSXS. The groundmass is a mix of fault gouge containing MU, CL, QZ... There is evidence for strong brittle faulting, including micro-fra											
<<Min: 125.8 - 133.9 1% Min: Pyrite>> ~1 cm clasts of massive pyrite in FBX											
<<Min: 125.8 - 133.9 3% Min: Calcite>> Blebs of CA in FBX											
<<Struc: 125.8 - 133.9 Intense (Alt) Fault>> Large fault with a polyolithic fault breccia over ~8 m											
133.90 139.70 RHYvl Lapilli tuff											
133.9 - 139.7: QZ-eye bearing lpl tuff with abundant rhyolitic lpl clasts.											
<<Min: 133.9 - 139.7 1% Min: Pyrrhotite>>											
<<Min: 133.9 - 139.7 2% Min: Calcite>>											
<<Struc: 137.95 - 137.96 dominant foliation>> MU-cleavage in RHYv											
139.70 142.90 MAFi Mafic Intrusions (primarily footwall mafic intrusion)											
139.7 - 142.9: BI+CL+CA+QZ schist (metapelite). Continuous foliation defined by aligned BI grains. Fg CL+CA+QZ groundmass. Assemblage resembles a pelitic mudstone. Symmetric gradational or chilled margin contacts (?).											
<<Min: 139.7 - 142.9 1% Min: Pyrite>>											
<<Min: 139.7 - 142.9 1% Min: Pyrrhotite>>											
<<Min: 139.7 - 142.9 20% Min: Calcite>>											
142.90 146.70 RHYvl Lapilli tuff											
142.9 - 146.7: QZ-eye bearing with rhyolite lapilli and a local granitic bomb. Groundmass is dominantly MU+QZ.											
<<Min: 142.9 - 146.7 1% Min: Pyrite>>											
<<Min: 142.9 - 148.1 5% Min: Calcite>>											



Project:
KZK
Hole Number:
K15-262

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 144.15 - 144.16 dominant foliation>> MU-cleavage in RHYv											
146.70	149.70	RHYvx Quartz and/or feldspar crystal tuff									
146.7 - 149.7: Crystal tuff containing QZ-eyes, FD crystals and elongated rhyolitic lpl. Unit becomes silicified from 148.1 to the bottom, possibly due to contact with RHYi.											
<<Min: 146.7 - 162.4 0.5% Min: Pyrite>>											
<<Alt: 148.1 - 153.4 Strong (Alt) Silicification>> Silicification of volcanoclastic rhyolite											
149.70	152.60	RHYi Aphanitic Rhyolite (intrusion)									
149.7 - 152.6: Patches of light grey aphanitic massive rhyolite. Original FD-crystals and QZ-eyes (from RHYvx?) are preserved within the massive rhyolite. Minor rounded QZ patches occur throughout the unit. Contacts appear gradational and are hard to distinguish from si											
<<Struc: 149.8 - 149.81 dominant foliation>> Cleavage in SI-altered RHYv											
152.60	162.40	RHYvx Quartz and/or feldspar crystal tuff									
152.6 - 162.4: Subhedral-euhedral FD crystals and QZ-eyes in silica+MU groundmass. Continuous foliation defined by MU and elongated FD. Gradational upper (with RHYi) and lower (with RHYvl xtl) contacts.											
<<Min: 153.4 - 166.8 1% Min: Calcite>>											
162.40	165.90	RHYvl Lapilli tuff									
162.4 - 165.9: Lithic (?) lpl, subhedral FD crystals, and QZ eyes in a silica+MU groundmass with local 1mm-2cm bands of semi-massive PY+/-PO.											
<<Min: 162.4 - 165.9 3% Min: Pyrite>> Bands of semi-massive PO+PY											
<<Min: 162.4 - 165.9 5% Min: Pyrrhotite>> Bands of semi-massive PO+PY											
165.90	166.80	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
165.9 - 166.8: QZ-eye bearing curdy rhyolite. Gradational lower contact with SED. Transitions from strongly curdy rhyolite to QE tuffaceous (?) rhyolite to BT+CL+QZ+CA schist (metapelite).											
<<Min: 165.9 - 174.5 1% Min: Pyrite>>											
166.80	167.30	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
166.8 - 167.3: BI+CL+CA+QZ schist (metapelite). Continuous foliation defined by aligned BI grains. Fg CL+CA+QZ groundmass. Assemblage resembles a pelitic mudstone. Symmetric gradational or chilled margin contacts (?).											
<<Min: 166.8 - 167.3 20% Min: Calcite>>											

Project:
KZK
Hole Number:
K15-262

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
167.30	172.00	RHYvl Lapilli tuff 167.3 - 172: Light grey, tuffaceous rhyolite with rhyolitic and lithic lpl, subhedral FD-crystals, and QZ eyes in a Silica+MUgroundmass. Unit varies from FD-crystal rich (167.3- ~168.8 m) to lithic lpl rich (~170-172 m). <<Min: 167.3 - 174.5 1% Min: Calcite>>									
172.00	174.50	RHYcw Curdy textured-flow banded (flows, subvolcanics) 172 - 174.5: Good curdy textured rhyolite with fg MU anastomosing cleavage									
174.50	178.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion) 174.5 - 178: BI+CL+CA+QZ schist (metapelite). Continuous foliation defined by aligned BI grains. Fg CL+CA+QZ groundmass. Assemblage resembles a pelitic mudstone. Symmetric gradational or chilled margin contacts (?). <<Min: 174.5 - 178 3% Min: Pyrite>> <<Min: 174.5 - 178 20% Min: Calcite>>									
178.00	182.30	RHYcw Curdy textured-flow banded (flows, subvolcanics) 178 - 182.3: Good curdy textured rhyolite with disseminated QZ eyes and an anastomosing MU-cleavage <<Min: 178 - 182.3 1% Min: Calcite>> <<Min: 178 - 194.5 1% Min: Pyrite>>									
182.30	183.40	RHYvl Lapilli tuff 182.3 - 183.4: light grey micaceous rhyolite tuff with moderate concentrations of altered lpl. Grades into RHYva at the bottom contact. <<Min: 182.3 - 194.5 5% Min: Calcite>>									
183.40	194.50	RHYva Coarse grained to ash tuff 183.4 - 194.5: Fine grained MU+Silica ashy tuff, with local patches of altered lpl.									
194.50	203.20	MAFi Mafic Intrusions (primarily footwall mafic intrusion) 194.5 - 203.2: Brownish-black, BI-CL-CA schist. Fg BI in an olive green CL-CA+/-QZ matrix with CA (after-FD?) crystals. Different than the other two MAFis in this hole. Originally logged as MAFi but the fly camp believes it to be intrusive. <<Min: 194.5 - 203.2 3% Min: Pyrite>> <<Min: 194.5 - 203.2 1% Min: Pyrrhotite>>									

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 194.5 - 203.2 20% Min: Calcite>>											
203.20	218.90	RHY undifferentiated rhyolite									
203.2 - 218.9: Large QZ-Carb vein with completely CL-altered wallrock. Minor zone (211.9-212.2 m) with a light grey colour that resembles rhyolite.											
<<Min: 203.2 - 218.9 5% Min: Calcite>>											
<<Alt: 203.2 - 218.9 Intense (Alt) Chlorite>> CL-alteration completely obliterates any texture or composition of original rock.											
<<Vein: 203.2 - 209.1 90% Quartz>> QZ-carb veining that has completely altered the wallrock to CL											
<<Vein: 209.1 - 214 30% Quartz>> QZ-carb veining in strongly CL-altered wallrock											
<<Vein: 214 - 218.9 90% Quartz>> QZ-carb veining that has completely altered the wallrock to CL											
<<Struc: 218.5 - 224.9 Strong (Alt) Fault>> Highly fractured and moderately faulted zone. Local 20-50 cm zones of wet fault gouge.											
218.90	224.90	RHYvl Lapilli tuff									
218.9 - 224.9: Highly fractured and moderately faulted, medium grey-green, rhyolite lapilli, MU-QZ schist. 0.5-1 cm long rhyolitic lapilli. Fine grained MU+QZ groundmass. Zones of strong fault gouge.											
<<Min: 218.9 - 234.1 1% Min: Pyrite>>											
<<Min: 218.9 - 247 5% Min: Calcite>>											
224.90	234.10	RHYv Rhyolite volcanoclastic									
224.9 - 234.1: Strongly faulted zone consisting mostly of fault gouge and/or fault breccia, with RHY clasts. Minor unfaulted blocks show volcanoclastic rhyolite texture.											
<<Struc: 224.9 - 234.1 Strong (Alt) Fault>> Strongly faulted zone with high proportion of fault gouge and fault breccia, consisting of RHY clasts.											
234.10	247.00	RHYvl Lapilli tuff									
234.1 - 247: ~20% rhyolitic lpl with minor PY-replaced lpl in MU+QZ groundmass.											
<<Min: 234.1 - 283.4 1% Min: Pyrite>>											
<<Min: 234.1 - 283.4 5% Min: Pyrrhotite>>											
<<Struc: 245 - 245.9 Moderate (Alt) Fault>> Moderately faulted rhyolite with some wet fault gouge.											
247.00	283.40	RHYv Rhyolite volcanoclastic									
247 - 283.4: Light grey-yellowish green, fine grained, PY+MU+QZ schist. ~5% disseminated mm-scale PO+/-PY blebs within a continuous foliation defined by MU. From ~256-270 m there are cm-scale contorted bands of PY+/-PO composing ~10% of the rock. Hard to determine the											
<<Min: 247 - 266 1% Min: Calcite>>											
<<Min: 256 - 270.5 5% Min: Pyrite>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-262

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 266 - 270.5 5% Min: Calcite>>											
<<Min: 270.5 - 295.7 1% Min: Calcite>>											
<<Struc: 265.3 - 265.7 Moderate (Alt) Fault>> weak-moderate fault with minor fault gouge											
<<Struc: 267.1 - 267.8 Strong (Alt) Fault>> Moderately faulted rhyolite with wet fault gouge											
283.40	291.10	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
283.4 - 291.1: Apparent contorted silica bands that are crosscut by MU-cleavage (axial planar to contortions). ~5-10% mm to cm-scale blebs of PO elongated with foliation.											
<<Min: 283.4 - 291.1 10% Min: Pyrrhotite>>											
291.10	295.70	RHYv Rhyolite volcaniclastic									
291.1 - 295.7: Light grey-yellowish green, fine grained, PY+MU+QZ schist. ~5% disseminated mm-scale PO+/-PY blebs within a continuous foliation defined by MU. Hard to determine the original texture due to the pervasive nature of the MU cleavage. Gradational lower bounda											
<<Min: 291.1 - 295.7 5% Min: Pyrrhotite>>											
295.70	298.50	MDS Sc Carbonaceous dominant mudstone									
295.7 - 298.5: Rhyolitic tuffaceous material in a carbonaceous continuous foliation. Carbonaceous material ~50%. Minor diagenetic (?) PY.											
<<Min: 295.7 - 298.5 2% Min: Pyrite>>											
<<Min: 295.7 - 298.5 1% Min: Pyrrhotite>>											
<<Min: 295.7 - 338.9 1% Min: Calcite>>											
298.50	317.90	RHYvl Lapilli tuff									
298.5 - 317.9: Abundant (~20-30%) rhyolitic lpl within a QZ+MU+/-PY groundmass.											
<<Min: 298.5 - 322.5 2% Min: Pyrite>>											
<<Alt: 306 - 328.4 Moderate (Alt) Muscovite>>											
<<Vein: 303.6 - 306 65% Quartz>> Massive QZ-CA vein in rhyolite											
<<Struc: 305 - 305.4 Strong (Alt) Fault>> moderately faulted zone with milled fault gouge/breccia											
<<Struc: 308.47 - 308.48 dominant foliation>> MU-cleavage											
<<Struc: 312.06 - 312.07 dominant foliation>> MU-cleavage											
<<Struc: 312.47 - 312.48 dominant foliation>>											
<<Struc: 313.25 - 313.26 dominant foliation>> MU-cleavage											
<<Struc: 314.75 - 314.76 dominant foliation>> MU-cleavage											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-262

From (m)		To (m)	Rocktype & Description									From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 315.68 - 315.69 dominant foliation>>			MU-cleavage																	
317.90	330.20	RHYcw	Curdy textured-flow banded (flows, subvolcanics)																	
317.9 - 330.2: Silica banding or good curdy siliceous texture with in MU-schist. Minor bands of semi-massive PY+SP+/-GL from 322.5-324.2 m.																				
<<Min: 322.5 - 324.4 0.5% Min: Sphalerite>>																				
<<Min: 322.5 - 324.4 5% Min: Pyrite>>			disseminated and thin bands of sulphide																	
<<Min: 323.7 - 323.8 5% Min: Sphalerite>>			band of semi-massive PY+SP																	
<<Min: 323.7 - 323.8 40% Min: Pyrite>>			band of semi-massive PY+SP																	
<<Min: 324.1 - 324.2 5% Min: Sphalerite>>			band of semi-massive PY+SP+GL																	
<<Min: 324.1 - 324.2 40% Min: Pyrite>>			band of semi-massive PY+SP+GL																	
<<Min: 324.1 - 324.2 2% Min: Galena>>			band of semi-massive PY+SP+GL																	
<<Min: 324.4 - 330.2 3% Min: Pyrite>>																				
<<Alt: 328.4 - 330.9 Weak (Alt) Muscovite>>																				
<<Struc: 318.77 - 318.78 dominant foliation>>			MU-cleavage																	
<<Struc: 320 - 320.01 dominant foliation>>			MU-cleavage																	
<<Struc: 321.14 - 321.15 dominant foliation>>			MU-cleavage																	
<<Struc: 325.6 - 325.61 dominant foliation>>			MU-cleavage																	
<<Struc: 328.08 - 328.09 dominant foliation>>			MU-cleavage																	
<<Struc: 329 - 329.01 dominant foliation>>			MU-cleavage																	
330.20	332.40	MDS	Carbonaceous dominant mudstone																	
330.2 - 332.4: Gradational boundary with overlying RHYcw, from MDSt to argillite (330.8-332.4 m). Disseminated cg PY (diagenetic?).																				
<<Min: 330.2 - 332.4 10% Min: Pyrite>>			Diagenetic PY in MDS																	
332.40	338.90	RHYv	Rhyolite volcaniclastic																	
332.4 - 338.9: QZ-MU schist. Hard to determine original texture.																				
<<Min: 332.4 - 338.9 0.5% Min: Pyrite>>																				
<<Min: 332.4 - 338.9 0.5% Min: Chalcopyrite>>																				
<<Alt: 332.4 - 341.1 Moderate (Alt) Muscovite>>																				

318.00	319.50	1.50	B00268777	0.5	0.01	-0.01	-0.01	-0.01
--------	--------	------	-----------	-----	------	-------	-------	-------

319.50	321.00	1.50	B00268778	0.4	-0.005	-0.01	-0.01	-0.01
321.00	322.50	1.50	B00268779	0.7	0.011	-0.01	-0.01	0.02
322.50	323.50	1.00	B00268781	1.3	0.02	0.02	0.02	0.2
323.50	324.50	1.00	B00268782	14.2	0.099	0.08	0.46	1.25
324.50	326.00	1.50	B00268783	0.8	0.017	0.01	0.01	0.08
326.00	327.50	1.50	B00268784	0.7	0.008	-0.01	-0.01	0.02
327.50	329.00	1.50	B00268785	0.7	0.008	-0.01	0.02	0.03

334.40	335.90	1.50	B00268786	0.7	0.008	-0.01	-0.01	-0.01
--------	--------	------	-----------	-----	-------	-------	-------	-------

335.90	337.40	1.50	B00268787	0.7	0.009	-0.01	-0.01	-0.01
337.40	338.90	1.50	B00268788	8.1	0.013	0.02	0.04	0.01

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-262
From (m) To (m) Rocktype & Description

338.90 340.50 RHY undifferentiated rhyolite

338.9 - 340.5: MU+BI+CA schist with disseminated PY+SP+GL+CP. Locally the texture moderately resembles MU-altered CL+BI+CA schist (MAFi). Core is very fractured.

<<Min: 338.9 - 340.5 1% Min: Sphalerite>> Minor bands of concentrated PY+SP+GL+/-CP

<<Min: 338.9 - 340.5 5% Min: Pyrite>> Minor bands of concentrated PY+SP+GL+/-CP

<<Min: 338.9 - 340.5 0.5% Min: Galena>> Minor bands of concentrated PY+SP+GL+/-CP

<<Min: 338.9 - 340.5 0.5% Min: Chalcopryrite>> Minor bands of concentrated PY+SP+GL+/-CP

<<Min: 338.9 - 340.5 10% Min: Calcite>>

<<Alt: 338.9 - 340.5 Moderate (Alt) Biotite>> Disseminated biotite within unit. Not sure whether it is alteration.

340.50 345.70 RHYvi Lapilli tuff

340.5 - 345.7: Medium grey, volcanoclastic with moderate rhyolitic lpl

<<Min: 340.5 - 345.7 1% Min: Pyrite>>

<<Min: 340.5 - 345.7 5% Min: Calcite>>

345.70 347.60 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

345.7 - 347.6: Green, CL+CA+BI schist

<<Min: 345.7 - 347.6 1% Min: Pyrrhotite>>

<<Min: 345.7 - 347.6 20% Min: Calcite>>

347.60 348.00 RHY undifferentiated rhyolite

347.6 - 348: Highly fractured/brecciated rhyolite with sericite in fractures.

<<Min: 347.6 - 348 1% Min: Calcite>>

End of Hole @ 348

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
338.90	339.90	1.00	B00268789	35.7	0.17	0.54	0.03	0.65

339.90	340.50	0.60	B00268791	7.5	0.029	0.06	0.03	0.35
--------	--------	------	-----------	-----	-------	------	------	------

340.50	342.00	1.50	B00268792	1.8	0.01	-0.01	-0.01	0.01
--------	--------	------	-----------	-----	------	-------	-------	------

342.00	343.50	1.50	B00268793	1.1	0.009	-0.01	-0.01	-0.01
--------	--------	------	-----------	-----	-------	-------	-------	-------

343.50	345.00	1.50	B00268794	0.9	0.008	-0.01	-0.01	-0.01
--------	--------	------	-----------	-----	-------	-------	-------	-------

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-263

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Daniele Heon
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	17-Sep-15
UTM Easting	415206.483	Core Size:	NQ3	Azimuth:	180	Date Logging Complete:	20-Sep-15
UTM Northing:	6815595.644	Casing Pulled?:	Yes	Dip:	-75	Drill Company:	Geotech
UTM Elev. (m):	1423.973	Casing Depth (m):	25	Length (m):	254	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	17-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	18-Sep-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-75	180	0	180	APS	Daniele Heon	17-Sep-15		<input checked="" type="checkbox"/>	
25.5	-72.3	165.3	22.5	187.8	ReflexEVS	Geotech	17-Sep-15		<input checked="" type="checkbox"/>	
32	-72.9	165.3	22.5	187.8	ReflexEVS	Geotech	17-Sep-15	5852	<input checked="" type="checkbox"/>	
62	-72.6	163.3	22.5	185.8	ReflexEVS	Geotech	17-Sep-15	5736	<input checked="" type="checkbox"/>	
89	-72.5	167.7	22.5	190.2	ReflexEVS	Geotech	17-Sep-15	5774	<input checked="" type="checkbox"/>	
116	-72.8	166.3	22.5	188.8	ReflexEVS	Geotech	17-Sep-15	5754	<input checked="" type="checkbox"/>	
146	-72.7	168.8	22.5	191.3	ReflexEVS	Geotech	17-Sep-15	5772	<input checked="" type="checkbox"/>	
170	-72.7	170.1	22.5	192.6	ReflexEVS	Geotech	17-Sep-15	5824	<input checked="" type="checkbox"/>	
200	-72.6	171.2	22.5	193.7	ReflexEVS	Geotech	17-Sep-15	5784	<input checked="" type="checkbox"/>	
230	-72.6	173.6	22.5	196.1	ReflexEVS	Geotech	18-Sep-15	5810	<input checked="" type="checkbox"/>	
254	-72.6	171.1	22.5	193.6	ReflexEVS	Geotech	18-Sep-15	5807	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	20.00	OVBN Overburden									
0 - 20: Cored rock in HQ casing starts around 20m, NQ core starts at 24m.											
20.00	26.88	RHYvl Lapilli tuff									
<<Min: 20 - 21.5 1% Min: Pyrrhotite>> in cased top of hole (HQ),oxidized, po-py heavily disseminated in qtz-rich bands // to foln.											
<<Min: 21.5 - 28.65 0.5% Min: Pyrrhotite>> Po in short flat seams // to foln.											
<<Min: 25.2 - 27 0.01% Min: Galena>> specks of galena in selvage of 1 cm shallow angle quartz vein.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-263

From (m)		To (m)		Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Vein: 21.62 - 21.67 100% Quartz 25 deg. >> discordant													
<<Vein: 25.2 - 27 30% Quartz 10 deg. >> Dark qtz and brown fg material (tourmaline?), galena in selvage													
<<Struc: 20.55 - 23.4 Moderate (Alt) Fault>> Four sections of rusty clayey gouge, 3 to 30 cm wide.													
26.88 53.92 RHYva Coarse grained to ash tuff													
<<Min: 27.95 - 31.1 3% Min: Calcite>>													
<<Min: 28.65 - 33.45 1% Min: Pyrite>> po-py heavily disseminated in qtz-rich bands // to foln.													
<<Min: 28.65 - 33.45 1% Min: Pyrrhotite>> po-py heavily disseminated in qtz-rich bands // to foln.													
<<Min: 33.45 - 48.15 0.5% Min: Pyrrhotite>> Po in short flat seams // to foln.													
<<Min: 47.1 - 51.95 3% Min: Calcite>>													
<<Min: 52.35 - 53.05 0.5% Min: Pyrrhotite>> Po in short flat seams // to foln.													
<<Min: 53.5 - 56.85 10% Min: Calcite>>													
<<Vein: 49 - 49.2 40% Quartz 15 deg. >> 2 cm qtz- brown tourmaline vein w tourm in selvage also.													
<<Struc: 49 - 49.2 Vein>> qtz brown tourmaline (?) vein. E-W strike, subvertical?													
<<Struc: 49.8 - 49.81 dominant foliation>> NE strike/ SE dip?													
53.92 54.40 RHYcw Curdy textured-flow banded (flows, subvolcanics)													
53.92 - 54.4: or RHY vl. White siliceous bands dissected by sericite, once a competent flow?													
54.40 56.70 MAFi Mafic Intrusions (primarily footwall mafic intrusion)													
54.4 - 56.7: fine grained,banded maroon (biot) and green f.g rx, peppered w f.g. stubby tourm or hbl?													
56.70 58.25 RHYcw Curdy textured-flow banded (flows, subvolcanics)													
56.7 - 58.25: or RHY vl. White siliceous bands dissected by sericite, once a competent flow?													
<<Min: 56.85 - 63.95 5% Min: Calcite>>													
58.25 63.95 RHYva Coarse grained to ash tuff													
<<Vein: 63.4 - 139 0.06% Quartz-Tourmaline 15 deg. >> Total of 9 thin shallow angle mm-scale veins +/- py, po, cc, displaced by S2 foln but cuts coarse qtz-carb veins. Loc tourm halo in wallrock upto 2 cm. Up to 45 deg CA.													
<<Struc: 59.2 - 59.21 >> 2nd foliation?													
63.95 64.75 MAFi Mafic Intrusions (primarily footwall mafic intrusion)													
63.95 - 64.75: Very f.g. green rx (chl) w 1-3mm calcite porphyroblasts? Calcite veining.													

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-263

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 63.95 - 65.05 15% Min: Calcite>>											
<<Vein: 63.95 - 64.75 5% Calcite 80 deg. >>											
64.75	72.00	RHYva Coarse grained to ash tuff									
<<Struc: 65.1 - 65.11 dominant foliation>>											
<<Struc: 66.1 - 66.11 Vein>> thingtz-brown tourm vein? E- strike, steep south dip.											
72.00	73.45	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
72 - 73.45: Very f.g. green rx (chl) w small hbl or tourmaline xtals? Calcite veining.											
<<Min: 72.15 - 74.1 10% Min: Calcite>>											
<<Vein: 72.15 - 73 5% Quartz 85 deg. >> 2 veins, 4-6 cm											
73.45	76.40	RHYva Coarse grained to ash tuff									
76.40	78.80	RHYva Coarse grained to ash tuff									
78.80	82.60	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
78.8 - 82.6: Very f.g. green rx (chl) w small hbl or tourmaline xtals? Calcite veining. Sharp contacts.											
<<Min: 78.8 - 82.6 10% Min: Calcite>>											
<<Vein: 81 - 82.6 2% Calcite 85 deg. >>											
<<Struc: 81 - 99 dominant foliation>>											
82.60	86.80	RHYvl Lapilli tuff									
<<Min: 83.5 - 84.3 0.5% Min: Pyrrhotite>> Po in short flat seams // to foln and diss in band // to foln											
86.80	88.85	RHYvx Quartz and/or feldspar crystal tuff									
88.85	91.90	RHYvl Lapilli tuff	grey								
88.85 - 91.9: w faint lapilli shapes											
<<Struc: 89.25 - 89.4 Strong (Alt) Fault>> small breccia fault gouge w fold in footwall w axial plane // to contact w fault gouge. Suggests reverse displacement.											
91.90	96.00	RHYvl Lapilli tuff	grey-green								
91.9 - 96: includes 0.5m mafic dyke at UC consisting of f.g. greenish grey rx w biotite porphyroblasts at UC. Rest of interval is slightly greenish, rel hard (due to qtz veining?), w loc flecks of carbonate xtals,											
<<Min: 95 - 96 0.5% Min: Pyrrhotite>>											
<<Alt: 92.5 - 95.5 Weak (Alt) Chlorite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-263

From (m)		To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Vein: 92.4 - 94.85 8% Quartz 85 deg. >> 1 cm qtz veins slightly discordant to foln												
<<Vein: 94.8 - 94.95 100% Quartz-Tourmaline 80 deg. >>												
96.00 108.25 RHYva Coarse grained to ash tuff grey-brown												
96 - 108.25: Mottled texture, sl sericite and chl altered groundmass, w some lapilli. Tightly folded qtz veins shows tight structure but rx not strongly foliated. 107.2-108.1: Xtal tuff (?) w ankerite-altered (?) broken xtals.												
<<Min: 98.8 - 105 0.5% Min: Calcite>>												
<<Min: 105 - 106.1 3% Min: Calcite>>												
<<Vein: 99.2 - 166.2 0.02% Chlorite 5 deg. >> Few shallow angle fractures w chlorite coating.												
<<Struc: 103.4 - 103.45 Weak (Alt) Fault>> fault gouge breccia												
108.25 109.20 RHYcw Curdy textured-flow banded grey-green (flows, subvolcanics)												
108.25 - 109.2: Irregular mottled siliceous bands in sericitic groundmass, once coherent rhyolite? Or RH?Yvl silicified by qtz veining?												
109.20 121.67 MAFi Mafic Intrusions (primarily footwall mafic intrusion)												
109.2 - 121.67: Strongly mottled and striped rx showing granular chl-biot-qtz domains strongly dissected by creamy sericite foliae. Loc calcareous. Texturally destructive creamy pale pinkish sericite along S1 (dom) and S2.												
<<Min: 111.6 - 123.6 0.5% Min: Pyrrhotite>> also in few heavily diss bands.												
<<Min: 120.75 - 121.6 1% Min: Calcite>>												
<<Min: 121.6 - 123.6 10% Min: Calcite>>												
<<Alt: 109.2 - 121.67 Weak (Alt) Muscovite>> beige sericite overprinting chloritic overprint?												
<<Alt: 109.2 - 121.67 Weak (Alt) Chlorite>> chloritic groundmass is dissected and overprinted by beige sericite.												
<<Struc: 116.15 - 116.16 dominant foliation>> Dominant foln (S1) is later folded by axial planar S2 foln. Dom foln is E-W strike, N dip.												
<<Struc: 116.17 - 116.18 >> Later axial planar S2 foln folds and crenulates dominant foln (S1). S2 has Nw Strike/ NE dip.												
121.67 123.60 MAFi Mafic Intrusions (primarily footwall mafic intrusion) brown												
121.67 - 123.6: fg brownish biotite-rich rx, dyke? Sharp UC (or alteration front), gradual LC, calcareous, w numerous folded carbonate veins. Could also be sed?												
<<Alt: 123.26 - 135.65 Moderate (Alt) Muscovite>> beigey sericite replacing along foliations and overprinting chl.												
<<Alt: 123.26 - 135.65 Weak (Alt) Chlorite>>												

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-263

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
123.60	135.65	RHYvl Lapilli tuff									
<p>123.6 - 135.65: Strongly mottled and striped rx showing granular chl-biot-qtz domains strongly dissected by creamy sericite foliae. Loc calcareous. Texturally destructive creamy pale pinkish sericite along foln. Some tightly folded bands of heavily diss po bands. 129-132.</p> <p><<Min: 123.6 - 134 1% Min: Calcite>></p> <p><<Min: 123.6 - 153 1% Min: Pyrite>> approx 1% py mostly disseminated but also loc in heavily diss bands w dominant po. Some short sections where diss py > po.</p> <p><<Min: 123.6 - 153 3% Min: Pyrrhotite>> Approx 2% po, diss in core and in heavily disseminated folded bands. Some short sections po<1%. 152.75-152.85: 2-5% po py in bands.</p> <p><<Struc: 133.9 - 133.91 dominant foliation>> E-W/N</p>											
135.65	169.20	RHYvl Lapilli tuff									
<p>135.65 - 169.2: light greenish grey sericitic felsic rx w fragmental texture, w folded bands of heavily diss po +/- py. 160.35-160.95: MDSt. Maybe RHYc in places? 162.85-163.4: interbanded grey sericitic/ and chl-biot bands w stubby black mineral diss along foliae (limy)</p> <p><<Min: 156.1 - 169.8 1% Min: Pyrrhotite>> in flat foliaform stringers and diss.</p> <p><<Min: 166 - 168 2% Min: Pyrrhotite>> po 1-2 % in flat foliaform seams</p> <p><<Min: 168 - 177 0.5% Min: Pyrrhotite>></p> <p><<Alt: 135.65 - 145 Moderate (Alt) Muscovite>> light greenish grey sericite on foliae, loc strong?</p> <p><<Alt: 145 - 169.8 Moderate (Alt) Muscovite>> silvery grey sericite on foliae.</p> <p><<Alt: 168.6 - 168.9 Weak (Alt) Chlorite>></p> <p><<Struc: 163.95 - 163.96 dominant foliation>> NW strike/ SE dip</p> <p><<Struc: 166.9 - 166.91 dominant foliation>> NE strike/ SE dip. Po in hole may affect mag reading?</p>											
169.20	175.00	MDSt Rhyolite tuff dominant dark grey mudstone	170.40	171.80	1.40	B00266775	0.8	0.006	-0.01	0.01	0.11
<p>169.2 - 175: Black to dark grey to grey tuff, w dark grey sericite talc-y on foliation planes, w loc bands of diss po. Includes 0.2m interval w possible cordierite (~ 3-4 mm) and two sections w crenulated cp blebs. (approaching proximal alteration?)</p> <p><<Min: 171.9 - 172.5 0.5% Min: Chalcopyrite>> in two foliaform blebs disrupted by crenulaion</p> <p><<Min: 172.85 - 173 15% Min: Calcite>></p> <p><<Min: 173 - 177.4 1% Min: Calcite>></p> <p><<Alt: 169.2 - 177.5 Moderate (Alt) Muscovite>> drk grey sericite and graphitic partings.</p> <p><<Alt: 169.2 - 177.5 Strong (Alt) Chlorite>> black chlorite in alteration breccia.</p> <p><<Vein: 172.85 - 173.6 95% Quartz-Sericite/White mica 45 deg. >></p> <p><<Struc: 169.9 - 169.91 dominant foliation>> NW/NE</p>											
175.00	177.40	RHY undifferentiated rhyolite medium grey	171.80	172.85	1.05	B00266776	2.1	0.061	0.21	0.02	0.05
			172.85	173.90	1.05	B00266777	0.7	0.005	0.01	0.01	0.04

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-263
From (m) To (m) Rocktype & Description

177.40 188.50 RHY undifferentiated rhyolite

177.4 - 188.5: Dark blue and white sheared and brecciated rx consisting of greyish fragments of (?) MDSt or RHY, cordierite, qtz veining and carbonate veining outlined/cut by or in groundmass of greasy dark chlorite and serpentine, altered to talc on fractures. Variably

<<Min: 177.4 - 182.6 2% Min: Calcite>>

<<Min: 182 - 185 1% Min: Sphalerite>> orangy red flecks

<<Min: 182.6 - 186 15% Min: Calcite>>

<<Min: 184.33 - 185 0.01% Min: Chalcopryrite>>

<<Min: 184.33 - 188.5 0.01% Min: Pyrrhotite>>

<<Min: 185 - 188.5 0.01% Min: Pyrite>>

<<Min: 186 - 188.5 1% Min: Calcite>> also ankerite?

<<Alt: 177.5 - 188.5 Weak-Moderate (Alt) Talc-serpentine>>

<<Alt: 177.5 - 188.5 Moderate (Alt) Muscovite>> grey silvery sericite

<<Alt: 177.5 - 188.5 Strong (Alt) Chlorite>> black and khaki massive greasy chlorite and/ or serpentine, talcose

<<Alt: 177.5 - 188.5 Strong (Alt) Cordierite>>

188.50 189.80 RHYc Rhyolite coherant volcanics grey

188.5 - 189.8: grey siliceous bands cut by grey silvery muscovite. Muscovite increases downwards into next unt.

<<Alt: 188.5 - 201 Strong (Alt) Muscovite>> grey muscovite

189.80 193.20 MDSw Coherent rhyolite flow with dark grey carbonaceous content

189.8 - 193.2: Grey rhyolite as above but with stronger musc-carbonaceous foliation.

<<Struc: 190.25 - 190.26 dominant foliation>> NW strike/ NE dip

<<Struc: 193 - 193.3 Strong (Alt) Fault>> Dark grey fault gouge

193.20 193.85 MDSt Rhyolite tuff dominant black mudstone

193.2 - 193.85: as above, increase in mica and carbonaceous content.

193.85 199.05 RHYc Rhyolite coherant volcanics grey

193.85 - 199.05: grey siliceous bands cut by grey silvery muscovite.

<<Min: 199 - 201 0.5% Min: Pyrrhotite>>

<<Struc: 198.65 - 198.75 Strong (Alt) Fault>> clay gouge

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
177.40	179.00	1.60	B00266778	-0.3	-0.005	-0.01	-0.01	0.01

179.00	180.40	1.40	B00266779	-0.3	-0.005	-0.01	-0.01	0.01
180.40	182.00	1.60	B00266781	-0.3	-0.005	-0.01	-0.01	0.02
182.00	183.50	1.50	B00266782	-0.3	-0.005	-0.01	-0.01	-0.01
183.50	185.00	1.50	B00266783	1.3	0.006	-0.01	0.19	0.27
185.00	186.20	1.20	B00266784	-0.3	-0.005	-0.01	-0.01	0.01
186.20	187.35	1.15	B00266785	-0.3	-0.005	-0.01	-0.01	-0.01
187.35	188.50	1.15	B00266786	0.4	-0.005	-0.01	-0.01	0.01

188.50	189.38	0.88	B00266787	-0.3	-0.005	-0.01	-0.01	-0.01
--------	--------	------	-----------	------	--------	-------	-------	-------

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-263

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
199.05	207.20	RHY undifferentiated rhyolite grey									
199.05 - 207.2: Mixture of RHYc and vl? Some strongly foliated sections w po along fln, tuff?, intercalated with some massive sections.											
<<Alt: 201 - 225 Moderate (Alt) Muscovite>>											
<<Struc: 201.4 - 201.41 dominant foliation>> NW/NE											
207.20	208.90	MDSr Rhyolite tuff dominant dark grey mudstone									
207.2 - 208.9: Carbonaceous tuff? Flinely banded dk grey to black rock, w clasts? Strongly crenulated.											
208.90	216.65	RHYcw Curdy textured-flow banded grey (flows, subvolcanics)	214.00	215.10	1.10	B00266788	0.7	-0.005	-0.01	-0.01	-0.01
208.9 - 216.65: Discontinuous bands of c in grey -green sericite, breccia texture from siliceous vs micaceous domains.											
<<Min: 214 - 216 1% Min: Pyrrhotite>>											
<<Min: 215.5 - 216 0.5% Min: Chalcopryrite>>											
<<Min: 216 - 225 1% Min: Pyrrhotite>>											
<<Struc: 212 - 212.5 Moderate (Alt) Fault>> brecciated qtz vein and cw in sericitic groundmass											
216.65	225.00	RHYvl Lapilli tuff									
216.65 - 225: Granular foliated rock w diss po. Some sections of curdy RHY. Blocky and clayey lower contact.											
<<Min: 220 - 224 2% Min: Calcite>>											
<<Min: 224 - 239 10% Min: Calcite>>											
<<Struc: 220.9 - 220.91 dominant foliation>> NW/ NE											
225.00	254.00	MAFi Mafic Intrusions (primarily green footwall mafic intrusion)									
225 - 254: loc cg (gabbro/pxenite), abundant calcite lenses and veins from 246m to eoh. Tr po-cp.											
<<Min: 225 - 254 0.05% Min: Pyrrhotite>>											
<<Min: 225 - 254 0.05% Min: Chalcopryrite>>											
<<Min: 239 - 245 3% Min: Calcite>>											
<<Min: 245 - 254 15% Min: Calcite>>											
<<Vein: 225.3 - 225.9 100% Quartz-Tourmaline>> silicified hanging wall.											
<<Struc: 225.01 - 225.02 Weak (Alt) Fault>> clay gouge											
<<Struc: 228.75 - 228.76 dominant foliation>> SW strike, NW dip											
<<Struc: 229.8 - 229.81 dominant foliation>> in mafic intrusion. NW/SE.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-263

From (m) To (m)

Rocktype & Description

From (m)

To (m)

Width

Sample

Ag PPM

Au PPM

Cu %

Pb %

Zn %

<<Struc: 241.85 - 241.86 dominant foliation>>

End of Hole @ 254

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-264

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Florent Pons
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	17-Sep-15
UTM Easting	414800.261	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	20-Sep-15
UTM Northing:	6815624.607	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1401.87	Casing Depth (m):	2	Length (m):	218	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	16-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	18-Sep-15
Local Elev. (m):						Purpose:	Resource/Met
Comments:						Parent Hole:	

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-65	180.12	0	180.12	APS	Geotech	16-Sep-15	0	<input type="checkbox"/>	
26	-65.5	160.8	22.5	183.3	ReflexEVS	Geotech	16-Sep-15	5697	<input checked="" type="checkbox"/>	
50	-65.6	160.7	22.5	183.2	ReflexEVS	Geotech	16-Sep-15	5681	<input checked="" type="checkbox"/>	
74	-65.6	160.1	22.5	182.6	ReflexEVS	Geotech	16-Sep-15	5752	<input checked="" type="checkbox"/>	
101	-65.7	164.4	22.5	186.9	ReflexEVS	Geotech	17-Sep-15	5683	<input checked="" type="checkbox"/>	
125	-65.7	162.7	22.5	185.2	ReflexEVS	Geotech	17-Sep-15	5664	<input checked="" type="checkbox"/>	
152	-65.7	152	22.5	174.5	ReflexEVS	Geotech	17-Sep-15	5598	<input type="checkbox"/>	Low magnetic field likely resulting in erratic corrected azimuth
176	-65.9	161.1	22.5	183.6	ReflexEVS	Geotech	17-Sep-15	5819	<input checked="" type="checkbox"/>	
200	-66.1	160.9	22.5	183.4	ReflexEVS	Geotech	18-Sep-15	5775	<input checked="" type="checkbox"/>	
218	-66	160.7	22.5	183.2	ReflexEVS	Geotech	18-Sep-15	5790	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	4.00	OVBN Overburden									
0 - 4: Overburden											
4.00	7.20	RHYvI Lapilli tuff									
4 - 7.2: Light grey, moderately foliated, < 10% of siliceous fragments/dismembered bands, deformed and folded, locally flattered within the foliation, within fine/medium matrix (Mu and CL altered). Probably lapilli tuff.											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
7.20	8.93	MAFi Mafic Intrusions (primarily footwall mafic intrusion) 7.2 - 8.93: Mafic ash tuff or mafic intrusive unit, fine to medium grained, equigranular, dark color. Moderately biotite altered (pervasive), moderate to strongly CA altered (Associated with subconcordant qtz veinlets and also pervasive). 3-4 % of thin qtz-fsp-+/-c <<Min: 7.2 - 8.93 1% Min: Pyrrhotite>> Disseminated within the matrix. <<Min: 7.2 - 8.93 2% Min: Calcite>> Associated with MAFta/MAFi, pervasive and thin qtz-fsp-cal veinlets. <<Alt: 7.2 - 8.93 Moderate (Alt) Biotite>> Biotite pervasive, fine grained, within MAFta/MAFi									
8.93	10.60	RHYvl Lapilli tuff 8.93 - 10.6: Light grey, moderately foliated, < 10% of siliceous fragments/dismembered bands, deformed and folded, locally flattered within the foliation, within fine/medium matrix (Mu and CL altered). Probably lapilli tuff. <<Min: 8.93 - 13 0.1% Min: Pyrrhotite>>									
10.60	11.05	MAFi Mafic Intrusions (primarily footwall mafic intrusion) 10.6 - 11.05: Mafic ash tuff or mafic intrusive unit, fine to medium grained, equigranular, dark color. Moderately biotite altered (pervasive), moderate to strongly CA altered (Associated with subconcordant qtz veinlets and also pervasive). 3-4 % of thin qtz-fsp-+/-c <<Min: 10.6 - 11.05 3% Min: Calcite>> Associated with MAFta/MAFi, pervasive and thin qtz-fsp-cal veinlets. <<Alt: 10.6 - 11.05 Moderate (Alt) Biotite>> Biotite pervasive, fine grained, within MAFta/MAFi									
11.05	14.55	RHYvl Lapilli tuff 11.05 - 14.55: Light grey, moderately foliated, < 10% of siliceous fragments/dismembered bands, deformed and folded, locally flattered within the foliation, within fine/medium matrix (Mu and CL altered). Probably lapilli tuff. <<Min: 13 - 17.27 1% Min: Pyrrhotite>> <<Struc: 13.43 - 13.44 dominant foliation>>									
14.55	17.27	MAFi Mafic Intrusions (primarily footwall mafic intrusion) 14.55 - 17.27: Mafic ash tuff or mafic intrusive unit, fine to medium grained, equigranular, dark color. Moderately biotite altered (pervasive), moderate to strongly CA altered (Associated with subconcordant qtz veinlets and also pervasive). 3-4 % of thin qtz-fsp-+/-c <<Min: 14.55 - 17.27 6% Min: Calcite>> Associated with MAFta/MAFi, pervasive and thin qtz-fsp-cal veinlets. <<Alt: 14.55 - 17.27 Moderate (Alt) Biotite>> Biotite pervasive, fine grained, within MAFta/MAFi									

Project:
KZK
Hole Number:
K15-264

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
17.27	19.35	RHYvl Lapilli tuff									
17.27 - 19.35: Light grey, moderately foliated, < 15% of siliceous fragments/dismembered bands, deformed and folded, locally flattered within the foliation, within fine/medium matrix (Mu and CL altered). Probably lapilli tuff.											
<<Min: 17.27 - 19.35 1% Min: Calcite>>											
<<Min: 17.27 - 27.3 0.1% Min: Pyrite>>											
<<Min: 17.27 - 27.3 0.1% Min: Pyrrhotite>>											
19.35	27.30	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
19.35 - 27.3: Mafic ash tuff or mafic intrusive unit, fine to medium grained, equigranular, dark color. Moderately biotite altered (pervasive), moderate to strongly CA altered (Associated with subconcordant qtz veinlets and also pervasive). 6 % of thin qtz-fsp-+/-cal											
<<Min: 19.35 - 27.3 5% Min: Calcite>> Associated with MAFta/MAFi, pervasive and thin qtz-fsp-cal veinlets.											
<<Alt: 19.35 - 27.3 Moderate (Alt) Biotite>> Biotite pervasive, fine grained, within MAFta/MAFi											
<<Vein: 26.8 - 26.82 30% Tourmaline>> TML, irregular, in MAFt, few CA.											
<<Struc: 22.76 - 22.77 dominant foliation>>											
27.30	33.70	RHYva Coarse grained to ash tuff									
27.3 - 33.7: Light/medium grey, massive, fine to coarse grained. Weakly foliated. Matrix weakly (Mu) altered (pervasive).<3% felsic fragments, lapilli sized, oriented within foliation. Qtz eyes, <2mm, disseminated within the matrix, weakly stretched. Ash tuff unit?											
<<Min: 27.3 - 33.7 1% Min: Pyrrhotite>> Very small wisps distributed within the matrix.											
<<Min: 27.3 - 44 1% Min: Calcite>>											
<<Vein: 27.3 - 27.35 Quartz>> QZ vein at lower contact with MAFt.											
33.70	36.70	RHYvl Lapilli tuff									
33.7 - 36.7: Light grey, moderately foliated, < 15% of siliceous fragments/dismembered bands, deformed and folded, locally flattered within the foliation, within fine/medium matrix (Mu and CL altered). Locally similar "curdy" texture were observed. Probably lapilli											
<<Min: 33.7 - 43.5 0.1% Min: Pyrite>>											
<<Min: 33.7 - 43.5 0.1% Min: Pyrrhotite>>											
36.70	53.60	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
36.7 - 53.6: light grey, fine to medium grained, comprising siliceous bands, milky, deformed,folded and locally dismembered, " curdy" texture well conserved. Weakly/moderately MU altered.											
44-49m: Siliceous bands are more fragmented, dismembered. Lapilli tuff or											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<p><<Min: 43.5 - 44.1 0.1% Min: Sphalerite>> Associated with bands of PO.</p> <p><<Min: 43.5 - 44.1 2% Min: Pyrrhotite>> Occuring as bands of disseminated coarse grained PO.</p> <p><<Min: 43.5 - 44.1 0.1% Min: Galena>> Associated with bands of Po/Sp</p> <p><<Min: 44.1 - 59.25 0.1% Min: Sphalerite>> Associated with bands of Po/Py</p> <p><<Min: 44.1 - 59.25 2% Min: Pyrite>> Associated with qtz veins/veinlets, occuring as cm bands</p> <p><<Min: 44.1 - 59.25 2% Min: Pyrrhotite>> Associated with qtz veins/veinlets, occuring as cm bands</p> <p><<Struc: 49.75 - 49.76 dominant foliation>></p> <p>53.60 55.45 RHYvl Lapilli tuff</p> <p>53.6 - 55.45: Light grey, moderately foliated, < 15% of siliceous fragments/dismembered bands, deformed and folded, locally flattered within the foliation, within fine/medium matrix (Mu and CL altered). Probably lapilli tuff sequence.</p> <p>55.45 63.60 RHYcw Curdy textured-flow banded (flows, subvolcanics)</p> <p>55.45 - 63.6: light grey, fine to medium grained, comprinsing siliceous bands, milky, deformed,folded and locally dismembered, " curdy" texture locally well conserved. Some intervals seem more lapillitic, no strong evidence of flow texture. Weakly/moderately MU alter</p> <p><<Min: 59.25 - 65.85 0.1% Min: Pyrite>></p> <p><<Min: 59.25 - 65.85 2% Min: Pyrrhotite>></p> <p>63.60 67.50 RHYva Coarse grained to ash tuff</p> <p>63.6 - 67.5: Light grey, medium grained, moderately foliated, < 5% of siliceous fragments/dismembered bands, deformed and folded, locally flattered within the foliation, within fine/medium matrix (Mu altered). Ash tuff sequence comprinsing some fragments lapilli size</p> <p><<Min: 65.85 - 67.65 7% Min: Pyrrhotite>> Occuring as bands/stringers. Seem associated with interval of qtz veining.</p> <p><<Alt: 66.7 - 67.5 Strong (Alt) Muscovite>> Associated with interval of qtz veining (margins).</p> <p><<Vein: 66.7 - 77.5 30% Quartz>> Interval comprinsing qtz veins, strongly deformed, folded, irregular, 5-20 cm wide. Po and Py disseminated at the margins.</p> <p>67.50 73.35 RHYcw Curdy textured-flow banded (flows, subvolcanics)</p> <p>67.5 - 73.35: light grey, fine to medium grained, comprinsing siliceous bands, milky, deformed,folded and locally dismembered, " curdy" texture well conserved. Weakly/moderately MU altered.</p> <p><<Min: 67.65 - 72.35 0.1% Min: Pyrite>></p> <p><<Min: 67.65 - 72.35 3% Min: Pyrrhotite>> Occuring as stringers/wisps</p> <p><<Min: 72.35 - 76.85 3% Min: Pyrrhotite>> Occuring as wisps/stringers and also disseminated.</p> <p><<Struc: 70.71 - 70.71 dominant foliation>></p>											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	------------------------	----------	--------	-------	--------	--------	--------	------	------	------

73.35 76.85 RHYva Coarse grained to ash tuff

73.35 - 76.85: Light grey, medium grained, moderately foliated, < 5% of siliceous fragments/dismembered bands, deformed and folded, locally flattered within the foliation, within fine/medium matrix (Mu altered). Ash tuff sequence comprinsing some fragments lapilli size

<<Struc: 73.94 - 73.95 dominant foliation>>

76.85 84.75 RHYcw Curdy textured-flow banded (flows, subvolcanics)

76.85 - 84.75: light grey, fine to medium grained, comprinsing siliceous bands, milky, deformed,folded and locally dismembered, " curdy" texture well conserved. Weakly/moderately MU altered.

<<Min: 76.85 - 82.25 1% Min: Pyrite>>

<<Min: 80.37 - 82.15 4% Min: Calcite>> Associated with fault/fractured interval.

<<Min: 82.25 - 82.9 1% Min: Pyrite>>

<<Min: 82.25 - 82.9 5% Min: Pyrrhotite>>

<<Min: 82.9 - 86 3% Min: Pyrite>> Associated with qtz veinlets, also disseminated.

<<Alt: 80.37 - 82.15 Strong (Alt) Muscovite>> Associated with interval fractured/fault.

<<Struc: 80.37 - 82.15 Moderate (Alt) Fault>> Interval moderately to strongly fractured, comprinsing short clay gauge intervals.

<<Struc: 83.54 - 83.55 dominant foliation>>

84.75 88.70 RHYvl Lapilli tuff

84.75 - 88.7: Light grey, medium grained, moderately foliated, < 5% of siliceous fragments/dismembered bands, deformed and folded, locally flattered within the foliation, within fine/medium matrix (Mu altered). Ash tuff sequence comprinsing some fragments lapilli size

<<Min: 86 - 93.55 0.1% Min: Pyrite>>

<<Min: 86 - 93.55 2% Min: Pyrrhotite>> Disseminated.

<<Struc: 85.78 - 88.77 Moderate (Alt) Fault>> Interval moderately/strongly fractured.

88.70 94.38 RHYcw Curdy textured-flow banded (flows, subvolcanics)

88.7 - 94.38: light grey, fine to medium grained, comprinsing siliceous bands, milky, deformed,folded and locally dismembered, " curdy" texture locally developped. Weakly/moderately MU altered.

<<Min: 93.55 - 94.2 6% Min: Pyrrhotite>> Occuring as thin bands.

<<Min: 94.2 - 99 4% Min: Pyrrhotite>>

Project:
KZK
Hole Number:
K15-264

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
94.38	100.60	RHYvl Lapilli tuff									
94.38 - 100.6: Light grey, moderately foliated, < 15% of siliceous fragments/dismembered bands, deformed and folded, locally flattered within the foliation, within fine/medium matrix (Mu and CL altered). Probably lapilli tuff sequence.											
<<Min: 99 - 100.6 2% Min: Pyrrhotite>>											
100.60	119.20	MDSw Coherent rhyolite flow with carbonaceous content									
100.6 - 119.2: Dark grey, fine grained, moderate to strongly foliated/sheared (intervals with crenulation and fault gauge). Alternation with thin carbonaceous bands (mudstone), very fine grained, and flow rhyolite bands. Banded texture. The foliation is locally folded											
<<Min: 100.6 - 102.9 1% Min: Pyrite>>											
<<Min: 100.6 - 102.9 3% Min: Pyrrhotite>> Also occurring as thin stringers.											
<<Min: 102.9 - 105 2% Min: Pyrrhotite>> Also occurring as thin stringers.											
<<Min: 105 - 120 0.5% Min: Pyrrhotite>> Also occurring as thin stringers.											
<<Min: 106.6 - 114 1% Min: Calcite>> Mainly associated with thin veinlets/fracture filling.											
<<Alt: 105 - 119.2 Moderate (Alt) Muscovite>> Associated with foliation (fracture surface)											
<<Struc: 105.35 - 108.15 Moderate (Alt) Fault>> Interval moderately fractured comprinsing some short gouge intervals.											
<<Struc: 110.1 - 110.11 Foliation>>											
<<Struc: 111.3 - 113 Strong (Alt) Fault>> 112-113m: gouge fault, lost core.											
<<Struc: 113.4 - 119 Weak (Alt) Fault>> Interval comprinsing few short gauge faults (5 cm wide)											
<<Struc: 119 - 119.01 Foliation>>											
119.20	131.50	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
119.2 - 131.5: light grey greenish, fine to medium grained, comprinsing siliceous bands, deformed,folded and locally dismembered, " curdy"/banding texture locally well developped.moderate to strongly MU altered associated with moderate/strong foliation.											
120-123.5m: I											
<<Min: 120 - 129.35 3% Min: Pyrite>> Occuring as discordant veins/veinlets (qtz),0.5-2 cm wide, folded/deformed.											
<<Min: 120 - 129.35 1% Min: Pyrrhotite>>											
<<Min: 129.35 - 131.05 1% Min: Pyrrhotite>>											
<<Min: 129.35 - 131.05 0.1% Min: Arsenopyrite>> locally finely disseminated.											
<<Min: 131.05 - 133.55 0.1% Min: Pyrite>>											
<<Min: 131.05 - 133.55 1% Min: Pyrrhotite>>											
<<Alt: 119.2 - 146.85 Moderate-Strong (Alt) Muscovite>> Moderate to strong MU alteration, pervasive, associated with foliation.Intensity increases gradually.											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %									
<div><<Vein: 120.77 - 122.35 40% Quartz>> Interval of massive qtz veining, light grey, decimetric, discordant. Associated with interval strongly Mu altered (Margins) and foliated. Irregular oriented.</div> <div><<Struc: 124.75 - 125.2 Moderate (Alt) Fault>> Interval moderately fractured comprinsng short gauge fault.</div> <div><div>131.50134.15MDSw</div><div>Coherent rhyolite flow with carbonaceous content</div></div> <div>131.5 - 134.15: Dark grey, fine grained, moderate to strongly foliated/sheared (intervals with crenulation and fault gauge). Alternation with thin carbonaceous bands (mudstone), very fine grained, and flow rhyolite bands. Banded texture. The foliation is locally folded</div> <div><<Min: 133.55 - 137 0.5% Min: Pyrite>></div> <div><<Min: 133.55 - 137 1% Min: Pyrrhotite>></div> <div><<Min: 133.55 - 137 0.1% Min: Ankerite>></div> <div><div>134.15146.85RHYcw</div><div>Curdy textured-flow banded (flows, subvolcanics)</div></div> <div>134.15 - 146.85: light grey greenish, fine to medium grained, comprinsng siliceous bands, deformed,folded and locally dismembered, " curdy"/banded texture locally well developped.moderate to strongly MU altered associated with moderate/strong foliation.The protolith is</div> <div><<Min: 137 - 140.15 0.5% Min: Pyrite>></div> <div><<Min: 137 - 140.15 2% Min: Pyrrhotite>></div> <div><<Min: 140.15 - 145.2 1% Min: Pyrrhotite>></div> <div><<Min: 145.2 - 146.85 1% Min: Sphalerite>> Occuring as thin veinlets/bands deformed.</div> <div><<Min: 145.2 - 146.85 0.5% Min: Pyrite>></div> <div><<Min: 145.2 - 146.85 0.5% Min: Pyrrhotite>></div> <div><<Vein: 134.15 - 134.44 95% Quartz 85 deg. >> Massive grey qtz vein, subconcordant, unmineralized.</div> <div><<Struc: 135.4 - 135.6 Strong (Alt) Fault>> Gauge fault.</div> <div><<Struc: 146.3 - 146.85 Moderate (Alt) Fault>> Associated with fracturation.</div> <div><div>146.85148.50OJ</div><div>Heavilly disseminated sulphides in proximal altered rock</div><div>CG</div></div> <div>146.85 - 148.5: Marked by strong back TL alteration, occuring as centimetric bands composed by acicular crystals. >5% of cordierite.</div> <div><<Min: 146.85 - 148.5 1% Min: Pyrrhotite>> Aggregates/patchy.</div> <div><<Min: 146.85 - 148.5 5% Min: Chalcopyrite>> Aggregates/patchy.</div> <div><<Alt: 146.85 - 148.5 Weak (Alt) Chlorite>> Associated with interval brecciated and mineralised.</div>												140.85	142.35	1.50	B00264946	0.8	-0.005	-0.01	0.02	0.08



KZK

Hole Number:

K15-264

GeoSpark 
www.geospark.ca

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-264

From (m) To (m) Rocktype & Description

<<Min: 151.75 - 153 70% Min: Pyrite>>

<<Min: 151.75 - 153 5% Min: Galena>> Associated with dismembered qtz/cordierite veins

<<Min: 151.75 - 153 1% Min: Chalcopryrite>>

<<Min: 153 - 155.5 3% Min: Sphalerite>> Occuring as bands, cm, subcordant.

<<Min: 153 - 155.5 80% Min: Pyrite>>

<<Min: 153 - 155.5 0.5% Min: Galena>>

<<Min: 154.8 - 154.95 2% Min: Pyrrhotite>> fine grained within massive sulphides

<<Min: 155.5 - 157.75 5% Min: Sphalerite>> Occuring as bands, cm, subcordant.

<<Min: 155.5 - 157.75 80% Min: Pyrite>> Laminated

<<Min: 155.5 - 157.75 10% Min: Magnetite>> Very fine disseminated, difficult to distinguish.

<<Min: 155.5 - 157.75 1% Min: Galena>>

155.76 157.75 OA Magnetite bearing sulphides

155.76 - 157.75: Marked by ~10% of magnetite.

157.75 164.30 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

157.75 - 164.3: 162.5m to 163.2m: Calcite associated with porphyroblasts of cordierite?

<<Min: 157.75 - 164.3 3% Min: Sphalerite>> Occuring as bands, cm, subcordant.

<<Min: 157.75 - 164.3 80% Min: Pyrite>>

<<Min: 157.75 - 164.3 1% Min: Galena>>

<<Min: 162.5 - 163.2 5% Min: Calcite>>

164.30 167.30 OJ Heavily disseminated sulphides in proximal altered rock

164.3 - 167.3: 165.5m to 166.4m: Strong CA alteration.

<<Min: 164.3 - 166.4 6% Min: Chalcopryrite>>

<<Min: 165.5 - 166.4 10% Min: Calcite>> Pervasive and associated with veinlets.

<<Min: 166.4 - 167.3 7% Min: Pyrite>> Coarse grained and bands semi-massive.

<<Min: 166.4 - 167.3 0.5% Min: Chalcopryrite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
153.75	154.75	1.00	B00264961	82.1	0.956	0.31	1.55	5.69
154.75	155.76	1.01	B00264962	143	1.44	0.48	2.4	7.41

MCG

155.76	156.75	0.99	B00264963	80	0.31	0.46	2.32	11.7
--------	--------	------	-----------	----	------	------	------	------

MCG

156.75	157.75	1.00	B00264964	49.6	0.197	0.05	2.18	8.78
157.75	158.75	1.00	B00264965	95.3	0.586	0.15	2.53	6.23

CG

158.75	159.75	1.00	B00264966	71	0.44	0.23	1.65	7.72
159.75	160.75	1.00	B00264967	190	0.989	0.51	2.15	7.02
160.75	161.75	1.00	B00264968	118	1.05	0.38	1.14	6.48
161.75	162.75	1.00	B00264969	29.2	0.246	0.13	0.44	5.93
162.75	163.50	0.75	B00264971	122	1.12	0.36	2.64	9.42
163.50	164.30	0.80	B00264972	115	0.341	0.09	2.17	8.95
164.30	165.30	1.00	B00264973	45.3	0.982	0.83	0.61	1.43

165.30	166.40	1.10	B00264974	124	1.26	2.65	1.52	2.85
166.40	167.30	0.90	B00264975	16.5	0.215	0.21	0.33	0.94

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-264

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %									
<p><<Alt: 164.3 - 167.6 Strong (Alt) Chlorite>> Associated with mineralisation.</p> <p><<Vein: 164.7 - 165.3 80% Quartz-Chalcopyrite>> Massive irregular qtz vein, grey, deformed and discordant. Comprinsing 10 % of Cp (fracture filling).</p> <p>167.30 171.22 MAFi Mafic Intrusions (primarily footwall mafic intrusion) FG</p> <p>167.3 - 171.22: Green, fine grained, large interval of mafic intrusive, moderately sheared/foliated. Mainly chlorite altered (pervasive, moderate/strong). Locally centimetric biotite bands (porphyroblasts,small flakes). > 15% of Qtz-Cal veinlets/bands, concordant.</p> <p><<Min: 167.3 - 176.31 0.5% Min: Pyrrhotite>></p> <p><<Min: 167.3 - 180.84 10% Min: Calcite>> Pervasive, porphyroblats and associated with subconcordant veinlets.</p> <p><<Alt: 167.6 - 171.22 Moderate (Alt) Chlorite>> MAFi</p> <p><<Struc: 169.3 - 169.31 Foliation>> Marqued by calcite porphyroblasts.</p> <p>171.22 172.00 RHYi Aphanitic Rhyolite (intrusion)</p> <p>171.22 - 172: Interval comprinsing >50 % of decimetric felsic dykes, aphanitic, banded, subconcordant. Diffused margins. Associated with MU.</p> <p><<Alt: 171.22 - 173.2 Weak (Alt) Muscovite>> Associated with RHYi interval.</p> <p>172.00 176.31 MAFi Mafic Intrusions (primarily footwall mafic intrusion)</p> <p>172 - 176.31: Green to brownish, fine grained, large interval of mafic intrusive, moderately sheared/foliated. Mainly chlorite altered (pervasive, moderate/strong), locally biotite altered (small flakes disseminated, occuring as bands) > 10% of Qtz-Cal veinlets/bands,</p> <p><<Alt: 173.2 - 174.65 Moderate (Alt) Biotite>> MAFi altered by biotite (small flakes,mm, distributed within matrix)</p> <p><<Alt: 174.65 - 176.31 Moderate (Alt) Silicification>> Fuschite?</p> <p><<Alt: 174.65 - 176.31 Moderate (Alt) Muscovite>> Fuschite?</p> <p><<Vein: 175.5 - 176.12 20% Quartz-Carbonate>> Interval comprinsing qtz-cal veins, grey/milky, irregular oriented, deformed.Trace of Po and Sp at the margins.</p> <p><<Struc: 176.3 - 178.4 Moderate (Alt) Fault>> Interval moderately fractured, irregular oriented.</p> <p>176.31 176.82 RHYi Aphanitic Rhyolite (intrusion)</p> <p>176.31 - 176.82: decimetric felsic dykes, aphanitic, banded, subconcordant. Diffused margins. Associated with MU. Comprinsing irregular qtz-Cal veins, dm, mineralised (Sp and Py at the edges).</p> <p><<Min: 176.31 - 176.82 2% Min: Sphalerite>> Occuring as thin stringer and small aggregates</p> <p><<Min: 176.31 - 176.82 2% Min: Pyrrhotite>> Occuring as thin stringer and small aggregates.</p>												167.30	167.90	0.60	B00264976	-0.3	-0.005	-0.01	-0.01	0.02
</																				



From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
176.82	180.84	MAFi Mafic Intrusions (primarily footwall mafic intrusion) 176.82 - 180.84: Light green, fine grained,Interval of mafic intrusive, moderately/strongly sheared/foliated. Mainly MU altered (pervasive, moderate/strong), from Rhyi? > 15% of Qtz-Cal veinlets/bands, concordant. Alo pervasive calcite. <<Min: 178.12 - 180.84 1% Min: Pyrite>> cm subheudral crystals									
180.84	187.10	RHYi Aphanitic Rhyolite (intrusion) 180.84 - 187.1: Beige to light green, aphanitic to very fine grained, locally banding texture, moderately Mu altered. Unit comprinsng large interval of qtz+/-cal veins associated with Sp and Py at the selvages. <<Min: 181.1 - 187.1 2% Min: Sphalerite>> Occuring as aggregates and thin stringers <<Min: 181.1 - 187.1 1% Min: Pyrrhotite>> <<Alt: 181.1 - 187.1 Moderate (Alt) Muscovite>> <<Vein: 182.6 - 187.1 40% Quartz>> Large interval of veining, qtz+/-cal, decimetric, irregular oriented and deformed. 1-2% Sp et Po at the selvages, occuring as thin stringers and agregates/patchy.	182.50	184.00	1.50	B00264981	1.1	0.01	-0.01	0.01	0.32
187.10	195.90	MAFi Mafic Intrusions (primarily footwall mafic intrusion) 187.1 - 195.9: Green to brownish, fine grained, large interval of mafic intrusive, moderately sheared/foliated. Mainly chlorite altered (pervasive, moderate/strong), Partially biotite altered (small flakes disseminated, occuring as bands) > 10% of Qtz-Cal veinlets/band <<Min: 187.1 - 189.1 1% Min: Pyrite>> Phenocrystal subheudral. <<Min: 187.1 - 189.7 1% Min: Pyrrhotite>> Mineralised at the margins of phenocrystals of PY. <<Min: 187.1 - 195.4 12% Min: Calcite>> Pervasive, porphyroblats and associated with subconcordant veinlets. <<Min: 189.7 - 197.5 0.1% Min: Pyrite>> <<Min: 189.7 - 197.5 0.1% Min: Pyrrhotite>> <<Alt: 187.1 - 189.7 Moderate (Alt) Chlorite>> MAFi <<Alt: 187.1 - 189.7 Weak (Alt) Biotite>> MAFi altered by biotite (small flakes,mm, distributed within matrix) <<Alt: 189.7 - 193.25 Moderate (Alt) Biotite>> MAFi altered by biotite (small flakes,mm, distributed within matrix) <<Alt: 193.25 - 195.9 Moderate (Alt) Chlorite>> <<Vein: 192.52 - 192.95 60% Quartz-Carbonate>> Group of cal-qtz veins, dm, discordant. Unmineralised.	184.00	185.50	1.50	B00264982	-0.3	-0.005	-0.01	-0.01	0.06
195.90	211.45	RHYc Rhyolite coherant volcanics 195.9 - 211.45: Light grey, strongly foliated, banding texture with locally "curdy" texture, marked by siliceous bands. < 2% of quartz eyes. <<Min: 197.5 - 203 1% Min: Pyrrhotite>> Veinlets hosted <<Min: 197.5 - 205.6 0.5% Min: Pyrite>>	185.50	187.00	1.50	B00264983	0.5	0.006	-0.01	-0.01	1.06

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-264

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 205.6 - 212.12 3% Min: Pyrite>>											
<<Alt: 205.05 - 210.65 Moderate-Strong (Alt) Muscovite>>											
<<Vein: 197.75 - 199.25 50% Quartz 80 deg. >> interval comprinsing large regular grey qtz veins.											
<<Struc: 202.16 - 202.6 Strong (Alt) Fault>> Fault gauge.											
211.45 216.80 RHYvI Lapilli tuff			212.12	213.50	1.38	B00264984	-0.3	-0.005	-0.01	-0.01	0.09
211.45 - 216.8: Moderately to strongly sheared, > 10% of siliceous fragments/dismembered bands, deformed and folded, 0.5-2 cm sized, flattered within the foliation, within fine/medium matrix (Mu and CL altered). Quartz eyes locally disseminated. Probably lapilli tuff.											
<<Min: 212.12 - 216.8 1% Min: Sphalerite>> Occuring as brownish bands.											
<<Min: 212.12 - 216.8 1% Min: Pyrite>>											
<<Min: 212.12 - 216.8 3% Min: Pyrrhotite>>											
<<Struc: 216.27 - 216.42 Strong (Alt) Fault>> Fault gauge.											
216.80 218.00 MAFi Mafic Intrusions (primarily footwall mafic intrusion)			213.50	215.00	1.50	B00264985	1.1	-0.005	-0.01	0.05	0.61
216.8 - 218: Brownish, mafic intrusive unit, medium grained, +/- homogeneous. Moderate biotite altered (pervasive and small flakes disseminated), moderate to strongly CA altered (Thin veinlets, concordant, and also locally pervasive).											
End of Hole @ 218											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-264W1

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Florent Pons
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	20-Sep-15
UTM Easting	414800.261	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	21-Sep-15
UTM Northing:	6815624.607	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1401.87	Casing Depth (m):	2	Length (m):	176.7	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	19-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	19-Sep-15
Local Elev. (m):						Purpose:	Metallurgical Wedge
Comments:						Parent Hole:	K15-264

Wedge of hole K15-264 to get another cut of the ore zone for metallurgical purposes.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-65	180.12	0	180.12	APS	Geotech	16-Sep-15	0	<input type="checkbox"/>	Values copied from K15-264
26	-65.5	160.8	22.5	183.3	ReflexEVS	Geotech	16-Sep-15	5697	<input checked="" type="checkbox"/>	Values copied from K15-264
50	-65.6	160.7	22.5	183.2	ReflexEVS	Geotech	16-Sep-15	5681	<input checked="" type="checkbox"/>	Values copied from K15-264
74	-65.6	160.1	22.5	182.6	ReflexEVS	Geotech	16-Sep-15	5752	<input checked="" type="checkbox"/>	Values copied from K15-264
101	-65.7	164.4	22.5	186.9	ReflexEVS	Geotech	16-Sep-15	5683	<input checked="" type="checkbox"/>	Values copied from K15-264
122	-63.8	161	22.5	183.5	ReflexEVS	Geotech	19-Sep-15	5870	<input checked="" type="checkbox"/>	Wedge start; value copied from first wedge survey at 146m
146	-63.8	161	22.5	183.5	ReflexEVS	Geotech	19-Sep-15	5870	<input checked="" type="checkbox"/>	
176	-63.8	161.5	22.5	184	ReflexEVS	Geotech	19-Sep-15	5830	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
122.00	131.90	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
<p>122 - 131.9: light grey greenish, fine to medium grained, comprising siliceous bands, deformed, folded and locally dismembered, " curdy"/banding texture locally well developed. moderately MU altered associated with moderate/strong foliation.</p> <p><<Min: 122 - 131.9 3% Min: Pyrite>> mm to centimetric sized, deformed and folded.</p> <p><<Min: 122 - 131.9 2% Min: Pyrrhotite>> mm to centimetric sized, deformed and folded.</p> <p><<Min: 126.1 - 126.46 0.5% Min: Sphalerite>> Associated with qtz veins.</p> <p><<Alt: 122 - 148.9 Moderate-Strong (Alt) Muscovite>></p>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-264W1

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Vein: 126.1 - 126.46 50% Quartz 60 deg. >> Group of regular grey qtz veins, cm, discordant, deformed and fragmented, Po and Sp at the selvages											
131.90	135.00	MDSw Coherent rhyolite flow with carbonaceous content									
131.9 - 135: Dark grey, fine grained, moderate to strongly foliated/sheared (intervals with crenulation). Alternation with thin carbonaceous bands (mudstone), very fine grained, and flow rhyolite bands. Banding texture. The foliation is locally folded and irregular.											
<<Min: 131.9 - 135 1% Min: Pyrrhotite>>											
135.00	148.90	RHYcw Curdy textured-flow banded (flows, subvolcanics)	141.15	142.65	1.50						
135 - 148.9: light grey , fine to medium grained, comprinsing siliceous bands +/- dismembered, deformed and folded, " curdy"/banded texture locally well developped. Moderate to strongly MU altered associated with moderate/strong foliation.The protolith isn't well co											
<<Min: 135 - 145.65 1% Min: Pyrite>>											
<<Min: 135 - 145.65 1% Min: Pyrrhotite>>											
<<Min: 145.65 - 148.9 3% Min: Pyrrhotite>>											
<<Min: 145.65 - 148.9 4% Min: Chalcopyrite>> Aggregates distributed within matrix.											
<<Alt: 145.65 - 147.1 Strong (Alt) Cordierite>> Occuring as phenocrystals disseminated, cm.											
<<Alt: 145.65 - 148.9 Moderate (Alt) Chlorite>>											
<<Alt: 147.1 - 148.9 Strong (Alt) Cordierite>> Occuring as phenocrystals disseminated, cm, associated with silica rich hydrothermal flow.											
<<Alt: 147.1 - 148.9 Moderate (Alt) Biotite>> Fracture filling within hydrotherml flow interval.											
<<Vein: 135 - 135.25 80% Quartz 70 deg. >> Group of regular grey qtz veins, dm, discordant, deformed. Mu and CL at the selvages.											
<<Struc: 145.75 - 146.3 Weak (Alt) Fault>>											
148.90	151.75	OC Chalcopyrite-pyrrhotite net textured sulphides	CG	148.90	149.90	1.00					
148.9 - 151.75: Interval strongly chlorite altered (pervasive),comprinsing strong Cp/Po mineralisation, occurring as bands, subparallel, laminated texture, +/- deformed, fine grained. Last 50 cm, Py increases (aggregates subheudral).											
<<Min: 148.9 - 151.28 4% Min: Pyrite>> Subheudral aggregates, increases at the end of interval.											
<<Min: 148.9 - 151.28 15% Min: Pyrrhotite>> Coarse grained associated with Cp, occurring as irregular bands +/- subparallel.											
<<Min: 148.9 - 151.28 12% Min: Chalcopyrite>> Coarse grained associated with Po, occurring as irregular bands +/- subparallel.											
<<Min: 151.28 - 151.75 25% Min: Pvrte>> Occuring as medium grained bands.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-264W1

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 151.28 - 151.75 8% Min: Pyrrhotite>>											
<<Min: 151.28 - 151.75 2% Min: Chalcopyrite>> Coarse grained.											
<<Alt: 148.9 - 151.75 Strong (Alt) Chlorite>>											
<<Alt: 148.9 - 152.85 Moderate (Alt) Cordierite>> Occuring as phenocrystals disseminated, cm.											
151.75	155.90	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	151.75	152.75	1.00					
<<Min: 151.75 - 152.85 60% Min: Pyrite>> Medium grained.											
<<Min: 151.75 - 152.85 5% Min: Galena>>											
<<Min: 152.85 - 155.9 7% Min: Sphalerite>> Occuring as bands, fine grained.											
<<Min: 152.85 - 155.9 70% Min: Pyrite>>											
<<Min: 152.85 - 155.9 3% Min: Galena>>											
155.90	156.50	OA Magnetite bearing sulphides	MG	155.90	156.50	0.60					
155.9 - 156.5: Laminated texture											
<<Min: 155.9 - 156.5 10% Min: Sphalerite>> Laminated texture, fine bands.											
<<Min: 155.9 - 156.5 40% Min: Pyrite>>											
<<Min: 155.9 - 156.5 10% Min: Pyrrhotite>> Laminated texture, fine bands.											
<<Min: 155.9 - 156.5 10% Min: Magnetite>> Laminated texture, fine bands.											
156.50	165.20	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	156.50	157.50	1.00					
<<Min: 156.5 - 165.2 10% Min: Sphalerite>> Occuring as bands, fine grained.											
<<Min: 156.5 - 165.2 70% Min: Pyrite>>											
<<Min: 156.5 - 165.2 2% Min: Galena>>											
<<Min: 165 - 167.8 5% Min: Calcite>> Associated with veinlets and also as porphyroblasts, pervasive.											
<<Alt: 158.1 - 159.05 Weak (Alt) Chlorite>> Occuring as cm aggregates, enclave?											
<<Alt: 158.1 - 159.05 Moderate (Alt) Cordierite>> Occuring as phenocrystals disseminated, cm. Associated with CL alteration.											
<<Alt: 165 - 168 Strong (Alt) Chlorite>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-264W1

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
165.20	168.00	OJ Heavily disseminated sulphides in proximal altered rock	CG	165.20	166.20	1.00					
165.2 - 168: Comprinsing some OC bands.											
<<Min: 165.2 - 168 1% Min: Sphalerite>>				166.20	167.00	0.80					
<<Min: 165.2 - 168 3% Min: Pyrite>>				167.00	168.00	1.00					
<<Min: 165.2 - 168 4% Min: Pyrrhotite>>											
<<Min: 165.2 - 168 1% Min: Galena>>											
<<Min: 165.2 - 168 3% Min: Chalcopyrite>>											
<<Min: 167.8 - 171.51 20% Min: Calcite>> Associated with veinlets and also as porphyroblasts, pervasive.											
<<Vein: 165.2 - 165.55 90% Quartz-Chalcopyrite>> Massive irregular qtz vein, grey, deformed and discordant. Comprinsing 10 % of Cp (fracture filling).											
168.00	171.51	MAFi Mafic Intrusions (primarily footwall mafic intrusion)		168.00	169.50	1.50					
168 - 171.51: Green, fine grained, interval of mafic intrusive, moderately sheared/foliated. Mainly chlorite altered (pervasive, moderate/strong). > 15% of Qtz-Cal veinlets/bands, concordant.											
<<Alt: 168 - 171.51 Moderate (Alt) Chlorite>>				169.50	171.00	1.50					
				171.00	171.51	0.51					
171.51	172.50	RHYi Aphanitic Rhyolite (intrusion)		171.51	172.50	0.99					
171.51 - 172.5: Interval comprinsing 30 % of felsic intrusive, aphanitic to very fine grained, banding texture. Associated with Mu alteration, Cr rich. Fuschite?											
<<Min: 171.51 - 174.75 0.5% Min: Pyrite>>											
<<Min: 171.51 - 174.75 0.5% Min: Pyrrhotite>>											
172.50	176.50	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
172.5 - 176.5: Green to brownish, fine grained, interval of mafic intrusive, moderately sheared/foliated. Mainly chlorite altered (pervasive, moderate/strong), Partially biotite altered (small flakes disseminated, occuring as bands), also interval fuschite altered? > 15%											
<<Min: 174.5 - 176.5 2% Min: Sphalerite>> Occuring as bands.											
<<Min: 174.75 - 176.5 2% Min: Pyrrhotite>>											
<<Alt: 172.9 - 173.67 Weak (Alt) Silicification>> Fuschite alteration?											
<<Alt: 172.9 - 173.67 Weak (Alt) Muscovite>> Fuschite alteration?											
<<Alt: 174.95 - 176.5 Weak (Alt) Silicification>> Fuschite alteration?											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-264W1

From (m) To (m) Rocktype & Description

<<Alt: 174.95 - 176.5 Weak (Alt) Muscovite>> Fuschite alteration?

<<Struc: 176.3 - 176.5 Weak (Alt) Fault>> Fault gauge.

176.50 176.70 RHYi Aphanitic Rhyolite (intrusion)

176.5 - 176.7: Hole finish in aphanitic RHYi.

End of Hole @ 176.7

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-265

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Daniele Heon	
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	20-Sep-15	
UTM Easting	415206.697	Core Size:	NQ3	Azimuth:	181	Date Logging Complete:	23-Sep-15	
UTM Northing:	6815594.549	Casing Pulled?:	Yes	Dip:	-55	Drill Company:	Geotech	
UTM Elev. (m):	1423.992	Casing Depth (m):	24	Length (m):	285	Drill Rig:	Hydracore	
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	18-Sep-15	
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	21-Sep-15	
Local Elev. (m):						Purpose:	Resource/Hydro	
Comments:							Parent Hole:	

The purpose of this hole was to test for eastern extent of main ABM lens. A prior hole from this pad (K15-263, at -75 deg dip) did not intersect massive sulphide but did intersect a zone of strong cordierite- greasy chlorite- talc alteration, showing brecciated textures. The top of this hole (-265) consists of a succession of lapilli tuff and ash tuff (RHYvl and va), intercalated with mafic tuffs and cut by mafic dykes, and also cut by RHYi (127.8-128.4 and 171-172.2). This hole (265, -55 dip) did intersect massive sulphide mineralization at the expected depth, topped and cored by strong cord-chl-talc alteration. A few copper rich zones were observed. The whole zone spans 172-199 m with the main massive sulphide horizon occurring between 184.15 and 199.4m. The footwall to the masive sulphides consists of felsic volcanoclastics, cut by the footwall mafic intrusion from 213 to 270.15. Its lower contact is intruded by RHYi and is marked by strong py veinlets +/- sphalerite. The hole ends in silica and musc-altered RHYv.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-55	181	0	181	APS	Daniele Heon	19-Sep-15	N/A	<input checked="" type="checkbox"/>	
36	-55.8	162.9	22.5	185.4	ReflexEVS	Geotech	19-Sep-15	5814	<input checked="" type="checkbox"/>	1st downhole test. Second hole on pad and drill not re-ligned up so probably off-azimuth right from start.
66	-56.1	162.9	22.5	185.4	ReflexEVS	Geotech	19-Sep-15	5777	<input checked="" type="checkbox"/>	
96	-55.5	165.8	22.5	188.3	ReflexEVS	Geotech	19-Sep-15	5818	<input checked="" type="checkbox"/>	
126	-55.8	166.1	22.5	188.6	ReflexEVS	Geotech	19-Sep-15	5775	<input checked="" type="checkbox"/>	
156	-56.4	168.4	22.5	190.9	ReflexEVS	Geotech	20-Sep-15	5736	<input checked="" type="checkbox"/>	
186	-55.9	161.5	22.5	184	ReflexEVS	Geotech	20-Sep-15	5848	<input type="checkbox"/>	Erratic azimuth reading
216	-55.5	169.4	22.5	191.9	ReflexEVS	Geotech	20-Sep-15	5769	<input checked="" type="checkbox"/>	
246	-55.6	171.1	22.5	193.6	ReflexEVS	Geotech	21-Sep-15	5791	<input checked="" type="checkbox"/>	
285	-54	174.7	22.5	197.2	ReflexEVS	Geotech	21-Sep-15	5831	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	25.00	OVBN Overburden									
25.00	44.40	RHYvl Lapilli tuff									
<<Min: 25 - 34.8 0.05% Min: Pyrrhotite>> diss and in few foliaform qtz-rich bands											

grey



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-265

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
		<<Min: 30.8 - 31.2 0.5% Min: Pyrrhotite>> coarse po in selvage of qtz-tourm vein									
		<<Min: 30.8 - 31.2 0.5% Min: Galena>> galena in qtz tourm vein									
		<<Min: 34.8 - 44.4 0.5% Min: Pyrrhotite>> po on flat seams // to foln									
		<<Vein: 30.1 - 160.6 0.6% Quartz-Carbonate 65 deg. >> Foliaform qtz-carb-chl veining									
		<<Vein: 30.3 - 78.9 0.4% Quartz-Tourmaline 15 deg. >> Mm to cm qtz-brown tourmaline veins, at shallow angle to CA, loc stockwork, w loc wide selvage of brown tourmaline. Wider veins at 31 and 54.4m contain sulphides (po-py +/- galena, different vein type>). Cuts all other vein types as well as RHYi.									
		<<Struc: 38.8 - 38.81 dominant foliation>> NE/SE									
		<<Struc: 41.6 - 41.61 dominant foliation>> NE/SE									
		<<Struc: 43.7 - 43.73 Vein>>									
44.40	48.85	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
44.4 - 48.85: Biot-qtz-rich bands interbanded w finer grained light green bands, sericite on foliae. Granular. Some small orangy flecks, leucoxene or carbonate? Few biot porphyroblasts. Gradational UC. LC bleached from qtz-tourm veining.											
		<<Min: 44.4 - 48.85 5% Min: Calcite>>									
		<<Min: 44.4 - 80.8 0.01% Min: Pyrite>>									
		<<Min: 44.4 - 80.8 0.01% Min: Pyrrhotite>>									
		<<Struc: 44.85 - 44.86 dominant foliation>> NE/SE									
		<<Struc: 47.6 - 47.61 dominant foliation>>									
		<<Struc: 47.9 - 47.91 Vein>> qtz-tourm vein: NW-SE strike/ vert dip									
48.85	57.10	RHYva Coarse grained to ash tuff									
48.85 - 57.1: few biot-qtz layers, intercalated mafic tuff?											
		<<Min: 48.85 - 68.7 1% Min: Calcite>>									
		<<Min: 54.35 - 54.7 2% Min: Pyrrhotite>> in 1 cm shallow angle qtz vein									
		<<Min: 54.35 - 54.7 0.5% Min: Galena>> in 1 cm shallow angle qtz vein									
		<<Struc: 50.9 - 50.91 dominant foliation>> NE strike/ shallow dip to SE									
		<<Struc: 54.5 - 54.51 Vein>> qtz-po-ga vein, 2 cm, E-W strike/ steep south dip.									
57.10	58.40	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
57.1 - 58.4: Lower contact bleached? Or gradational?											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-265

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
58.40	60.20	RHYcw Curdy textured-flow banded (flows, subvolcanics) beige									
58.4 - 60.2: white siliceous bands w thin olive beige sericite seams, contorted, every half-centimeter. Rob interprets as pepperite: rhyolite dyke intruding wet tuffs. Lower contact: 0.5m mass qtz-ser: chill margin or altered mafic tuff?											
<<Vein: 59.5 - 105.3 0.8% Quartz-Carbonate-Sulphide>> qtz- carb +/- py-po veins, discordant, ass w RHYCw?											
60.20	61.90	MAFi Mafic Intrusions (primarily footwall mafic intrusion) grey-green									
60.2 - 61.9: khaki green, granular, w some calcareous biot-rich bands.											
61.90	63.20	RHYcw Curdy textured-flow banded (flows, subvolcanics) beige									
61.9 - 63.2: contorted siliceous bands, beige sericite, pepperite?											
63.20	69.35	RHYva Coarse grained to ash tuff grey									
<<Min: 68.7 - 69.35 3% Min: Calcite>>											
<<Struc: 65.95 - 65.96 dominant foliation>> NE/ mod dipto SE											
<<Struc: 68.85 - 68.86 dominant foliation>> flat											
69.35	70.30	MAFi Mafic Intrusions (primarily footwall mafic intrusion) green									
<<Min: 69.35 - 70.3 3% Min: Calcite>>											
70.30	76.75	RHYva Coarse grained to ash tuff grey									
<<Min: 70.3 - 76 0.5% Min: Calcite>>											
<<Min: 76 - 84 5% Min: Calcite>>											
76.75	77.55	MAFi Mafic Intrusions (primarily footwall mafic intrusion) green									
<<Struc: 77.5 - 77.55 Weak (Alt) Fault>> clay gouge/ 5cm											
77.55	79.00	RHYvi Lapilli tuff									
<<Struc: 77.95 - 77.96 dominant foliation>> NE/ Shallow SE dip											
79.00	79.50	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
79.50	79.85	RHYvi Lapilli tuff									
79.85	80.80	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-265

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
80.80	84.60	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
80.8 - 84.6: Dominantly mafic tuffs w some short lapilli tuff intervals? Or fg mafic dyke intrudes vl?											
<<Min: 80.8 - 84 0.5% Min: Pyrrhotite>> diss in qtz-rich bands and loc blebby											
<<Min: 84 - 86 1% Min: Calcite>>											
<<Min: 84 - 94 0.01% Min: Pyrrhotite>>											
84.60	88.65	RHYvl Lapilli tuff									
<<Min: 86 - 91.18 5% Min: Calcite>>											
<<Alt: 85.8 - 88.64 Weak (Alt) Chlorite>>											
<<Struc: 86.95 - 86.96 dominant foliation>> E-W, south dip,orientation of stretched lapilli.											
88.65	91.80	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<<Min: 91.18 - 101.35 1% Min: Calcite>>											
91.80	101.35	RHYvl Lapilli tuff									
91.8 - 101.35: Dominantly lapilli tuff, w some ash-dominant sections.											
<<Min: 94 - 96 0.5% Min: Pyrrhotite>>											
<<Alt: 91.8 - 101.35 Weak (Alt) Chlorite>>											
101.35	105.25	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<<Min: 101.35 - 105.2 2% Min: Calcite>> carb is ankertie?											
<<Struc: 101.45 - 101.5 Moderate (Alt) Fault>> broken, clay gouge.											
105.25	114.40	RHYvl Lapilli tuff									
105.25 - 114.4: Dark, loc very siliceous, mixture of lapilli tuff, some ash, and some intervals w prominent siliceous bands or contorted blebs (RHYcw?, 105.3-105.6, 110.8-114).											
<<Alt: 105.6 - 114.4 Weak (Alt) Chlorite>>											
<<Vein: 109 - 127.1 0.01% Quartz-Tourmaline 5 deg. >>											
114.40	117.00	RHYvl Lapilli tuff									
grey											
117.00	119.00	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
grey											
117 - 119: very sileceosu rx w bands and disrupted bands of silica. Silicified and w bands of diss py in qtz..											
<<Min: 117.3 - 121 3% Min: Pyrite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-265

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 117.9 - 121 Moderate (Alt) Silicification>>											
<<Alt: 117.9 - 121 Moderate (Alt) Muscovite>>											
<<Vein: 118.8 - 164 0.1% Quartz-Carbonate 40 deg. >> discordant qtz-carb veins, 2-5 cm											
119.00	121.55	RHYvl Lapilli tuff									
<<Min: 121 - 125 0.5% Min: Pyrite>>											
121.55	125.30	RHYva Coarse grained to ash tuff									
<<Min: 121.55 - 125 0.5% Min: Pyrrhotite>> flat foliaform seams											
<<Min: 125 - 127.3 1% Min: Pyrite>>											
<<Min: 125 - 127.3 1% Min: Pyrrhotite>>											
<<Alt: 125 - 130.65 Moderate (Alt) Muscovite>>											
<<Alt: 125 - 131.65 Moderate (Alt) Silicification>>											
125.30	127.80	RHYvl Lapilli tuff									
125.3 - 127.8: musc and py alteration increase downhole.											
<<Min: 127.3 - 128.4 0.5% Min: Sphalerite>>											
<<Min: 127.3 - 128.4 3% Min: Pyrite>>											
<<Min: 127.3 - 128.4 3% Min: Pyrrhotite>>											
<<Min: 127.3 - 128.4 0.01% Min: Galena>>											
<<Struc: 125.95 - 125.96 dominant foliation>> NW/NE											
127.80	128.40	RHYi Aphanitic Rhyolite (intrusion) light grey									
127.8 - 128.4: w thin sulphide veinlets, x-cut by thin qtz-tourm veinlets.											
128.40	130.50	RHY undifferentiated rhyolite									
128.4 - 130.5: Green and grey musc-silica-altered felsic rx w abundant bands of diss qtz-py. No primary textures.											
<<Min: 128.4 - 130.6 1% Min: Pyrite>> disseminated in qtz-rich bands											
130.50	148.65	RHYvl Lapilli tuff									
130.5 - 148.65: Lapilli and/or siliceous fragment size and amount increase down-hole, loc xtal-lithic tuff?.											
<<Min: 130.6 - 154.4 0.5% Min: Pyrite>> in irregular sulphide seams dissected by foliation											
<<Min: 130.6 - 154.4 0.5% Min: Pyrrhotite>>											
<<Min: 147.5 - 149.1 3% Min: Calcite>>											
<<Alt: 131 - 146.5 Weak (Alt) Silicification>>											
<<Alt: 138.2 - 146.5 Weak (Alt) Chlorite>>											
<<Alt: 138.2 - 170 Moderate (Alt) Muscovite>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-265

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %									
<<Struc: 131.9 - 131.91 dominant foliation>> e-w/ n																				
<<Struc: 134.95 - 134.96 dominant foliation>> NE/ shallow SE																				
<<Struc: 143.3 - 143.31 Weak (Alt) Fault>> 1 cm fault gouge																				
148.65	157.30	RHYva Coarse grained to ash tuff	grey-green																	
<<Min: 154.4 - 154.5 10% Min: Pyrite>>																				
<<Min: 154.5 - 163.7 1% Min: Pyrite>> in sulph-qtz seams																				
<<Min: 154.5 - 170.55 1% Min: Pyrrhotite>> in sulph-qtz seams																				
157.30	163.70	RHYvl Lapilli tuff	grey-green																	
157.3 - 163.7: Fragment-rich xtal-lapilli tuff, (loc up to CW) w contorted qtz veins and fragments (of cw?) and qtz-sulph bands.Looks brecciated.																				
163.70	169.60	RHYva Coarse grained to ash tuff	grey																	
<<Min: 163.7 - 170.55 3% Min: Pyrite>>																				
169.60	171.00	RHY undifferentiated rhyolite	medium grey																	
169.6 - 171: Darkish grey siliceous foliated rx w grey-green sericite on partings. Grey but not really carbonaceous. Cw?																				
<<Alt: 170 - 184.15 Strong (Alt) Muscovite>>																				
171.00	172.20	RHYi Aphanitic Rhyolite (intrusion)	beige																	
171 - 172.2: actually white, blocky, strongly fractured, abundant qtz veins and strong mica/talc alteration. Includes some blocks of strongly musc/ clay-altered RHY. Poor recovery so meterage approximate.																				
172.20	175.60	OJ Heavilly disseminated sulphides in proximal altered rock	grey-brown																	
172.2 - 175.6: mottled zone of strong cordierite-chl alteration,w sulphides 5 to 20%. Altered RHY w knots of dark or light-coloured cordierite, in groundmass of greasy chlorite and grey muscovite. Cordierite loc altered to dark biot/chl? Diss and stringers of py, cp, sp																				
<<Alt: 172.2 - 175.6 Strong (Alt) Chlorite>>																				
<<Alt: 172.2 - 175.6 Strong (Alt) Cordierite>>																				
175.60	178.15	RHY undifferentiated rhyolite																		
<<Min: 178 - 180 5% Min: Calcite>>																				
<<Alt: 176.75 - 178.15 Strong (Alt) Talc-serpentine>>																				
<<Struc: 177.5 - 177.6 dominant foliation>>																				

168.50	169.60	1.10	B00266795	-0.3	-0.005	-0.01	-0.01	0.02
--------	--------	------	-----------	------	--------	-------	-------	------

169.60	171.00	1.40	B00266796	0.7	-0.005	-0.01	0.01	0.02
--------	--------	------	-----------	-----	--------	-------	------	------

171.00	172.20	1.20	B00266797	3.2	-0.005	0.03	0.04	0.03
--------	--------	------	-----------	-----	--------	------	------	------

172.20	172.90	0.70	B00266798	54.8	0.094	0.32	0.76	3.43
--------	--------	------	-----------	------	-------	------	------	------

172.90	173.90	1.00	B00266799	13.2	0.124	0.44	0.08	0.08
173.90	174.95	1.05	B00266801	25.1	0.079	0.31	0.32	1.61
174.95	175.60	0.65	B00266802	22.1	0.037	0.34	0.27	1.07
175.60	176.75	1.15	B00266803	1.6	-0.005	0.05	0.02	0.06
176.75	178.15	1.40	B00266804	0.4	-0.005	-0.01	-0.01	0.02

168.50	169.60	1.10	B00266795	-0.3	-0.005	-0.01	-0.01	0.02
--------	--------	------	-----------	------	--------	-------	-------	------

169.60	171.00	1.40	B00266796	0.7	-0.005	-0.01	0.01	0.02
--------	--------	------	-----------	-----	--------	-------	------	------

171.00	172.20	1.20	B00266797	3.2	-0.005	0.03	0.04	0.03
--------	--------	------	-----------	-----	--------	------	------	------

172.20	172.90	0.70	B00266798	54.8	0.094	0.32	0.76	3.43
--------	--------	------	-----------	------	-------	------	------	------

172.90	173.90	1.00	B00266799	13.2	0.124	0.44	0.08	0.08
--------	--------	------	-----------	------	-------	------	------	------

173.90	174.95	1.05	B00266801	25.1	0.079	0.31	0.32	1.61
--------	--------	------	-----------	------	-------	------	------	------

174.95	175.60	0.65	B00266802	22.1	0.037	0.34	0.27	1.07
--------	--------	------	-----------	------	-------	------	------	------

175.60	176.75	1.15	B00266803	1.6	-0.005	0.05	0.02	0.06
--------	--------	------	-----------	-----	--------	------	------	------

176.75	178.15	1.40	B00266804	0.4	-0.005	-0.01	-0.01	0.02
--------	--------	------	-----------	-----	--------	-------	-------	------

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-265
From (m) **To (m)** **Rocktype & Description**
178.15 180.00 RHY undifferentiated rhyolite

178.15 - 180: White, green and grey, brecciated/ fractured appearance, w coalescing white cordierites in groundmass of greasy greenish chlorite, talc-y on fractures.

<<Alt: 178.15 - 181 Moderate (Alt) Talc-serpentine>>

<<Alt: 178.2 - 180 Strong (Alt) Chlorite>>

<<Alt: 178.2 - 180 Strong (Alt) Cordierite>>

180.00 184.15 RHYcw Curdy textured-flow banded (flows, subvolcanics)

180 - 184.15: or RHY

<<Alt: 183.9 - 184.15 Moderate (Alt) Talc-serpentine>>

<<Alt: 184 - 184.15 Strong (Alt) Chlorite>>

<<Alt: 184 - 184.15 Strong (Alt) Cordierite>>

<<Struc: 183.1 - 183.2 Strong (Alt) Fault>> broken, gouge

184.15 186.00 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

184.15 - 186: last 0.3m is OA

<<Min: 184.15 - 187.55 2% Min: Chalcopryite>>

<<Min: 184.15 - 199.4 2% Min: Sphalerite>>

<<Min: 184.15 - 199.4 3% Min: Galena>>

<<Min: 185.2 - 187.55 15% Min: Pyrite>>

<<Min: 185.2 - 191.6 10% Min: Pyrrhotite>>

186.00 186.90 OA Magnetite bearing sulphides
186.90 187.55 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides
187.55 191.55 OJ Heavily disseminated sulphides in proximal altered rock

187.55 - 191.55: 189.9-190.5: semi-massive cordierite, sulphide poor. 192-191.55: sulphide rich, could be classed as OC.

187.85-188: musc-altered RHY.

<<Min: 187.55 - 190.4 5% Min: Pyrite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
178.15	180.00	1.85	B00266805	1.2	-0.005	-0.01	0.03	0.11

180.00	182.00	2.00	B00266806	0.8	-0.005	-0.01	0.02	0.15
--------	--------	------	-----------	-----	--------	-------	------	------

182.00	184.15	2.15	B00266807	2.1	0.008	0.02	0.03	0.09
--------	--------	------	-----------	-----	-------	------	------	------

184.15	185.20	1.05	B00266808	200	0.781	0.39	4.25	6.63
--------	--------	------	-----------	-----	-------	------	------	------

185.20	186.00	0.80	B00266809	150	0.468	0.27	4.51	9.76
--------	--------	------	-----------	-----	-------	------	------	------

186.00	186.90	0.90	B00266812	148	1.05	0.51	4.81	10.5
--------	--------	------	-----------	-----	------	------	------	------

186.90	187.55	0.65	B00266813	250	1.59	0.09	5.56	8.2
--------	--------	------	-----------	-----	------	------	------	-----

187.55	188.95	1.40	B00266814	39	0.139	0.65	0.47	1.17
--------	--------	------	-----------	----	-------	------	------	------

188.95	190.40	1.45	B00266815	14	0.059	0.31	0.05	0.2
--------	--------	------	-----------	----	-------	------	------	-----

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-265

From (m) To (m) Rocktype & Description

<<Min: 187.55 - 192.5 5% Min: Chalcopryite>> diss from 192.2-192.5
<<Min: 190.4 - 191.8 15% Min: Pyrite>>
<<Alt: 187.55 - 191.55 Moderate (Alt) Talc-serpentine>>
<<Alt: 187.55 - 191.55 Strong (Alt) Chlorite>>
<<Alt: 187.55 - 191.55 Strong (Alt) Cordierite>>
<<Vein: 189.25 - 189.35 Quartz 35 deg. >> py on selvage. E-W, subvertical.
<<Struc: 189.25 - 189.26 Vein>> E_W/
<<Struc: 190.8 - 190.9 dominant foliation>> NW-SE/subvert. In cordierite alteration zone.

191.55 193.50 OA Magnetite bearing sulphides

191.55 - 193.5: good magnetite banding.

<<Min: 191.8 - 199.4 30% Min: Pyrite>>
<<Min: 192.5 - 198.25 3% Min: Chalcopryite>>
<<Struc: 192.6 - 192.61 dominant foliation>> magnetite banding. NW/ NE dip.

193.50 194.15 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

194.15 194.80 OA Magnetite bearing sulphides

<<Struc: 194.7 - 194.71 dominant foliation>> NW/NE

194.80 196.05 OA Magnetite bearing sulphides

194.8 - 196.05: cp

196.05 197.75 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

196.05 - 197.75: massive

197.75 199.40 OA Magnetite bearing sulphides

197.75 - 199.4: mostly OA w some short sections of OB and ~ 10cm blebby cp.

<<Min: 198.25 - 198.4 15% Min: Chalcopryite>>
<<Min: 199.24 - 213 1% Min: Sphalerite>> in veinlets/bands up to 1 cm
<<Min: 199.24 - 213 0.5% Min: Pyrite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
190.40	191.55	1.15	B00266816	58.2	0.279	0.87	0.51	1.91
191.55	192.50	0.95	B00266817	78.8	0.507	1.76	0.27	1.46
192.50	193.50	1.00	B00266818	46.8	0.434	1.05	0.1	0.44
193.50	194.15	0.65	B00266819	18.1	0.363	0.34	0.05	1.66
194.15	194.80	0.65	B00266821	109	1.02	0.36	1.78	7.67
194.80	195.25	0.45	B00266822	290	2.49	0.13	4.05	8.79
195.25	196.05	0.80	B00266823	280	2.61	0.18	4.46	8.06
196.05	196.90	0.85	B00266824	300	2.18	0.11	4.73	9.42
196.90	197.75	0.85	B00266825	290	2.05	0.25	3.55	11.6
197.75	198.50	0.75	B00266826	141	1.19	1.35	1.66	10.2
198.50	199.40	0.90	B00266827	202	1.91	0.3	2.99	10.4



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-265

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 199.24 - 213 1% Min: Pyrrhotite>>											
<<Min: 199.24 - 213 0.5% Min: Chalcopyrite>> in veinlets/bands up to 1 cm											
199.40	213.00	RHYcw Curdy textured-flow banded (flows, subvolcanics)	199.40	200.90	1.50	B00266828	5.3	0.061	0.02	0.17	0.28
199.4 - 213: or RHYva											
<<Alt: 199.4 - 213 Moderate (Alt) Muscovite>> greenish											
<<Vein: 206 - 210 5% Quartz 80 deg. >> 3 veins 5-10 cmm											
213.00	270.15	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	200.90	202.50	1.60	B00266829	3	0.036	0.01	0.12	0.17
213 - 270.15: m to cg chloritic intrusion, w biot (replacing hbl?) in bands defining foliation, tr sulphides, w common carbonate veinlets and pods. Gabbro to pxenite composition. Last meter is fg, spotted by leucoxene (?), and w mm-thin biot-py stringers: chilled margi											
<<Min: 213 - 223 10% Min: Calcite>>											
<<Min: 213 - 270.15 0.01% Min: Pyrrhotite>>											
<<Min: 213 - 270.15 0.01% Min: Chalcopyrite>> at edge of po grains.											
<<Min: 223 - 236 5% Min: Calcite>>											
<<Min: 236 - 242 15% Min: Calcite>>											
<<Min: 242 - 268.7 2% Min: Calcite>>											
<<Min: 269.4 - 274.1 1% Min: Pyrite>> in veinlets 70-90 deg CA											
<<Min: 269.4 - 285 0.01% Min: Sphalerite>>											
<<Vein: 247.15 - 247.25 100% Quartz-Tourmaline-Sulphide 40 deg. >> qtz-tourm-po-asp vein.											
<<Struc: 218.44 - 218.45 dominant foliation>>											
<<Struc: 218.98 - 218.99 dominant foliation>>											
<<Struc: 221.5 - 221.6 dominant foliation>>											
<<Struc: 221.87 - 221.88 Vein>> carbonate vein											
<<Struc: 233.97 - 233.98 dominant foliation>>											
<<Struc: 247.15 - 247.16 Vein>> NW-SE/ steep											
270.15	271.80	RHYi Aphanitic Rhyolite (intrusion)	270.15	271.00	0.85	B00266832	3.4	0.025	-0.01	0.01	0.02
270.15 - 271.8: py diss and in mm to cm seams											
<<Alt: 270.15 - 275 Moderate (Alt) Silicification>>											
<<Alt: 270.15 - 275 Moderate (Alt) Muscovite>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-265

From (m) To (m) Rocktype & Description

271.80 273.70 RHYva Coarse grained to ash tuff

271.8 - 273.7: strongly foliated, siliceous, w same py seams as in RHYi.

273.70 274.55 RHYi Aphanitic Rhyolite (intrusion)

273.7 - 274.55: py diss and in mm to cm seams

<<Min: 274.1 - 284.1 0.01% Min: Pyrrhotite>>

<<Min: 274.1 - 285 0.5% Min: Pyrite>> py quite bright yellow (w cp?)

274.55 276.20 RHYva Coarse grained to ash tuff

274.55 - 276.2: silicified? Greenish, foliated, w dark qtz-sulph lenses and seams.

<<Alt: 275 - 285 Strong (Alt) Silicification>>

276.20 276.30 RHYi Aphanitic Rhyolite (intrusion)

276.30 282.00 RHYva Coarse grained to ash tuff

276.3 - 282: silicified? Greenish, foliated, w dark qtz-sulph lenses and seams.

<<Struc: 280 - 280.01 dominant foliation>>

282.00 285.00 RHYv Rhyolite volcanoclastic

282 - 285: blue-grey, siliceous musc-rich rx, granular groundmass w some fragmental texture and maybe clasts of cw?
Qtz eyes or qtz clasts?

<<Min: 284.1 - 285 0.5% Min: Pyrrhotite>>

<<Vein: 284 - 284.1 100% Quartz-Chlorite-Carbonate 80 deg. >> qtz-carb-chl

<<Struc: 284.1 - 284.15 Strong (Alt) Fault>> clay breccia gouge.

<<Struc: 284.8 - 284.9 >> crenulation

End of Hole @ 285

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
271.80	273.00	1.20	B00266834	3.6	0.03	-0.01	0.03	0.19
273.00	273.70	0.70	B00266835	2.8	0.014	-0.01	0.03	0.06
273.70	274.00	0.30	B00266836	2.8	0.034	-0.01	0.02	0.02

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-266

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Trevor Rabb
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	21-Sep-15
UTM Easting	414698.867	Core Size:	HQ3	Azimuth:	180.2	Date Logging Complete:	21-Sep-15
UTM Northing:	6815466.42	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1418.903	Casing Depth (m):	7.5	Length (m):	110	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	19-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	20-Sep-15
Local Elev. (m):						Purpose:	Metallurgical Twin
Comments:						Parent Hole:	K15-272

This hole is an HQ-size Metallurgical twin of K15-272. The hole encountered continuous and discontinuous massive sulphide lenses near top of hole from 38.85 to 41.4 (OB+OC continuous) and 52.4 to 55 (OI, discontinuous) within a stringer zone from 37.7 to 62.2m. Main ABM Massive sulphide intersected (OA and OB) from 62.2 to 104.17 with intervening wall rock totalling 3.5m dilution (RHYv).

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	181	0	181	APS	Geotech	19-Sep-15	N/A	<input type="checkbox"/>	
26	-59.6	160.7	22.5	183.2	ReflexEVS	Geotech	19-Sep-15	5790	<input checked="" type="checkbox"/>	
50	-59.5	160.4	22.5	182.9	ReflexEVS	Geotech	20-Sep-15	5737	<input checked="" type="checkbox"/>	
74	-59.7	159.8	22.5	182.3	ReflexEVS	Geotech	20-Sep-15	5752	<input checked="" type="checkbox"/>	
74.01	-61.6	156.7	22.5	179.2	ReflexEVS	Geotech	21-Sep-15	5684	<input type="checkbox"/>	Repeat reading
98	-59.6	159.6	22.5	182.1	ReflexEVS	Geotech	21-Sep-15	5819	<input checked="" type="checkbox"/>	
110	-59.9	162.6	22.5	185.1	ReflexEVS	Geotech	21-Sep-15	5639	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	8.00	OVBN Overburden									
0 - 8: Casing to 7.5m and cave from 7.5m to 8m											
8.00	11.50	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
<<Min: 10.1 - 12.8 3% Min: Pyrite>> diss. Aggregates											
11.50	12.80	MDSc Carbonaceous dominant mudstone									
11.5 - 12.8: heterolithic, gradational contacts, weakly carbonaceous.											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-266

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
12.80	14.30	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
12.8 - 14.3: Strongly disrupted MDSw, pinched out Z-folds (upper limb?) with fold noses throughout, folds are highlighted by graphitic folia. Folds are isoclinal to very tight with E-W fold axis and plunging to the south.											
14.30	30.00	MDSw Coherent rhyolite flow with carbonaceous content									
14.3 - 30: Strongly disrupted MDSw, pinched out Z-folds (upper limb?) with fold noses throughout, folds are highlighted by graphitic folia. Folds are isoclinal to very tight with E-W fold axis and plunging to the south.											
<<Alt: 23.5 - 30 Weak-Moderate (Alt) Muscovite>>											
<<Vein: 25.14 - 30 Quartz>>											
<<Struc: 19.8 - 20.2 Weak (Alt) Fault>>											
30.00	32.80	MDSw Carbonaceous dominant mudstone									
30 - 32.8: weakly graphitic, heterolithic appearance. Sharp UCT and LCT.											
<<Alt: 30 - 32.8 Weak (Alt) Muscovite>>											
<<Struc: 30.5 - 32.8 Weak-Moderate (Alt) Fault>>											
32.80	38.80	RHYcw Curdy textured-flow banded (flows, subvolcanics)	33.85	34.85	1.00						
32.8 - 38.8: gradational LCT into RHYv											
<<Min: 37.7 - 38.85 0.5% Min: Pyrite>>											
<<Min: 37.7 - 38.85 0.5% Min: Pyrrhotite>>											
<<Min: 37.7 - 38.85 0.5% Min: Chalcopyrite>>											
<<Min: 37.77 - 38.85 2% Min: Sphalerite>> isolated banded aggregates											
<<Min: 37.77 - 38.85 1% Min: Arsenopyrite>>											
<<Alt: 32.8 - 38.85 Moderate (Alt) Muscovite>>											
<<Vein: 36 - 37.85 Quartz>>											
38.80	41.40	OC Chalcopyrite-pyrrhotite net textured sulphides	38.85	39.85	1.00						
38.8 - 41.4: sharp UCT, LCT gradational over 20cm. Cpy poor over gradational LCT. 45cm dilution (qtz vein + RHY). Cpy+sph+gl											
<<Min: 38.85 - 41.4 5% Min: Sphalerite>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-266

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 38.85 - 41.4 5% Min: Pyrrhotite>>		net txt, coasre graiuned in qz vein	40.85	41.40	0.55						
<<Min: 38.85 - 41.4 1% Min: Galena>>											
<<Min: 38.85 - 41.4 1.5% Min: Chalcopryite>>											
<<Alt: 38.85 - 41.4 Weak (Alt) Muscovite>>											
<<Vein: 39.6 - 40.2 Quartz>>		+cpy									
41.40 45.25 RHYcw		Curdy textured-flow banded (flows, subvolcanics)	41.40	42.40	1.00						
41.4 - 45.25: strongly altered, txt destructive.											
<<Min: 41.4 - 46.9 5% Min: Calcite>>			42.40	43.40	1.00						
<<Alt: 41.4 - 45.2 Intense (Alt) Muscovite>>			43.40	44.40	1.00						
<<Alt: 45.2 - 55 Strong (Alt) Muscovite>>			44.40	45.25	0.85						
45.25 46.75 OI		Heavilly disseminated sulphides in host schist	45.25	46.25	1.00						
45.25 - 46.75: Stringer mineralization, convoluted OC veins and disseminated f.g. po+gn+cpy											
<<Min: 45.75 - 46.75 3% Min: Sphalerite>>			46.25	46.75	0.50						
<<Min: 45.75 - 46.75 3% Min: Pyrrhotite>>		net txt + diss									
<<Min: 45.75 - 46.75 1.5% Min: Chalcopryite>>		complex intergrowths withg po (net text.)									
46.75 47.75 RHYcw		Curdy textured-flow banded (flows, subvolcanics)	46.75	47.75	1.00						
46.75 - 47.75: pervasive Mu altered RHYv											
<<Min: 47.7 - 49 3% Min: Calcite>>											
47.75 50.20 OI		Heavilly disseminated sulphides in host schist	47.75	48.75	1.00						
47.75 - 50.2: Stringer mineralization, convoluted OC veins and disseminated f.g. po+gn+cpy											
<<Min: 47.75 - 50 5% Min: Sphalerite>>			48.75	49.75	1.00						
<<Min: 47.75 - 50 5% Min: Pyrrhotite>>			49.75	50.20	0.45						
<<Min: 47.75 - 50 1% Min: Chalcopryite>>											
<<Struc: 50 - 50.4 Weak (Alt) Fault>>											
50.20 52.40 RHYcw		Curdy textured-flow banded (flows, subvolcanics)	50.20	51.20	1.00						
50.2 - 52.4: int. Mu alt Rhyv.laminated throughout.											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-266

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 51.2 - 55 2% Min: Calcite>>											
52.40	55.00	OI	FMG								
Heavilly disseminated sulphides in host schist											
52.4 - 55: discrete sulphide lenses <15cm (stringer mineralization)											
<<Min: 52.4 - 55 3% Min: Sphalerite>>											
<<Min: 52.4 - 55 7% Min: Pyrite>>											
<<Min: 52.4 - 55 1% Min: Galena>>											
55.00	62.20	MDSw	FG								
Coherent rhyolite flow with carbonaceous content											
55 - 62.2: fg wispy stringers and <5cm bands of py-po-sp + diss. Throughout											
<<Min: 57.3 - 62.2 0.5% Min: Chalcopryite>>											
<<Min: 57.53 - 62.2 1.5% Min: Sphalerite>>											
<<Min: 57.53 - 62.2 2% Min: Pyrite>>											
<<Min: 57.53 - 62.2 0.5% Min: Galena>>											
<<Alt: 55 - 62.2 Strong (Alt) Muscovite>>											
<<Struc: 60.2 - 61.5 Strong (Alt) Fault>> weakly healed gouge and intact core (<20cm) with cataclastic overprint. Lost core (0.9m)											
62.20	64.90	OA	FG								
Magnetite bearing sulphides											
<<Min: 62.2 - 65 15% Min: Sphalerite>>											
<<Min: 62.2 - 65 60% Min: Pyrite>>											
<<Min: 62.2 - 65 3% Min: Galena>>											
<<Min: 62.2 - 65 1% Min: Chalcopryite>>											
64.90	65.90	OB	FG								
Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides											
<<Min: 65 - 76 10% Min: Sphalerite>>											
<<Min: 65 - 76 55% Min: Pyrite>>											
<<Min: 65 - 76 2% Min: Galena>>											
<<Min: 65 - 76 0.5% Min: Chalcopryite>>											
65.90	67.40	OA	FG								
Magnetite bearing sulphides											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-266

From (m)	To (m)	Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
67.40	68.85	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FG	67.40	67.90	0.50					
					67.90	68.85	0.95					
68.85	70.90	OA	Magnetite bearing sulphides	FMG	68.85	69.90	1.05					
					69.90	70.90	1.00					
70.90	72.22	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FG	70.90	71.40	0.50					
					71.40	72.22	0.82					
72.22	75.00	OA	Magnetite bearing sulphides	FG	72.22	73.20	0.98					
					73.20	74.20	1.00					
					74.20	75.00	0.80					
75.00	77.00	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG	75.00	76.00	1.00					
					76.00	77.00	1.00					
<<Min: 76 - 78 15% Min: Sphalerite>>												
<<Min: 76 - 78 50% Min: Pyrite>>												
<<Min: 76 - 78 0.5% Min: Galena>>												
77.00	78.00	OI	Heavily disseminated sulphides in host schist	FMG	77.00	78.00	1.00					
<<Min: 77 - 78 2% Min: Magnetite>>												
<<Min: 77.6 - 79.5 5% Min: Calcite>>												
78.00	79.20	RHYv	Rhyolite volcaniclastic		78.00	79.20	1.20					
<<Alt: 78 - 79.2 Strong (Alt) Muscovite>>												
79.20	82.30	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG	79.20	80.20	1.00					
<<Min: 79.2 - 82.3 10% Min: Sphalerite>>												
<<Min: 79.2 - 82.3 60% Min: Pyrite>>												
<<Min: 79.2 - 82.3 3% Min: Galena>>												
<<Min: 79.5 - 84.5 2% Min: Calcite>>												
					80.20	81.20	1.00					
					81.20	82.30	1.10					

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-266
From (m) **To (m)** **Rocktype & Description**
82.30 84.50 RHYva Coarse grained to ash tuff

82.3 - 84.5: mg chl replaced xtals, perv MU alteration with sel. Repl chl

<<Min: 82.3 - 84.5 0.25% Min: Sphalerite>>

<<Min: 82.3 - 84.5 0.5% Min: Pyrite>> local startiform aggregates

<<Alt: 82.3 - 84.5 Strong (Alt) Muscovite>>

<<Vein: 82.3 - 82.7 Quartz>>

**84.50 86.30 OB Wispy laminate, fine
buckshot textured, non-
magnetite bearing sulphides**

<<Min: 84.5 - 87.25 10% Min: Sphalerite>>

<<Min: 84.5 - 87.25 50% Min: Pyrite>>

<<Min: 84.5 - 87.25 5% Min: Galena>>

86.30 87.25 OA Magnetite bearing sulphides
**87.25 88.30 OH Fine grained, megascopically
homogeneous pyrite rock**

<<Min: 87.25 - 88.4 70% Min: Pyrite>>

88.30 90.30 OA Magnetite bearing sulphides

<<Min: 88.4 - 90.95 15% Min: Sphalerite>>

<<Min: 88.4 - 90.95 50% Min: Pyrite>>

<<Min: 88.4 - 90.95 2% Min: Chalcopyrite>>

**90.30 90.95 OB Wispy laminate, fine
buckshot textured, non-
magnetite bearing sulphides**
90.95 92.34 RHYv Rhyolite volcanoclastic

<<Min: 90.95 - 92.4 1% Min: Sphalerite>>

<<Min: 90.95 - 92.4 5% Min: Pyrite>>

<<Min: 90.95 - 92.4 0.5% Min: Galena>>

<<Alt: 90.95 - 92.4 Strong (Alt) Muscovite>>

**92.34 95.34 OB Wispy laminate, fine
buckshot textured, non-
magnetite bearing sulphides**

<<Min: 92.4 - 98.2 2% Min: Calcite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
82.30	83.30	1.00						
83.30	84.50	1.20						
84.50	85.50	1.00						
85.50	86.30	0.80						
86.30	87.25	0.95						
87.25	88.30	1.05						
88.30	89.30	1.00						
89.30	90.30	1.00						
90.30	90.95	0.65						
90.95	92.34	1.39						
92.34	93.34	1.00						
93.34	94.34	1.00						

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-266

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 92.4 - 104.17 20% Min: Sphalerite>>			94.34	95.34	1.00						
<<Min: 92.4 - 104.17 60% Min: Pyrite>>											
<<Min: 92.4 - 104.17 5% Min: Galena>>											
<<Min: 92.4 - 104.17 1% Min: Chalcopryrite>>											
95.34	96.25	OA Magnetite bearing sulphides	95.34	96.25	0.91						
96.25	101.17	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	96.25	97.25	1.00						
<<Min: 98.4 - 104.8 5% Min: Calcite>>			97.25	98.25	1.00						
			98.25	99.25	1.00						
			99.25	100.25	1.00						
			100.25	101.17	0.92						
			101.17	101.75	0.58						
			101.75	102.65	0.90						
101.17	102.65	RHYv Rhyolite volcanoclastic	102.65	103.85	1.20						
<<Struc: 101.17 - 101.75 Moderate-Strong (Alt) Shear>> protomylonite to str cataclastic txt			103.85	104.40	0.55						
<<Struc: 101.75 - 102.65 Moderate-Strong (Alt) Fault>> consolidated healed gouge, cataclastic txt throughout, flt bx txt.			104.40	105.40	1.00						
102.65	107.90	RHYi Aphanitic Rhyolite (intrusion)	105.40	106.80	1.40						
<<Min: 104.8 - 107.9 5% Min: Calcite>>											
<<Vein: 103.2 - 105.3 Quartz>>											
107.90	110.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<<Min: 107.9 - 110 10% Min: Calcite>>											
<<Alt: 107.9 - 110 Intense (Alt) Biotite>> bi after cl?											
<<Struc: 108.53 - 108.57 Moderate-Strong (Alt) Fault>> soft unconsolidated gouge											
End of Hole @ 110											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-267

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	20-Sep-15
UTM Easting	415151.403	Core Size:	NQ3	Azimuth:	179.67	Date Logging Complete:	22-Sep-15
UTM Northing:	6815554.372	Casing Pulled?:	Yes	Dip:	-65	Drill Company:	Geotech
UTM Elev. (m):	1402.897	Casing Depth (m):	15	Length (m):	218	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	19-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	21-Sep-15
Local Elev. (m):						Purpose:	Resource/Met
Comments:						Parent Hole:	

K15-267 was drilled as a resource infill between historic holes K95-134 and K94-016. K15-270 was drilled as a twin to collect samples of MET3 and MET5 domains. The hanging wall stratigraphy consists of mixed felsic and mafic volcanics/intrusives from 15-136.4 m. Noticeable MU-alteration in the hanging wall occurred from ~85.5-134.9 m, where the alteration increased to CL+CI near the MSXS. MSXS was encountered from 136.4-161.1 m, consisting of OJ, OB, OA, OH, OI. The footwall consists of volcanoclastic rhyolite from 161.1-165.3 m, with strong CL+CI alteration proximal to the MSXS. From 165.3-218 m (EOH) a CL-BI-CA schist (MAFi) was encountered.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-65	179.67	0	179.67	APS	Dillon Hume	19-Sep-15		<input checked="" type="checkbox"/>	
20	-65.7	160.7	22.5	183.2	ReflexEVS	Geotech	19-Sep-15	5783	<input checked="" type="checkbox"/>	
50	-65.8	186	22.5	208.5	ReflexEVS	Geotech	19-Sep-15	593	<input type="checkbox"/>	Values not accepted due to very low magnetic field. Repeat reading at 50.10 m.
50.1	-66	163.9	22.5	186.4	ReflexEVS	Geotech	21-Sep-15	5752	<input checked="" type="checkbox"/>	
80	-65.9	165.4	22.5	187.9	ReflexEVS	Geotech	19-Sep-15	5949	<input checked="" type="checkbox"/>	
110	-65.2	167.2	22.5	189.7	ReflexEVS	Geotech	20-Sep-15	5734	<input checked="" type="checkbox"/>	
140	-65	169.2	22.5	191.7	ReflexEVS	Geotech	20-Sep-15	5766	<input checked="" type="checkbox"/>	
170	-65.3	170.6	22.5	193.1	ReflexEVS	Geotech	20-Sep-15	5815	<input checked="" type="checkbox"/>	
200	-65.1	173.2	22.5	195.7	ReflexEVS	Geotech	20-Sep-15	5802	<input checked="" type="checkbox"/>	
218	-65.3	172.6	22.5	195.1	ReflexEVS	Geotech	21-Sep-15	5795	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	15.00	CASN									
15.00	17.10	MAFi									
Casing Mafic Intrusions (primarily footwall mafic intrusion) 15 - 17.1: CL+CA+/-BI schist with relatively sharp lower contact.											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-267

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 15 - 17.1 20% Min: Calcite>>											
<<Min: 15 - 72 1% Min: Pyrite>>											
<<Min: 15 - 72 1% Min: Pyrrhotite>>											
17.10	23.60	RHYva Coarse grained to ash tuff									
17.1 - 23.6: fine grained ash tuff with minor rhyolite and mafic lpl. Local ~3 cm bands with chloritic groundmass.											
<<Min: 17.1 - 23.6 2% Min: Calcite>>											
23.60	24.30	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
23.6 - 24.3: Banded BI and CL with fine grained CA crystals. Sharp lower and upper contact.											
<<Min: 23.6 - 24.3 20% Min: Calcite>>											
24.30	26.90	RHYva Coarse grained to ash tuff									
24.3 - 26.9: Medium green-grey, fine grained MU+QZ+CL+/-bi ash tuff with minor rhyolitic lpl											
<<Min: 24.3 - 26.9 2% Min: Calcite>>											
26.90	32.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
26.9 - 32: CL+CA+/-BI schist. CA bands and fine grain crystals. CL+/-BI makes up the foliated groundmass.											
<<Min: 26.9 - 36.8 20% Min: Calcite>>											
32.00	32.70	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
32 - 32.7: Curdy rhyolite with interstitial MAFi. Pepperitic texture?											
32.70	36.80	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
32.7 - 36.8: BI+CA+CL schist, with poorly developed foliation. CA crystals rimmed with BI. Gradational lower boundary from 36.1-36.8 m.											
36.80	38.90	RHYvl Lapilli tuff									
36.8 - 38.9: Unit grades from rhyolitic lpl in a MU+QZ groundmass at the top to CL+CA lpl in a MU+QZ+CL groundmass at the bottom.											
<<Min: 36.8 - 38.9 2% Min: Calcite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-267

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
38.90	39.50	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
38.9 - 39.5: BI+CL+CA schist with gradational upper and lower contacts.											
<<Min: 38.9 - 39.5 20% Min: Calcite>>											
39.50	44.20	RHYvl	Lapilli tuff								
39.5 - 44.2: Unit is dominated by well foliated rhyolitic lpl within a MU+QZ groundmass. Small intersection of RHYva from 40.7-41.4 m, which lacks lpl.											
<<Min: 39.5 - 44.2 2% Min: Calcite>>											
44.20	44.80	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
44.2 - 44.8: banded CL-BI-CA schist with sharp upper and lower contacts											
<<Min: 44.2 - 46.4 1% Min: Calcite>>											
44.80	46.40	RHYvl	Lapilli tuff								
44.8 - 46.4: rhyolitic lpl within a MU+QZ groundmass. Fracture sets with tourmaline growths in the fracture and on the selvages.											
46.40	47.30	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
46.4 - 47.3: CA porphyroblastic, CL+CA+MU+/-BI schist. Sharp upper and lower contacts.											
<<Min: 46.4 - 47.3 20% Min: Calcite>>											
47.30	50.00	RHYvl	Lapilli tuff								
47.3 - 50: Unit is dominated by rhyolitic lpl within a MU+QZ groundmass. Locally displays coherent flow banded texture.											
<<Min: 47.3 - 50 2% Min: Calcite>>											
50.00	63.50	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
50 - 63.5: CL+BI+CA schist. CA blebs resemble fragmental lpl. Upper and lower contact are relatively sharp.											
<<Min: 50 - 55.3 30% Min: Calcite>>											
<<Min: 55.3 - 68 5% Min: Calcite>>											
63.50	65.80	RHYc	Rhyolite coherant volcanics								
63.5 - 65.8: Good coherent siliceous banded texture with a MU+QZ groundmass. Local volcanoclastic textures (lpl).											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-267

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
65.80	67.40	RHYvl Lapilli tuff									
65.8 - 67.4: BI+CL+CA lpl within a MU+QZ groundmass											
67.40	72.00	RHYvl Lapilli tuff									
67.4 - 72: Rhyolite lpl within a MU-QZ groundmass. Local ~10 cm zone of flow banded rhyolite.											
<<Min: 68 - 72 2% Min: Calcite>>											
72.00	78.20	RHYvl Lapilli tuff									
72 - 78.2: BI+CL+CA lpl within a MU+QZ groundmass											
<<Min: 72 - 78.2 10% Min: Calcite>>											
<<Min: 72 - 132.9 2% Min: Pyrite>>											
<<Min: 72 - 132.9 2% Min: Pyrrhotite>>											
78.20	79.40	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
78.2 - 79.4: BI+CL+CA schist. Poorly developed foliation. CA is confined mainly to bands rimmed by BI.											
<<Min: 78.2 - 79.4 20% Min: Calcite>>											
79.40	85.50	RHYvl Lapilli tuff									
79.4 - 85.5: BI+CL+CA lpl within a MU+QZ groundmass											
<<Min: 79.4 - 85.3 10% Min: Calcite>>											
85.50	89.60	RHYvl Lapilli tuff									
85.5 - 89.6: rhyolite and PY (after-lithic?) lpl within a yellow-green MU-altered MU-QZ groundmass											
<<Min: 85.5 - 101.6 5% Min: Calcite>>											
<<Alt: 85.5 - 91.4 Weak (Alt) Muscovite>>											
89.60	91.80	RHYv Rhyolite volcanoclastic									
89.6 - 91.8: Yellow-green MU-altered, fine grained MU+PO+QZ schist. Hard to determine whether originally RHYva or RHYvl.											
<<Alt: 91.4 - 101.6 Moderate (Alt) Muscovite>>											
91.80	101.60	RHYvl Lapilli tuff									
91.8 - 101.6: yellow-green, cm-scale rhyolite lpl and mm-scale lithic/sulphide lpl within a well foliated MU+QZ groundmass.											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-267

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
101.60	103.20	RHYvl Lapilli tuff									
101.6 - 103.2: yellow-green, cm-scale PO+/-rhyolite blebs (lpl) within a moderately foliated MU+QZ+CL(?) groundmass											
<<Min: 101.6 - 132.9 1% Min: Calcite>>											
<<Alt: 101.6 - 110.9 Weak (Alt) Muscovite>>											
103.20	110.90	RHYvl Lapilli tuff									
103.2 - 110.9: yellow-green, cm-scale rhyolite and PO+/-PY lpl within a moderately foliated MU+QZ groundmass											
110.90	132.90	RHYv Rhyolite volcanoclastic	128.40	129.90	1.50	B00268795	-0.3	-0.005	-0.01	-0.01	0.02
110.9 - 132.9: Medium grey, heterogeneous volcanoclastic, with local lpl and fine grained (ash) texture.											
<<Alt: 126.9 - 130.1 Moderate (Alt) Muscovite>>											
<<Alt: 130.1 - 134.9 Strong (Alt) Muscovite>>											
<<Struc: 113.48 - 113.49 dominant foliation>> MU-PY cleavage											
132.90	136.40	RHY undifferentiated rhyolite	129.90	131.40	1.50	B00268796	0.9	0.024	-0.01	0.01	0.07
132.9 - 136.4: MU+CL+CI schist with local blebs of albite near the bottom of the unit. Disseminated blebs of PO+PY+CP+/-SP+/-GL.											
<<Min: 132.9 - 136.4 2% Min: Sphalerite>>											
<<Min: 132.9 - 136.4 4% Min: Pyrite>>											
<<Min: 132.9 - 136.4 5% Min: Pyrrhotite>>											
<<Min: 132.9 - 136.4 0.5% Min: Galena>>											
<<Min: 132.9 - 136.4 2% Min: Chalcopyrite>>											
<<Min: 132.9 - 161.1 0.5% Min: Calcite>>											
<<Alt: 132.9 - 137 Moderate (Alt) Chlorite>>											
<<Alt: 132.9 - 137 Strong (Alt) Cordierite>>											
<<Alt: 134.9 - 136 Strong (Alt) Albite>>											
136.40	137.00	OJ Heavily disseminated sulphides in proximal altered rock	131.40	132.90	1.50	B00268797	1.4	0.021	-0.01	0.01	0.02
132.9 - 136.4: MU+CL+CI schist with local blebs of albite near the bottom of the unit. Disseminated blebs of PO+PY+CP+/-SP+/-GL.											
<<Min: 132.9 - 136.4 2% Min: Sphalerite>>											
<<Min: 132.9 - 136.4 4% Min: Pyrite>>											
<<Min: 132.9 - 136.4 5% Min: Pyrrhotite>>											
<<Min: 132.9 - 136.4 0.5% Min: Galena>>											
<<Min: 132.9 - 136.4 2% Min: Chalcopyrite>>											
<<Min: 132.9 - 161.1 0.5% Min: Calcite>>											
<<Alt: 132.9 - 137 Moderate (Alt) Chlorite>>											
<<Alt: 132.9 - 137 Strong (Alt) Cordierite>>											
<<Alt: 134.9 - 136 Strong (Alt) Albite>>											
136.40	137.00	OJ Heavily disseminated sulphides in proximal altered rock	133.80	134.70	0.90	B00268799	20.4	0.039	0.26	0.36	0.69
136.4 - 137: Semi-massive PO+PY+CP with a CL+CI groundmass.											
<<Min: 136.4 - 137 40% Min: Pyrrhotite>>											
<<Struc: 136.63 - 136.64 dominant foliation>> PO cleavage											
			134.70	135.60	0.90	B00268801	3	0.015	-0.01	0.03	0.31
			135.60	136.40	0.80	B00268802	4.1	-0.005	0.05	0.04	0.21
			136.40	137.00	0.60	B00268803	26.9	0.125	0.36	0.38	1.83

CG

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-267

From (m)	To (m)	Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
145.10	145.70	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	145.10	145.70	0.60	B00268816	76.4	0.745	0.34	1	5.88
145.1 - 145.7: Unit begins with intensely CL altered zone with vcg CP (145.1-145.4 m). Transitions into massive PY+SP+GL to 145.7 m.												
<<Struc: 145.45 - 145.46 dominant foliation>> PY band												
145.70	148.70	OA Magnetite bearing sulphides	MCG	145.70	146.70	1.00	B00268817	108	1.12	1.72	0.48	2.32
145.7 - 148.7: Massive PY+PO+MG+/-CP+/-SP+/-GL with cg MG buckshot texture												
<<Min: 145.7 - 150 10% Min: Pyrrhotite>>												
<<Struc: 146.6 - 146.61 dominant foliation>> MG band												
<<Struc: 147.73 - 147.74 dominant foliation>> PY-MG band												
148.70	149.20	OH Fine grained, megascopically homogeneous pyrite rock	MG	148.70	149.20	0.50	B00268821	125	1.62	1.58	0.9	2.77
148.7 - 149.2: Massive PY												
149.20	150.00	OA Magnetite bearing sulphides	MCG	149.20	150.00	0.80	B00268822	149	0.597	1.2	1.47	7.44
149.2 - 150: Massive PY+PO+MG+/-CP+/-SP+/-GL with cg MG buckshot texture												
<<Struc: 149.98 - 149.99 dominant foliation>> PY-MG band												
150.00	150.70	OH Fine grained, megascopically homogeneous pyrite rock	MG	150.00	150.70	0.70	B00268823	141	2.07	1.22	1.64	4.79
150 - 150.7: Massive PY												
150.70	151.50	OA Magnetite bearing sulphides	MCG	150.70	151.50	0.80	B00268824	67.7	0.847	0.97	0.37	4.11
150.7 - 151.5: Massive PY+MG+/-CP+/-SP+/-GL with cg MG buckshot texture												
151.50	152.00	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	151.50	152.00	0.50	B00268825	160	1.39	0.25	1.13	8.9
151.5 - 152: Banded PY+SP+GL												
152.00	152.80	OA Magnetite bearing sulphides	MCG	152.00	152.80	0.80	B00268826	59.8	0.652	0.4	0.72	5.3
152 - 152.8: Massive PY+MG+/-CP+/-SP+/-GL with cg MG buckshot texture												



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-267

From (m) To (m) Rocktype & Description

152.80 160.60 OB **Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides**

152.8 - 160.6: Banded PY+SP+GL

<<Alt: 160.5 - 161.1 Strong (Alt) Chlorite>>

<<Alt: 160.5 - 161.1 Strong (Alt) Cordierite>>

<<Struc: 159.4 - 159.41 dominant foliation>> SP-GL band

<<Struc: 160.1 - 160.11 dominant foliation>> SP-PY band

160.60 161.10 OJ **Heavily disseminated sulphides in proximal altered rock**

160.6 - 161.1: CL-CI altered schist with net textured to stringers of PO+CP

161.10 165.30 RHYvl **Lapilli tuff**

161.1 - 165.3: Buff grey, rhyolite with some lpl apparent. Hard to distinguish mineralogy and original texture.

<<Min: 161.1 - 165.3 1% Min: Pyrite>>

<<Min: 161.1 - 165.3 1% Min: Pyrrhotite>>

<<Min: 161.1 - 165.3 2% Min: Calcite>>

<<Alt: 161.1 - 165.3 Weak (Alt) Muscovite>>

165.30 218.00 MAFi **Mafic Intrusions (primarily footwall mafic intrusion)**

165.3 - 218: CL+BI+CA schist with varying quantities of BI. Locally MU+SI altered.

<<Min: 165.3 - 218 0.5% Min: Pyrrhotite>>

<<Min: 165.3 - 218 15% Min: Calcite>>

<<Alt: 165.3 - 218 Strong (Alt) Chlorite>>

<<Alt: 165.3 - 218 Strong (Alt) Biotite>>

<<Alt: 187.3 - 189.4 Moderate (Alt) Silicification>>

<<Alt: 187.3 - 189.4 Moderate (Alt) Muscovite>>

<<Struc: 167.95 - 167.96 dominant foliation>> CA band

MG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
152.80	153.80	1.00	B00268827	160	1.36	0.25	2.74	9.62

153.80	154.80	1.00	B00268828	96.4	0.873	0.17	1.31	7.98
154.80	155.80	1.00	B00268829	105	1.1	0.3	0.7	5.17
155.80	156.80	1.00	B00268832	144	1.02	0.16	2.33	6.01
156.80	157.80	1.00	B00268833	147	1.02	0.19	2.89	6.64
157.80	158.80	1.00	B00268834	330	3.87	0.63	4.1	11.3
158.80	159.80	1.00	B00268835	148	0.65	0.15	3.36	10.9
159.80	160.60	0.80	B00268836	160	0.584	0.51	3.16	16.1
160.60	161.10	0.50	B00268837	115	0.563	2.47	1.19	11

MCG

161.10	162.60	1.50	B00268838	4.3	0.034	-0.01	0.09	0.24
--------	--------	------	-----------	-----	-------	-------	------	------

162.60	164.10	1.50	B00268839	3.1	0.102	-0.01	0.02	0.04
164.10	165.30	1.20	B00268841	1.5	-0.005	-0.01	0.01	0.02



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-267

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 168.9 - 168.91	dominant foliation>>	CL band									
<<Struc: 170.1 - 170.11	dominant foliation>>	CL band									
<<Struc: 171.05 - 171.06	dominant foliation>>	CA band									
<<Struc: 172.3 - 172.31	dominant foliation>>	CL band									
<<Struc: 173.64 - 173.65	dominant foliation>>	BI band									
<<Struc: 174.75 - 174.76	dominant foliation>>	BI foliation									
<<Struc: 175.9 - 175.91	dominant foliation>>	CA band									
<<Struc: 176.98 - 176.99	dominant foliation>>	continuous BI foliation									
<<Struc: 178.9 - 178.91	dominant foliation>>	continuous BI foliation									
<<Struc: 180.3 - 180.31	dominant foliation>>	continuous BI foliation									
<<Struc: 182.8 - 182.81	dominant foliation>>	continuous BI foliation									
<<Struc: 185.34 - 185.35	dominant foliation>>	continuous BI foliation									

End of Hole @ 218

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-268

Prospect:	GP4F	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Gilles Dessureau
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	22-Sep-15
UTM Easting	418753.272	Core Size:	HQ	Azimuth:	180	Date Logging Complete:	26-Sep-15
UTM Northing:	6814106.691	Casing Pulled?:	Yes	Dip:	-70	Drill Company:	Geotech
UTM Elev. (m):	1493.377	Casing Depth (m):	3	Length (m):	355	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	21-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	26-Sep-15
Local Elev. (m):						Purpose:	Exploration
Comments:						Parent Hole:	

This hole was drilled to test a gravity high associated with an EM high, northwest of the GP4F deposit. This hole intersected rhyolite lapilli tuffs, ash tuffs, and crystal tuffs, and pelitic metasediments and carbonaceous sediments. This hole cuts a higher ratio of pelitic metasediments to felsic volcanic compared to the holes drilled in the immediate vicinity of the GP4F deposit. This hole intersected a quartz-feldspar phyric rhyolite crystal tuff (281.45-291.55m) which may be the lateral equivalent of the quartz-feldspar crystal tuff encountered around the GP4F horizon. This unit was relatively un-altered and showed no mineralization. Below this quartz-feldspar phyric unit this hole intersected carbonaceous and siliceous mudstones, which mark the transition from a volcanoclastic/sedimentary sequence to a dominantly sedimentary sequence. No significant mineralization or alteration was intersected in this hole. No samples were taken.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-70	180	0	180	APS	Gilles Dessureau	21-Sep-15		<input checked="" type="checkbox"/>	
12	-69.5	298	24.5	322.5	ReflexEVS	Geotech	21-Sep-15	5959	<input type="checkbox"/>	Bad survey, values not accepted
36	-69.4	159.4	24.5	183.9	ReflexEVS	Geotech	22-Sep-15	5797	<input checked="" type="checkbox"/>	
61	-68.7	160	24.5	184.5	ReflexEVS	Geotech	22-Sep-15	5796	<input checked="" type="checkbox"/>	
86	-68.6	164	24.5	188.5	ReflexEVS	Geotech	22-Sep-15	5797	<input checked="" type="checkbox"/>	
111	-69	163.8	24.5	188.3	ReflexEVS	Geotech	22-Sep-15	5796	<input checked="" type="checkbox"/>	
132	-69	161.4	24.5	185.9	ReflexEVS	Geotech	23-Sep-15	5783	<input checked="" type="checkbox"/>	
157	0	4.7	24.5	29.2	ReflexEVS	Geotech	23-Sep-15	5810	<input type="checkbox"/>	Bad survey, values not accepted
192	-68.5	168	24.5	192.5	ReflexEVS	Geotech	23-Sep-15	5801	<input checked="" type="checkbox"/>	
219	-67.8	168.8	24.5	193.3	ReflexEVS	Geotech	24-Sep-15	5783	<input checked="" type="checkbox"/>	
249	-67.6	168.5	24.5	193	ReflexEVS	Geotech	24-Sep-15	5818	<input checked="" type="checkbox"/>	
273	-67.6	172.3	24.5	196.8	ReflexEVS	Geotech	24-Sep-15	5793	<input checked="" type="checkbox"/>	
303	-67.5	165.2	24.5	189.7	ReflexEVS	Geotech	25-Sep-15	5788	<input checked="" type="checkbox"/>	
330	-67	174.3	24.5	198.8	ReflexEVS	Geotech	25-Sep-15	5790	<input checked="" type="checkbox"/>	
354	-66.2	170.6	24.5	195.1	ReflexEVS	Geotech	25-Sep-15	5782	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-268

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0 - 1: Overburden.											
1.00	8.90	RHYvl Lapilli tuff									
grey FMG 1 - 8.9: Grey, to brown (where oxidized), foliated, fine to medium grained, quartz-muscovite schist/rhyolite lapilli-ash tuff. Matrix supported, ash tuff with 20-30% small (1-2cm) siliceous lapilli. Several graded contacts with fining up hole. Abundant 1-2mm biotite crystals in the finer sequences. Weak to moderate oxidation along fractures.											
8.90	9.85	SED undifferentiated Sediment									
dark grey FG 8.9 - 9.85: Dark grey to brownish grey, foliated, fine grained, biotite-quartz schist/metapelite.											
9.85	32.00	RHYvl Lapilli tuff									
grey FMG 9.85 - 32: Grey, to brown (where oxidized), foliated, fine to medium grained, quartz-muscovite schist/rhyolite lapilli-ash tuff. Matrix supported, ash tuff with 20-30% small (1-2cm) siliceous lapilli. Several graded contacts with fining-up up hole. Abundant 1-2mm biotite crystals in the finer sequences. Weak to moderate oxidation along fractures with vuggy textures associated with the strongest oxidation.											
<<Struc: 22.6 - 23.6 Weak-Moderate (Alt) Fault>> Broken core.											
32.00	41.90	RHYvl Lapilli tuff									
light grey FMG 32 - 41.9: Grey to light grey, and brown (where oxidized), foliated, fine to medium grained, quartz-muscovite schist/rhyolite, feldspar crystal, lapilli tuff. Could be feldspar porphyry; with ghosts of possible feldspar crystals although some still look like siliceous lapilli. Much more massive and homogenous unit. Oxidation continues along fractures and up to 10-20 cm from fractures.											
<<Vein: 39.6 - 39.75 90% Quartz-Carbonate 80 deg. >> quartz-carbonate vein.											
<<Struc: 33 - 33.5 Weak-Moderate (Alt) Fault>> Broken core.											
41.90	46.70	RHYva Coarse grained to ash tuff									
light grey FG 41.9 - 46.7: Light grey, foliated, fine grained, quartz-muscovite schist/rhyolite ash tuff. Occasional small (10-15cm) bands with up to 10% lapilli. Cut by occasional small quartz veins, and weakly oxidized on fractures.											
46.70	50.00	RHYvl Lapilli tuff									
light grey FMG 46.7 - 50: Light grey, well foliated, fine to medium grained, quartz-muscovite schist/rhyolite lapilli tuff. This sequence fines down hole from clast supported, lapilli dominated tuff to ash dominant tuff.											
50.00	57.55	RHYva Coarse grained to ash tuff									
light grey FG 50 - 57.55: Light grey, foliated, fine grained, quartz-muscovite-(amphibole) schist/rhyolite ash tuff. Abundant (locally up to 10%) fine (1mm) biotite porphyroblasts(?).											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-268

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
57.55	62.80	SED undifferentiated Sediment brown FG									
57.55 - 62.8: Brown to grey, well foliated, fine grained, biotite-quartz schist/metapelite. Cut by small quartz-carbonate veinlets.											
62.80	67.30	RHYva Coarse grained to ash tuff light grey FMG									
62.8 - 67.3: Light grey, foliated, fine to locally medium grained, quartz-muscovite schist/rhyolite ash tuff interbedded with small zone (20-50cm) of rhyolite lapilli tuff with gradational contacts. Abundant small (<1mm) biotite porphyroblasts.											
67.30	70.70	RHYvx Quartz and/or feldspar crystal tuff light grey FMG									
67.3 - 70.7: Light grey, well foliated, fine and medium grained, quartz-muscovite schist/rhyolite crystal-lapilli tuff. A fine grained matrix supported tuff with large (1-2cm) elongated altered feldspar crystals (or lapilli or both). Looks like porphyry although it appears to grade outward to a lapilli tuff and an ash tuff. No sharp contacts. Contains abundant (1mm) biotite porphyroblasts and abundant (<1mm) white porphyroblasts (leucoxene?).											
70.70	73.30	SED undifferentiated Sediment grey-brown FG									
70.7 - 73.3: Grey-brown, foliated, fine grained, biotite-quartz schist/metapelite. Gradational upper and lower contacts. Abundant small (1mm) white, hard, sub angular to sub rounded, porphyroblasts (leucoxene?) Cut by small quartz-carbonate veinlets.											
73.30	76.75	RHYvi Lapilli tuff grey-brown FMG									
73.3 - 76.75: Light grey, foliated, fine to medium grained, quartz-muscovite schist/rhyolite ash tuff interbedded with rhyolite lapilli tuff.											
76.75	77.55	SED undifferentiated Sediment grey-brown FG									
76.75 - 77.55: Grey-brown, foliated, fine grained, biotite-quartz schist/metapelite. Gradational contacts. Cut by small quartz-carbonate veinlets.											
77.55	85.95	RHYvx Quartz and/or feldspar crystal tuff light grey FMG									
77.55 - 85.95: Light grey, foliated, fine to medium to coarse grained, quartz-muscovite schist/rhyolite crystal-lapilli tuff. Excellent preservation of primary textures within this unit. Very obvious feldspar crystals (0.5cm) and large (1-2cm) lithic lapilli with visible feldspar crystals (<1mm) with in the lithic fragment. Gradational variation within this unit with variable lapilli/ash/crystal content. Gradational upper and lower contacts. Locally abundant 1mm biotite crystals (could be phenocrysts or could be porphyroblasts).											
85.95	89.60	SED undifferentiated Sediment grey-brown FG									
85.95 - 89.6: Dark brown and grey, foliated, fine grained, quartz-biotite schist/metapelite interbedded with quartz-muscovite schist/rhyolite ash tuff. Both gradational contacts and sharp.											
<<Min: 89 - 90.5 1% Min: Pyrite>> narrow bands (up to 5cm) with up to 5% disseminated pyrite and pyrrhotite.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-268

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
89.60	94.30	RHYvx Quartz and/or feldspar crystal light grey tuff FMG									
89.6 - 94.3: Grey, foliated, fine to medium to coarse grained, quartz muscovite schist/rhyolite lapilli tuff. Abundant, densely packed, large (1-2cm) lithic lapilli in a fine ash matrix.											
94.30	96.80	SED undifferentiated Sediment grey-brown FG									
94.3 - 96.8: Brown and grey, foliated, fine grained biotite-quartz schist/metapelite interbedded with quartz muscovite schist/rhyolite ash-lapilli tuff. Sharp contacts.											
96.80	103.90	RHYva Coarse grained to ash tuff light grey FMG									
96.8 - 103.9: Light grey, foliated (to massive), fine to medium grained, quartz-muscovite tuff/ rhyolite ash tuff. Dominantly ash tuff with minor lapilli component locally up to 10% lapilli over 10-20cm. Very small crystals visible within some of the lithic lapilli fragments.											
103.90	105.10	SED undifferentiated Sediment brown FG									
103.9 - 105.1: Brown, weakly foliated, fine grained, biotite-quartz schist/metapelite. Small zones with graded beds (cross bedding??), otherwise massive, equigranular quartz-biotite schist. Cut by occasional small quartz-carbonate veins.											
105.10	108.50	RHYva Coarse grained to ash tuff light grey FMG									
105.1 - 108.5: Light grey, foliated, fine to medium grained, quartz-muscovite schist/rhyolite ash tuff. Dominantly ash tuff with minor lapilli component locally up to 10% lapilli over 10-20cm. Abundant 1mm biotite crystals.											
108.50	111.10	SED undifferentiated Sediment brown FG									
108.5 - 111.1: Brown, weakly foliated, fine grained, biotite-quartz schist/metapelite. Sharp lower contact, gradational upper contact. Cut by occasional small quartz-carbonate veins.											
111.10	123.00	RHYva Coarse grained to ash tuff light grey FMG									
111.1 - 123: Light grey, foliated, fine to medium grained, quartz-muscovite schist/rhyolite ash tuff. Dominantly ash tuff with minor lapilli component locally up to 10% lapilli over 10-20cm. Abundant 1mm biotite crystals.											
<<Vein: 115.5 - 119 5% Quartz 0 deg. >> 1 cm wide quartz-pyrite-tourmaline vein parallel to core axis.											
123.00	127.10	RHYi Aphanitic Rhyolite (intrusion) beige VFG									
123 - 127.1: Light grey to beige, massive to brecciated, very fine grained, rhyolite dyke (flow?). Large (123.0m 124.3m) quartz vein at upper contact containing pyrite and pyrrhotite. Lower contact is brecciated with quartz veining and several phases of intrusion (finer grained and coarse grained).											
<<Min: 123 - 124 1% Min: Pyrrhotite>> pyrrhotite veinlets.											
<<Min: 123 - 124.3 1% Min: Pyrite>> pyrite veinlets.											
<<Vein: 123 - 124.3 80% Quartz 80 deg. >> large quartz-pyrite-pyrrhotite vein.											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-268

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
127.10	127.65	RHYva Coarse grained to ash tuff grey FMG									
127.1 - 127.65: Light grey, foliated, fine to medium grained, quartz-muscovite schist/rhyolite ash tuff. Dominantly ash tuff with minor lapilli component locally up to 10% lapilli over 10-20cm. Gradational lower contact.											
127.65	128.60	SED undifferentiated Sediment brown FG									
127.65 - 128.6: Brown, weakly foliated, fine grained, biotite-quartz schist/metapelite. Gradational contacts. Cut by occasional small quartz-carbonate (+/-pyrite) veins.											
128.60	130.40	RHYva Coarse grained to ash tuff light grey FG									
128.6 - 130.4: Light grey, foliated, fine to medium grained, quartz-muscovite schist/rhyolite ash tuff. Abundant small biotite xls. Gradational upper contact.											
<<Struc: 130 - 130.1 Weak-Moderate (Alt) dominant foliation>>											
130.40	135.50	RHYvl Lapilli tuff grey FMG									
130.4 - 135.5: Grey, foliated, fine to medium grained, quartz-muscovite-biotite schist/rhyolite lapilli tuff interbedded with narrow (10-20cm) bands of pelitic sediments (biotite schist).											
135.50	138.10	SED undifferentiated Sediment grey-brown FG									
135.5 - 138.1: Brown, foliated, fine grained, biotite schist/pelitic metasediment. Sharp upper contact, gradational lower contact. Cut by occasional quartz carbonate veins. Relatively homogeneous otherwise.											
138.10	140.70	RHYva Coarse grained to ash tuff grey FMG									
138.1 - 140.7: Grey, weakly foliated to massive, fine grained, quartz-muscovite-biotite schist/rhyolite ash tuff. The bottom 40cm of this unit is a biotite-rich lapilli tuff. The tuffaceous unit is weakly silicified with weak, patchy sericite alteration.											
<<Alt: 138.1 - 140.7 Weak (Alt) Silicification>> Weak quartz-sericite alteration.											
<<Alt: 138.1 - 140.7 Weak (Alt) Muscovite>> Weak quartz-sericite alteration.											
<<Struc: 140 - 140.1 Weak-Moderate (Alt) dominant foliation>>											
140.70	144.40	SED undifferentiated Sediment grey-brown FG									
140.7 - 144.4: Grey-brown, foliated, fine grained, biotite and biotite-quartz schist/metapelite. Cut by occasional quartz carbonate veins.											
<<Vein: 140.7 - 141 95% Quartz 70 deg. >> quartz vein											
144.40	145.80	RHYva Coarse grained to ash tuff									
144.4 - 145.8: Grey, weakly foliated to massive, fine grained to medium grained, quartz-muscovite-biotite schist/rhyolite ash tuff with up to 5% lapilli locally. Abundant fine grained biotite in this unit (up to 25%).											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-268

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
145.80	148.05	SED undifferentiated Sediment									
145.8 - 148.05: Grey-brown, foliated, fine grained, biotite schist/metapelite. Cut by occasional quartz carbonate veins.											
148.05	149.00	RHYva Coarse grained to ash tuff									
148.05 - 149: Grey, moderately foliated, fine grained, quartz-muscovite-biotite schist/rhyolite ash tuff. This unit could be an epiclastic sediment with small quartz 'grains' in a quartz-biotite matrix.											
149.00	150.00	SED undifferentiated Sediment									
149 - 150: Grey to brown and weakly green, foliated, fine grained, quartz-biotite-chlorite schist/pelitic metasediment with minor mafic component. Cut by occasional quartz-carbonate veins.											
150.00	157.05	RHYva Coarse grained to ash tuff									
150 - 157.05: Grey, weakly foliated to massive, fine grained, quartz-muscovite-biotite schist/rhyolite ash tuff with abundant biotite (locally up to 20%). The biotite content could suggest an epiclastic sediment in places with a high component of pelitic clays in the original rock.											
<<Vein: 153.7 - 153.8 95% Quartz 80 deg. >> quartz vein											
<<Struc: 150 - 150.1 Weak-Moderate (Alt) dominant foliation>>											
157.05	159.60	SED undifferentiated Sediment									
157.05 - 159.6: Grey to brown, foliated to massive, fine grained, biotite and quartz biotite schist/pelitic metasediment interbedded with possible epiclastic sediments.											
159.60	176.40	RHYva Coarse grained to ash tuff									
159.6 - 176.4: Light to medium grey, foliated, relatively homogenous, fine to very fine grained, quartz-muscovite, schist/rhyolite ash tuff. Up to 10% small (<0.5cm) lithic lapilli. Cut by occasional quartz veins, and cut by occasional, tightly folded, convoluted, carbonate veins. 65-65.5m broken core - weak fault zone.											
<<Vein: 160.3 - 160.4 95% Quartz 80 deg. >> quartz vein											
<<Vein: 164.5 - 165.1 20% Quartz-Carbonate 80 deg. >> quartz carbonate veins											
<<Struc: 160 - 160.1 Weak-Moderate (Alt) dominant foliation>>											
<<Struc: 170 - 170.1 Moderate (Alt) dominant foliation>>											
176.40	177.00	SED undifferentiated Sediment									
176.4 - 177: Brown, foliated, fine grained, biotite schist/metapelite, with rhyolite ash tuff above and rhyolite lapilli tuff below.											
<<Vein: 176.4 - 176.6 60% Quartz 60 deg. >> quartz vein											
177.00	177.90	RHYvi Lapilli tuff									
177 - 177.9: Grey, foliated, fine to medium grained, quartz-muscovite schist/rhyolite lapilli tuff.											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-268

From (m)		To (m)		Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Vein: 177.7 - 177.8 90% Quartz 70 deg. >> quartz vein														
177.90	178.40	SED	undifferentiated Sediment	brown	FG									
177.9 - 178.4: Brown, foliated, fine grained, biotite schist/metapelite.														
178.40	181.30	RHYvl	Lapilli tuff	grey	FMG									
178.4 - 181.3: Grey, foliated, fine to medium grained, quartz-muscovite schist/rhyolite lapilli tuff.														
<<Struc: 180 - 180.1 Moderate (Alt) dominant foliation>>														
181.30	183.15	SED	undifferentiated Sediment	brown	FG									
181.3 - 183.15: Brown, foliated, fine grained, biotite schist/metapelite. Cut by occasional, cms scale quartz veins.														
<<Vein: 182.2 - 182.4 80% Quartz 80 deg. >> quartz vein														
183.15	188.00	RHYva	Coarse grained to ash tuff	grey	FG									
183.15 - 188: Light to medium grey, foliated, fine to very fine grained, quartz-muscovite, schist/rhyolite ash tuff. Up to 10% small (<0.5cm) lithic lapilli. Interbedded with narrow (10-20cm) biotite rich bands of metapelite. Cut by occasional quartz veins.														
188.00	190.60	RHYva	Coarse grained to ash tuff	light grey	FG									
188 - 190.6: Light grey, foliated, moderately altered, faulted, fine to medium grained, quartz-muscovite schist/rhyolite lapilli tuff and fault zone. Contains partially healed breccia, broken rock and weak gouge development. Alteration is moderate, pervasive sericite alteration overprint associated with the fault zone.														
<<Struc: 188 - 190.6 Moderate (Alt) Fault>> moderately sericite altered fault zone with minor fault gouge.														
190.60	193.90	SED	undifferentiated Sediment	grey-brown	FG									
190.6 - 193.9: Light grey to brown, foliated, fine grained, quartz-muscovite schist/rhyolite ash tuff grading up hole to a biotite-quartz schist to a biotite schist/metapelite. Excellent example of an ash tuff grading up hole to a pelitic sediment.														
<<Struc: 192 - 192.1 Moderate (Alt) dominant foliation>>														
193.90	199.60	RHYva	Coarse grained to ash tuff	grey	FG									
193.9 - 199.6: Light to medium grey, foliated, fine to very fine grained, quartz-muscovite, schist/rhyolite ash tuff. Up to 10% small (<0.5cm) lithic lapilli. Cut by occasional quartz veins. Narrow bands (up to 20cm) of biotite-rich metapelite.														
199.60	201.10	SED	undifferentiated Sediment	grey-brown	FG									
199.6 - 201.1: Brown, foliated, fine grained, biotite schist. Upper contact is gradational with ash tuff.														
<<Struc: 200 - 200.1 Moderate (Alt) dominant foliation>>														

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-268

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
201.10	207.30	RHYvi Lapilli tuff	grey	FMG							
201.1 - 207.3: Grey, foliated, fine to medium grained, quartz-muscovite schist/rhyolite lapilli tuff. Abundant <1cm siliceous lithic lapilli in a quartz-muscovite matrix. Some 'fragments' could be ghosts of feldspar crystals and are sub rectangular. Abundant small (1-2mm) white, sub rounded to sub angular (subhedral diamond shaped) porphyroblasts (cordierite?) exist near the lower contact (within 50cm of contact).											
207.30	209.85	SED undifferentiated Sediment	grey-brown	FMG							
207.3 - 209.85: Brown to grey, foliated, fine grained, biotite schist/metapelite interbedded with a fine to medium grained quartz-muscovite schist/rhyolite lapilli tuff. Excellent examples of gradational contacts between a rhyolite lapilli tuff (down hole) grading up to an ash tuff and finally a biotite-rich metapelite.											
209.85	213.55	RHYi Aphanitic Rhyolite (intrusion)	light grey	VFG							
209.85 - 213.55: Light grey, weakly foliated to massive, very fine grained to aphanitic, siliceous, rhyolite intrusion (rhyolite flow? Or silicified ash tuff), gradational contacts seem to suggest silicified ash tuff. Possible gradational contact up hole into lapilli tuff. Rare 2-5mm ghosts of feldspar phenocrysts.											
<<Alt: 209.85 - 213.55 Weak-Moderate (Alt) Silicification>> pervasive silicification.											
<<Struc: 210 - 210.1 Moderate (Alt) dominant foliation>>											
213.55	214.70	SED undifferentiated Sediment	brown	FG							
213.55 - 214.7: Brown, foliated, fine grained, biotite-quartz schist/metapelite. Gradational contacts with the rhyolite below.											
214.70	224.30	RHYi Aphanitic Rhyolite (intrusion)	light grey	VFG							
214.7 - 224.3: Light grey, massive, fine grained to aphanitic, rhyolite intrusion (flow? Silicified ash?). Gradational contacts.											
<<Alt: 214.7 - 222.999 Weak-Moderate (Alt) Silicification>> pervasive silicification											
224.30	226.15	RHYvi Lapilli tuff	grey	FMG							
224.3 - 226.15: Grey, foliated, fine to medium grained, quartz-muscovite schist/rhyolite lapilli tuff. Matrix supported, 1-2cm siliceous lithic lapilli in a fine quartz muscovite matrix with 2-5% biotite porphyroblasts. Gradational contact with the upper aphyric rhyolite.											
226.15	227.60	SED undifferentiated Sediment	brown	FG							
226.15 - 227.6: Brown, foliated, fine grained biotite schist/metapelite. Cut by occasional quartz-carbonate vein (up to 5cm).											
227.60	231.80	RHYvi Lapilli tuff	grey	FMG							
227.6 - 231.8: Grey, foliated, fine to medium grained, quartz-muscovite schist/rhyolite lapilli tuff. Matrix supported, 1-2cm siliceous lithic lapilli in a fine quartz muscovite matrix with 1-2% biotite porphyroblasts.											
231.80	232.90	SED undifferentiated Sediment	brown	FG							
231.8 - 232.9: Brown, foliated, fine grained biotite schist/metapelite. Cut by occasional quartz-carbonate veins (up to 5cm).											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-268

From (m)	To (m)	Rocktype & Description			From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Vein: 231.8 - 232.5 80% Quartz 80 deg. >> quartz veins.													
232.90	239.60	RHYvl	Lapilli tuff	light grey	FMG								
232.9 - 239.6: Grey, foliated, fine to medium grained, quartz-muscovite schist/rhyolite lapilli tuff. Matrix supported, 1-2cm siliceous lithic lapilli in a fine quartz muscovite matrix with 1-2% biotite porphyroblasts. 239.15-239.6 quartz vein with pyrite and pyrrhotite.													
<<Vein: 239.15 - 239.6 90% Quartz 80 deg. >> quartz-pyrite-pyrrhotite.													
239.60	245.65	SED	undifferentiated Sediment	brown	FG								
239.6 - 245.65: Brown, foliated, fine grained biotite schist/metapelite. Cut by occasional quartz-carbonate veins (up to 5cm).													
245.65	254.60	SED	undifferentiated Sediment	grey-brown	FG								
245.65 - 254.6: Grey and brown, foliated, fine grained, biotite schist/metapelite interbedded with quartz-muscovite schist/rhyolite ash tuff. Several ~1m bands of metapelite interbedded with several ~1m bands of rhyolite ash tuff with up to 10% biotite.													
254.60	259.50	RHYvl	Lapilli tuff	light grey	FMG								
254.6 - 259.5: Light grey, foliated, fine to medium grained, quartz-muscovite schist/rhyolite lapilli tuff grading into rhyolite ash tuff. Abundant 1-2cm siliceous lithic lapilli in a fine grained quartz-muscovite ash matrix.													
259.50	262.45	RHYvl	Lapilli tuff	light grey	FG								
259.5 - 262.45: Dominantly quartz vein in a light grey, altered rhyolite lapilli tuff.													
<<Vein: 259.5 - 262.45 90% Quartz 20 deg. >> quartz vein													
262.45	263.75	RHYvl	Lapilli tuff	light grey	FMG								
262.45 - 263.75: Light grey, foliated, fine to medium grained, quartz-muscovite schist/rhyolite lapilli tuff.													
263.75	270.00	RHYvl	Lapilli tuff	grey-brown	FMG								
263.75 - 270: Medium grey, foliated, banded, fine to medium grained, quartz-muscovite schist and quartz biotite schist. Banded rhyolite lapilli tuff and epiclastic sediments.													
270.00	272.60	SED	undifferentiated Sediment	brown	FG								
270 - 272.6: Brown, foliated, fine grained, biotite schist/metapelite. Gradational lower contact. Cut by occasional quartz-carbonate veinlets.													
272.60	281.45	RHYvl	Lapilli tuff	grey	FMG								
272.6 - 281.45: Grey, foliated, fine to medium grained, quartz-muscovite schist/rhyolite lapilli tuff interbedded with small zones of rhyolite ash tuff and small zones of biotite-rich metapelite. The base of this unit is a densely packed coarse rhyolite lapilli tuff that grades up to an ash tuff over 1m.													

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-268

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
281.45	291.55	RHYvx Quartz and/or feldspar crystal tuff grey FMG									
281.45 - 291.55: Grey, foliated, fine to medium grained, quartz-muscovite schist/rhyolite crystal-lapilli tuff. Rare 2-4mm bluish quartz crystals, with abundant 1-5mm sub rectangular feldspar crystals in a fine quartz-muscovite-biotite matrix. Cut by occasional quartz veins. Fine grained disseminated pyrite and pyrrhotite in bands up to 5cm.											
291.55	295.15	MDS Sc Carbonaceous dominant mudstone dark grey VFG									
291.55 - 295.15: Dark grey, finely laminated, very fine grained, carbonaceous mudstone. Very fine bands (0.1-1cm) of carbonaceous material and more siliceous material.											
295.15	295.50	RHYva Coarse grained to ash tuff cream VFG									
295.15 - 295.5: Light grey to off white, finely laminated, very fine grained, aphanitic rhyolite ash tuff. Gradational upper contact with carbonaceous sediment and sharp lower contact.											
295.50	303.50	RHYvl Lapilli tuff grey FMG									
295.5 - 303.5: Grey, foliated, fine to medium grained, quartz-muscovite-biotite schist/epiclastic or sedimentary rock (wacke?). May still contain some lapilli but more 'primary' biotite than previous lapilli tuffs. Grades downhole to a lapilli tuff.											
303.50	310.50	RHYvl Lapilli tuff beige FG									
303.5 - 310.5: Light grey to beige, weakly laminated, moderately to strongly altered, quartz-muscovite schist/alternated rhyolite lapilli tuff and/or ash tuff. Alteration is moderate to strong, pervasive sericite-quartz-pyrite alteration, making the rock beige in color. Cut by several small (mm scale), concordant and discordant, pyrite veinlets and small (1-2cm) quartz veins. Small (2-5cm) fracture zones with clay alteration. Alteration starts as patchy zones with less altered patches of rhyolite lapilli tuff similar to the above unit.											
<<Alt: 303.5 - 310.5 Moderate-Strong (Alt) Muscovite>> pervasive sericite-muscovite-pyrite alteration.											
310.50	313.10	MDS Sc Carbonaceous dominant mudstone dark grey VFG									
310.5 - 313.1: Dark grey, finely laminated, folded, very fine grained, carbonaceous mudstone. 1-2% fine to medium grained disseminated pyrite and 1-2% narrow pyrite veinlets. Cut by occasional narrow quartz veins.											
<<Min: 310.5 - 313.1 2% Min: Pyrite>> disseminated pyrite											
313.10	314.45	RHYva Coarse grained to ash tuff light grey VFG									
313.1 - 314.45: Light grey to beige, foliated, very fine grained, siliceous siltstone/rhyolite very fine ash tuff. Gradational upper contact, sharp lower contact. This unit fines upwards from coarse ash to very fine ash at the top. Cut by occasional narrow quartz veinlet. Weak pervasive silicification.											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-268

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
314.45	317.10	MDS	Carbonaceous dominant mudstone	grey	VFG						
<p>314.45 - 317.1: Light to medium grey, finely laminated, very fine grained, siliceous, carbonaceous mudstone. Silicification increases down hole towards abundant quartz veining.</p> <p><<Alt: 314.45 - 317.1 Moderate (Alt) Silicification>> pervasive silicification</p>											
317.10	318.20	SED	undifferentiated Sediment	green-brown	FG						
<p>317.1 - 318.2: Light brown and green, foliated, altered, biotite-chlorite-carbonate schist. Dominantly biotite with narrow zones of chlorite, that could represent a mafic component in the pelite. Cut by abundant quartz veins (up to 10cm).</p> <p><<Alt: 317.1 - 318.2 Moderate-Strong (Alt) Silicification>> patchy silicification.</p> <p><<Vein: 317.1 - 318.2 50% Quartz-Carbonate 80 deg. >> quartz-carbonate veins</p>											
318.20	321.70	MDS	Carbonaceous dominant mudstone	light grey	VFG						
<p>318.2 - 321.7: Light grey, finely laminated, very fine grained, siliceous, carbonaceous mudstone. Silicification increases down hole.</p> <p><<Alt: 318.2 - 321.7 Moderate-Strong (Alt) Silicification>> pervasive silicification.</p>											
321.70	323.95	SED	undifferentiated Sediment	brown	FG						
<p>321.7 - 323.95: Brown, foliated, fine grained, biotite schist. Cut by abundant, large (up to 30cm) deformed quartz veins.</p> <p><<Alt: 321.7 - 323.95 Moderate-Strong (Alt) Silicification>> patchy silicification.</p> <p><<Vein: 321.7 - 323.95 40% Quartz 80 deg. >> quartz veins</p>											
323.95	326.80	RHY	Lapilli tuff	light grey	FMG						
<p>323.95 - 326.8: Light grey to white, foliated, strongly altered, quartz-muscovite schist/rhyolite lapilli tuff. Cut by quartz vein (80% of interval). Strongly sericite-quartz altered groundmass around quartz vein.</p> <p><<Alt: 323.95 - 326.8 Intense (Alt) Silicification>> intense silicification and quartz veining.</p> <p><<Vein: 323.95 - 326.8 80% Quartz 80 deg. >> quartz veins</p>											
326.80	355.00	MDS	Carbonaceous dominant mudstone	dark grey	VFG						
<p>326.8 - 355: Dark to medium grey and light grey, finely laminated, very fine grained, carbonaceous mudstone interbedded with siliceous mudstone. Convolutly folded and disrupted beds. Abundant (up to 5%) fine grained, disseminated pyrite in the more carbonaceous bands. Cut by occasional brittle quartz-carbonate veins and stockwork with jigsaw fit breccia fragments of carbonaceous mudstone (349-351m).</p> <p><<Min: 326.8 - 355 5% Min: Pyrite>> disseminated pyrite</p> <p><<Alt: 326.8 - 328.6 Moderate-Strong (Alt) Silicification>> pervasive silicification.</p>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-268

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 345.8 - 347 Moderate (Alt) Silicification>> pervasive silicification.											
<<Alt: 350 - 355 Moderate-Strong (Alt) Silicification>> pervasive silicification.											
<<Vein: 349 - 351 20% Quartz-Carbonate 25 deg. >> quartz-carbonate veins and stockwork.											
End of Hole @ 355											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-269

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Trevor Rabb
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	22-Sep-15
UTM Easting	414698.872	Core Size:	NQ3	Azimuth:	180.2	Date Logging Complete:	22-Sep-15
UTM Northing:	6815466.422	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1418.874	Casing Depth (m):	9	Length (m):	72.72	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	21-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	22-Sep-15
Local Elev. (m):						Purpose:	Resource/Met
Comments:						Parent Hole:	

This hole is the parent hole of K15-266 (completed metallurgical hole), though it was abandoned due to intersecting a sub-parallel historic drillhole (K94-036) at 71.25m. Hole encountered similar geology as K15-266 with lenses of massive sulphide (OI and OB) uphole from main ABM massive sulphide. This hole was only quicklogged as it was redrilled as K15-271 from the same pad at -55 deg inclination. Hole not sampled.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	180.2	0	180.2	APS	Trevor Rabb	21-Sep-15		<input checked="" type="checkbox"/>	
50	-60.2	162.9	22.5	185.4	ReflexEVS	Geotech	21-Sep-15	5927	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	8.00	OVBN Overburden									
8.00	9.40	MDSw Coherent rhyolite flow with carbonaceous content									
<<Min: 9.38 - 10.8 3% Min: Pyrite>> diss. Aggregates											
9.40	10.00	MDSc Carbonaceous dominant mudstone									
10.00	15.20	MDSw Coherent rhyolite flow with carbonaceous content									
15.20	17.90	MDSc Carbonaceous dominant mudstone									
17.90	28.55	MDSw Coherent rhyolite flow with carbonaceous content									
<<Vein: 24.2 - 24.7 Quartz>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-269

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 20.4 - 20.7 Weak (Alt) Fault>>											
28.55	31.70	MDS	Carbonaceous dominant mudstone								
<<Struc: 28.55 - 32.23 Weak-Moderate (Alt) Fault>>											
31.70	35.10	MDSw	Coherent rhyolite flow with carbonaceous content								
31.7 - 35.1: weakly graphitic, RHYc											
<<Min: 33.15 - 38.2 2% Min: Sphalerite>> isolated banded aggregates											
<<Min: 33.15 - 38.2 0.5% Min: Pyrite>>											
<<Min: 33.15 - 38.2 0.5% Min: Pyrrhotite>>											
<<Min: 33.15 - 38.2 0.5% Min: Chalcopyrite>>											
<<Alt: 34.9 - 38.2 Moderate (Alt) Muscovite>>											
35.10	38.20	RHYvx	Quartz and/or feldspar crystal tuff								
<<Vein: 35.1 - 37.1 Quartz>>											
38.20	39.00	OC	Chalcopyrite-pyrrhotite net textured sulphides								
<<Min: 38.2 - 39 5% Min: Sphalerite>>											
<<Min: 38.2 - 39 10% Min: Pyrite>>											
<<Min: 38.2 - 39 5% Min: Pyrrhotite>> net txt, coasre graiuned in qz vein											
<<Min: 38.2 - 39 1% Min: Galena>>											
<<Min: 38.2 - 39 1.5% Min: Chalcopyrite>>											
<<Vein: 38.75 - 39.63 Quartz>> +cpy											
39.00	41.50	RHYvl	Lapilli tuff								
<<Alt: 39 - 52.2 Moderate-Strong (Alt) Muscovite>>											
41.50	43.40	OI	Heavilly disseminated sulphides in host schist								
<<Min: 42.5 - 46.5 5% Min: Calcite>>											
43.40	44.93	RHYv	Rhyolite volcaniclastic								
<<Min: 44.9 - 47 3% Min: Sphalerite>>											
<<Min: 44.9 - 47 3% Min: Pyrrhotite>> net txt + diss											
<<Min: 44.9 - 47 1.5% Min: Chalcopyrite>> complex intergrowths withq po (net text.)											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-269

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
44.93	47.10	OI Heavily disseminated sulphides in host schist									
44.93 - 47.1: RHYv host											
47.10	48.45	RHYv Rhyolite volcanoclastic									
<<Min: 47.5 - 48.5 3% Min: Calcite>>											
<<Struc: 47.6 - 47.7 Weak (Alt) Fault>>											
48.45	49.20	OI Heavily disseminated sulphides in host schist									
<<Min: 48.45 - 50.7 5% Min: Sphalerite>>											
<<Min: 48.45 - 50.7 5% Min: Pyrrhotite>>											
<<Min: 48.45 - 50.7 1% Min: Chalcopyrite>>											
49.20	52.10	RHYvl Lapilli tuff									
<<Min: 50.9 - 54 2% Min: Calcite>>											
52.10	54.20	OI Heavily disseminated sulphides in host schist									
52.1 - 54.2: Sulphide mineralization intensifies into massive sulphide (<0.3m) towards middle of interval.											
<<Min: 52.2 - 54.25 3% Min: Sphalerite>>											
<<Min: 52.2 - 54.25 7% Min: Pyrite>>											
<<Min: 52.2 - 54.25 1% Min: Galena>>											
<<Alt: 52.2 - 56 Moderate (Alt) Muscovite>>											
54.20	61.50	MDSw Coherent rhyolite flow with carbonaceous content									
54.2 - 61.5: discontinuous stringer mineralization throughout											
<<Min: 56.75 - 58.04 1.5% Min: Sphalerite>>											
<<Min: 56.75 - 58.04 2% Min: Pyrite>>											
<<Min: 56.75 - 58.04 0.5% Min: Galena>>											
<<Min: 56.75 - 58.04 0.5% Min: Chalcopyrite>>											
<<Alt: 56 - 61.45 Strong (Alt) Muscovite>>											
<<Alt: 58.6 - 61.5 Moderate-Strong (Alt) Cordierite>>											
<<Alt: 58.6 - 61.5 Moderate-Strong (Alt) Albite>>											
<<Struc: 59 - 60.8 Strong (Alt) Fault>> weakly healed gouge and intact core (<20cm) with cataclastic overprint. Lost core (0.9m)											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-269

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
61.50	64.10	OA Magnetite bearing sulphides <<Min: 61.5 - 66.7 15% Min: Sphalerite>> <<Min: 61.5 - 66.7 60% Min: Pyrite>> <<Min: 61.5 - 66.7 3% Min: Galena>> <<Min: 61.5 - 66.7 1% Min: Chalcopyrite>>									
64.10	65.20	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides									
65.20	67.20	OA Magnetite bearing sulphides <<Min: 66.7 - 72.72 10% Min: Sphalerite>> <<Min: 66.7 - 72.72 55% Min: Pyrite>> <<Min: 66.7 - 72.72 2% Min: Galena>> <<Min: 66.7 - 72.72 0.5% Min: Chalcopyrite>> <<Alt: 66.7 - 69.3 Moderate (Alt) Cordierite>>									
67.20	68.28	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides									
68.28	70.34	OA Magnetite bearing sulphides									
70.34	71.70	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides									
71.70	72.72	OA Magnetite bearing sulphides									
End of Hole @ 72.72											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-270

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	22-Sep-15
UTM Easting	415151.29	Core Size:	HQ3	Azimuth:	180.09	Date Logging Complete:	23-Sep-15
UTM Northing:	6815552.105	Casing Pulled?:	Yes	Dip:	-65	Drill Company:	Geotech
UTM Elev. (m):	1402.992	Casing Depth (m):	12	Length (m):	170	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	21-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	23-Sep-15
Local Elev. (m):						Purpose:	Metallurgical Twin
Comments:						Parent Hole:	K15-267

K15-270 was drilled as a metallurgical twin of K15-267, in order to collect samples of the MET3 and MET5 domains.

The hanging wall stratigraphy consists of mixed felsic and mafic volcanics/intrusives, from 12-136.1 m. Noticeable MU-alteration in the hanging wall occurred from ~64.9-136.3 m. Alteration increased to CL+CI near the MSXS. MSXS was encountered from 136.1-161.2 m, consisting of OJ, OB, OA, and OI. The footwall consists of volcanoclastic rhyolite from 161.2-161.9 m, with strong CL+CI alteration proximal to the MSXS. From 161.9-170 m (EOH) a CL-BI-CA schist (MAFi) was encountered. The MAFi was locally Mu-altered from 161.9-164.9 m.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-65	180.09	0	180.09	APS	Dillon Hume	21-Sep-15		<input checked="" type="checkbox"/>	
20	-65.2	156.3	22.5	178.8	ReflexEVS	Geotech	21-Sep-15	5793	<input checked="" type="checkbox"/>	
50	-66.4	161	22.5	183.5	ReflexEVS	Geotech	21-Sep-15	5755	<input checked="" type="checkbox"/>	
80	-66	163.6	22.5	186.1	ReflexEVS	Geotech	21-Sep-15	5725	<input checked="" type="checkbox"/>	
110	-66.4	166.4	22.5	188.9	ReflexEVS	Geotech	22-Sep-15	5721	<input checked="" type="checkbox"/>	
140	-66.7	165.7	22.5	188.2	ReflexEVS	Geotech	22-Sep-15	5490	<input checked="" type="checkbox"/>	
170	-67	166.4	22.5	188.9	ReflexEVS	Geotech	22-Sep-15	5788	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	12.00	CASN Casing									
12.00	16.40	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
12 - 16.4: Good flow banded textured rhyolite											
<<Min: 12 - 16.4 0.5% Min: Calcite>>											
<<Min: 12 - 17.6 0.5% Min: Pyrite>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-270

From (m)		To (m)		Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
16.40	17.60	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)										
16.4 - 17.6: Banded CL-CA-BI schist with chilled margins (?)													
<<Min: 16.4 - 17.6 20% Min: Calcite>>													
17.60	23.20	RHYva	Coarse grained to ash tuff										
17.6 - 23.2: Fine grained ash tuff with disseminated mm-scale blebs of PO. Grades into lpl tuff at the lower contact.													
<<Min: 17.6 - 30.9 2% Min: Pyrite>>													
<<Min: 17.6 - 30.9 1% Min: Pyrrhotite>>													
<<Min: 17.6 - 30.9 2% Min: Calcite>>													
23.20	24.10	RHYvl	Lapilli tuff										
23.2 - 24.1: CL-CA-Silica lpl within a MU+QZ+CL groundmass. Small ~5 cm of MAFi from 23.9-23.95 m.													
24.10	24.60	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)										
24.1 - 24.6: Olive green to light brown, fine grained CL+BI+CA schist.													
24.60	27.30	RHYvl	Lapilli tuff										
24.6 - 27.3: Siliceous lpl in a MU+QZ+CL+BI groundmass													
27.30	28.00	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)										
27.3 - 28: Green, CL-CA-BI schist with relatively sharp boundaries													
28.00	30.10	RHY	undifferentiated rhyolite										
28 - 30.1: Banded CL+QZ and MU with lpl sized clasts (?) of CL+QZ. Hard to determine whether texture is coherent or volcaniclastics.													
30.10	30.90	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)										
30.1 - 30.9: Olive green to light brown, fine grained CL+BI+CA schist.													
30.90	31.30	RHYcw	Curdy textured-flow banded (flows, subvolcanics)										
30.9 - 31.3: Good curdy textured rhyolite with MU groundmass													

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-270

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 30.9 - 37.4 20% Min: Calcite>>											
<<Min: 30.9 - 52.2 0.5% Min: Pyrite>>											
<<Min: 30.9 - 52.2 0.5% Min: Pyrrhotite>>											
31.30	37.40	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
31.3 - 37.4: CA porphyroblastic (euhedral), CL-BI-CA schist with well developed foliation.											
37.40	44.00	RHYvl	Lapilli tuff								
37.4 - 44: Rhyolitic lpl with lesser CL lpl within a MU+QZ groundmass											
<<Min: 37.4 - 44 1% Min: Calcite>>											
44.00	45.20	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
44 - 45.2: Olive green to light brown, fine grained CL+BI+CA schist.											
<<Min: 44 - 48.3 15% Min: Calcite>>											
45.20	47.00	RHYv	Rhyolite volcanoclastic								
45.2 - 47: Banded MU and QZ+CL with local rhyolitic lpl											
47.00	48.30	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
47 - 48.3: CA porphyroblastic (euhedral), BI-CA-CL schist with well developed foliation.											
48.30	54.10	RHYvl	Lapilli tuff								
48.3 - 54.1: Rhyolitic and CL+BI+CA lpl within a MU+QZ groundmass. Core from 53-59 m had been dropped by drillers. From and To measurements are not accurate.											
<<Min: 48.3 - 54.1 2% Min: Calcite>>											
<<Min: 52.2 - 130.6 2% Min: Pyrite>>											
<<Min: 52.2 - 130.6 2% Min: Pyrrhotite>>											
54.10	55.70	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
54.1 - 55.7: CA porphyroblastic, CL-BI-CA schist with well developed foliation. Core from 53-59 m had been dropped by drillers. From and To measurements are not accurate.											
<<Min: 54.1 - 55.7 20% Min: Calcite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-270

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
55.70	62.00	RHYvl Lapilli tuff									
55.7 - 62: Rhyolitic lpl within a dark MU+QZ+BI groundmass. Core from 53-59 m had been dropped by drillers. From and To measurements are not accurate.											
<<Min: 55.7 - 103.6 2% Min: Calcite>>											
62.00	63.60	RHYc Rhyolite coherent volcanics									
62 - 63.6: Banded silica and MU											
63.60	68.20	RHYvl Lapilli tuff									
63.6 - 68.2: Rhyolitic lpl with MU+QZ+/-CL+/-BI groundmass.											
<<Alt: 64.9 - 84.3 Weak (Alt) Muscovite>>											
68.20	69.60	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
68.2 - 69.6: QZ+MU schist with good rhyolitic flow banded texture											
69.60	84.30	RHYvl Lapilli tuff									
69.6 - 84.3: Rhyolitic and QZ+CL lpl within a MU+QZ groundmass											
84.30	90.10	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
84.3 - 90.1: Good white rhyolitic curdy and flow banded texture within a greenish-yellow MU groundmass. Continuous foliation defined by MU.											
<<Alt: 84.3 - 108.4 Moderate (Alt) Muscovite>>											
90.10	103.60	RHYvl Lapilli tuff									
90.1 - 103.6: greenish-yellow lpl rhyolite. ~.5 cm sized rhyolitic lpl and mm-scale blebs of PY+/-PO within a well foliated MU+QZ groundmass.											
103.60	108.40	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
103.6 - 108.4: Good white rhyolitic curdy and flow banded texture within a greenish-yellow MU groundmass. Continuous foliation defined by MU.											
<<Min: 103.6 - 152 0.5% Min: Calcite>>											
108.40	126.20	RHYvl Lapilli tuff									
108.4 - 126.2: Medium grey, rhyolite lpl tuff. CL, PO, and rhyolite lpl within a MU+QZ groundmass.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-270

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 108.4 - 130.6 Weak (Alt) Muscovite>>											
126.20	130.00	RHY undifferentiated rhyolite									
126.2 - 130: Moderately faulted and healed rock with clasts of CL, rhyolite, MSXS, and MDS.											
<<Struc: 126.2 - 130 Strong (Alt) Fault>> Moderately faulted and healed fault breccia, with clasts of rhyolite, CL, MSXS and MDS.											
130.00	136.10	RHY undifferentiated rhyolite									
130 - 136.1: Strongly altered rhyolite. Alteration varies in concentrations of MU, CI, AB, and CL.											
<<Min: 130.6 - 136.1 2% Min: Pyrite>>											
<<Min: 130.6 - 136.1 3% Min: Pyrrhotite>>											
<<Min: 130.6 - 136.1 1% Min: Chalcopyrite>>											
<<Alt: 130.6 - 136.3 Strong (Alt) Muscovite>>											
<<Alt: 132.3 - 136.1 Moderate-Strong (Alt) Cordierite>>											
<<Alt: 132.3 - 136.7 Moderate (Alt) Chlorite>>											
<<Alt: 133.4 - 136.1 Moderate (Alt) Albite>>											
136.10	136.60	OJ Heavilly disseminated sulphides in proximal altered rock									
136.1 - 136.6: Semi-massive PY+PO+/-GL+/-SP in strongly-intensely altered schist with large cm-scale CI porphyroblasts											
<<Min: 136.1 - 137.9 10% Min: Pyrrhotite>>											
<<Alt: 136.1 - 136.7 Strong (Alt) Cordierite>> Very large CI porphyroblasts											
136.60	137.90	OA Magnetite bearing sulphides	MCG								
136.6 - 137.9: Massive PY+PO+MG with cg MG buckshot texture											
137.90	142.40	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MCG								
137.9 - 142.4: Banded PY+SP+GL+AB											
<<Min: 137.9 - 142.4 20% Min: Sphalerite>> rusty orange-brown and darker purple-brown sphalerite											
<<Min: 137.9 - 142.4 5% Min: Galena>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-270

From (m)	To (m)	Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
142.40	143.90	OA Magnetite bearing sulphides	MCG	142.40	143.10	0.70						
142.4 - 143.9: Massive PY+MG with cg MG buckshot texture												
143.90	144.20	OI Heavily disseminated sulphides in host schist		143.10	143.90	0.80						
143.9 - 144.2: Heavily disseminated PY in MU+CL+CI schist												
144.20	144.50	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	143.90	144.50	0.60						
144.2 - 144.5: Banded PY+SP+GL												
144.50	149.30	OA Magnetite bearing sulphides	MCG	144.50	145.40	0.90						
144.5 - 149.3: Massive PY+PO+MG with cg MG buckshot texture												
<<Min: 144.5 - 148 5% Min: Pyrrhotite>>												
149.30	149.80	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MCG	145.40	146.40	1.00						
149.3 - 149.8: Banded PY+SP+GL												
149.80	150.50	OA Magnetite bearing sulphides	MCG	146.40	147.40	1.00						
149.8 - 150.5: Massive PY+PO+MG with cg MG buckshot texture												
150.50	150.80	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	147.40	148.40	1.00						
150.5 - 150.8: Banded PY+SP+GL												
150.80	151.00	OA Magnetite bearing sulphides	MCG	148.40	149.30	0.90						
150.8 - 151: Massive PY+PO+MG with cg MG buckshot texture												
				149.30	149.80	0.50						
				149.80	150.50	0.70						
				150.50	151.30	0.80						

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-270

From (m)		To (m)		Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
151.00	151.30	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides		MG									
151 - 151.3: Banded PY+SP+GL														
151.30	152.30	OA	Magnetite bearing sulphides		MCG	151.30	152.30	1.00						
151.3 - 152.3: Massive PY+PO+MG with cg MG buckshot texture														
<<Min: 152 - 158.1 2% Min: Calcite>>														
152.30	160.60	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides		MG	152.30	153.30	1.00						
152.3 - 160.6: Banded PY+SP+GL+AB														
<<Min: 158.1 - 160.4 10% Min: Calcite>>														
						153.30	154.30	1.00						
						154.30	155.30	1.00						
						155.30	156.30	1.00						
						156.30	157.20	0.90						
						157.20	158.10	0.90						
						158.10	159.00	0.90						
						159.00	159.80	0.80						
						159.80	160.60	0.80						
160.60	161.20	OJ	Heavilly disseminated sulphides in proximal altered rock		MCG	160.60	161.20	0.60						
160.6 - 161.2: CP+PO net texture with cg GL+/-SP in strongly altered CI+MU schist														
<<Min: 160.6 - 161.2 10% Min: Pyrrhotite>>														
<<Min: 160.6 - 161.2 10% Min: Galena>>														
<<Min: 160.6 - 161.2 20% Min: Chalcopyrite>>														
<<Min: 160.6 - 161.2 0.5% Min: Calcite>>														
<<Alt: 160.6 - 161.2 Strong (Alt) Cordierite>>														
<<Alt: 160.6 - 164.9 Moderate (Alt) Muscovite>>														
161.20	161.90	RHY	undifferentiated rhyolite			161.20	161.90	0.70						
161.2 - 161.9: Strongly MU-altered schist														

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-270

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 161.2 - 164.9 3% Min: Pyrite>>											
<<Min: 161.2 - 164.9 5% Min: Calcite>>											
161.90	164.90	MAFi									
Mafic Intrusions (primarily footwall mafic intrusion)											
161.9 - 164.9: MU+CA+BI schist (MU-alteration) Texturally resembles the blebby texture of the CL+BI+CA MAFi											
			161.90	162.90	1.00						
			162.90	163.90	1.00						
			163.90	164.90	1.00						
			164.90	165.90	1.00						
164.90	170.00	MAFi									
Mafic Intrusions (primarily footwall mafic intrusion)											
164.9 - 170: CL+BI+CA schist with blebby-banded texture											
<<Min: 164.9 - 170 0.5% Min: Pyrrhotite>>											
<<Min: 164.9 - 170 20% Min: Calcite>>											
<<Alt: 164.9 - 170 Strong (Alt) Chlorite>>											
<<Alt: 164.9 - 170 Strong (Alt) Biotite>>											
End of Hole @ 170											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-271

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Daniele Heon
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	24-Sep-15
UTM Easting	415249.612	Core Size:	NQ3	Azimuth:	180	Date Logging Complete:	26-Sep-15
UTM Northing:	6815584.132	Casing Pulled?:	Yes	Dip:	-65	Drill Company:	Geotech
UTM Elev. (m):	1437.556	Casing Depth (m):	12	Length (m):	258	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	22-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	25-Sep-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

The target of this hole is eastern step out to extend ABM main lens. No massive sulphide was intersected but strong alteration, trace disseminated sphalerite and a 3m run with no core were intersected around the target depth of 195-200m. The hole deviated by 17 degrees from planned azimuth, the biggest deviation occurring around a zone of broken rock with associated core loss. The top of the hole alternated between carbonaceous argillite (MDS_c) and mafic tuffs and dykes till 32.65m, followed by a sequence of alternating RHY_{cw}, vl and va with a few mafic units till 118.4. This includes a short siliceous, silicified, broken and veined section from 76-78m, associated with a short interval of RHY_i dyke. From 118.4m to 193.65m, the sequence alternates between RHY_{cw}, vl and va with a few mafic units, becomes very siliceous(or silicified?), and is logged mainly as RHY_{cw} with increasing sericite alteration downhole and local fragmental or pseudo-fragmental textures. From 193-200, dark chl-sericite partings are interpreted as MDS_w, and contain trace sp and cp on either side of the interval (195-198) where no core was recovered (possible friable mineralized horizon?). Strong muscovite- cordierite- chlorite alteration marks the footwall of this missing interval. The hole then continues in siliceous RHY_c until its lower contact with the footwall mafic intrusion at 242.6, with some disseminated sp and cp in foliaform stringers for 1-2 m intervals from 229 to 242m.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-65	180	0	180	APS	Geotech	22-Sep-15		<input checked="" type="checkbox"/>	
21	-65.5	160.4	22.5	182.9	ReflexE _{ZS}	Geotech	22-Sep-15	5813	<input checked="" type="checkbox"/>	
51	-65.8	161.2	22.5	183.7	ReflexE _{ZS}	Geotech	22-Sep-15	5758	<input checked="" type="checkbox"/>	
81	-65.8	164.2	22.5	186.7	ReflexE _{ZS}	Geotech	23-Sep-15	5788	<input checked="" type="checkbox"/>	
111	-65.2	166.3	22.5	188.8	ReflexE _{ZS}	Geotech	23-Sep-15	5770	<input checked="" type="checkbox"/>	
141	-64.3	168	22.5	190.5	ReflexE _{ZS}	Geotech	23-Sep-15	5793	<input checked="" type="checkbox"/>	
171	-63.6	168.9	22.5	191.4	ReflexE _{ZS}	Geotech	24-Sep-15	5826	<input checked="" type="checkbox"/>	
201	-62.5	170.5	22.5	193	ReflexE _{ZS}	Geotech	24-Sep-15	5746	<input checked="" type="checkbox"/>	
228	-62.3	171.1	22.5	193.6	ReflexE _{ZS}	Geotech	25-Sep-15	5793	<input checked="" type="checkbox"/>	
258	-61.8	174.9	22.5	197.4	ReflexE _{ZS}	Geotech	25-Sep-15	5795	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	8.17	OVBN Overburden									

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-271

From (m)		To (m)		Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
8.17		8.40		MDS	Carbonaceous dominant mudstone								
8.40		14.65		MAFt	Mafic Volcaniclastics								
8.4 - 14.65: f.g.,dark green, calcareous mafic tuff or dyke,													
<<Min: 12 - 32.65 10% Min: Calcite>> Core stacked outside before calcite logged. Estimate done from litho log.													
<<Vein: 12 - 63 3% Quartz-Chlorite-Sulphide 80 deg. >> 5-10 cm													
<<Vein: 12 - 124 1% Calcite 65 deg. >>													
14.65		14.95		MDS	Carbonaceous dominant mudstone								
14.95		16.95		MAFt	Mafic Volcaniclastics								
16.95		22.50		MDS	Carbonaceous dominant mudstone								
16.95 - 22.5: good banded carbonaceous argillite, folded and crenulated.													
22.50		26.85		MDSt	Rhyolite tuff dominant mudstone								
22.5 - 26.85: coarse ash?, crenulated. Texture reminiscent of portion of rx type at 119.75-124.65.													
<<Min: 22.5 - 26.85 1% Min: Pyrrhotite>>													
26.85		31.00		MDS	Carbonaceous dominant mudstone								
26.85 - 31: strongly veined, folded and crenulated.													
31.00		32.65		MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
32.65		33.35		RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
<<Min: 32.65 - 72 0.5% Min: Calcite>> Core stacked outside before calcite logged. Estimate done from litho log.													
33.35		33.60		MAFta	Coarse grained to ash tuff								
33.35 - 33.6: or dyke													

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-271

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
33.60	38.30	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
33.6 - 38.3: or coarse RHYvl											
38.30	42.20	RHYvl Lapilli tuff									
38.3 - 42.2: Coarse siliceous lapilli tuff or CW											
<<Min: 40 - 41.6 3% Min: Pyrrhotite>> in heavy diss bands											
42.20	42.90	RHYvl Lapilli tuff									
42.2 - 42.9: finer grained groundmass and lapilli, less siliceous											
42.90	49.75	MAFt Mafic Volcaniclastics									
42.9 - 49.75: maroon and green, f.g. loc banded,, includes 20 cm of cw strongly dissected by sericite. Loc amygdules?											
<<Vein: 44 - 120 0.05% Quartz-Tourmaline-Sulphide 10 deg. >> deformed by crenulation gen 1cm wide, shallow CA, w commom tourmaline halo. Tr po, galena and sp											
49.75	52.45	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
49.75 - 52.45: or c.g. and crowded lapilli tuff. Fines gradually into RHYvl below.											
52.45	54.20	RHYvl Lapilli tuff									
54.20	66.30	RHYva Coarse grained to ash tuff									
54.2 - 66.3: few lapilli											
66.30	68.40	MAFt Mafic Volcaniclastics									
66.3 - 68.4: f.g. ash? Mafic? Sed?											
68.40	72.00	RHYva Coarse grained to ash tuff									
72.00	76.35	MAFt Mafic Volcaniclastics									
72 - 76.35: banded, maroon. Lower contact strongly veined and altered (looks clayey).											
<<Min: 72 - 76 10% Min: Calcite>>											
<<Vein: 76 - 150 1% Quartz-Chlorite-Sulphide 20 deg. >>											
76.35	77.45	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
76.35 - 77.45: Intense qtz veining and sericite alteration.											

Project:
KZK
Hole Number:
K15-271

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<div><<Alt: 76.35 - 82.3 Moderate (Alt) Muscovite>> ass w RHYi and qtz veining? Loc strong.</div> <div><<Alt: 76.35 - 85.6 Weak (Alt) Silicification>></div> <div><div>77.45</div><div>78.35</div><div>RHY</div><div>undifferentiated rhyolite</div></div> <div>77.45 - 78.35: strongly veined and broken, w strong khaki sericite altered-bands and broken qtz veins. Some qtz-tourm veining sub// to CA. Quartz in veins, as bands and as clasts? UC may include some bleached mafic tuff sections. Poore recovery.</div> <div><<Min: 77.5 - 82 2% Min: Calcite>></div> <div><<Min: 78.3 - 82.3 0.5% Min: Pyrite>> in po-qtz bands.</div> <div><<Min: 78.3 - 82.3 1% Min: Pyrrhotite>> heavy diss in qtz-rich bands.</div> <div><div>78.35</div><div>78.70</div><div>RHYi</div><div>Aphanitic Rhyolite (intrusion)</div></div> <div>78.35 - 78.7: crackled, veined and altered. Poor recovery.</div> <div><div>78.70</div><div>82.55</div><div>RHYc</div><div>Rhyolite coherant volcanics</div></div> <div>78.7 - 82.55: poker chips partings w greenish sericite. Few lapilli or silica bands. Diss po in qtz-rich bands.</div> <div><<Min: 82 - 97.2 1% Min: Calcite>></div> <div><<Min: 82.3 - 84.8 0.5% Min: Pyrite>></div> <div><div>82.55</div><div>83.50</div><div>RHYvl</div><div>Lapilli tuff</div></div> <div>82.55 - 83.5: silicified?</div> <div><div>83.50</div><div>97.20</div><div>RHYva</div><div>Coarse grained to ash tuff</div></div> <div>83.5 - 97.2: w small tourmaline porphyroblasts</div> <div><<Alt: 90 - 97.2 Moderate (Alt) Muscovite>> dark greenish-blue hue</div> <div><<Alt: 96 - 96.5 Weak (Alt) Chlorite>></div> <div><<Struc: 85.5 - 85.8 Moderate (Alt) Fault>> clay gouge</div> <div><<Struc: 87.5 - 87.6 Strong (Alt) Fault>> clay gouge, broken rock.</div> <div><<Struc: 89.85 - 89.86 dominant foliation>> NW/SE</div> <div><<Struc: 94.65 - 94.7 Moderate (Alt) Fault>> dicrete and competent clay gouge zone.</div> <div><div>97.20</div><div>97.95</div><div>MAFi</div><div>Mafic Intrusions (primarily footwall mafic intrusion)</div></div> <div><<Min: 97.2 - 99.4 5% Min: Calcite>></div> <div><div>97.95</div><div>98.10</div><div>RHYvl</div><div>Lapilli tuff</div></div> <div><div>98.10</div><div>99.45</div><div>MAFi</div><div>Mafic Intrusions (primarily footwall mafic intrusion)</div></div>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-271

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
99.45	106.80	RHYvl Lapilli tuff <<Min: 106.7 - 108.65 10% Min: Calcite>> <<Alt: 101 - 106.8 Weak (Alt) Muscovite>> <<Alt: 101 - 106.8 Weak (Alt) Chlorite>> <<Alt: 105 - 106.8 Weak (Alt) Silicification>>									
106.80	108.65	MAFi Mafic Intrusions (primarily footwall mafic intrusion) 106.8 - 108.65: or MAFt?									
108.65	118.40	RHYvl Lapilli tuff 108.65 - 118.4: w small tourmaline porphyroblasts <<Min: 111.7 - 111.9 2% Min: Pyrite>> in vein and diss <<Min: 117 - 129 0.5% Min: Calcite>> <<Alt: 108.65 - 148 Moderate (Alt) Muscovite>>									
118.40	119.75	RHYcw Curdy textured-flow banded (flows, subvolcanics) 118.4 - 119.75: or coarse and silicified lapilli tuff? Mottled, very siliceous, maroon and grey (biot-sericite alteration) w white silica blebs (dismembered lapilli or cw), w gradual appearance of dolom/ank crystals. Tourmaline porphyroblasts, diss po. Hornfels/alterd from carb-bearing dyke below? <<Min: 118.4 - 124 0.5% Min: Pyrite>> <<Min: 118.4 - 124 0.5% Min: Pyrrhotite>> <<Alt: 119.5 - 123.4 Moderate (Alt) Cordierite>> carbonat replacing cordierite?									
119.75	124.65	MAFi Mafic Intrusions (primarily footwall mafic intrusion) 119.75 - 124.65: strong popyhroblastic dolomite or ankerite replacing cordierite? Carbonate xtals in dk sericite- chlorite- biot groundmass. Intrusive texture. Chl loc greasy. Diss po. Chl-cordierite alteration zone or altered mafic dyke?									
124.65	128.80	RHYvl Lapilli tuff 124.65 - 128.8: small tourmaline porphyroblasts.									
128.80	136.30	RHYcw Curdy textured-flow banded (flows, subvolcanics) 128.8 - 136.3: gradual UC? Brownish grey sericite separates siliceous domains. Gets lumpy: lapilli? <<Struc: 129.6 - 130.1 Moderate (Alt) Fault>> weak broken rx and fault gouge, discordant to foln.									



Project:
KZK
Hole Number:
K15-271

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
136.30	144.10	RHYvl Lapilli tuff									
136.3 - 144.1: finer grained and darker matrix than above, more fragmental or pseudo-fragmental texture, could be RHYcw. Muscovite colour and intensity varies.											
144.10	174.00	RHYc Rhyolite coherent volcanics									
144.1 - 174: very siliceous, variably fragmental or pseudo-fragmental, some sections could be coarse lapilli. Few possible qtz xtals? Pervasive greenish sericite. Stronger fg ankerite alteration. 146-151 and 155-169.5 : dislocated py-po bands and blebs.											
<<Min: 146.8 - 150.8 1% Min: Pyrite>> in qtz-rich bands											
<<Min: 146.8 - 150.8 1% Min: Pyrrhotite>> in qtz-rich bands											
<<Min: 155 - 159.5 2% Min: Pyrrhotite>> heavily disseminated in dislocated qtz-rich bands or blebs.											
<<Min: 155 - 169.5 2% Min: Pyrite>> heavily disseminated in dislocated qtz-rich bands or blebs.											
<<Alt: 148 - 187 Strong (Alt) Muscovite>> till end of boxes Thursday											
<<Alt: 172.35 - 177 Weak (Alt) Chlorite>>											
<<Struc: 160 - 165 Vein>> fracture sub// to CA											
<<Struc: 161.9 - 161.91 dominant foliation>>											
174.00	177.00	MAFt Mafic Volcaniclastics									
174 - 177: Mafic tuff or chl-altered felsic tuff? Stripy maroon and green rx. More intense and pervasive sericite alteration?											
177.00	187.20	RHYc Rhyolite coherent volcanics									
177 - 187.2: loc lumpy (lapilli?). Some dark amorphous soft mineral interstitial to the sulphides in qtz-po bands (chloritoid).											
<<Min: 177.2 - 186 2% Min: Pyrite>> heavily disseminated in dislocated qtz-rich bands or blebs.											
<<Min: 177.2 - 186 1% Min: Pyrrhotite>> heavily disseminated in dislocated qtz-rich bands or blebs.											
<<Min: 186 - 195 1% Min: Pyrite>>											
<<Alt: 187 - 213 Intense (Alt) Muscovite>>											
<<Struc: 185.9 - 185.91 dominant foliation>>											
187.20	193.50	RHY undifferentiated rhyolite									
187.2 - 193.5: Strongly sericite-altered cw (?) (lt grey, clayey on poker chips partings till 190.5m). Segregations between silica vs sericite bands increase downhole and poker chips decrease. Dk grey-green, loc bleached. Small squarish greenish soft mineral w fuzzy outline rimmed by ankerite (breakdown of py?) (chloritoid?).											
<<Vein: 191.9 - 193.15 10% Quartz-Kspar-Sulphide 65 deg. >> w po											
<<Vein: 192.35 - 208 0.5% Quartz 60 deg. >>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-271

From (m) To (m) Rocktype & Description

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
193.50	195.10	1.60	B00266837	0.3	-0.005	-0.01	-0.01	0.04

193.50 195.10 MDSw Coherent rhyolite flow with carbonaceous content

193.5 - 195.1: Siliceous rx w dk sericite partings, sph<1% and one 10 cm band of 5-7% po and 1-2% py.

<<Min: 193.5 - 195 0.05% Min: Sphalerite>>

<<Alt: 194.2 - 198.99 Strong (Alt) Chlorite>> some greasy black chl on foln, maybe mixed in w dark sericite.

195.10 198.00 No Core No Core

195.1 - 198: run washed away. Only 10cm of rubble recovered. Trace sph and 10cm band of qtz-po in previous run and <1% diss sp in following run.

<<Min: 195.25 - 195.4 7% Min: Pyrrhotite>> in qtz-rich band

198.00 200.00 MDSw Coherent rhyolite flow with carbonaceous content

198 - 200: Siliceous rx w dk sericite partings. Sph diss in narrow stringers, <1% til 199.6m.

<<Min: 198 - 199.6 1% Min: Sphalerite>> ?

200.00 209.00 RHY undifferentiated rhyolite

200 - 209: Light grey, blocky, very strongly sericite altered, no recognizeable primary textures, spotted w dark squarish outline of amorphous brown mineral w fuzzy grain outline(0.5cm), loc containing small py cubes (altered chloritoid?). Some irregular bands of whitish cordierite // to foln.

<<Alt: 201 - 204 Weak (Alt) Talc-serpentine>> soapy feel on clayey partings.

<<Struc: 201 - 208 Weak (Alt) Fault>> few sections of broken rx wclayey matrix in zoe of strong sericite/ clayey alteration.

209.00 210.25 RHYc Rhyolite coherent volcanics

209 - 210.25: w tabular sericitic partings.

<<Min: 209 - 228 0.5% Min: Pyrrhotite>>

210.25 213.75 RHY undifferentiated rhyolite dark grey

210.25 - 213.75: Dark grey, vfg rx pervasively altered to grey sericite, w diss po and pervasive dusting of vfg py. Alteration front? Bleached mudstone? Ash? Or dyke?

<<Alt: 213 - 230 Strong (Alt) Muscovite>>

<<Vein: 210.65 - 212 0.1% Quartz 70 deg. >> qtz veins,

<<Struc: 212.9 - 212.91 dominant foliation>>



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-271

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
213.75	220.75	RHYv Rhyolite volcanoclastic									
213.75 - 220.75: Sericite still strong on partings but not as abundant so overall less altered. If primary textures: then ash. Flat po seams on foln.											
<<Vein: 215 - 215.35 Quartz-Chlorite 70 deg. >>											
<<Struc: 214.2 - 214.4 Strong (Alt) Fault>> section of finely broken rx,											
220.75	221.15	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
221.15	225.40	RHY undifferentiated rhyolite									
221.15 - 225.4: grey, spotted w greenish square to diamond shape fuzzy xtals (chloritoid?), siliceous, finely foliated											
225.40	235.40	RHYc Rhyolite coherent volcanics	227.10	228.40	1.30	B00266839	1.2	0.006	-0.01	0.01	0.12
225.4 - 235.4: light greenish-grey siliceous rx w platy lamellar foln defined by light green musc. Loc contorted. Mineralized mostly w bright py. Approx 2m w diss sp and cp along foln.											
<<Min: 228 - 232 2% Min: Pyrite>>											
<<Min: 228 - 232 1% Min: Pyrrhotite>>											
<<Min: 229.35 - 231.5 0.5% Min: Sphalerite>>											
<<Min: 229.35 - 231.5 0.5% Min: Chalcopyrite>>											
<<Min: 232 - 235.4 0.01% Min: Sphalerite>>											
<<Min: 232 - 235.4 0.5% Min: Pyrite>>											
<<Min: 232 - 235.4 0.5% Min: Pyrrhotite>>											
<<Min: 235.2 - 235.8 3% Min: Calcite>>											
<<Struc: 228 - 228.4 Moderate (Alt) Fault>> small zones of finely broken core,core loss.											
<<Struc: 230.35 - 230.38 >> Small kink fold. No cleavage developed. Measurement of curvilinear AP.											
235.40	235.90	MAFi Mafic Intrusions (primarily green footwall mafic intrusion)									
<<Min: 235.8 - 242 0.5% Min: Calcite>>											
235.90	242.60	RHYc Rhyolite coherent volcanics	238.33	239.30	0.97	B00266845	0.4	0.007	-0.01	-0.01	-0.01
235.9 - 242.6: siliceous bands dissected by bands of light green sericite. Diss py and po throughout and some sp cp diss in bands for last 2m.											
<<Min: 235.9 - 242.5 0.5% Min: Pyrite>>											
<<Min: 235.9 - 242.5 0.5% Min: Pyrrhotite>>											
<<Min: 241.2 - 242.4 0.5% Min: Sphalerite>>											
<<Min: 241.2 - 242.4 0.5% Min: Chalcopyrite>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-271

From (m) To (m) Rocktype & Description

<<Min: 242 - 247 10% Min: Calcite>>

<<Alt: 242.3 - 242.5 Weak (Alt) Chlorite>>

<<Vein: 242.5 - 242.6 100% Quartz-Tourmaline 75 deg. >>

**242.60 258.00 MAFi Mafic Intrusions (primarily
footwall mafic intrusion)**

242.6 - 258: footwall intrusion. UC altered by qtz-tourmaline vein. Rusty fractures and slicked planes in blocky ground with core loss between 251 and 252m

<<Min: 247 - 254.4 2% Min: Calcite>>

End of Hole @ 258

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
242.60	244.00	1.40	B00266849	-0.3	-0.005	-0.01	-0.01	0.03

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-272

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Trevor Rabb
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	23-Sep-15
UTM Easting	414699.175	Core Size:	NQ3	Azimuth:	180.2	Date Logging Complete:	23-Sep-15
UTM Northing:	6815465.295	Casing Pulled?:	Yes	Dip:	-55	Drill Company:	Geotech
UTM Elev. (m):	1418.911	Casing Depth (m):	6	Length (m):	128	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	22-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	23-Sep-15
Local Elev. (m):						Purpose:	Resource/Met
Comments:						Parent Hole:	

Parent hole to K15-266 (metallurgical HQ hole) and redrill of K15-269 (Abandoned). Orientation marks were found to be inconsistent throughout hole, with few consecutive orientation marks. When consecutive orientation marks were present, only one run was marked with a solid line (62-68m). Mafic dike near OI (41.7-51) and fault makes this twin significantly less representative of original HQ Met hole.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-55	180.2	0	180.2	APS	Trevor Rabb	22-Sep-15		<input type="checkbox"/>	
26	-55.2	160.1	22.5	182.6	ReflexEVS	Geotech	22-Sep-15	5780	<input checked="" type="checkbox"/>	
50	-53	163.9	22.5	186.4	ReflexEVS	Geotech	22-Sep-15	5609	<input type="checkbox"/>	
74	-53.1	159.9	22.5	182.4	ReflexEVS	Geotech	22-Sep-15	5826	<input checked="" type="checkbox"/>	
101	-53.1	162.1	22.5	184.6	ReflexEVS	Geotech	22-Sep-15	5645	<input checked="" type="checkbox"/>	
125	-53.4	160.8	22.5	183.3	ReflexEVS	Geotech	22-Sep-15	5681	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	7.00	OVBN									
7.00	8.20	MDSw									
<<Min: 8 - 12.1 2% Min: Pyrite>>											
8.20	12.10	MDSw									
12.10	16.10	RHYc									
16.10	20.50	MDSw									



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-272

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 17 - 18.7 2% Min: Pyrite>>											
<<Min: 18.7 - 28 0.5% Min: Pyrite>>											
20.50	23.90	MDS _c Carbonaceous dominant mudstone									
<<Vein: 23.1 - 29.7 Quartz>>											
<<Struc: 21.5 - 22.4 Trace (Alt) Fault>>											
23.90	27.85	MDS _w Coherent rhyolite flow with carbonaceous content									
<<Alt: 23.9 - 27.4 Weak (Alt) Muscovite>>											
<<Struc: 25.7 - 26 Weak-Moderate (Alt) Fault>> lost core, soft unconsolidated gouge											
<<Struc: 27.2 - 27.9 Weak (Alt) Fault>> local gouge zones											
27.85	29.15	MDS _c Carbonaceous dominant mudstone									
<<Min: 28 - 29.15 1% Min: Pyrite>>											
29.15	34.80	MDS _w Coherent rhyolite flow with carbonaceous content	29.15	30.15	1.00	B00268098	0.3	0.005	-0.01	-0.01	0.01
<<Min: 29.15 - 34.8 0.5% Min: Pyrite>>											
<<Alt: 29.25 - 34.8 Weak-Moderate (Alt) Muscovite>>											
<<Struc: 29.91 - 31 Weak (Alt) Fault>> local gouge intervals											
34.80	35.50	OI Heavily disseminated sulphides in host schist									
34.8 - 35.5: Approaches massive sulphide towards LCT.											
<<Min: 34.8 - 35.5 10% Min: Pyrite>>											
<<Min: 34.8 - 35.5 2% Min: Pyrrhotite>>											
<<Min: 34.8 - 35.5 5% Min: Chalcopyrite>>											
35.50	39.20	RHY _{cw} Curdy textured-flow banded (flows, subvolcanics)	35.50	37.00	1.50	B00268105	0.5	0.005	-0.01	-0.01	-0.01
<<Alt: 35.5 - 39.2 Moderate (Alt) Muscovite>>											
39.20	41.70	OC Chalcopyrite-pyrrhotite net textured sulphides	37.00	38.00	1.00	B00268106	0.3	-0.005	-0.01	0.01	-0.01
			38.00	39.20	1.20	B00268107	0.4	-0.005	0.02	-0.01	0.01
			39.20	40.20	1.00	B00268108	53.4	0.24	1.4	1.66	14

MCG

FMG



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-272

From (m) To (m) Rocktype & Description

<<Min: 39.2 - 41.7 10% Min: Sphalerite>>

<<Min: 39.2 - 41.7 10% Min: Pyrite>>

<<Min: 39.2 - 41.7 3% Min: Galena>>

<<Min: 39.2 - 41.7 1.5% Min: Chalcopyrite>>

41.70 43.00 RHYcw Curdy textured-flow banded (flows, subvolcanics)

41.7 - 43: could be ash tuff, fine laminated

<<Min: 42.9 - 43.9 10% Min: Sphalerite>>

<<Min: 42.9 - 43.9 10% Min: Pyrite>>

<<Min: 42.9 - 43.9 5% Min: Pyrrhotite>>

<<Min: 42.9 - 43.9 3% Min: Galena>>

<<Min: 42.9 - 43.9 1.5% Min: Chalcopyrite>>

<<Alt: 41.7 - 43 Moderate (Alt) Cordierite>> Chlorites after Cl

<<Vein: 41.7 - 41.9 Quartz>>

<<Struc: 42.5 - 42.5 Foliation>> chlorite mineral alignment

43.00 43.90 OC Chalcopyrite-pyrrhotite net textured sulphides

<<Vein: 43.8 - 43.9 Quartz>>

<<Struc: 43.87 - 43.87 Vein>> qz-cb vein

43.90 45.60 RHYcw Curdy textured-flow banded (flows, subvolcanics)

43.9 - 45.6: Mixing with RHYv, strongly convoluted contacts

<<Alt: 43.9 - 51 Moderate (Alt) Cordierite>> Chlorites after Cl

<<Vein: 44.25 - 45.1 Quartz>> irreg. contactcs

<<Struc: 43.9 - 43.9 Contact>>

45.60 45.90 OC Chalcopyrite-pyrrhotite net textured sulphides

<<Min: 45.6 - 46.1 5% Min: Pyrite>>

<<Min: 45.6 - 46.1 15% Min: Pyrrhotite>>

<<Min: 45.6 - 46.1 5% Min: Chalcopyrite>>

<<Vein: 45.8 - 46.1 Quartz>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
40.20	40.70	0.50	B00268109	23	0.142	0.49	1.42	13.3
40.70	41.70	1.00	B00268111	38.8	0.136	0.41	2.54	13.1

41.70	43.00	1.30	B00268112	1.5	-0.005	0.02	0.03	0.11
-------	-------	------	-----------	-----	--------	------	------	------

FMG

43.00	43.40	0.40	B00268113	35.5	0.157	0.45	1.68	11.4
-------	-------	------	-----------	------	-------	------	------	------

43.40	43.90	0.50	B00268114	25.7	0.124	0.5	0.89	13
-------	-------	------	-----------	------	-------	-----	------	----

43.90	45.50	1.60	B00268115	2	0.014	0.07	0.02	0.05
-------	-------	------	-----------	---	-------	------	------	------

45.50	46.00	0.50	B00268116	25.5	0.164	0.82	0.43	3.88
-------	-------	------	-----------	------	-------	------	------	------

MG



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-272

From (m)	To (m)	Rocktype & Description
45.90	47.40	RHYcw Curdy textured-flow banded (flows, subvolcanics)

45.9 - 47.4: could be ash tuff, fine laminated

<<Min: 46.75 - 50.5 1% Min: Pyrrhotite>> associated with cpy

<<Min: 46.75 - 50.5 1% Min: Chalcopryite>>

47.40	50.20	RHY undifferentiated rhyolite
--------------	--------------	--------------------------------------

50.20	50.90	RHY undifferentiated rhyolite
--------------	--------------	--------------------------------------

50.90	53.45	RHY undifferentiated rhyolite
--------------	--------------	--------------------------------------

<<Min: 53 - 55.4 5% Min: Sphalerite>>

<<Min: 53 - 55.4 5% Min: Pyrrhotite>> assoc. with cpy

<<Min: 53 - 55.4 2% Min: Chalcopryite>>

<<Vein: 52.15 - 52.35 Quartz>>

<<Vein: 52.8 - 53.4 Quartz>>

53.45	54.50	OI Heavily disseminated sulphides in host schist
--------------	--------------	---

54.50	55.40	RHYv Rhyolite volcaniclastic
--------------	--------------	-------------------------------------

<<Alt: 54.9 - 62.27 Strong (Alt) Muscovite>>

55.40	57.30	OC Chalcopryite-pyrrhotite net textured sulphides
--------------	--------------	--

55.4 - 57.3: weakly disseminated and rare narrow (<2cm) fg stringer intervals

<<Min: 55.4 - 57.8 1% Min: Pyrite>> locally up to 20% as fg wispy veins

<<Min: 55.4 - 57.8 0.5% Min: Chalcopryite>>

<<Struc: 57 - 57 Foliation>>

57.30	62.27	RHYv Rhyolite volcaniclastic
--------------	--------------	-------------------------------------

<<Min: 57.8 - 62.27 0.5% Min: Pyrite>>

<<Alt: 59.4 - 62.27 Moderate (Alt) Albite>>

<<Struc: 57.85 - 57.85 Vein>> QZ vein

<<Struc: 59.4 - 59.4 Crenulation cleavage>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
46.00	47.50	1.50	B00268117	2.7	0.015	0.02	0.05	0.1

47.50	49.00	1.50	B00268118	7.3	0.044	0.41	0.03	0.3
49.00	50.50	1.50	B00268119	22.2	0.03	0.89	0.11	0.21
50.50	52.00	1.50	B00268121	6.5	0.005	0.01	0.08	0.54
52.00	53.45	1.45	B00268122	31	0.011	0.64	0.15	0.62

FG

53.45	54.50	1.05	B00268123	330	1.37	0.75	4.87	9.62
-------	-------	------	-----------	-----	------	------	------	------

54.50	55.40	0.90	B00268124	1.4	0.031	-0.01	0.02	0.04
-------	-------	------	-----------	-----	-------	-------	------	------

55.40	56.30	0.90	B00268125	2.4	0.035	0.02	-0.01	0.05
-------	-------	------	-----------	-----	-------	------	-------	------

56.30	57.30	1.00	B00268126	14.2	0.092	0.23	0.2	0.62
-------	-------	------	-----------	------	-------	------	-----	------

57.30	58.80	1.50	B00268127	2.5	0.018	0.08	-0.01	0.04
58.80	60.30	1.50	B00268128	0.9	0.011	-0.01	0.01	0.03
60.30	61.30	1.00	B00268129	0.8	0.006	-0.01	-0.01	0.02
61.30	62.27	0.97	B00268131	2.6	0.038	-0.01	0.04	0.11

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-272

From (m) To (m) Rocktype & Description

62.27 76.30 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Min: 62.27 - 69.3 10% Min: Sphalerite>>
 <<Min: 62.27 - 69.3 60% Min: Pyrite>>
 <<Min: 62.27 - 69.3 2% Min: Galena>>
 <<Min: 62.27 - 69.3 1.5% Min: Chalcopyrite>>
 <<Min: 62.75 - 63.3 4% Min: Magnetite>> anhedral mt blebs
 <<Min: 67.85 - 71.07 6% Min: Magnetite>> discontinuous throughout
 <<Min: 69.93 - 72.33 2% Min: Sphalerite>>
 <<Min: 69.93 - 72.33 70% Min: Pyrite>>
 <<Min: 69.93 - 72.33 0.5% Min: Galena>>
 <<Min: 72.33 - 73.75 6% Min: Magnetite>> anhedral mt blebs
 <<Min: 72.33 - 76.3 5% Min: Sphalerite>>
 <<Min: 72.33 - 76.3 50% Min: Pyrite>>
 <<Min: 72.33 - 76.3 1.5% Min: Galena>>
 <<Min: 72.33 - 76.3 0.5% Min: Chalcopyrite>>
 <<Min: 75.8 - 76.3 10% Min: Magnetite>> anhedral mt blebs
 <<Struc: 62.6 - 62.6 Vein>> sphalerite banding
 <<Struc: 65.1 - 65.1 Vein>>
 <<Struc: 66.9 - 66.9 Vein>> qz-ab+/-cb

76.30 79.00 RHYc Rhyolite coherent volcanics

<<Alt: 76.3 - 79 Moderate-Strong (Alt) Muscovite>>
 <<Alt: 76.3 - 79 Moderate (Alt) Albite>>

79.00 80.22 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Min: 79 - 80.22 15% Min: Sphalerite>> bands 1-2cm
 <<Min: 79 - 80.22 50% Min: Pyrite>>
 <<Min: 79 - 80.22 4% Min: Galena>>
 <<Min: 79 - 80.22 1.5% Min: Chalcopyrite>>
 <<Alt: 79 - 86.6 Strong (Alt) Muscovite>>

80.22 85.20 RHYva Coarse grained to ash tuff

FG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
62.27	63.30	1.03	B00268132	78.5	0.746	0.23	0.86	8.04

63.30	64.30	1.00	B00268133	204	1.46	0.12	3.73	11.6
64.30	65.30	1.00	B00268134	91.3	1.06	0.21	1.34	7.07
65.30	66.30	1.00	B00268135	126	1.38	0.39	1.29	4.45
66.30	67.30	1.00	B00268136	115	1.61	0.2	2.25	5.54
67.30	68.30	1.00	B00268137	179	1.61	0.14	2.51	5.5
68.30	69.30	1.00	B00268138	140	2.59	0.27	1.4	9.05
69.30	70.30	1.00	B00268139	115	1.34	0.27	0.94	3.14
70.30	71.30	1.00	B00268142	99.7	1.4	0.51	0.68	2.85
71.30	72.30	1.00	B00268143	147	1.8	0.34	0.91	2.8
72.30	73.30	1.00	B00268144	217	2.25	0.2	1.06	6.66
73.30	74.30	1.00	B00268145	136	2.01	0.29	0.86	4.72
74.30	75.30	1.00	B00268146	341	2.86	0.35	2	5.79
75.30	76.30	1.00	B00268147	583	3.59	0.32	2.49	4.09

76.30	77.50	1.20	B00268148	6	0.09	0.01	0.03	0.08
77.50	79.00	1.50	B00268149	47.6	0.221	0.1	0.06	0.15

FMG

79.00	80.22	1.22	B00268151	448	3.28	0.38	6.12	11.9
-------	-------	------	-----------	-----	------	------	------	------

80.22	81.70	1.48	B00268152	18.8	0.089	0.01	0.27	0.63
-------	-------	------	-----------	------	-------	------	------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-272

From (m) To (m) Rocktype & Description

<<Min: 80.22 - 81.05 1% Min: Sphalerite>>

<<Min: 80.22 - 81.05 2% Min: Pyrite>> bands 1-2cm

<<Min: 80.22 - 81.05 0.2% Min: Galena>>

85.20 86.60 RHYc Rhyolite coherent volcanics

86.60 90.10 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Min: 86.6 - 90.1 3% Min: Sphalerite>>

<<Min: 86.6 - 90.1 60% Min: Pyrite>>

<<Min: 86.6 - 90.1 2% Min: Galena>>

<<Min: 86.6 - 90.1 2% Min: Chalcopryite>>

<<Min: 88.5 - 90.1 15% Min: Magnetite>>

90.10 91.30 OA Magnetite bearing sulphides

<<Min: 90.1 - 92 1% Min: Sphalerite>>

<<Min: 90.1 - 92 40% Min: Pyrite>>

<<Min: 90.1 - 92 5% Min: Pyrrhotite>>

<<Min: 90.1 - 92 2% Min: Galena>>

<<Min: 90.1 - 92 3% Min: Chalcopryite>>

91.30 92.00 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

92.00 93.20 OH Fine grained, megascopically homogeneous pyrite rock

92 - 93.2: non-magnetic, OB with cataclastic txt overprint (mortar texture)

<<Min: 92 - 95.5 80% Min: Pyrite>>

<<Struc: 92 - 95.8 Strong (Alt) Fault>>

93.20 98.03 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Min: 95.5 - 98.03 5% Min: Sphalerite>>

<<Min: 95.5 - 98.03 60% Min: Pyrite>>

<<Min: 95.5 - 98.03 3% Min: Galena>>

<<Min: 95.5 - 98.03 3% Min: Chalcopryite>>

FMG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
81.70	83.20	1.50	B00268153	0.4	0.02	-0.01	-0.01	-0.01
83.20	84.70	1.50	B00268154	2.2	0.023	-0.01	0.02	0.05
84.70	86.00	1.30	B00268155	3.2	0.013	-0.01	0.07	0.22
86.00	86.60	0.60	B00268156	0.5	0.006	-0.01	-0.01	0.01
86.60	87.60	1.00	B00268157	183	1.79	0.43	3.48	9.21

MG

87.60	88.60	1.00	B00268158	107	1.36	0.4	1.65	10.1
88.60	89.60	1.00	B00268159	83	1.32	0.42	0.69	7.02
89.60	90.10	0.50	B00268161	72.2	1.15	0.21	0.75	10.9
90.10	90.95	0.85	B00268162	72.1	1.27	0.59	1.5	9.36
90.95	91.45	0.50	B00268163	59.3	0.239	0.21	2.15	9.33

MG

91.45	92.45	1.00	B00268164	159	1.25	0.42	2.49	9.13
-------	-------	------	-----------	-----	------	------	------	------

MG

92.45	93.45	1.00	B00268165	135	1.19	0.35	2.23	9.37
-------	-------	------	-----------	-----	------	------	------	------

MG

93.45	95.00	1.55	B00268166	115	0.662	0.21	2.7	10.1
-------	-------	------	-----------	-----	-------	------	-----	------

95.00	95.45	0.45	B00268167	135	1.13	0.37	3.34	8.6
95.45	96.45	1.00	B00268168	106	0.71	0.19	2.76	8.2
96.45	97.45	1.00	B00268169	97.6	0.634	0.16	2.6	6.23
97.45	98.03	0.58	B00268171	526	5.63	1.64	3.16	8.53



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-272
From (m) **To (m)** **Rocktype & Description**

<<Vein: 95.6 - 97.7 Quartz-Carbonate>> associated with fault bx texture - forms mosaic bx.

98.03 100.40 RHYvl Lapilli tuff

<<Min: 98.03 - 101 0.5% Min: Sphalerite>>

<<Min: 98.03 - 101 1% Min: Pyrite>>

<<Min: 98.03 - 101 0.2% Min: Galena>>

<<Alt: 98.03 - 101 Weak-Moderate (Alt) Muscovite>>

<<Struc: 98.03 - 98.3 Moderate (Alt) Fault>>

100.40 102.50 RHYcw Curdy textured-flow banded (flows, subvolcanics)
102.50 103.70 RHYvl Lapilli tuff

<<Vein: 103 - 103.2 Quartz>>

103.70 105.60 RHYcw Curdy textured-flow banded (flows, subvolcanics)
105.60 107.50 RHYvl Lapilli tuff

<<Vein: 105.95 - 107.2 Quartz>>

<<Struc: 105.6 - 105.6 Foliation>>

<<Struc: 106.6 - 106.6 Foliation>>

107.50 111.80 RHYcw Curdy textured-flow banded (flows, subvolcanics)

<<Vein: 111.1 - 111.75 Quartz>>

111.80 113.36 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

111.8 - 113.36: blk-grn /w euhedral c.g. diss py.Bi after cl.

<<Min: 111.8 - 113.3 5% Min: Pyrite>> coarse grained euhedral py

<<Min: 111.8 - 113.3 1% Min: Chalcopyrite>>

<<Min: 113.3 - 116.2 0.5% Min: Pyrite>>

<<Min: 113.3 - 116.2 0.5% Min: Galena>>

<<Vein: 113 - 116.15 Quartz>>

113.36 117.50 RHYcw Curdy textured-flow banded (flows, subvolcanics)

<<Min: 116.2 - 128 0.5% Min: Sphalerite>> bands of sphalerite and galena

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

98.03	99.00	0.97	B00268172	10.3	0.08	0.01	0.18	0.31
-------	-------	------	-----------	------	------	------	------	------

99.00	100.50	1.50	B00268173	11.2	0.041	-0.01	0.11	0.13
-------	--------	------	-----------	------	-------	-------	------	------

100.50	102.00	1.50	B00268174	4.5	0.019	-0.01	0.02	0.04
--------	--------	------	-----------	-----	-------	-------	------	------

102.00	103.50	1.50	B00268175	-0.3	-0.005	-0.01	-0.01	-0.01
--------	--------	------	-----------	------	--------	-------	-------	-------

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-272

From (m)		To (m)		Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 116.2 - 128 0.5% Min: Pyrite>>														
117.50		121.00		MAFi		Mafic Intrusions (primarily footwall mafic intrusion)								
<<Struc: 119.54 - 119.54 Foliation>>														
<<Struc: 120.7 - 120.7 Foliation>>														
121.00		126.60		RHYcw		Curdy textured-flow banded (flows, subvolcanics)								
121 - 126.6: Diffuse upper and lower contacts. Cr mica throughout.														
<<Struc: 122.2 - 122.2 Foliation>>														
<<Struc: 123.23 - 123.23 Foliation>>														
<<Struc: 124.6 - 124.6 Vein>>														
126.60		128.00		MAFi		Mafic Intrusions (primarily footwall mafic intrusion)								
End of Hole @ 128														

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-273

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	24-Sep-15
UTM Easting	415051.003	Core Size:	NQ3	Azimuth:	179.13	Date Logging Complete:	25-Sep-15
UTM Northing:	6815507.074	Casing Pulled?:	Yes	Dip:	-77	Drill Company:	Geotech
UTM Elev. (m):	1382.272	Casing Depth (m):	15	Length (m):	149	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	23-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	25-Sep-15
Local Elev. (m):						Purpose:	Resource/Met
Comments:						Parent Hole:	

K15-273 was drilled to confirm the resource intercept of historic hole K95-070. Metallurgical twin hole K15-275 was drilled to collect samples of MET3, MET8, and MET8 domains. Overburden was encountered to a depth of 14.7 m. The hanging wall stratigraphy (14.7-91.2 m) consists of mixed felsic volcanics with one carbonaceous horizon. Moderate to strong MU alteration is present from 50-91.2 m and is associated with disseminated CI porphyroblasts proximal to the MSXS. MSXS was encountered from 91.2-111.4 m, consisting of OG, OA, OB, OI, OC, and OJ ore types. The CL-CA-BI schist (MAFi) occurs from 111.4-117.3 m. MAFi is MU-altered proximal to the MSXS and has local CL+PO+CP stringer zones from 116.6-117 m. The lower contact of the MAFi is MU+SI altered from the later RHYi, which is encountered from 117.3-149 m (EOH).

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-77	179.13	0	179.13	APS	Dillon Hume	23-Sep-15		<input checked="" type="checkbox"/>	
20	-75	161.2	22.5	183.7	ReflexEVS	Geotech	23-Sep-15	5852	<input checked="" type="checkbox"/>	
50	-73.9	156.7	22.5	179.2	ReflexEVS	Geotech	23-Sep-15	5765	<input checked="" type="checkbox"/>	
80	-73.4	162.4	22.5	184.9	ReflexEVS	Geotech	23-Sep-15	5606	<input checked="" type="checkbox"/>	
110	-73	159.1	22.5	181.6	ReflexEVS	Geotech	24-Sep-15	6068	<input checked="" type="checkbox"/>	
140	-73	359.9	22.5	22.4	ReflexEVS	Geotech	24-Sep-15	5204	<input type="checkbox"/>	Values not accepted, low magnetic field
149	-72.8	167.9	22.5	190.4	ReflexEVS	Geotech	25-Sep-15	5780	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	14.70	OVB									
14.70	16.80	RHYcw									
Overburden Curdy textured-flow banded (flows, subvolcanics)											
14.7 - 16.8: Good curdy rhyolite											
<<Min: 14.7 - 41.1 2% Min: Pyrite>>											
<<Min: 14.7 - 41.1 1% Min: Pyrrhotite>>											
<<Min: 14.7 - 103 0.5% Min: Calcite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-273

From (m)			To (m)			Rocktype & Description			From (m)			To (m)			Width			Sample			Ag PPM			Au PPM			Cu %			Pb %			Zn %		
16.80			41.10			RHYvl Lapilli tuff																													
16.8 - 41.1: Unit dominated by felsic and PY lpl within a MU+QZ groundmass. Local coherent textures (curdy or flow banded).																																			
41.10			44.10			MDSr Rhyolite tuff dominant mudstone																													
41.1 - 44.1: rhyolitic tuff with ~30% carbonaceous material																																			
<<Min: 41.1 - 44.1 5% Min: Pyrrhotite>>																																			
44.10			50.00			RHYvl Lapilli tuff																													
44.1 - 50: rhyolitic and PY lpl within a MU+QZ groundmass																																			
<<Min: 44.1 - 90.2 2% Min: Pyrite>>																																			
<<Min: 44.1 - 90.2 2% Min: Pyrrhotite>>																																			
50.00			91.20			RHYcw Curdy textured-flow banded (flows, subvolcanics)																													
50 - 91.2: siliceous banding within a MU+QZ groundmass. Unit has flow banded texture. Strongly altered (obscuring the texture) from 86.2-91.2 m.																																			
<<Min: 90.2 - 91.2 5% Min: Pyrrhotite>>																																			
<<Min: 90.2 - 91.2 3% Min: Chalcopyrite>>																																			
<<Alt: 50 - 76.5 Moderate (Alt) Muscovite>>																																			
<<Alt: 76.5 - 91.2 Strong (Alt) Muscovite>>																																			
<<Alt: 84 - 91.2 Weak (Alt) Chlorite>>																																			
<<Alt: 86.2 - 86.3 Moderate (Alt) Cordierite>>																																			
<<Alt: 90.2 - 90.9 Strong (Alt) Albite>>																																			
<<Alt: 90.7 - 91.2 Strong (Alt) Cordierite>>																																			
<<Struc: 63.1 - 63.7 Moderate (Alt) Fault>> moderately faulted with local fault gouge																																			
<<Struc: 83.01 - 83.02 dominant foliation>>																																			
91.20			93.00			OG Chalcopyrite rich sulphides			CG																										
91.2 - 93: CP+PO+PY net texture with cg disseminated MG. (CP ~40%)																																			
<<Min: 91.2 - 93 40% Min: Chalcopyrite>>																																			
<<Min: 91.2 - 100 10% Min: Pyrrhotite>>																																			

85.70	87.20	1.50	B00268842	-0.3	-0.005	-0.01	-0.01	-0.01
-------	-------	------	-----------	------	--------	-------	-------	-------

87.20	88.70	1.50	B00268843	-0.3	0.01	-0.01	-0.01	0.02
88.70	90.20	1.50	B00268844	2.1	-0.005	-0.01	0.04	0.06
90.20	91.20	1.00	B00268845	20.7	0.048	0.52	0.03	0.17

91.20	92.20	1.00	B00268846	240	4.51	12.2	0.05	2.53
-------	-------	------	-----------	-----	------	------	------	------

92.20	93.00	0.80	B00268847	265	2.52	10.7	0.09	2
-------	-------	------	-----------	-----	------	------	------	---

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-273
From (m) **To (m)** **Rocktype & Description**
93.00 97.80 OA Magnetite bearing sulphides
MCG

93 - 97.8: Massive PY+PO+CP+MG. Locally the grain size is increased associated with bands of CL.

<<Min: 93 - 100 5% Min: Chalcopyrite>>

<<Struc: 94.1 - 94.11 dominant foliation>> sulphide lamination

<<Struc: 94.7 - 94.71 dominant foliation>> sulphide lamination

<<Struc: 97.6 - 97.61 dominant foliation>> sulphide lamination

**97.80 108.00 OB Wispy laminate, fine
buckshot textured, non-
magnetite bearing sulphides**
MCG

97.8 - 108: Unit grades from massive PY+/-MG+/-PO+/-CP+/-SP near the top to massive PY+SP+GL+CA near the bottom.

<<Min: 103 - 109.3 2% Min: Calcite>>

<<Min: 106.4 - 107.2 30% Min: Sphalerite>>

<<Min: 106.4 - 107.2 10% Min: Galena>>

**108.00 108.70 OI Heavily disseminated
sulphides in host schist**

108 - 108.7: Heavily disseminated PY+SP+GL within intensely altered Mu schist

<<Alt: 108 - 108.7 Intense (Alt) Muscovite>>

**108.70 109.30 OB Wispy laminate, fine
buckshot textured, non-
magnetite bearing sulphides**
MCG

108.7 - 109.3: laminated PY+SP+GL with cg PY buckshot texture

<<Min: 108.7 - 109.3 20% Min: Sphalerite>>

<<Min: 108.7 - 109.3 5% Min: Galena>>

<<Struc: 108.85 - 108.86 dominant foliation>> sulphide lamination

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
93.00	94.00	1.00	B00268848	115	1.09	3.27	0.18	4.46

94.00	95.00	1.00	B00268849	220	1.86	4.18	0.37	3.04
95.00	96.00	1.00	B00268852	161	2.07	5.14	0.3	1.56
96.00	97.00	1.00	B00268853	140	2.04	4.51	0.21	2.35
97.00	97.80	0.80	B00268854	112	1.65	3.93	0.09	1.45
97.80	98.80	1.00	B00268855	38.3	0.556	1.21	0.13	2.1

98.80	99.80	1.00	B00268856	79.6	0.881	1.67	0.45	1.67
99.80	100.80	1.00	B00268857	69.3	0.528	0.63	0.63	1.26
100.80	101.80	1.00	B00268858	50.3	0.553	0.65	0.3	1.21
101.80	102.60	0.80	B00268859	47.8	0.626	0.74	0.22	2.25
102.60	103.50	0.90	B00268861	78.9	0.723	0.41	0.95	2.2
103.50	104.40	0.90	B00268862	93.4	1.44	0.29	0.69	5.59
104.40	105.40	1.00	B00268863	148	2.77	0.36	1.2	6.2
105.40	106.40	1.00	B00268864	46.9	1.39	0.14	0.74	5.59
106.40	107.20	0.80	B00268865	340	2.3	0.45	5.75	15.5
107.20	108.00	0.80	B00268866	300	2.64	0.75	2.14	6.98
108.00	108.70	0.70	B00268867	101	1.13	0.29	0.37	1.94

108.70	109.30	0.60	B00268868	184	0.427	0.17	4.46	15.2
--------	--------	------	-----------	-----	-------	------	------	------

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-273

From (m) To (m) Rocktype & Description

109.30 109.90 OC Chalcopyrite-pyrrhotite net textured sulphides

109.3 - 109.9: Massive PO net textured with blebs of CP+/-AS+/-TT with disseminated cg MG

<<Min: 109.3 - 109.9 60% Min: Pyrrhotite>>

<<Min: 109.3 - 109.9 5% Min: Chalcopyrite>>

<<Min: 109.3 - 109.9 5% Min: Arsenopyrite>>

<<Alt: 109.6 - 111.4 Moderate (Alt) Chlorite>>

109.90 111.40 OJ Heavily disseminated sulphides in proximal altered rock

109.9 - 111.4: Dark green-black CL+Talc (?) schist with stringers of PY+SP+/-GL

111.40 117.30 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

111.4 - 117.3: CL+CA+BI schist with pervasive foliation

<<Min: 111.4 - 116.6 0.5% Min: Pyrrhotite>>

<<Min: 111.4 - 117.3 20% Min: Calcite>>

<<Min: 116.6 - 117.1 5% Min: Pyrrhotite>>

<<Min: 116.6 - 117.1 3% Min: Chalcopyrite>>

<<Min: 117.1 - 149 1% Min: Sphalerite>>

<<Min: 117.1 - 149 2% Min: Pyrite>>

<<Alt: 111.4 - 111.7 Moderate (Alt) Muscovite>>

<<Alt: 111.7 - 117 Strong (Alt) Chlorite>>

<<Alt: 111.7 - 117 Strong (Alt) Biotite>>

<<Alt: 116.6 - 117 Strong (Alt) Chlorite>> Bands of intense CL-alteration associated with PO+CP mineralization

<<Alt: 117 - 117.3 Strong (Alt) Silicification>> alteration associated with RH Yi

<<Alt: 117 - 117.3 Strong (Alt) Muscovite>> alteration associated with RH Yi

<<Struc: 113.1 - 113.11 dominant foliation>> continuous foliation defined by elongated CA+CL+BI

117.30 149.00 RHYi Aphanitic Rhyolite (intrusion)

117.3 - 149: Light grey QZ+MU schist with continuous MU foliation from 117.3- ~125 m. From 125-149 m the unit is a light grey massive aphanitic rhyolite, with QZ amygdules. Fractures containing PY+SP throughout the unit.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
109.30	109.90	0.60	B00268869	137	2.58	1.04	2.6	8.52

109.90	110.80	0.90	B00268872	12.4	-0.005	0.08	0.23	1.38
--------	--------	------	-----------	------	--------	------	------	------

110.80	111.40	0.60	B00268873	29.7	0.013	0.14	0.81	4.33
111.40	112.90	1.50	B00268874	1.9	0.008	0.02	0.09	0.2

112.90	114.40	1.50	B00268875	0.5	-0.005	-0.01	-0.01	0.02
114.40	115.90	1.50	B00268876	0.3	-0.005	-0.01	-0.01	0.02
115.90	116.60	0.70	B00268877	-0.3	-0.005	-0.01	0.02	0.05
116.60	117.00	0.40	B00268878	13.6	0.071	0.89	0.01	0.31
117.00	118.50	1.50	B00268879	4.2	0.015	-0.01	0.08	0.11

118.50	120.00	1.50	B00268881	6.7	0.042	-0.01	0.04	0.09
--------	--------	------	-----------	-----	-------	-------	------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-273

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 117.3 - 149 5% Min: Calcite>>											
<<Vein: 127.5 - 127.7 90% Quartz>> Massive QZ-carb vein with cg recrystallized SP											
<<Vein: 133.4 - 133.9 95% Quartz>> Massive QZ vein											
<<Struc: 118 - 118.01 dominant foliation>> continuous MU foliation											
<<Struc: 124.4 - 124.41 dominant foliation>> continuous MU foliation											
End of Hole @ 149											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-274

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Trevor Rabb
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	24-Sep-15
UTM Easting	414675.436	Core Size:	NQ3	Azimuth:	180.5	Date Logging Complete:	25-Sep-15
UTM Northing:	6815455.273	Casing Pulled?:	Yes	Dip:	-70	Drill Company:	Geotech
UTM Elev. (m):	1425.019	Casing Depth (m):	7.5	Length (m):	128	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	23-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	25-Sep-15
Local Elev. (m):						Purpose:	Resource/Met
Comments:						Parent Hole:	

Parent hole for K15-276 (metallurgical twin hole). Upper portion of hole contains MDSw and MDSc and grades into RHYv and RHYc. Prior to intersecting the main ABM massive sulphide body, hole intersected perched lenses of massive sulphides and also stringer style mineralization (sub-economic?). MAFi was also intersected in footwall - similar to K15-272.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-70	180.5	0	180.5	APS	Trevor Rabb	23-Sep-15		<input type="checkbox"/>	
26	-69.6	156.3	22.5	178.8	ReflexEVS	Geotech	23-Sep-15	5822	<input checked="" type="checkbox"/>	
50	-69.3	166.6	22.5	189.1	ReflexEVS	Geotech	23-Sep-15	6109	<input type="checkbox"/>	Values not accepted, high magnetic field
74	-69.2	157.4	22.5	179.9	ReflexEVS	Geotech	24-Sep-15	5728	<input checked="" type="checkbox"/>	
101	-69.6	158.2	22.5	180.7	ReflexEVS	Geotech	24-Sep-15	5646	<input checked="" type="checkbox"/>	
125	-69.3	158.1	22.5	180.6	ReflexEVS	Geotech	24-Sep-15	5730	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	7.50	OVBN Overburden									
7.50	14.00	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
14.00	16.60	MDSc Carbonaceous dominant mudstone									
<<Min: 14 - 16.6 5% Min: Pyrite>> euhedral (diagenetic) py											
<<Struc: 14 - 16 Strong (Alt) Fault>> lost core, unconsolidated fault gouge.											
16.60	18.60	MDSw Coherent rhyolite flow with carbonaceous content									
18.60	22.80	RHYc Rhyolite coherent volcanics									



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-274

Rocktype & Description				From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 19 - 22.8 Weak (Alt) Muscovite>>												
22.80	24.00	MDS _c	Carbonaceous dominant mudstone	22.8 - 24: interbedded MDSt with MDS _c . Two deformed sequences of fining upward grading from MDS _c (<30cm) to MDSt (majority of interval).								
24.00	24.80	MDS _c	Carbonaceous dominant mudstone									
24.80	26.80	MDS _w	Coherent rhyolite flow with carbonaceous content	24.8 - 26.8: Flow textures become more dominant downhole. Significant carbonaceous component (15%) and wispy carbonaceous controlled sulphides.								
<<Min: 26 - 27 2% Min: Pyrite>>												
26.80	30.53	RHY _c	Rhyolite coherant volcanics	late quartz veining, interstitial to wall rock. Vein selvages and wallrock boundaries show early cpy mantled by po.								
30.53	34.10	MDS _w	Coherent rhyolite flow with carbonaceous content									
<<Min: 32 - 34.9 2% Min: Pyrite>>												
<<Min: 32 - 34.9 2% Min: Pyrrhotite>>												
<<Alt: 33.8 - 39.7 Weak-Moderate (Alt) Muscovite>>												
34.10	34.80	RHY _c	Rhyolite coherant volcanics	34.10 35.60 1.50 B00268176 1.6 0.011 -0.01 0.01 0.09								
34.80	39.70	RHY _v	Rhyolite volcanoclastic									
<<Min: 39.5 - 42 2% Min: Calcite>>												
<<Vein: 39.6 - 46.8 30% Quartz-Carbonate>>												
39.70 40.00 OI Heavilly disseminated sulphides in host schist												
<<Min: 39.7 - 44.7 1% Min: Pyrite>>												
<<Min: 39.7 - 44.7 1% Min: Pyrrhotite>>												
<<Min: 39.7 - 44.7 0.2% Min: Galena>> associated with cp+po												
<<Min: 39.7 - 44.7 1% Min: Chalcopyrite>> hosted in quartz veins and margins of intruded massive sulphides (xenoliths?)												
40.00	42.40	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)	40.60 41.60 1.00 B00268182 13.3 0.017 0.45 0.03 0.05								

34.10	35.60	1.50	B00268176	1.6	0.011	-0.01	0.01	0.09
35.60	37.10	1.50	B00268177	1	0.006	-0.01	-0.01	-0.01
37.10	38.60	1.50	B00268178	1.3	0.007	-0.01	-0.01	-0.01
38.60	39.60	1.00	B00268179	1.1	-0.005	-0.01	-0.01	0.01
39.60	40.60	1.00	B00268181	29.3	0.021	0.98	0.03	0.09

40.60	41.60	1.00	B00268182	13.3	0.017	0.45	0.03	0.05
-------	-------	------	-----------	------	-------	------	------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-274

From (m) To (m) Rocktype & Description

<<Min: 42 - 46.5 10% Min: Calcite>> calcite after cordierite

<<Struc: 41.8 - 41.81 dominant foliation>>

<<Struc: 41.81 - 41.82 Foliation>>

42.40 43.80 OI Heavily disseminated sulphides in host schist

<<Alt: 42.4 - 43.8 Moderate (Alt) Cordierite>> calcite after cordierite, patchy coarse grained throughout.

<<Struc: 43.09 - 43.1 Vein>>

43.80 44.30 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

44.30 44.70 OI Heavily disseminated sulphides in host schist

44.70 46.50 RHY undifferentiated rhyolite

<<Min: 44.7 - 46.5 0.1% Min: Pyrite>>

<<Min: 44.7 - 46.5 0.5% Min: Pyrrhotite>>

<<Min: 44.7 - 46.5 0.1% Min: Galena>>

<<Min: 44.7 - 46.5 0.2% Min: Chalcopryrite>>

<<Alt: 44.7 - 46.5 Moderate-Strong (Alt) Chlorite>>

46.50 49.10 RHYv Rhyolite volcaniclastic

<<Min: 46.5 - 51 2% Min: Calcite>>

<<Alt: 46.5 - 59 Moderate (Alt) Muscovite>>

49.10 49.30 OI Heavily disseminated sulphides in host schist

49.30 52.35 RHYv Rhyolite volcaniclastic

52.35 52.55 MDSc Carbonaceous dominant mudstone

52.35 - 52.55: discrete interval of graphitic MDSc. Sharp LCT, convoluted UCT.

52.55 56.20 MDSt Rhyolite tuff dominant mudstone

<<Alt: 54.5 - 59 Strong (Alt) Albite>>

<<Struc: 54.75 - 56.25 Weak-Moderate (Alt) Fault>> unconsolidated fault gouge

56.20 57.30 RHYc Rhyolite coherent volcanics

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
41.60	42.40	0.80	B00268183	8.4	0.009	0.29	0.01	0.05

42.40	43.80	1.40	B00268184	37.2	0.102	1.5	0.21	0.52
-------	-------	------	-----------	------	-------	-----	------	------

43.80	44.70	0.90	B00268185	36.2	0.149	0.77	0.8	1.9
-------	-------	------	-----------	------	-------	------	-----	-----

44.70	45.70	1.00	B00268186	7.8	0.036	0.39	0.02	0.07
-------	-------	------	-----------	-----	-------	------	------	------

45.70	46.50	0.80	B00268187	6.1	0.031	0.2	0.03	0.06
-------	-------	------	-----------	-----	-------	-----	------	------

46.50	47.50	1.00	B00268188	1.1	0.006	-0.01	0.01	0.02
-------	-------	------	-----------	-----	-------	-------	------	------

47.50	48.50	1.00	B00268189	0.8	-0.005	-0.01	-0.01	-0.01
-------	-------	------	-----------	-----	--------	-------	-------	-------

48.50	50.00	1.50	B00268191	0.7	0.025	-0.01	-0.01	0.01
-------	-------	------	-----------	-----	-------	-------	-------	------

50.00	51.50	1.50	B00268192	48.8	0.31	0.17	0.02	0.04
-------	-------	------	-----------	------	------	------	------	------

51.50	52.55	1.05	B00268193	0.8	0.01	-0.01	-0.01	-0.01
-------	-------	------	-----------	-----	------	-------	-------	-------

52.55	54.00	1.45	B00268194	2.3	0.015	-0.01	0.01	0.02
-------	-------	------	-----------	-----	-------	-------	------	------

54.00	56.00	2.00	B00268195	1.8	0.012	-0.01	-0.01	-0.01
-------	-------	------	-----------	-----	-------	-------	-------	-------

56.00	57.50	1.50	B00268196	1.7	0.012	-0.01	0.01	0.02
-------	-------	------	-----------	-----	-------	-------	------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-274

From (m) To (m) Rocktype & Description

<<Struc: 57 - 57.5 Weak (Alt) Fault>> consolidated fault gouge

57.30 59.00 RHYv Rhyolite volcanoclastic

59.00 60.10 OA Magnetite bearing sulphides

<<Min: 59 - 60.1 4% Min: Sphalerite>>

<<Min: 59 - 60.1 2% Min: Chalcopyrite>>

<<Min: 59 - 61 40% Min: Pyrite>>

<<Min: 59 - 61 10% Min: Pyrrhotite>>

60.10 61.00 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Min: 60.1 - 61 2% Min: Galena>>

61.00 62.80 OA Magnetite bearing sulphides

<<Min: 61 - 62.8 2% Min: Sphalerite>>

<<Min: 61 - 62.8 30% Min: Pyrite>>

<<Min: 61 - 62.8 10% Min: Pyrrhotite>>

<<Min: 61 - 62.8 0.5% Min: Chalcopyrite>>

62.80 64.70 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Min: 62.8 - 63.5 5% Min: Magnetite>> 1-5mm aggregates of mt. wains towards end of interval.

<<Min: 62.8 - 66 8% Min: Sphalerite>>

<<Min: 62.8 - 66 3% Min: Galena>>

<<Min: 62.8 - 66 2% Min: Chalcopyrite>>

<<Struc: 64.12 - 64.13 dominant foliation>>

64.70 66.00 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Struc: 65.58 - 65.59 dominant foliation>>

66.00 74.10 RHYcw Curdy textured-flow banded (flows, subvolcanics)

<<Min: 66 - 81.05 5% Min: Sphalerite>> vein controlled

<<Min: 66 - 81.05 0.2% Min: Chalcopyrite>>

<<Alt: 66 - 74.1 Strong (Alt) Muscovite>>

FMG

FG

FG

FG

MG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
57.50	59.00	1.50	B00268197	8.3	0.057	0.27	0.07	0.43
59.00	60.10	1.10	B00268198	88.6	0.898	1.3	1.12	10
60.10	61.00	0.90	B00268199	70.8	0.296	0.26	0.91	11.4
61.00	62.00	1.00	B00268202	62.3	0.675	0.99	0.67	5.52
62.00	62.80	0.80	B00268203	97.6	0.662	0.52	1.74	5.56
62.80	64.00	1.20	B00268204	138	1.32	0.61	0.94	6.63
64.00	65.00	1.00	B00268205	269	3.73	0.6	2.92	11.1
65.00	66.00	1.00	B00268206	350	2.61	0.4	3.1	10
66.00	67.50	1.50	B00268207	30.5	0.466	0.06	0.19	0.69
67.50	69.00	1.50	B00268208	18	0.2	0.08	0.02	0.08
69.00	70.50	1.50	B00268209	6.5	0.136	0.16	0.02	0.21
70.50	72.00	1.50	B00268211	8.1	0.097	0.18	0.03	0.03



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-274

From (m) To (m) Rocktype & Description

<<Alt: 72.6 - 74.1 Moderate-Strong (Alt) Cordierite>>

<<Vein: 66.5 - 68.8 10% Quartz>> irregular quartz carbonate veining

<<Vein: 66.5 - 74.1 60% Quartz-Carbonate>>

<<Vein: 72.03 - 72.3 100% Quartz>>

<<Struc: 66.8 - 66.9 Weak (Alt) Fault>> consolidated fault gouge

74.10 81.05 RHY undifferentiated rhyolite

74.1 - 81.05: dk-med green - tan, pervasive chlorite altered, pervasive cordierite porphyroblasts (coarse grained, anhedral), variably mixed with underlying rock type towards LCT and UCT (RHYc + RHYv). Chaotic texture throughout.

<<Alt: 74.1 - 80.2 Strong (Alt) Cordierite>>

<<Alt: 74.1 - 84.4 Moderate-Strong (Alt) Muscovite>>

<<Alt: 74.1 - 84.4 Moderate-Strong (Alt) Chlorite>> Pervasive chlorite alteration, wains uphole and downhole

<<Vein: 75.8 - 76.35 100% Quartz>>

<<Vein: 77.3 - 78.2 100% Quartz>>

<<Struc: 77.1 - 77.11 dominant foliation>>

<<Struc: 78.24 - 78.25 dominant foliation>>

<<Struc: 78.43 - 78.44 dominant foliation>>

<<Struc: 78.49 - 78.5 dominant foliation>>

<<Struc: 78.68 - 78.69 dominant foliation>>

<<Struc: 80.34 - 80.35 dominant foliation>>

81.05 84.40 RHYvl Lapilli tuff

<<Vein: 83.9 - 84.4 85% Quartz>>

<<Struc: 82.76 - 82.77 dominant foliation>>

<<Struc: 83.12 - 83.13 dominant foliation>>

84.40 94.40 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Min: 84.4 - 86.5 3% Min: Sphalerite>>

<<Min: 84.4 - 86.5 60% Min: Pyrite>>

<<Min: 84.4 - 86.5 2% Min: Galena>>

<<Min: 86.5 - 90.5 15% Min: Sphalerite>>

<<Min: 86.5 - 90.5 5% Min: Galena>>

<<Min: 86.5 - 90.5 5% Min: Chalcopyrite>>

<<Min: 86.5 - 90.6 50% Min: Pyrite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
72.00	73.50	1.50	B00268212	0.7	0.034	-0.01	-0.01	0.03
73.50	74.10	0.60	B00268213	0.4	-0.005	-0.01	-0.01	0.02

74.10	75.50	1.40	B00268214	9.2	0.119	0.19	0.01	0.03
-------	-------	------	-----------	-----	-------	------	------	------

75.50	77.00	1.50	B00268215	1.2	0.012	0.01	0.01	0.03
77.00	78.50	1.50	B00268216	2.8	0.012	0.02	0.02	0.05
78.50	80.00	1.50	B00268217	0.8	-0.005	-0.01	0.01	0.03
80.00	81.50	1.50	B00268218	0.5	-0.005	-0.01	-0.01	0.02

81.50	83.00	1.50	B00268219	1	0.013	-0.01	-0.01	0.01
83.00	84.40	1.40	B00268221	0.5	0.341	-0.01	-0.01	0.02

84.40	85.40	1.00	B00268222	165	3.42	0.52	1.67	10.6
-------	-------	------	-----------	-----	------	------	------	------

85.40	86.40	1.00	B00268223	149	1.94	0.39	2	14.1
86.40	87.40	1.00	B00268224	209	1.85	0.31	5.04	13.9
87.40	88.40	1.00	B00268225	293	2.08	0.5	7.28	14.3
88.40	89.40	1.00	B00268226	181	2.06	0.26	4.22	8.68
89.40	90.40	1.00	B00268227	154	2.1	1.44	3.87	18.7
90.40	91.40	1.00	B00268228	122	1.15	0.29	4.05	7.87
91.40	92.40	1.00	B00268229	128	1.56	0.52	3.05	8.93

FMG



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-274

From (m) To (m) Rocktype & Description

<<Min: 90.6 - 96 5% Min: Sphalerite>>

<<Min: 90.6 - 96 65% Min: Pyrite>>

<<Min: 90.6 - 96 2% Min: Galena>>

<<Min: 90.6 - 96 1% Min: Chalcopryite>>

<<Struc: 87.72 - 87.73 dominant foliation>>

<<Struc: 88.73 - 88.74 dominant foliation>>

<<Struc: 89.9 - 89.91 dominant foliation>>

<<Struc: 91.96 - 91.97 dominant foliation>>

<<Struc: 93.86 - 93.87 dominant foliation>>

94.40 95.50 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

FG

95.50 98.80 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

FG

<<Min: 95.5 - 98.8 5% Min: Calcite>> veinlets

<<Min: 96 - 98.8 10% Min: Sphalerite>>

<<Min: 96 - 98.8 40% Min: Pyrite>>

<<Min: 96 - 98.8 5% Min: Galena>>

<<Min: 96 - 98.8 1% Min: Chalcopryite>>

<<Struc: 96.72 - 96.73 dominant foliation>>

<<Struc: 97.92 - 97.93 dominant foliation>>

98.80 102.90 RHYv Rhyolite volcaniclastic

VFG

<<Alt: 98.8 - 107.65 Weak (Alt) Muscovite>>

<<Struc: 98.8 - 99 Weak-Moderate (Alt) Fault>> soft unconsolidated gouge

<<Struc: 101.3 - 101.5 Moderate (Alt) Fault>> soft unconolsidated gouge

102.90 105.20 RHYc Rhyolite coherant volcanics

<<Min: 105 - 105.8 5% Min: Pyrite>>

<<Vein: 103.3 - 106.86 20% Quartz-Carbonate>>

105.20 107.40 RHYv Rhyolite volcaniclastic

<<Struc: 106.97 - 106.98 dominant foliation>>

107.40 107.65 RHYi Aphanitic Rhyolite (intrusion)

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
92.40	93.40	1.00	B00268231	82.5	0.934	0.35	1.79	8.86
93.40	94.40	1.00	B00268232	108	1.38	0.56	1.66	4.97

94.40	95.50	1.10	B00268233	211	2.54	0.89	2.06	3.56
-------	-------	------	-----------	-----	------	------	------	------

95.50	96.50	1.00	B00268234	112	0.92	0.34	3.3	8.42
-------	-------	------	-----------	-----	------	------	-----	------

96.50	97.50	1.00	B00268235	124	1.28	0.39	3.69	8.81
97.50	98.25	0.75	B00268236	149	1.12	0.36	3.35	8.01
98.25	98.80	0.55	B00268237	136	0.684	0.1	3.17	9.79

98.80	101.00	2.20	B00268238	17.4	0.087	0.01	0.25	0.93
101.00	102.50	1.50	B00268239	1.7	0.012	-0.01	0.03	0.07
102.50	104.00	1.50	B00268241	1	0.009	-0.01	0.02	0.05

104.00	105.50	1.50	B00268242	1.1	0.007	-0.01	0.01	0.02
--------	--------	------	-----------	-----	-------	-------	------	------

105.50	107.00	1.50	B00268243	8.4	0.052	-0.01	0.1	0.16
--------	--------	------	-----------	-----	-------	-------	-----	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-274

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
107.65	108.30	MAFi Mafic Intrusions (primarily footwall mafic intrusion) <<Min: 107.65 - 116.5 10% Min: Calcite>>									
108.30	111.20	RHYi Aphanitic Rhyolite (intrusion) <<Vein: 111 - 111.2 85% Quartz>> qz+wallrock <<Struc: 108.3 - 108.31 dominant foliation>> <<Struc: 110.8 - 110.81 dominant foliation>>									
111.20	111.75	MAFi Mafic Intrusions (primarily footwall mafic intrusion) <<Alt: 111.2 - 111.75 Moderate (Alt) Chlorite>>									
111.75	114.60	RHYi Aphanitic Rhyolite (intrusion) <<Alt: 111.75 - 114.6 Weak (Alt) Muscovite>> patchy cr-mica, becomes str towards LCT <<Struc: 112.69 - 112.7 dominant foliation>>									
114.60	115.85	MAFi Mafic Intrusions (primarily footwall mafic intrusion) <<Alt: 114.6 - 115.85 Moderate (Alt) Chlorite>>									
115.85	116.50	RHYi Aphanitic Rhyolite (intrusion)									
116.50	128.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion) <<Min: 116.5 - 128 20% Min: Calcite>> <<Alt: 116.5 - 117.7 Moderate (Alt) Chlorite>> <<Alt: 117.7 - 118.6 Moderate (Alt) Muscovite>> cr-mica <<Alt: 118.6 - 119.35 Moderate (Alt) Chlorite>> <<Alt: 119.35 - 121.5 Moderate (Alt) Muscovite>> cr-mica <<Alt: 121.5 - 128 Moderate (Alt) Chlorite>> <<Vein: 125.13 - 125.5 90% Chlorite>> <<Struc: 118.32 - 118.33 dominant foliation>>									
End of Hole @ 128											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-275

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	27-Sep-15
UTM Easting	415051.127	Core Size:	HQ3	Azimuth:	180.75	Date Logging Complete:	29-Sep-15
UTM Northing:	6815507.001	Casing Pulled?:	Yes	Dip:	-71.5	Drill Company:	Geotech
UTM Elev. (m):	1382.274	Casing Depth (m):	9	Length (m):	122	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	25-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	29-Sep-15
Local Elev. (m):						Purpose:	Metallurgical Twin
Comments:						Parent Hole:	K15-273

K15-275 was drilled as a metallurgical twin of K15-273 in order to collect samples of the MET8, MET3, and MET7 domains. The hanging wall package (9.7-91.1 m) consists of mixed felsic volcanics with a mudstone horizon from 41.8-43.7 m. Strong MU-alteration became visible at ~47.5 m and graded into stronger CL+CI in the ore zone. MSXS was encountered from 91.1-109 m, consisting of OJ, OC, OA, OF, and OB. In the footwall there is a rhyolitic volcanoclastic unit from 109-110.4, a CL-CA-BI schist (MAFi) from 110.4-116.8 m, and RHYi from 116.8-122 m (EOH). A local band of CL-alteration with SP and PO+PY+CP stringers is present within the MAFi unit.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-71.5	180.75	0	180.75	APS	Dillon Hume	25-Aug-15		<input checked="" type="checkbox"/>	
17	-72	157.3	22.5	179.8	ReflexEVS	Geotech	25-Aug-15	5803	<input checked="" type="checkbox"/>	
47	-71.3	157.2	22.5	179.7	ReflexEVS	Geotech	26-Aug-15	5724	<input checked="" type="checkbox"/>	
77	-70.9	161.1	22.5	183.6	ReflexEVS	Geotech	26-Aug-15	5725	<input checked="" type="checkbox"/>	
107	-70.4	177.3	22.5	199.8	ReflexEVS	Geotech	28-Aug-15	5713	<input checked="" type="checkbox"/>	
122	-70.7	163.8	22.5	186.3	ReflexEVS	Geotech	28-Aug-15	5821	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	9.70	OVBN Overburden									
9.70	14.40	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
9.7 - 14.4: Medium grey, flow banded rhyolite with MU+QZ groundmass											
<<Min: 9.7 - 41.8 3% Min: Pyrite>>											
<<Min: 9.7 - 41.8 1% Min: Pyrrhotite>>											
<<Min: 9.7 - 98.8 0.5% Min: Calcite>> trace CA											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-275

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
14.40	15.70	RHYvl Lapilli tuff 14.4 - 15.7: rhyolitic and minor lithic lpl within a QZ+MU groundmass									
15.70	24.40	RHYcw Curdy textured-flow banded (flows, subvolcanics) 15.7 - 24.4: Good curdy and flow banded rhyolite with local zones of volcanoclastic textures <<Alt: 15.7 - 33.3 Weak (Alt) Muscovite>>									
24.40	29.00	RHYvl Lapilli tuff 24.4 - 29: Unit is dominated by rhyolitic and lithic lpl within a QZ+MU groundmass, but locally displays flow banded or curdy textures									
29.00	29.80	RHYcw Curdy textured-flow banded (flows, subvolcanics) 29 - 29.8: Good curdy and flow banded rhyolite									
29.80	35.20	RHYvl Lapilli tuff 29.8 - 35.2: Unit is dominated by rhyolitic and lithic lpl within a MU+QZ groundmass <<Alt: 33.3 - 47.5 Moderate (Alt) Muscovite>>									
35.20	41.80	RHYcw Curdy textured-flow banded (flows, subvolcanics) 35.2 - 41.8: Good curdy and flow banded rhyolite with local volcanoclastic textures (lpl)									
41.80	43.70	MDS Sc Carbonaceous dominant mudstone 41.8 - 43.7: Carbonaceous mudstone with ~40-50% tuffaceous material <<Min: 41.8 - 43.7 4% Min: Pyrrhotite>>									
43.70	47.50	RHYv Rhyolite volcanoclastic 43.7 - 47.5: Tuffaceous rhyolite with minor rhyolitic lpl <<Min: 43.7 - 91.1 2% Min: Pyrite>> <<Min: 43.7 - 91.1 3% Min: Pyrrhotite>>									

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-275

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
47.50	91.10	RHYcw Curdy textured-flow banded (flows, subvolcanics)	86.10	87.10	1.00						
47.5 - 91.1: Unit is dominated by rhyolitic flow bands with yellow-green MU cleavages											
<<Alt: 47.5 - 91.1 Strong (Alt) Muscovite>>											
<<Vein: 77.5 - 78.2 25% Quartz>> QZ-TML vein at a high angle to core axis											
<<Vein: 87.1 - 88.8 30% Quartz>> Zone of QZ veining											
<<Struc: 54.6 - 57 Fault>> weak-moderately fractured rhyolite											
91.10	92.00	OJ Heavily disseminated sulphides in proximal altered rock	87.10	88.10	1.00						
91.1 - 92: Heavily disseminated to blebby CP+PO+PY within dark Cl-porphyroblastic CL+MU groundmass.											
<<Min: 91.1 - 92 10% Min: Pyrrhotite>>											
<<Min: 91.1 - 92 10% Min: Chalcopyrite>>											
<<Alt: 91.1 - 92 Weak (Alt) Chlorite>>											
<<Alt: 91.1 - 92.1 Weak (Alt) Cordierite>>											
92.00	92.90	OC Chalcopyrite-pyrrhotite net textured sulphides	88.10	89.10	1.00						
92 - 92.9: banded PO and CP+PY+PO with cg MG disseminated throughout											
<<Min: 92 - 92.9 10% Min: Pyrrhotite>>											
<<Min: 92 - 92.9 7% Min: Magnetite>>											
<<Min: 92 - 92.9 20% Min: Chalcopyrite>>											
92.90	98.80	OA Magnetite bearing sulphides	89.10	90.10	1.00						
92.9 - 98.8: Banded MG+SP+PO and PY+CP+PO with cg MG disseminated throughout. Unit grades from banded MG to disseminated MG (from top to bottom).											
<<Min: 92.9 - 98.8 10% Min: Pyrrhotite>>											
98.80	99.20	OF Pyrrhotite rich sulphides	90.10	91.10	1.00						
98.8 - 99.2: Massive PO with disseminated mg-cg CP+MG											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-275

From (m)			To (m)			Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %	
<<Min: 98.8 - 99.2 90% Min: Pyrrhotite>>																
<<Min: 98.8 - 99.2 5% Min: Magnetite>>																
<<Min: 98.8 - 99.2 2% Min: Chalcopyrite>>																
99.20			100.60			OH	Fine grained, megascopically homogeneous pyrite rock			FMG	99.20	100.00	0.80			
99.2 - 100.6: Fine to medium grained massive PY with 1-10 cm bands of cg PY+MG+CP+SP+PO																
<<Min: 99.2 - 100.6 1% Min: Pyrrhotite>>																
100.60			102.90			OA	Magnetite bearing sulphides			MCG	100.00	100.60	0.60			
100.6 - 102.9: Disseminated to laminated MG+/-SP+/-PO in massive PY																
<<Min: 100.6 - 102.9 5% Min: Pyrrhotite>>																
<<Min: 102.6 - 110.4 0.5% Min: Calcite>>																
102.90			108.30			OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides			MCG	101.50	102.40	0.90			
102.9 - 108.3: Bands of SP+PY+GL and PY. Local disseminated MG and semi-massive PO																
<<Min: 102.9 - 108.3 20% Min: Sphalerite>>																
<<Min: 102.9 - 108.3 5% Min: Pyrrhotite>>																
<<Alt: 106.6 - 106.9 Moderate (Alt) Chlorite>> CL in groundmass of MSXS																
<<Alt: 108.1 - 108.4 Moderate (Alt) Chlorite>> CL-after-CI porphyroblasts																
108.30			109.00			OJ	Heavilly disseminated sulphides in proximal altered rock				103.80	104.70	0.90			
108.3 - 109: Heavily disseminated to blebby PY+PO+CP+GL+SP in a CL+MS+QZ+/-CI schist																
<<Min: 108.3 - 108.4 10% Min: Chalcopyrite>>																
<<Min: 108.3 - 110.4 2% Min: Pyrite>>																
<<Min: 108.3 - 110.4 2% Min: Pyrrhotite>>																
<<Min: 108.4 - 109 5% Min: Galena>>																
<<Alt: 108.4 - 110.4 Moderate (Alt) Muscovite>>																
<<Alt: 108.4 - 110.4 Weak (Alt) Chlorite>> Weak CL alteration. Maybe overprinted?																

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-275

From (m) To (m) Rocktype & Description

109.00 110.40 RHYvl Lapilli tuff

109 - 110.4: MU+QZ+CL schist with local lpl textures

<<Vein: 109.2 - 109.8 30% Quartz>> Zone of QZ-AK veining

110.40 110.90 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

<<Min: 110.4 - 116.8 20% Min: Calcite>>

<<Alt: 110.4 - 110.9 Strong (Alt) Chlorite>>

<<Alt: 110.4 - 110.9 Moderate (Alt) Biotite>>

<<Struc: 110.7 - 111 Fault>> Weak-moderately faulted zone

110.90 111.40 OJ Heavily disseminated sulphides in proximal altered rock

110.9 - 111.4: Bands of strongly CL-altered MAFi with SP stringers

<<Min: 110.9 - 111.4 5% Min: Sphalerite>>

<<Alt: 110.9 - 111.4 Moderate (Alt) Chlorite>> Banded CL-alteration in MAFi

111.40 115.80 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

111.4 - 115.8: CL+CA+BI schist with a discontinuous foliation defined by CA blebs

<<Min: 111.4 - 115.8 0.5% Min: Pyrrhotite>>

<<Alt: 111.4 - 115.8 Strong (Alt) Chlorite>>

<<Alt: 111.4 - 115.8 Strong (Alt) Biotite>>

115.80 116.20 OJ Heavily disseminated sulphides in proximal altered rock

115.8 - 116.2: Bands of moderately CL-altered MAFi with blebby PO+/-PY+/-CP

<<Min: 115.8 - 116.2 1% Min: Pyrite>>

<<Min: 115.8 - 116.2 5% Min: Pyrrhotite>>

<<Min: 115.8 - 116.2 0.5% Min: Chalcopyrite>>

<<Alt: 115.8 - 116.2 Weak (Alt) Chlorite>> Banded CL-alteration in MAFi

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
109.00	109.80	0.80						

109.80	110.40	0.60
110.40	110.90	0.50

110.90	111.40	0.50
--------	--------	------

111.40	112.40	1.00
--------	--------	------

112.40	113.40	1.00
113.40	114.40	1.00
114.40	115.10	0.70
115.10	115.80	0.70
115.80	116.20	0.40



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-275

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
116.20	116.80	MAFi									
		Mafic Intrusions (primarily footwall mafic intrusion)									
116.2 - 116.8: CL+CA+BI schist											
<<Alt: 116.2 - 116.8 Strong (Alt) Chlorite>>											
<<Alt: 116.2 - 116.8 Strong (Alt) Biotite>>											
116.80	122.00	RHYi									
		Aphanitic Rhyolite (intrusion)									
116.8 - 122: Well foliated MU+QZ schist with fg CA porphyroblasts and QZ amygdules											
<<Min: 116.8 - 122 2% Min: Pyrite>>											
<<Min: 116.8 - 122 2% Min: Calcite>>											
<<Alt: 116.8 - 122 Strong (Alt) Silicification>>											
<<Alt: 116.8 - 122 Strong (Alt) Muscovite>>											
End of Hole @ 122											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-276

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Cooper Campbell
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	26-Sep-15
UTM Easting	414675.458	Core Size:	HQ3	Azimuth:	180.22	Date Logging Complete:	28-Sep-15
UTM Northing:	6815453.463	Casing Pulled?:	Yes	Dip:	-70	Drill Company:	Geotech
UTM Elev. (m):	1425.014	Casing Depth (m):	7.5	Length (m):	110	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	25-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	26-Sep-15
Local Elev. (m):						Purpose:	Metallurgical Twin
Comments:						Parent Hole:	K15-274

This hole is a daughter hole for K15-274 (metallurgical twin hole). Upper portion of hole contains RHYc, RHYcw, MDSw and MDSc and grades into RHYc and RHYv. Prior to intersecting the main ABM massive sulphide body, hole intersected perched lenses of massive sulphides and stringer style mineralization. The two lenses of massive sulphide were separated by strongly CI, CL altered RHYcw. Below the perched lenses the hole intersected RHYv, and MDSt and MAFi.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-70	180.22	0	180.22	APS	Trevor Rabb	25-Sep-15		<input checked="" type="checkbox"/>	
26	-69.9	162.7	22.5	185.2	ReflexEVS	Geotech	25-Sep-15	5781	<input checked="" type="checkbox"/>	
74	-69.8	160.9	22.5	183.4	ReflexEVS	Geotech	26-Sep-15	5698	<input checked="" type="checkbox"/>	
101	-69.9	158.2	22.5	180.7	ReflexEVS	Geotech	26-Sep-15	5621	<input checked="" type="checkbox"/>	
110	-69.7	159.8	22.5	182.3	ReflexEVS	Geotech	26-Sep-15	5645	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	6.38	OVBN									
6.38	15.95	RHYcw									
		Overburden									
		Curdy textured-flow banded (flows, subvolcanics)									
15.95	16.84	MDSc									
		Carbonaceous dominant mudstone									
<<Min: 15.95 - 31.67 0.5% Min: Pyrite>>											
16.84	20.30	MDSw									
		Coherent rhyolite flow with carbonaceous content									
<<Alt: 16.84 - 20.3 Weak (Alt) Muscovite>>											
<<Vein: 19.23 - 19.52 90% Quartz-Carbonate 20 deg. >>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-276

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
20.30	20.60	MDS _c Carbonaceous dominant mudstone									
20.60	22.20	MDS _w Coherent rhyolite flow with carbonaceous content									
22.20	23.40	MDS _c Carbonaceous dominant mudstone									
23.40	32.93	MDS _w Coherent rhyolite flow with carbonaceous content									
<<Min: 31.67 - 35.07 4% Min: Pyrite>>											
<<Struc: 24.72 - 25 Moderate (Alt) Fault>> Narrow faults filled with broken rock and trace gouge. Spaced cm's apart. Low intensity.											
<<Struc: 31.02 - 31.32 Weak (Alt) Fault>> Narrow faults filled gouge and broken rock. Spaced cm's apart. Moderate intensity.											
32.93	35.07	RHY _c Rhyolite coherent volcanics									
<<Alt: 32.93 - 43.57 Moderate (Alt) Muscovite>>											
35.07	43.34	RHY _v Rhyolite volcaniclastic	38.50	39.50	1.00						
<<Min: 35.07 - 41.73 0.5% Min: Pyrite>>											
<<Min: 39.74 - 45.44 1% Min: Calcite>>											
<<Min: 41.73 - 43.34 5% Min: Pyrite>>											
<<Alt: 37.07 - 41.73 Weak (Alt) Chlorite>>											
<<Alt: 41.73 - 45.22 Moderate (Alt) Chlorite>>											
<<Vein: 39.74 - 43.34 7% Quartz-Carbonate-Sulphide 15 deg. >> QZ-CA-CL-PY-PO-SP-CP-GL											
43.34	43.57	OI Heavily disseminated sulphides in host schist	43.34	44.33	0.99						
<<Min: 43.34 - 43.57 0.01% Min: Sphalerite>>											
<<Min: 43.34 - 43.57 2% Min: Pyrrhotite>>											
<<Min: 43.34 - 43.57 5% Min: Chalcopyrite>>											
<<Vein: 43.34 - 45.82 10% Quartz-Carbonate-Sulphide 60 deg. >> QZ-CA-CP-PO-SP-CL-GL. 5% CP											
43.57	43.75	OF Pyrrhotite rich sulphides									
<<Min: 43.57 - 43.75 70% Min: Pyrrhotite>>											
43.75	44.33	OI Heavily disseminated sulphides in host schist									
<<Min: 43.75 - 44.33 2% Min: Pyrrhotite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-276

From (m)			To (m)			Rocktype & Description			From (m)			To (m)			Width			Sample			Ag PPM			Au PPM			Cu %			Pb %			Zn %		
<<Min: 43.75 - 44.33 4% Min: Chalcopyrite>>																																			
<<Alt: 43.75 - 45.36 Weak (Alt) Cordierite>>																																			
44.33			44.65			OF			Pyrrhotite rich sulphides			44.33			45.22			0.89																	
44.33 - 44.65: MG?																																			
<<Min: 44.33 - 44.65 80% Min: Pyrrhotite>>																																			
<<Min: 44.33 - 44.65 2% Min: Magnetite>>																																			
44.65			44.94			OI			Heavilly disseminated sulphides in host schist																										
<<Min: 44.65 - 44.94 4% Min: Pyrrhotite>>																																			
44.94			45.22			OF			Pyrrhotite rich sulphides																										
44.94 - 45.22: MG?																																			
<<Min: 44.94 - 45.22 60% Min: Pyrrhotite>>																																			
45.22			45.82			OI			Heavilly disseminated sulphides in host schist			45.22			45.82			0.60																	
<<Min: 45.22 - 45.82 2% Min: Pyrrhotite>>																																			
<<Min: 45.44 - 45.71 10% Min: Calcite>>																																			
<<Min: 45.71 - 46.6 1% Min: Calcite>>																																			
<<Alt: 45.22 - 45.82 Strong (Alt) Chlorite>>																																			
<<Alt: 45.22 - 51.11 Strong (Alt) Muscovite>>																																			
45.82			51.77			RHYv			Rhyolite volcaniclastic			45.82			46.50			0.68																	
<<Min: 45.82 - 51.77 4% Min: Pyrite>>																																			
<<Min: 45.82 - 51.77 0.01% Min: Chalcopyrite>>																																			
<<Alt: 51.11 - 53.82 Moderate (Alt) Muscovite>>																																			
<<Vein: 45.82 - 46.6 4% Quartz-Carbonate-Sulphide 60 deg. >> QZ-CA-CP-PO. 0.01%CP																																			
51.77			53.82			MDSt			Rhyolite tuff dominant mudstone																										
<<Min: 51.77 - 57.11 1% Min: Pyrite>>																																			
<<Min: 51.77 - 57.11 0.01% Min: Pyrrhotite>>																																			
53.82			55.30			RHYc			Rhyolite coherant volcanics			53.82			54.50			0.68																	
<<Alt: 53.82 - 55.3 Strong (Alt) Muscovite>>																																			
55.30			57.52			RHYv			Rhyolite volcaniclastic			55.30			56.00			0.70																	
<<Min: 57.11 - 57.52 0.01% Min: Pyrite>>																																			
												56.00			57.00			1.00																	



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-276

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 57.11 - 57.52 1% Min: Pyrrhotite>>			57.00	57.52	0.52						
<<Alt: 55.3 - 57.52 Moderate (Alt) Muscovite>>											
<<Alt: 56.98 - 57.52 Weak (Alt) Chlorite>>											
<<Alt: 56.98 - 57.52 Trace (Alt) Cordierite>>											
57.52	57.60	OJ Heavily disseminated sulphides in proximal altered rock	57.52	58.50	0.98						
<<Min: 57.52 - 59.02 10% Min: Pyrrhotite>> Locally SMAS											
<<Alt: 57.52 - 57.6 Moderate (Alt) Chlorite>>											
57.60	59.02	OA Magnetite bearing sulphides	58.50	59.02	0.52						
<<Min: 57.6 - 62.4 20% Min: Magnetite>>											
59.02	60.17	OA Magnetite bearing sulphides	59.02	59.50	0.48						
			59.50	60.17	0.67						
60.17	62.40	OA Magnetite bearing sulphides	60.17	60.75	0.58						
			60.75	61.50	0.75						
			61.50	62.40	0.90						
			62.40	63.00	0.60						
<<Min: 62.4 - 64.98 0.01% Min: Magnetite>>			63.00	64.00	1.00						
			64.00	64.98	0.98						
64.98	66.09	OJ Heavily disseminated sulphides in proximal altered rock	64.98	65.50	0.52						
<<Alt: 64.98 - 66.09 Moderate (Alt) Chlorite>>											
<<Alt: 64.98 - 66.09 Weak (Alt) Cordierite>>											
66.09	74.09	RHYcw Curdy textured-flow banded (flows, subvolcanics)	65.50	66.09	0.59						
<<Min: 66.09 - 73.48 0.01% Min: Chalcopyrite>> DIS			66.09	67.00	0.91						
<<Min: 66.09 - 74.09 0.01% Min: Sphalerite>> VN, BL											
<<Min: 66.09 - 74.09 2% Min: Pyrite>> FD			67.00	68.00	1.00						
<<Min: 66.09 - 74.09 0.01% Min: Pyrrhotite>>			68.00	69.00	1.00						
<<Min: 66.09 - 74.09 0.01% Min: Galena>> DIS			69.00	70.00	1.00						
			70.00	71.00	1.00						



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-276

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 73.48 - 73.77 1% Min: Chalcopyrite>>											
<<Alt: 66.09 - 71.54 Weak (Alt) Chlorite>>											
<<Alt: 71.54 - 74.09 Moderate (Alt) Chlorite>>											
<<Alt: 71.54 - 74.09 Strong (Alt) Cordierite>>											
<<Vein: 66.09 - 74.09 40% Quartz-Carbonate-Sulphide 30 deg. >> QZ-AK-PY-SP-GL-CP											
74.09	80.67	RHY undifferentiated rhyolite	79.67	80.67	1.00						
<<Min: 74.09 - 76.55 0.01% Min: Sphalerite>>											
<<Min: 74.09 - 76.55 0.01% Min: Pyrite>>											
<<Min: 74.09 - 76.55 0.01% Min: Galena>>											
<<Min: 74.09 - 76.55 0.01% Min: Chalcopyrite>>											
<<Min: 76.55 - 80.67 2% Min: Pyrite>>											
<<Min: 76.55 - 80.67 0.5% Min: Pyrrhotite>>											
<<Alt: 75.58 - 75.9 Strong (Alt) Muscovite>>											
<<Alt: 75.58 - 75.9 Moderate (Alt) Chlorite>>											
<<Alt: 75.58 - 75.9 Strong (Alt) Cordierite>>											
<<Alt: 76.55 - 77.89 Strong (Alt) Chlorite>>											
<<Alt: 76.55 - 80.67 Strong (Alt) Cordierite>>											
<<Alt: 76.55 - 83.99 Strong (Alt) Muscovite>>											
<<Alt: 77.89 - 80.67 Moderate (Alt) Chlorite>>											
<<Vein: 74.09 - 76.63 90% Quartz-Carbonate-Sulphide 55 deg. >> QZ-AK-GL-PY-CP-SP											
80.67	83.99	RHYva Coarse grained to ash tuff	80.67	81.50	0.83						
<<Min: 80.67 - 83.99 0.5% Min: Pyrite>> SF			81.50	82.00	0.50						
<<Min: 80.67 - 83.99 0.01% Min: Arsenopyrite>>			82.00	83.00	1.00						
<<Alt: 80.67 - 83.99 Trace (Alt) Chlorite>>			83.00	83.99	0.99						
<<Alt: 80.67 - 83.99 Weak (Alt) Cordierite>>											
83.99	97.94	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	83.99	84.99	1.00						
<<Min: 83.99 - 89.26 0.5% Min: Magnetite>>			84.99	85.99	1.00						
<<Min: 84.37 - 84.73 3% Min: Calcite>>			85.99	86.99	1.00						
<<Min: 85.84 - 85.94 2% Min: Calcite>>			86.99	87.99	1.00						
<<Min: 88.62 - 88.9 1% Min: Calcite>>			87.99	88.99	1.00						
<<Min: 89.26 - 89.97 15% Min: Sphalerite>>			88.99	89.99	1.00						

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-276

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 89.26 - 89.97		4% Min: Magnetite>>	89.99	90.99	1.00						
<<Min: 89.26 - 89.97		5% Min: Chalcopyrite>>	90.99	91.99	1.00						
<<Min: 91.55 - 91.73		10% Min: Calcite>>	91.99	92.99	1.00						
<<Min: 91.73 - 92.35		5% Min: Calcite>>	92.99	93.99	1.00						
<<Min: 93.27 - 93.61		3% Min: Calcite>>	93.99	94.99	1.00						
<<Min: 93.61 - 95.05		0.01% Min: Calcite>>	94.99	95.99	1.00						
<<Min: 95.05 - 97.06		10% Min: Calcite>>	95.99	96.99	1.00						
<<Min: 97.06 - 100.47		3% Min: Calcite>>	96.99	97.94	0.95						
97.94 102.48 RHYv		Rhyolite volcaniclastic	97.94	98.50	0.56						
<<Min: 97.94 - 98.07		2% Min: Sphalerite>>	98.50	99.50	1.00						
<<Min: 97.94 - 110		0.5% Min: Pyrite>> WIS	99.50	100.50	1.00						
<<Min: 100.47 - 104.7		1% Min: Calcite>>	100.50	101.50	1.00						
<<Alt: 97.94 - 107.1		Weak (Alt) Muscovite>>	101.50	102.48	0.98						
<<Struc: 98 - 100.42		Moderate (Alt) Fault>> Narrow faults filled with gouge and broken rock. Spaced tens of cm's apart. Moderate intensity.									
102.48 104.99 RHYvl		Lapilli tuff									
<<Min: 104.7 - 104.99		10% Min: Calcite>>									
<<Vein: 104 - 106.74		2% Quartz-Carbonate 70 deg. >> QZ-CA									
104.99 107.10 RHYv		Rhyolite volcaniclastic									
<<Min: 104.99 - 105.7		1% Min: Calcite>>									
<<Min: 105.7 - 106.44		5% Min: Calcite>>									
<<Min: 106.44 - 107.1		2% Min: Calcite>>									
107.10 107.48 MAFi		Mafic Intrusions (primarily footwall mafic intrusion)									
<<Min: 107.1 - 110		15% Min: Calcite>>									
<<Alt: 107.1 - 107.48		Weak (Alt) Chlorite>>									
<<Vein: 107.27 - 109.91		7% Quartz-Carbonate 80 deg. >> CA-QZ									
107.48 107.68 RHYi		Aphanitic Rhyolite (intrusion)									
<<Alt: 107.48 - 108.38		Strong (Alt) Silicification>>									
<<Alt: 107.48 - 108.38		Weak (Alt) Muscovite>>									
107.68 108.38 RHYc		Rhyolite coherent volcanics									
108.38 109.76 MAFi		Mafic Intrusions (primarily footwall mafic intrusion)									

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-276

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 108.38 - 109.76 Weak (Alt) Chlorite>>											
109.76 110.00 RHYi Aphanitic Rhyolite (intrusion)											
<<Min: 109.76 - 110 0.01% Min: Sphalerite>>											
<<Alt: 109.76 - 110 Moderate (Alt) Silicification>>											
<<Alt: 109.76 - 110 Weak (Alt) Muscovite>>											
End of Hole @ 110											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-277

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Daniele Heon
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	28-Sep-15
UTM Easting	415248.9	Core Size:	NQ3	Azimuth:	190	Date Logging Complete:	01-Oct-15
UTM Northing:	6815348.359	Casing Pulled?:	Yes	Dip:	-68	Drill Company:	Geotech
UTM Elev. (m):	1442.245	Casing Depth (m):	21	Length (m):	357.8	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	26-Sep-15
Local Northing:		Cemented?:	No	Core Storage Loc.:	KZK Camp	Drill Completed:	01-Oct-15
Local Elev. (m):						Purpose:	Exploration
Comments:						Parent Hole:	

The target of this hole is a sulphide lens offset by a fault block.

The top of the hole intersected interbedded argillite and mafic dyke or tuff (both crenulated); core was very block with poor recovery. The argillite unit is very dark and carbonaceous, and is strongly folded and crenulated. Foliations are bent into brittle fault zones from 23 to 30m and 38 to 50m. Metaseds transition into a felsic volcanoclastic sequence from 83 to 97.5m below which thick RHYva is present down to 160m, intruded and silicified by two RHYi units. From 160-202, the hole is mainly RHYva with some tuffaceous sections (either mafic or biot-carb altered felsic). From 302-303.4 the showed a fluted texture and stronger clay alteration. From 103.5-313.8 and 326-333.95 is semi-massive and massive sulphide, mostly OB, with some OJ. One section may be altered mafic tuff or intrusive. From 333.95 - 357.8 (EOH) is the footwall mafic intrusion, with the contact marked by 15cm of massive biotite underlain by 15cm of intense carbonate alteration, which is in turn underlain by units of gradually coarsening grain size. This zone includes two sections (total 30 cm) with heavy py-sp-cp associated with silicate gangue.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-68	190	0	190	APS	Daniele Heon	28-Sep-15		<input checked="" type="checkbox"/>	
41	-70.5	172.1	22.5	194.6	ReflexEVS	Geotech	27-Sep-15	5799	<input checked="" type="checkbox"/>	
68	-70.5	171.2	22.5	193.7	ReflexEVS	Geotech	27-Sep-15	5747	<input checked="" type="checkbox"/>	
98	-68.5	173.5	22.5	196	ReflexEVS	Geotech	28-Sep-15	5625	<input checked="" type="checkbox"/>	
122	-67.6	173	22.5	195.5	ReflexEVS	Geotech	28-Sep-15	5713	<input checked="" type="checkbox"/>	
152	-67.3	171.6	22.5	194.1	ReflexEVS	Geotech	28-Sep-15	5784	<input checked="" type="checkbox"/>	
182	-67.1	173.2	22.5	195.7	ReflexEVS	Geotech	28-Sep-15	5791	<input checked="" type="checkbox"/>	
209	-67	175.8	22.5	198.3	ReflexEVS	Geotech	29-Sep-15	5754	<input checked="" type="checkbox"/>	
242	-67.1	174	22.5	196.5	ReflexEVS	Geotech	29-Sep-15	5772	<input checked="" type="checkbox"/>	
272	-66.9	175.9	22.5	198.4	ReflexEVS	Geotech	30-Sep-15	5768	<input checked="" type="checkbox"/>	
302	-65.5	179	22.5	201.5	ReflexEVS	Geotech	30-Sep-15	5790	<input checked="" type="checkbox"/>	
332	-64.2	180.7	22.5	203.2	ReflexEVS	Geotech	01-Oct-15	5675	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	21.00	CASN Casing									



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-277

From (m)		To (m)		Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
21.00	22.50	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)											
21 - 22.5: bleached, poor recovery.														
<<Min: 21 - 28 5% Min: Calcite>>														
22.50	23.00	MDSc	Carbonaceous dominant mudstone											
23.00	24.20	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)											
24.20	25.00	MDSc	Carbonaceous dominant mudstone											
<<Struc: 24.2 - 27.7 Moderate (Alt) Fault>> Argillite broken, brecciated and gouged, foliations and brecciated contacts 0 to 15 deg CA														
25.00	25.45	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)											
25.45	27.00	MDSc	Carbonaceous dominant mudstone											
25.45 - 27: strongly carbonaceous,broken														
27.00	28.10	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)											
<<Min: 28 - 35.4 25% Min: Calcite>>														
<<Struc: 27.7 - 29.4 Strong (Alt) Shear>>														
<<Struc: 28 - 29.4 dominant foliation>> crenulation														
28.10	34.80	MDSc	Carbonaceous dominant mudstone											
<<Struc: 29.4 - 32.2 dominant foliation>> crenulation														
34.80	40.90	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)											
<<Min: 35.4 - 39.1 5% Min: Calcite>>														
<<Min: 39.1 - 40.9 3% Min: Calcite>>														
<<Struc: 37.3 - 37.31 dominant foliation>> crenulation (displaces earlier fabric)														
40.90	62.30	MDSc	Carbonaceous dominant mudstone											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-277

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 40.9 - 50 7% Min: Calcite>>											
<<Min: 50 - 54 40% Min: Calcite>> poor recovery											
<<Min: 54 - 62.5 10% Min: Calcite>>											
<<Vein: 61.52 - 61.82 100% Quartz-Carbonate-Sulphide 70 deg. >> coarse py bleb											
<<Struc: 42 - 42.01 dominant foliation>> crenulation											
<<Struc: 43 - 43.71 dominant foliation>> crenulation											
<<Struc: 48 - 48.01 dominant foliation>> crenulation											
<<Struc: 50.15 - 50.16 dominant foliation>>											
<<Struc: 60.95 - 61.05 Strong (Alt) Fault>> finely broken, decomposed core											
62.30	62.55	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
<<Min: 62.5 - 67 3% Min: Calcite>>											
<<Vein: 62.52 - 81.8 0.8% Quarzt-Chlorite-Carbonate>> some veins brecciated or fragmented.											
62.55	63.70	MDS	Carbonaceous dominant mudstone								
63.70	63.90	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
63.90	64.94	MDS	Carbonaceous dominant mudstone								
64.94	67.45	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
<<Min: 67 - 69.3 10% Min: Calcite>>											
67.45	69.33	MDS	Carbonaceous dominant mudstone								
<<Min: 69.3 - 71 3% Min: Calcite>>											
69.33	71.20	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
69.33 - 71.2: veined											
<<Min: 71 - 73.85 10% Min: Calcite>>											
<<Struc: 70.4 - 71 Moderate (Alt) Fault>> qtz-carb vein as breccia fx in chloritic grounmass, some argillite caught up											
71.20	71.80	MDS	Carbonaceous dominant mudstone								



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-277

From (m)		To (m)		Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 71.35 - 71.36 >> axial planar cleavage in FW of qtz-car-chl vein														
71.80	72.23	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)											
72.23	82.30	MDSc	Carbonaceous dominant mudstone											
<<Min: 73.85 - 80.3 20% Min: Calcite>>														
<<Struc: 73.8 - 73.81 dominant foliation>> crenulation														
<<Struc: 74.4 - 74.45 Weak (Alt) Fault>> clayey fault gouge														
<<Struc: 78.75 - 78.76 dominant foliation>> axial planar crenulation														
<<Struc: 80.8 - 80.82 Weak (Alt) Fault>> finely broken, decomposed core														
82.30	83.10	MDSc	Carbonaceous dominant mudstone											
82.3 - 83.1: poker chip pieces														
83.10	86.65	RHYva	Coarse grained to ash tuff											
83.1 - 86.65: siliceous, grey, w some carbonaceous sections. Could be RHYc? Pyritic. Some dark blueish seams, hard: cherty argillite chips?)														
<<Vein: 83.1 - 83.15 20% Quartz-Carbonate 15 deg. >> 1 cm														
86.65	87.05	MAFt	Mafic Volcaniclastics											
86.65 - 87.05: Banded, light green (chlorite?), beige (sericite), cream (carbonate) and reddish brown (biotite) w biot rimming carbonate grains.														
87.05	89.00	RHYvl	Lapilli tuff											
87.05 - 89: siliceous, sugary, grey, w some carbonaceous sections. Pyritic. Some dark blueish seams, hard: cherty argillite chips? Distinct oval-shaped clasts: lapilli and stretched out argillite clasts. LC gradually more carbonaceous.														
<<Min: 88.8 - 90.45 15% Min: Calcite>>														
89.00	90.45	MAFt	Mafic Volcaniclastics											
89 - 90.45: light green, sugary, w diss py, includes short chloritized sections w diss mt xtals in halo.														
90.45	92.10	MDSc	Carbonaceous dominant mudstone											
92.10	94.10	RHYva	Coarse grained to ash tuff											
92.1 - 94.1: lt grey, sugary, weakly banded ash. Could be logged as RHYc.														

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-277

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
94.10	95.17	MDS	Carbonaceous dominant mudstone								
95.17	95.43	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
<<Min: 95.2 - 96.1 15% Min: Calcite>>											
95.43	96.00	MDS	Carbonaceous dominant mudstone								
96.00	97.45	RHYv	Lapilli tuff								
96 - 97.45: lapilli tuff w dark sericitic/ carbonaceous partings. Could also be logged as MDSt.											
97.45	105.40	RHYva	Coarse grained to ash tuff								
97.45 - 105.4: creamy brown sericitic groundmass.											
<<Min: 97.6 - 105 5% Min: Calcite>>											
<<Vein: 98.45 - 98.55 100% Quartz-Tourmaline-Sulphide 80 deg. >>											
<<Vein: 98.6 - 118.15 2% Quartz-Chlorite-Carbonate 70 deg. >>											
<<Struc: 104.85 - 105 Moderate (Alt) Fault>> clay gouge.											
<<Struc: 105.3 - 105.4 Strong (Alt) Fault>> clay gouge.											
105.40	106.10	RHYv	Lapilli tuff								
105.4 - 106.1: grey-beige groundmass s light beige lapilli or pseudo fx											
106.10	107.45	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
106.1 - 107.45: banded reddish brown biotite-rich rock wporphyritic texture given by carbonate xtals, porphyroblastic?											
<<Min: 106.1 - 106.35 1% Min: Pyrite>>											
<<Min: 106.1 - 106.35 1% Min: Pyrrhotite>>											
<<Min: 106.4 - 107.45 20% Min: Calcite>>											
<<Vein: 106.1 - 106.35 100% Quartz-Tourmaline-Sulphide 80 deg. >> broken core, contacts unclear but looks like steep CA.											
<<Struc: 106.91 - 106.92 dominant foliation>> mafi											
107.45	114.55	RHYva	Coarse grained to ash tuff								
107.45 - 114.55: finely banded, granular, biot pophyroblasts none to moderate, creamy beige sericitic groundmass banded w chl-carb-rich bands or veins.											
<<Min: 107.45 - 121 5% Min: Calcite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-277

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 109.91 - 109.92 dominant foliation>>											
<<Struc: 113.95 - 113.96 dominant foliation>>											
114.55	115.00	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
115.00	116.10	RHYva	Coarse grained to ash tuff								
115 - 116.1: grey, siliceous, granular, could also be logged as RHY©?											
<<Min: 115 - 116.3 1% Min: Pyrite>>											
116.10	125.60	RHYva	Coarse grained to ash tuff								
116.1 - 125.6: creamy grey sericitic groundmass.few lapilli.											
<<Min: 119.2 - 120 0.5% Min: Pyrite>>											
<<Min: 121 - 128.8 1% Min: Calcite>>											
<<Vein: 119.2 - 120 Quartz-Sericite/White mica-Chlorite>>											
<<Struc: 121.95 - 121.96 dominant foliation>>											
125.60	130.65	RHYvl	Lapilli tuff								
125.6 - 130.65: UC contact brecciated. Some siliceous rx that could be logged as RHYcw (128.5-128.75m). W some pyriticbands.											
<<Min: 128.8 - 133.75 5% Min: Calcite>>											
<<Vein: 127.8 - 128.1 100% Quartz>> broken by fault											
<<Struc: 125.6 - 128 Moderate (Alt) Fault>> breccia and broken core											
<<Struc: 128.75 - 128.8 Weak (Alt) Fault>> brecciated											
130.65	137.50	RHYvl	Lapilli tuff								
130.65 - 137.5: gradually more siliceous/silicified going down hole. Contact with underlying RHYi unclear, may be in this interval (@135.9m?). Some pyritic bands.											
<<Min: 132 - 132.7 1% Min: Pyrite>> heavy disseminations in qtz-rich foliaform bands.											
<<Min: 133.75 - 142.2 1% Min: Calcite>>											
<<Min: 134 - 143.3 0.5% Min: Pyrite>> fine stringers an diss and in veins.											
<<Alt: 134.6 - 143.8 Moderate (Alt) Silicification>>											
<<Alt: 134.6 - 143.8 Moderate (Alt) Muscovite>>											
137.50	143.35	RHYi	Aphanitic Rhyolite (intrusion)								
137.5 - 143.35: cherty, beige, highly siliceous, fractured, ass w qtz veining. Lower section may be silicified RHYvl.											
<<Min: 137.9 - 138.3 1% Min: Pyrite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-277

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 140.1 - 141.1 0.5% Min: Pyrite>>											
<<Min: 142.2 - 146 5% Min: Calcite>>											
<<Vein: 137.9 - 146.6 10% Quartz-Sericite/White mica-Sulphides 65 deg. >>											
<<Struc: 139.4 - 139.45 Moderate (Alt) Fault>> breccia gouge in area of veining and silicification											
<<Struc: 142.25 - 142.3 Strong (Alt) Fault>> narrow breccia clay gouge											
143.35 143.85 RHYvl Lapilli tuff											
143.35 - 143.85: silicified RHYvl in whole or in part. Banded for last 30cm.											
143.85 146.25 RHYva Coarse grained to ash tuff											
143.85 - 146.25: strong musc alteration at LC.											
<<Min: 143.9 - 144.8 1% Min: Pyrrhotite>> flat seams// to foln											
<<Min: 146 - 151.65 1% Min: Calcite>>											
<<Alt: 146.05 - 148.6 Moderate (Alt) Silicification>>											
<<Alt: 146.05 - 148.6 Moderate (Alt) Muscovite>>											
<<Struc: 146.05 - 146.08 Weak (Alt) Fault>> narrow breccia gouge											
146.25 147.55 RHYi Aphanitic Rhyolite (intrusion)											
146.25 - 147.55: cherty, featureless except few fractures. Could be/ or include veined and silicified va/ vl.											
<<Min: 146.35 - 146.4 0.05% Min: Galena>>											
147.55 149.90 RHYvl Lapilli tuff											
147.55 - 149.9: siliceous, finely banded:stretched out lapilli or cw?											
<<Struc: 148.9 - 149.91 dominant foliation>> shallow											
149.90 160.34 RHYva Coarse grained to ash tuff											
149.9 - 160.34: fine biotite porphyroblasts.											
<<Min: 151.65 - 160.3 5% Min: Calcite>>											
<<Min: 160.3 - 160.95 15% Min: Calcite>>											
<<Struc: 154.2 - 154.35 Weak (Alt) Fault>> breccia gouge											
<<Struc: 154.9 - 154.91 dominant foliation>> weak second foln? NW/NE.											
160.34 166.28 MAFt Mafic Volcaniclastics											
160.34 - 166.28: first 45 cm f.g. biot (pelitic sed?) grading into greenish, sl calcareous rx w small carbonate porphyroblasts and 0.5-1mm biot porphyroblasts of varying proportions. Slight greenish cast but mainly sericite in groundmass. Looks like mostly felsic composition but mapped as mafic tuff for consistency with other loggers. Some chl alt at contact w mafic dyke below.											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-277

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<div><<Min: 160.95 - 167.07 10% Min: Calcite>></div> <div><<Alt: 161.3 - 163.8 Moderate (Alt) Biotite>> in area of biotite porphyroblasts, increase in size and abundance of porphyroblasts near carbonate veining.</div> <div><<Alt: 166 - 166.28 Moderate (Alt) Chlorite>></div> <div><<Struc: 164.3 - 164.4 Strong (Alt) Fault>> broken rx, gouge, poor recovery.</div> <div><<Struc: 165.95 - 165.99 Strong (Alt) Fault>> clay gouge at bottom of blocky run.</div> <div><div>166.28169.07MAFi</div><div>Mafic Intrusions (primarily footwall mafic intrusion)</div></div> <div>166.28 - 169.07: f.g, green, weak biot porphyroblasts. Texture looks tuffaceous but sharp contacts.</div> <div><<Min: 167.07 - 168.3 2% Min: Calcite>></div> <div><<Min: 168.3 - 184.5 5% Min: Calcite>></div> <div><div>169.07172.35RHYva</div><div>Coarse grained to ash tuff</div></div> <div>169.07 - 172.35: Greenish, sl calcareous rx w small carbonate pophyroblasts and 0.5-1mm biot porphyroblasts of varying proportions. Slight greenish cast but mainly sericite in groundmass. Looks like mostly felsic composition but mapped as mafic tuff for consistency. Size of carbonate pophyroblasts increase after 168m, and short sections show greener groundmass, sl chloritic alteration or more mafic intervals?</div> <div><<Alt: 170.1 - 171.2 Moderate (Alt) Biotite>> Increase in size and amount of biot porphyroblasts w increase in carbonate porphyroblasts and carbonate veining.</div> <div><div>172.35176.00RHYvl</div><div>Lapilli tuff</div></div> <div><<Vein: 173.95 - 174.35 50% Quartz-Tourmaline 0 deg. >></div> <div><div>176.00176.90RHYva</div><div>Coarse grained to ash tuff</div></div> <div><div>176.90187.95RHYvl</div><div>Lapilli tuff</div></div> <div>176.9 - 187.95: shear at top of interval</div> <div><<Min: 184.5 - 188.6 10% Min: Calcite>></div> <div><<Vein: 180.2 - 181 0.1% Tourmaline 5 deg. >></div> <div><<Struc: 176.9 - 178.2 Strong (Alt) Fault>> breccia/sheared fx</div> <div><<Struc: 185 - 185.1 dominant foliation>></div> <div><div>187.95192.72RHYva</div><div>Coarse grained to ash tuff</div></div> <div>187.95 - 192.72: w fine biot porphyroblasts.</div> <div><<Min: 188.6 - 191.5 3% Min: Calcite>></div> <div><<Min: 191.5 - 202.05 15% Min: Calcite>></div>											



From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
192.72	199.85	MAFt Mafic Volcaniclastics									
192.72 - 199.85: Reddish-brown porphyroblastic- biot-rich rx consisting of sericitic groundmass w varying proportion of augen-shaped carbonate porphyroblasts rimmed by biotite, loc coalescing into bands and/or veins. Biotite stronger around carbonate patches and veins. Mapped as mafic tuff for consistency but suggest felsic composition w strong biot-carb alteration. Sharp UC and gradational LC.											
<<Min: 199 - 202 0.5% Min: Pyrite>> in carbonate veinlets											
<<Alt: 192.72 - 199.85 Strong (Alt) Biotite>> Strong biotite associated with strong carbonate veining and augens (porphyroblasts). Biotite lines carbonate blebs and carbonate veins.											
199.85	200.50	RHYva Coarse grained to ash tuff grey									
200.50	202.05	MAFt Mafic Volcaniclastics									
200.5 - 202.05: same rx as above (?) but with rapid increase in biotite porphyroblasts to give appearance of mafic tuff. Reddish-brown porphyroblastic- biot-rich rx consisting of sericitic groundmass w 25 cm of coarse augen-shaped carbonate porphyroblasts rimmed by biotite, loc coalescing into bands and/or veins. Biotite stronger around carbonate patches and veins. Mapped as mafic tuff for consistency but suggest felsic composition w strong biot-carb alteration. Rapid UC and sharp but broken LC.											
<<Min: 202 - 218 0.5% Min: Pyrite>> f.g diss and in fine stringers and inqtz veins											
202.05	211.00	RHYi Aphanitic Rhyolite (intrusion)									
202.05 - 211: Siliceous, grey-green, massive, w irregular pyritic fractures. Internally "brecciated" and strongly-sericite-altered 207.8-208.6m. Includes total 2.95m of massive qtz veins, some // to CA. Rutile or sulphosalt needles in qtz vein.											
<<Min: 202.05 - 209.5 3% Min: Calcite>>											
<<Min: 206.6 - 207.2 0.01% Min: Sulphosalts>> fg metallic grey-blue needles, striated // to long axis, stibnite? Boulangerite?											
<<Min: 209.5 - 218 0.01% Min: Calcite>>											
<<Alt: 202.5 - 218 Strong (Alt) Silicification>> associated w RHYi											
<<Alt: 202.5 - 218 Strong (Alt) Muscovite>> associated w RHYi											
<<Vein: 206 - 207.45 100% Quartz-Carbonate-Sulphide 65 deg. >> associated w RHYi											
<<Vein: 210.1 - 220.95 15% Quartz-Carbonate-Sulphide>> qtz veins from 2 cm to 0.7m, 0 to 80 deg CA, stockwork? Associated w RHYi dyke.											
211.00	212.75	RHYv Rhyolite volcaniclastic									
211 - 212.75: enclave of tuff in RHYi dyke and associated alteration and veining. Strongly sericite-altered. One 2cm qtz vein shows orange coating on fractures (?).											
212.75	218.00	RHYi Aphanitic Rhyolite (intrusion)									
212.75 - 218: probably includes strongly altered RHYv (for first 2m?)											

Project:
KZK
Hole Number:
K15-277

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
218.00	219.25	RHYvl Lapilli tuff									
218 - 219.25: w foliaform pyritic bands.											
<<Min: 218 - 219.3 3% Min: Calcite>>											
<<Min: 218 - 230 1% Min: Pyrite>> heavy disseminations in crenulated bands and in tabular foliaform bands.											
<<Alt: 218 - 221.4 Moderate (Alt) Muscovite>> associated w RHYi?											
<<Struc: 218.3 - 218.31 dominant foliation>>											
219.25	221.40	RHY undifferentiated rhyolite									
219.25 - 221.4: altered tuff and/or dyke, banded and mottled sericite alteration overprinted by patches of chloritic alteration, some very siliceous patches: RHYi or alteration from RHYi?											
<<Min: 219.3 - 224.9 1% Min: Calcite>>											
<<Alt: 219.25 - 221 Moderate (Alt) Chlorite>>											
<<Alt: 219.25 - 221.4 Moderate (Alt) Silicification>> associated w RHYi?											
<<Struc: 221.3 - 221.4 Moderate (Alt) Fault>> small sericite-clay altered gouge. Core loss.											
221.40	239.00	RHYvl Lapilli tuff									
221.4 - 239: mod to strong greenish sericite alteration, often clayey on partings, w rx strongly to intensely dissected by sericitic foliation/crenulation, loc creating brecciated textures (isolated siliceous domains in sericitic matrix). Fine grained, darker grey, undeformed, less chewed up 228-229.2 (more ash component or weaker sericite-alteration).											
<<Min: 224.9 - 229.85 5% Min: Calcite>>											
<<Min: 229.85 - 277.4 1% Min: Calcite>> end of boxes											
<<Min: 230 - 257 5% Min: Pyrite>> heavily disseminated in folded and crenulated bands and finely diss throughout.											
<<Min: 237 - 282.2 1% Min: Pyrrhotite>> diss and in small flat seams // to foln											
<<Alt: 221.4 - 229 Weak (Alt) Muscovite>>											
<<Alt: 229 - 259 Moderate (Alt) Muscovite>> greyish green, clayey.											
<<Alt: 232 - 232.2 Weak (Alt) Chlorite>> some chloritized fx in small fault breccia											
<<Struc: 222.7 - 222.9 Moderate (Alt) Fault>> clayey broken rx, gouge. Core loss.											
<<Struc: 229.8 - 230.8 Strong (Alt) Fault>> clayey broken rx, clay gouge											
<<Struc: 232 - 232.2 Strong (Alt) Fault>> breccia w siliceous fx in sericitic groundmass plus small interval of fault gouge.											
<<Struc: 233.9 - 234.1 Moderate (Alt) Fault>> clayey breccia											
<<Struc: 235.9 - 236.1 Moderate (Alt) Fault>> clayey broken rx, clay gouge											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-277

From (m) To (m) Rocktype & Description

239.00 282.10 RHY undifferentiated rhyolite

239 - 282.1: probably still lapilli but too chewed up to recognize textures. mod to strong greenish to white sericite alteration, often clayey on partings, w rx strongly to intensely dissected by sericitic foliation/crenulation, loc creating brecciated textures (isolated siliceous domains in sericitic matrix).

<<Min: 257 - 262 1% Min: Pyrite>>

<<Min: 262 - 271.8 3% Min: Pyrite>> py in irregular diss, crenulated stringers and in bands, varies 1-5%

<<Min: 271.8 - 282.2 1% Min: Pyrite>>

<<Min: 277.4 - 277.95 3% Min: Calcite>>

<<Min: 277.95 - 280.1 1% Min: Calcite>>

<<Min: 280.1 - 281.15 3% Min: Calcite>>

<<Min: 281.15 - 286.75 1% Min: Calcite>>

<<Alt: 259 - 299 Strong (Alt) Muscovite>> white to greenish; clayey, greasy partings.

<<Struc: 242 - 244.2 Strong (Alt) Fault>> clayey broken rx, clay gouge, severe core loss

<<Struc: 251.6 - 251.63 Moderate (Alt) Fault>> narrow clayey breccia gouge

<<Struc: 253.1 - 253.16 Strong (Alt) Fault>> narrow clayey breccia gouge

<<Struc: 256.3 - 256.37 Moderate (Alt) Fault>> narrow clayey breccia gouge

<<Struc: 256.43 - 256.47 Moderate (Alt) Fault>> narrow clayey breccia gouge

<<Struc: 261.2 - 261.25 Weak (Alt) Fault>> narrow clayey breccia gouge

<<Struc: 263 - 263.15 Moderate (Alt) Fault>> clayey broken rx

<<Struc: 280.22 - 280.28 Moderate (Alt) Fault>> breccia gouge, in place

282.10 285.70 RHY undifferentiated rhyolite

282.1 - 285.7: fine banding caused by strong dissecting sericite bands and strong foliaform py.

<<Min: 282.2 - 285.15 5% Min: Pyrite>> finely diss and in finely diss bands.

<<Min: 282.2 - 285.15 3% Min: Pyrrhotite>>

<<Min: 285.15 - 299 0.5% Min: Pyrrhotite>> po in flat seams

285.70 303.70 RHYc Rhyolite coherent volcanics

285.7 - 303.7: mostly white siliceous domains w fine regular but strong yellow-greenish sericitic partings, loc 'poker chip' partings.

<<Min: 286.75 - 287.8 3% Min: Calcite>>

<<Min: 287.8 - 292.8 1% Min: Calcite>>

<<Min: 292.8 - 295.1 3% Min: Calcite>>

<<Min: 295.1 - 302 1% Min: Calcite>>

<<Min: 299 - 303.7 1% Min: Pyrite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
280.66	282.10	1.44	B00266851	0.4	0.013	-0.01	-0.01	0.01

282.10	283.00	0.90	B00266852	0.3	-0.005	-0.01	-0.01	0.01
--------	--------	------	-----------	-----	--------	-------	-------	------

283.00	284.00	1.00	B00266853	0.5	0.012	-0.01	-0.01	-0.01
284.00	285.70	1.70	B00266854	0.4	0.012	-0.01	-0.01	0.02

298.75	300.00	1.25	B00266855	-0.3	0.007	-0.01	-0.01	-0.01
--------	--------	------	-----------	------	-------	-------	-------	-------

300.00	302.00	2.00	B00266856	1.8	0.024	-0.01	0.04	0.06
302.00	303.70	1.70	B00266857	1.9	0.017	-0.01	0.02	0.06



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-277

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 299 - 303.7 1% Min: Pyrrhotite>>											
<<Min: 302 - 302.5 5% Min: Calcite>>											
<<Min: 302.5 - 308.3 1% Min: Calcite>>											
<<Alt: 299 - 310.8 Intense (Alt) Muscovite>>											
<<Struc: 290.35 - 290.5 Strong (Alt) Fault>>			breccia gouge								
<<Struc: 301.3 - 302.25 Strong (Alt) Fault>>			strong								
<<Struc: 303 - 303.55 Strong (Alt) Fault>>			strong								
303.70	312.85	OB									
			Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides								
303.7 - 312.85: semi-massive to massive sulphide, dominantly crystalline pyrite (0.5-1mm) w bands of diss sph and patches of diss cp. Some visible interstitial galena. 303.7-305.25m: 10-20% diss sulph in felsic rx. 305.25-306.85: massive py bands interbanded w variably pyritic silky yellow-khaki sericite bands. 306.85-308.25: same as above, but faulted. 308.25-309.8m: massive py w diss sp, and few bands of gangue w cp sp. 309.8-311: massive xtalline py interbanded w pyrite/sericite bands, both brecciated. 311- 312.85m: massive xtalline py w faintly banded sphalerite, few gangue sections mineralized w cp, sp, ga.											
<<Min: 303.7 - 305.25 7% Min: Pyrite>>			303.70	305.25	1.55	B00266858	142	1.17	0.65	1.38	2.29
<<Min: 303.7 - 305.25 0.01% Min: Sphalerite>>											
<<Min: 303.7 - 305.25 0.5% Min: Chalcopryite>>											
<<Min: 304.3 - 308.25 0.5% Min: Chalcopryite>>											
<<Min: 305.25 - 306.85 20% Min: Pyrite>>											
<<Min: 305.25 - 308.25 2% Min: Sphalerite>>											
<<Min: 306.85 - 307.4 50% Min: Pyrite>>											
<<Min: 307.4 - 307.85 15% Min: Pyrite>>											
<<Min: 307.85 - 312.85 50% Min: Pyrite>>											
<<Min: 308.25 - 312.85 1% Min: Chalcopryite>>											
<<Min: 308.25 - 312.85 5% Min: Sphalerite>>											
<<Min: 308.3 - 309.25 3% Min: Calcite>>											
<<Min: 309.25 - 309.8 10% Min: Calcite>>											
<<Min: 309.8 - 311.3 1% Min: Calcite>>											
<<Min: 311 - 313.75 2% Min: Galena>>											
<<Min: 311.3 - 314.25 10% Min: Calcite>>											
<<Struc: 307 - 308.25 Strong (Alt) Fault>>			discontinuous sections of breccia: sulphide and mineralized gangue clasts in greenish yellow sericitic groundmass.								

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-277

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 310 - 311 Moderate (Alt) Fault>> discontinuous breccia intervals consisting of sulphide clasts and sericitized wall rx clasts in greenish-yellow sericitic and/or sulphide groundmass.											
312.85	313.75	OJ Heavily disseminated sulphides in proximal altered rock	312.85	313.75	0.90	B00266868	268	1.69	1.47	3.47	5.62
312.85 - 313.75: 312.85-313.35:massive py po w green cordierite xtals, magnetite, and blebs of cp. 313.35- 313.75: 20-40% sulph, py,po, cp and sp w weak chl, continuation of OJ?											
<<Min: 312.85 - 313.7 30% Min: Pyrite>>											
<<Min: 312.85 - 313.75 5% Min: Pyrrhotite>>											
<<Min: 312.85 - 313.75 3% Min: Chalcopyrite>>											
<<Min: 313.7 - 326 1% Min: Pyrite>>											
<<Min: 313.7 - 327.8 2% Min: Galena>>											
<<Alt: 313.5 - 326 Intense (Alt) Muscovite>>											
313.75	326.00	RHY undifferentiated rhyolite	313.75	314.90	1.15	B00266869	2.6	0.013	-0.01	0.03	0.04
313.75 - 326: folded and crenulated, strong to intense sericite alteration. Grey and pyritic for first meter.											
<<Min: 314.25 - 314.8 3% Min: Calcite>>			314.90	315.90	1.00	B00266871	3.6	0.015	-0.01	0.03	0.07
<<Min: 314.8 - 326 1% Min: Calcite>>			315.90	317.00	1.10	B00266872	0.9	0.007	-0.01	-0.01	-0.01
<<Struc: 316.3 - 316.85 Strong (Alt) Fault>> breccia, gouge, core loss.			317.00	318.50	1.50	B00266873	0.8	0.009	-0.01	-0.01	-0.01
<<Struc: 320 - 324.3 Strong (Alt) Fault>> broken rx, extensive clay gouge, core loss. Deformation continues for approx 1m w brecciated qtz and intense folding and crenulation.			318.50	320.00	1.50	B00266874	2.6	0.014	0.01	0.03	0.04
			320.00	323.00	3.00	B00266875	0.5	0.01	-0.01	-0.01	-0.01
			323.00	324.30	1.30	B00266876	7.7	0.054	0.02	0.03	0.09
			324.30	326.00	1.70	B00266877	65.5	1.53	0.1	0.04	0.12
326.00	326.50	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	326.00	326.50	0.50	B00266878	142	0.745	0.01	2.07	8.18
326 - 326.5: Re-ordered core. Mostly xtalline pyrite w some sph with gangue clots w ga-sph. No sig cp.											
<<Min: 326 - 327 5% Min: Calcite>>											
<<Min: 326 - 327.8 2% Min: Sphalerite>>											
<<Min: 326 - 333.9 50% Min: Pyrite>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-277
From (m) **To (m)** **Rocktype & Description**

326.50 327.00 OJ **Heavily disseminated sulphides in proximal altered rock**

326.5 - 327: mostly py-cord w weak chl, weak cp

<<Min: 326.5 - 327 3% Min: Chalcopyrite>>

327.00 327.80 OA **Magnetite bearing sulphides**

327 - 327.8: coarsely xtalline py-mt in gangue w sp-ga.

<<Min: 327 - 329 10% Min: Calcite>>

327.80 330.35 MAFi **Mafic Intrusions (primarily footwall mafic intrusion)**

327.8 - 330.35: heresy I know. Banded light brown (biot) and bluish grey (cordierite? Not clear.) altered MAFi or MAFt? W some heavy py stringers and some galena and cp. Could be seen as weak OJ. Strong biotite schist for first 25cm and at UC of 25cm calcite-py-cp vein. Includes 40cm of massive py-sp.

<<Min: 327.8 - 329 2% Min: Chalcopyrite>>

<<Min: 329 - 330.9 20% Min: Calcite>>

<<Min: 329 - 332.9 2% Min: Sphalerite>>

<<Min: 330.1 - 330.35 1% Min: Chalcopyrite>>

<<Vein: 330 - 330.35 100% Carbonate-Sulphide 70 deg. >>

330.35 332.90 OB **Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides**

330.35 - 332.9: mostly OB w some magnetite sections, some weakly banded, and some sections w dark chlorite.

<<Min: 330.9 - 332.9 5% Min: Calcite>>

332.90 357.80 MAFi **Mafic Intrusions (primarily footwall mafic intrusion)**

<<Min: 332.9 - 339 15% Min: Calcite>>

<<Min: 340 - 344 20% Min: Calcite>>

<<Min: 341.75 - 342.03 10% Min: Sphalerite>>

<<Min: 341.75 - 342.03 10% Min: Pyrite>>

<<Min: 342.58 - 342.66 5% Min: Sphalerite>>

<<Min: 342.58 - 342.66 20% Min: Pyrite>>

<<Min: 342.58 - 342.66 5% Min: Chalcopyrite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
326.50	327.00	0.50	B00266879	133	0.701	0.03	2.27	4.45

327.00	327.80	0.80	B00266881	244	2.15	0.41	3.93	7.68
--------	--------	------	-----------	-----	------	------	------	------

327.80	329.00	1.20	B00266882	140	0.978	0.15	2.09	0.36
--------	--------	------	-----------	-----	-------	------	------	------

329.00	330.35	1.35	B00266883	170	0.883	0.19	2.02	5.61
--------	--------	------	-----------	-----	-------	------	------	------

330.35	331.65	1.30	B00266884	122	0.651	0.03	1	4.26
--------	--------	------	-----------	-----	-------	------	---	------

331.65	332.90	1.25	B00266885	131	1.25	0.19	0.95	3.71
--------	--------	------	-----------	-----	------	------	------	------

332.90	333.90	1.00	B00266886	32.9	0.13	0.03	0.32	0.14
--------	--------	------	-----------	------	------	------	------	------

333.90	335.30	1.40	B00266887	11.3	0.062	0.02	0.13	0.08
--------	--------	------	-----------	------	-------	------	------	------

335.30	336.90	1.60	B00266888	10.8	0.082	0.02	0.12	0.1
--------	--------	------	-----------	------	-------	------	------	-----

340.20	341.00	0.80	B00266889	22.9	0.092	0.01	0.25	0.06
--------	--------	------	-----------	------	-------	------	------	------

341.00	341.75	0.75	B00266891	43.2	0.665	0.04	0.45	1.05
--------	--------	------	-----------	------	-------	------	------	------

341.75	342.70	0.95	B00266892	194	3.1	0.71	1.37	4.27
--------	--------	------	-----------	-----	-----	------	------	------

342.70	344.00	1.30	B00266893	19.9	0.18	-0.01	0.23	0.07
--------	--------	------	-----------	------	------	-------	------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-277

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 344 - 352 10% Min: Calcite>>											
<<Min: 352 - 357.8 5% Min: Calcite>>											
<<Min: 355.7 - 355.8 3% Min: Galena>>											
<<Vein: 355.7 - 357 1% Quartz-Carbonate-Sulphide 45 deg. >>											
End of Hole @ 357.8											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-278

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Cooper Campbell
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	28-Sep-15
UTM Easting	414625.354	Core Size:	HQ3	Azimuth:	180.14	Date Logging Complete:	30-Sep-15
UTM Northing:	6815538.706	Casing Pulled?:	Yes	Dip:	-70	Drill Company:	Geotech
UTM Elev. (m):	1437.145	Casing Depth (m):	6.5	Length (m):	197.26	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	26-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	28-Sep-15
Local Elev. (m):						Purpose:	Resource/Met
Comments:						Parent Hole:	

The purpose of this hole was to confirm the continuity of the lower sulphide lens (MET 4 Domain).

The upper portion of this hole contains RHYvl, RHYva, MAFt, MDSt, MDSc, and RHYcw intruded by MAFi. One major lens of massive sulphide was intersected between 131.95-145.38. OA and OJ ore types were intersected. RHYcw, RHYv, RHYvl, and RHYvx intruded by MAFi was intersected below the sulphide lens. Volcaniclastic rhyolites were intersected below the MAFi unit. CI-CL zones were intersected above, within, and below the sulphide lens. CI-CL intersections were found at: 127.17-129.28m, 131.95-141.2m, 144.96-145.38m. Narrow AB zones were also intersected between 131.95-132.7m and 144.96-145.38m.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-70	180.14	0	180.14	APS	Cooper Campbell	26-Sep-15		<input checked="" type="checkbox"/>	
26	-70	160.9	22.5	183.4	ReflexEVS	Geotech	26-Sep-15	5722	<input checked="" type="checkbox"/>	
53	-70.5	162.1	22.5	184.6	ReflexEVS	Geotech	27-Sep-15	5713	<input checked="" type="checkbox"/>	
74	-70.5	160.1	22.5	182.6	ReflexEVS	Geotech	27-Sep-15	5694	<input checked="" type="checkbox"/>	
101	-70.8	162.9	22.5	185.4	ReflexEVS	Geotech	27-Sep-15	5729	<input checked="" type="checkbox"/>	
125	-70.4	164.2	22.5	186.7	ReflexEVS	Geotech	27-Sep-15	5714	<input checked="" type="checkbox"/>	
152	-70	175.2	22.5	197.7	ReflexEVS	Geotech	27-Sep-15	5822	<input checked="" type="checkbox"/>	
179	-70.6	165.4	22.5	187.9	ReflexEVS	Geotech	27-Sep-15	5767	<input checked="" type="checkbox"/>	
191	-70.4	165.2	22.5	187.7	ReflexEVS	Geotech	28-Sep-15	5739	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	6.34	OVBN Overburden									
6.34	8.52	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
6.34 - 8.52: Gradational contact with RHYvl.											
<<Min: 6.34 - 8.52 0.5% Min: Pyrrhotite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-278

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %									
<<Min: 6.34 - 8.52 15% Min: Calcite>>																				
<<Alt: 6.34 - 8.52 Trace (Alt) Chlorite>>																				
<<Struc: 6.34 - 19.8 Fault>> Very narrow faults filled with broken rock. Spaced metres apart. Low intensity.																				
8.52	23.87	RHYvl Lapilli tuff																		
8.52 - 23.87: Local flow banding.																				
<<Min: 8.52 - 16.32 5% Min: Calcite>>																				
<<Min: 8.52 - 67.33 0.5% Min: Pyrite>> VN																				
<<Min: 8.52 - 67.33 1% Min: Pyrrhotite>> VN																				
<<Min: 16.32 - 23.87 2% Min: Calcite>>																				
<<Alt: 8.52 - 48.39 Moderate (Alt) Muscovite>>																				
23.87	31.20	MDSr Rhyolite tuff dominant mudstone																		
<<Min: 23.87 - 31.2 0.5% Min: Calcite>>																				
31.20	32.74	MDSr Carbonaceous dominant mudstone																		
<<Min: 31.2 - 32.74 2% Min: Calcite>>																				
<<Min: 31.2 - 46.87 1% Min: Calcite>>																				
32.74	35.14	RHYva Coarse grained to ash tuff																		
35.14	36.07	MDSr Rhyolite tuff dominant mudstone																		
36.07	40.19	RHYvl Lapilli tuff																		
40.19	41.73	MDSr Rhyolite tuff dominant mudstone																		
41.73	67.33	RHYvl Lapilli tuff																		
<<Min: 46.87 - 56.51 5% Min: Calcite>>																				
<<Min: 54 - 55 0.01% Min: Sphalerite>>																				
<<Min: 56.51 - 66.61 2% Min: Calcite>>																				
<<Min: 66.61 - 73.63 20% Min: Calcite>>																				
<<Alt: 46.87 - 66.79 Trace (Alt) Biotite>>																				
<<Alt: 48.39 - 67.33 Weak (Alt) Muscovite>>																				
<<Alt: 66.79 - 73.77 Trace (Alt) Chlorite>>																				
<<Alt: 66.79 - 73.77 Moderate (Alt) Biotite>>																				

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-278

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %									
<<Vein: 48.77 - 49.82 10% Quartz-Carbonate-Sulphide 15 deg. >> QZ-CA-SP-PY																				
67.33	69.03	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)																	
<<Min: 67.33 - 69.03 0.01% Min: Pyrrhotite>>																				
<<Vein: 67.33 - 73.51 4% Calcite 60 deg. >> CA-trQZ																				
69.03	69.93	RHYvl	Lapilli tuff																	
<<Min: 69.03 - 69.93 1% Min: Pyrrhotite>>																				
<<Alt: 69.03 - 69.93 Weak (Alt) Muscovite>>																				
69.93	73.51	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)																	
<<Min: 69.93 - 73.51 0.01% Min: Pyrrhotite>>																				
73.51	88.10	RHYvl										Lapilli tuff								
<<Min: 73.51 - 78.39 0.01% Min: Pyrite>>																				
<<Min: 73.51 - 78.39 0.5% Min: Pyrrhotite>>																				
<<Min: 73.63 - 90.21 0.5% Min: Calcite>>																				
<<Min: 78.39 - 88.1 2% Min: Pyrite>>																				
<<Min: 78.39 - 88.1 1% Min: Pyrrhotite>>																				
<<Alt: 73.51 - 96.14 Weak (Alt) Muscovite>>																				
88.10	90.21	RHYva	Coarse grained to ash tuff																	
<<Min: 88.1 - 92.63 0.5% Min: Pyrrhotite>>																				
90.21	93.41	MDSst	Rhyolite tuff dominant mudstone																	
<<Min: 90.21 - 94.74 0.01% Min: Calcite>>																				
<<Min: 92.63 - 95.39 0.01% Min: Pyrrhotite>>																				
<<Struc: 93.06 - 93.07 dominant foliation>>																				
<<Struc: 93.14 - 93.15 Foliation>>																				
93.41	96.47	RHYv	Rhyolite volcaniclastic																	
93.41 - 96.47: Trace crb.																				
<<Min: 94.71 - 97 10% Min: Calcite>>																				
<<Min: 95.39 - 98.51 0.01% Min: Pyrite>>																				
<<Alt: 96.14 - 128 Moderate (Alt) Muscovite>>																				
<<Struc: 93.43 - 93.44 dominant foliation>>																				

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-278

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 93.44 - 93.45 Foliation>>											
96.47	100.44	MDS ^t Rhyolite tuff dominant mudstone									
<<Min: 97 - 124.57 0.01% Min: Calcite>>											
<<Min: 98.51 - 113.64 0.5% Min: Pyrite>>											
<<Vein: 96.47 - 103.62 1% Quartz-Carbonate-Sulphide 55 deg. >> QZ-CA-PY											
100.44	111.91	RHY ^{cw} Curdy textured-flow banded (flows, subvolcanics)									
100.44 - 111.91: Trace crb.											
<<Struc: 103.85 - 106.87 Fault>> Narrow faults (cm's) filled with broken rock and gouge. Spaced tens of cm's apart. Moderate intensity.											
111.91	112.08	MDS ^c Carbonaceous dominant mudstone									
112.08	124.57	MDS ^w Coherent rhyolite flow with carbonaceous content									
<<Min: 113.64 - 124.57 1% Min: Pyrite>>											
<<Struc: 114.7 - 115.24 Fault>> Healed fault zone. Moderate intensity.											
<<Struc: 115.71 - 115.72 dominant foliation>>											
<<Struc: 121.64 - 121.65 dominant foliation>>											
<<Struc: 122.27 - 122.28 dominant foliation>>											
124.57	128.50	RHY ^{cw} Curdy textured-flow banded (flows, subvolcanics)	127.00	128.50	1.50	B00268244	3.8	-0.005	0.02	0.18	0.43
<<Min: 124.57 - 126.49 0.5% Min: Pyrite>>											
<<Min: 124.57 - 126.49 0.5% Min: Pyrrhotite>> BL											
<<Min: 124.57 - 129.28 0.5% Min: Calcite>>											
<<Min: 126.49 - 131.95 1% Min: Sphalerite>>											
<<Min: 126.49 - 131.95 2% Min: Pyrite>> WIS											
<<Min: 126.49 - 131.95 1% Min: Pyrrhotite>> FD											
<<Min: 126.49 - 131.95 0.5% Min: Chalcopryite>>											
<<Alt: 127.17 - 129.28 Weak (Alt) Chlorite>>											
<<Alt: 127.17 - 129.28 Weak (Alt) Cordierite>>											
<<Alt: 128 - 131.95 Strong (Alt) Muscovite>>											
128.50	131.95	RHY undifferentiated rhyolite	128.50	129.69	1.19	B00268245	9.1	0.038	0.39	0.1	3.52



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-278

From (m)	To (m)	Rocktype & Description										
<<Min: 129.28 - 132.51 2% Min: Calcite>>												
<<Vein: 129.69 - 134.56 10% Quartz-Carbonate-Sulphide 10 deg. >> Large vuggy bladed calcite veins.												
<<Struc: 129.03 - 129.04 dominant foliation>>												
<<Struc: 129.39 - 132.11 Fault>> cm scale faults filled with gouge and broken rock. Partially healed in places. Spaced tens of cm's apart. Moderate to strong intensity.												
131.95	133.00	OJ	Heavilly disseminated sulphides in proximal altered rock									
131.95 - 133: Ab alteration also?												
<<Min: 131.95 - 133 5% Min: Pyrrhotite>>												
<<Min: 131.95 - 133 10% Min: Magnetite>>												
<<Min: 131.95 - 133 3% Min: Chalcopyrite>>												
<<Min: 132.51 - 134 25% Min: Calcite>>												
<<Alt: 131.95 - 132.7 Moderate (Alt) Albite>>												
<<Alt: 131.95 - 133 Moderate (Alt) Chlorite>>												
<<Struc: 132.8 - 132.81 dominant foliation>>												
133.00	136.81	OA	Magnetite bearing sulphides									
133 - 136.81: Logged as OD by Cominco. 20%MG, 5% PO, 10% SP, 5% CP												
<<Min: 133 - 136.81 10% Min: Sphalerite>> Part of the massive sulphide mineralization. Individual mineral species does not account for enough of total rock to be considered massive mineralization.												
<<Min: 133 - 136.81 10% Min: Pyrrhotite>> Part of the massive sulphide mineralization. Individual mineral species does not account for enough of total rock to be considered massive mineralization.												
<<Min: 133 - 136.81 20% Min: Magnetite>> Part of the massive sulphide mineralization. Individual mineral species does not account for enough of total rock to be considered massive mineralization.												
<<Min: 133 - 136.81 5% Min: Chalcopyrite>> Part of the massive sulphide mineralization. Individual mineral species does not account for enough of total rock to be considered massive mineralization.												
<<Min: 134 - 145.17 1% Min: Calcite>>												
<<Struc: 135.4 - 135.41 dominant foliation>>												
136.81	139.31	OA	Magnetite bearing sulphides									
136.81 - 139.31: Classic laminated OA. 20%SP, 10%PO, 15%MG.												
<<Min: 136.81 - 139.31 20% Min: Sphalerite>> Part of the massive sulphide mineralization. Individual mineral species does not account for enough of total rock to be considered massive mineralization.												
<<Min: 136.81 - 139.31 10% Min: Pyrrhotite>> Part of the massive sulphide mineralization. Individual mineral species does not account for enough of total rock to be considered massive mineralization.												

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
129.69	131.00	1.31	B00268246	2.1	-0.005	0.04	0.06	0.56
131.00	131.95	0.95	B00268247	3.6	0.008	-0.01	0.04	0.05
131.95	132.50	0.55	B00268248	18.7	0.247	1.55	0.03	0.09
132.50	133.00	0.50	B00268249	23.4	0.52	1.94	0.02	0.18
133.00	134.00	1.00	B00268251	19.1	0.442	1.58	0.01	0.14
134.00	135.00	1.00	B00268252	13.3	0.279	0.98	0.02	0.28
135.00	136.00	1.00	B00268253	8.8	0.242	0.75	0.02	4.97
136.00	136.81	0.81	B00268254	15.8	0.398	1.1	0.03	4.17
136.81	137.81	1.00	B00268255	12.6	0.278	0.59	0.08	6.44
137.81	138.81	1.00	B00268256	33.6	0.204	0.4	0.68	14.2
138.81	139.31	0.50	B00268257	13	0.185	0.19	0.15	10.4



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-278

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 136.81 - 139.31 20% Min: Magnetite>> Part of the massive sulphide mineralization. Individual mineral species does not account for enough of total rock to be considered massive mineralization.			139.31	140.00	0.69	B00268258	12.7	0.179	0.47	0.08	8.07
139.31 140.58 OA Magnetite bearing sulphides											
139.31 - 140.58: Logged as OD by Cominco. 20%MG, 15%PO, 10%SP.											
<<Min: 139.31 - 140.58 10% Min: Sphalerite>> Part of the massive sulphide mineralization. Individual mineral species does not account for enough of total rock to be considered massive mineralization.			140.00	140.58	0.58	B00268259	61.7	0.257	0.22	0.47	3.64
<<Min: 139.31 - 140.58 15% Min: Pyrrhotite>> Part of the massive sulphide mineralization. Individual mineral species does not account for enough of total rock to be considered massive mineralization.											
<<Min: 139.31 - 140.58 20% Min: Magnetite>> Part of the massive sulphide mineralization. Individual mineral species does not account for enough of total rock to be considered massive mineralization.											
<<Struc: 139.36 - 139.37 dominant foliation>>											
140.58 141.20 OJ Heavily disseminated sulphides in proximal altered rock			140.58	141.20	0.62	B00268261	11.2	0.166	0.93	-0.01	0.12
140.58 - 141.2: 22.6% recovery for this lithology interval. AK alteration.											
<<Min: 140.58 - 141.2 1% Min: Pyrrhotite>>											
<<Min: 140.58 - 141.2 1% Min: Chalcopyrite>>											
<<Alt: 140.58 - 141.2 Moderate (Alt) Chlorite>>											
<<Alt: 140.58 - 141.2 Moderate (Alt) Cordierite>>											
<<Alt: 140.58 - 141.2 Moderate (Alt) Biotite>>											
<<Vein: 140.58 - 145.3 4% Carbonate-Biotite 70 deg. >> AK-BI-CL-PO-PY-CP											
141.20 141.52 OA Magnetite bearing sulphides			141.20	141.70	0.50	B00268262	14.5	0.202	0.16	0.07	0.66
141.2 - 141.52: 5% MG, 3%PO.											
<<Min: 141.2 - 141.52 3% Min: Pyrrhotite>> Part of the massive sulphide mineralization. Individual mineral species does not account for enough of total rock to be considered massive mineralization.											
<<Min: 141.2 - 141.52 5% Min: Magnetite>> Part of the massive sulphide mineralization. Individual mineral species does not account for enough of total rock to be considered massive mineralization.											
141.52 144.38 OA Magnetite bearing sulphides			141.70	142.70	1.00	B00268263	11.6	0.222	0.42	0.03	0.6
141.52 - 144.38: Logged as OD by Cominco. 30%SP, 15% PO, 20%MG.											
<<Min: 141.52 - 144.38 30% Min: Sphalerite>>			142.70	143.25	0.55	B00268264	11.1	0.133	0.36	0.04	9.64
<<Min: 141.52 - 144.38 15% Min: Pyrrhotite>> Part of the massive sulphide mineralization. Individual mineral species does not account for enough of total rock to be considered massive mineralization.			143.25	143.75	0.50	B00268265	23.4	0.563	0.37	0.51	12.6
<<Min: 141.52 - 144.38 20% Min: Magnetite>> Part of the massive sulphide mineralization. Individual mineral species does not account for enough of total rock to be considered massive mineralization.			143.75	144.38	0.63	B00268266	40.6	0.191	0.2	1.04	11.7



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-278

From (m) To (m) Rocktype & Description

<<Struc: 144.28 - 144.29 dominant foliation>>

144.38 144.96 OA Magnetite bearing sulphides

144.38 - 144.96: 10%MG, 5%PO

<<Min: 144.38 - 144.96 5% Min: Pyrrhotite>> Part of the massive sulphide mineralization. Individual mineral species does not account for enough of total rock to be considered massive mineralization.

<<Min: 144.38 - 144.96 10% Min: Magnetite>> Part of the massive sulphide mineralization. Individual mineral species does not account for enough of total rock to be considered massive mineralization.

<<Struc: 144.58 - 144.59 dominant foliation>>

144.96 145.38 OJ Heavily disseminated sulphides in proximal altered rock

144.96 - 145.38: 3%MG, 3%PO. AK alteration.

<<Min: 144.96 - 145.38 3% Min: Pyrrhotite>>

<<Min: 144.96 - 145.38 3% Min: Magnetite>>

<<Min: 145.17 - 145.38 5% Min: Calcite>>

<<Alt: 144.96 - 145.38 Moderate (Alt) Chlorite>>

<<Alt: 144.96 - 145.38 Weak (Alt) Cordierite>>

<<Alt: 144.96 - 145.38 Moderate (Alt) Biotite>>

<<Alt: 144.96 - 145.38 Moderate (Alt) Albite>>

145.38 148.87 RHYcw Curdy textured-flow banded (flows, subvolcanics)

145.38 - 148.87: Uncertain on lithology. May be a MAF rock.

<<Min: 145.38 - 148.87 0.01% Min: Sphalerite>>

<<Min: 145.38 - 148.87 0.5% Min: Pyrite>> VN

<<Min: 145.38 - 148.87 0.01% Min: Pyrrhotite>> FD

<<Min: 145.38 - 148.87 3% Min: Calcite>>

<<Alt: 145.38 - 149.41 Moderate (Alt) Muscovite>>

<<Vein: 146.09 - 149.4 5% Quartz-Carbonate-Sulphide 60 deg. >> QZ-CA-BI-PY-PO-SP

148.87 171.12 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

<<Min: 148.87 - 153.12 20% Min: Calcite>>

<<Min: 148.87 - 155.3 0.01% Min: Pyrrhotite>> VN

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
144.38	144.96	0.58	B00268267	50.2	0.2	0.22	0.42	6.55

144.96	145.38	0.42	B00268268	25.4	0.125	0.35	0.09	0.72
--------	--------	------	-----------	------	-------	------	------	------

145.38	146.38	1.00	B00268269	2.2	-0.005	-0.01	0.02	0.04
--------	--------	------	-----------	-----	--------	-------	------	------

146.38	147.38	1.00	B00268271	1	-0.005	-0.01	0.02	0.07
--------	--------	------	-----------	---	--------	-------	------	------

147.38	148.87	1.49	B00268272	0.7	0.01	-0.01	-0.01	0.03
--------	--------	------	-----------	-----	------	-------	-------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-278

From (m) To (m) Rocktype & Description

<<Min: 148.87 - 171.12 0.01% Min: Pyrite>>
<<Min: 153.12 - 166.73 3% Min: Calcite>>
<<Min: 166.73 - 171.58 30% Min: Calcite>>
<<Alt: 148.87 - 171.12 Moderate (Alt) Chlorite>>
<<Alt: 148.87 - 171.12 Moderate (Alt) Biotite>>
<<Vein: 149.4 - 171.12 20% Quartz-Carbonate 70 deg. >> CA-QZ
<<Struc: 154.57 - 154.58 Vein>> Anomalous veinlet orientation.
<<Struc: 154.76 - 154.77 dominant foliation>>

171.12 174.72 RHYv Rhyolite volcanoclastic

<<Min: 171.12 - 174.72 0.01% Min: Pyrite>>
<<Min: 171.58 - 174.52 10% Min: Calcite>>
<<Min: 174.52 - 195 0.01% Min: Calcite>>
<<Alt: 171.12 - 174.72 Moderate (Alt) Muscovite>>
<<Vein: 171.12 - 174.72 2% Quartz-Carbonate 70 deg. >> QZ-CA

174.72 175.93 MAFI Mafic Intrusions (primarily footwall mafic intrusion)

174.72 - 175.93: 1%CP, 1%PO.

<<Min: 174.72 - 175.93 1% Min: Pyrrhotite>>
<<Min: 174.72 - 175.93 1% Min: Chalcopryrite>>
<<Alt: 174.72 - 175.93 Strong (Alt) Chlorite>>

175.93 178.21 RHYvl Lapilli tuff

<<Min: 175.93 - 183.34 0.01% Min: Pyrite>>
<<Min: 175.93 - 183.34 0.01% Min: Pyrrhotite>>
<<Alt: 175.93 - 187.78 Moderate (Alt) Muscovite>>

178.21 181.74 RHYvx Quartz and/or feldspar crystal tuff

181.74 183.77 RHYvl Lapilli tuff

181.74 - 183.77: Possible RHYcw.

<<Min: 183.34 - 188 0.5% Min: Pyrrhotite>>
<<Alt: 181.74 - 186.79 Trace (Alt) Chlorite>>

183.77 188.00 RHYvx Quartz and/or feldspar crystal tuff

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
173.22	174.72	1.50	B00268273	1.7	0.013	-0.01	0.03	0.1

174.72	175.43	0.71	B00268274	19.2	0.235	0.61	0.14	0.23
--------	--------	------	-----------	------	-------	------	------	------

175.43	175.93	0.50	B00268275	0.5	-0.005	0.04	-0.01	0.05
--------	--------	------	-----------	-----	--------	------	-------	------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-278

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 187.78 - 191.45 Strong (Alt) Muscovite>> OP associated with veining over interval.											
188.00	197.26	RHYvl Lapilli tuff									
188 - 197.26: CL overprint from 194.11 onward.											
<<Min: 188 - 191.45 0.01% Min: Sphalerite>>											
<<Min: 188 - 191.45 0.5% Min: Pyrite>>											
<<Min: 188 - 191.45 0.01% Min: Galena>>											
<<Min: 191.45 - 197.26 0.01% Min: Sphalerite>>											
<<Min: 191.45 - 197.26 1% Min: Pyrite>> FD, BL											
<<Min: 191.45 - 197.26 2% Min: Pyrrhotite>> FD, VN											
<<Min: 195 - 197.26 3% Min: Calcite>>											
<<Alt: 191.45 - 194.11 Moderate (Alt) Muscovite>>											
<<Alt: 194.11 - 197.25 Weak (Alt) Muscovite>>											
<<Alt: 194.11 - 197.25 Weak (Alt) Chlorite>>											
<<Vein: 189.48 - 190.75 20% Quartz-Sulphide 15 deg. >> QZ-PY-SP-GL											
<<Vein: 195.02 - 195.08 100% Quartz-Carbonate-Sulphide 60 deg. >> QZ-AK-CA-PO-SP											
End of Hole @ 197.26											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-278W1

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Cooper Campbell
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	30-Sep-15
UTM Easting	414625.354	Core Size:	HQ3	Azimuth:	180.14	Date Logging Complete:	01-Oct-15
UTM Northing:	6815538.706	Casing Pulled?:	Yes	Dip:	-70	Drill Company:	Geotech
UTM Elev. (m):	1437.145	Casing Depth (m):	6.5	Length (m):	161	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	28-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	29-Sep-15
Local Elev. (m):						Purpose:	Metallurgical Wedge
Comments:						Parent Hole:	K15-278

The purpose of this hole was to sample the lower sulphide lens (MET 4 Domain) for metallurgical testing.

The upper portion of this hole contains MDSw and RHYcw. One major lens of massive sulphide was intersected between 132.17-145.81 m. OA and OJ ore types were intersected. RHYcw intruded by MAFI was intersected below the sulphide lens.

CI-CL alteration zones were intersected above, within, and below the sulphide lens. CI-CL intersections were found at: 126.2-133.85m, 141.37-141.54m, 145.3-145.81m. A narrow AB zone was also intersected between 132.15-133.1m.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-70	180.14	0	180.14	APS	Cooper Campbell	26-Sep-15		<input checked="" type="checkbox"/>	Values copied from K15-278
26	-70	160.9	22.5	183.4	ReflexEVS	Geotech	26-Sep-15	5722	<input checked="" type="checkbox"/>	Values copied from K15-278
53	-70.5	162.1	22.5	184.6	ReflexEVS	Geotech	27-Sep-15	5713	<input checked="" type="checkbox"/>	Values copied from K15-278
74	-70.5	160.1	22.5	182.6	ReflexEVS	Geotech	27-Sep-15	5694	<input checked="" type="checkbox"/>	Values copied from K15-278
101	-70.8	162.9	22.5	185.4	ReflexEVS	Geotech	27-Sep-15	5729	<input checked="" type="checkbox"/>	Values copied from K15-278
116	-69	163.6	22.5	186.1	ReflexEVS	Geotech	28-Sep-15	5796	<input checked="" type="checkbox"/>	Wedge start; value copied from first wedge survey at 126.5m
126.5	-69	163.6	22.5	186.1	ReflexEVS	Geotech	28-Sep-15	5796	<input checked="" type="checkbox"/>	
143	-68.8	172.5	22.5	195	ReflexEVS	Geotech	28-Sep-15	5583	<input checked="" type="checkbox"/>	
161	-68.3	169.9	22.5	192.4	ReflexEVS	Geotech	28-Sep-15	5840	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
116.00	125.00	MDSw									
		Coherent rhyolite flow with carbonaceous content									
<<Min: 116 - 125 1% Min: Pyrite>>											
<<Min: 116 - 129.49 0.01% Min: Calcite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-278W1

From (m) To (m) Rocktype & Description

<<Alt: 116 - 126.2 Moderate (Alt) Muscovite>>

125.00 128.90 RHYcw Curdy textured-flow banded (flows, subvolcanics)

<<Min: 125 - 126.61 0.5% Min: Pyrite>> WIS

<<Min: 125 - 126.61 0.5% Min: Pyrrhotite>> WIS

<<Min: 126.61 - 132.17 1% Min: Sphalerite>>

<<Min: 126.61 - 132.17 2% Min: Pyrite>> WIS

<<Min: 126.61 - 132.17 1% Min: Pyrrhotite>> FD

<<Min: 126.61 - 132.17 0.5% Min: Galena>>

<<Min: 126.61 - 132.17 0.01% Min: Chalcopryite>>

<<Alt: 126.2 - 132.15 Strong (Alt) Muscovite>>

<<Alt: 126.2 - 132.15 Weak (Alt) Chlorite>>

<<Alt: 127.58 - 130.7 Weak (Alt) Cordierite>>

<<Vein: 126.61 - 132.17 5% Chlorite-Sulphides 80 deg. >> PY-SP-PO-GL-CP

128.90 132.17 RHY undifferentiated rhyolite

<<Min: 129.49 - 133.17 3% Min: Calcite>>

<<Alt: 132.15 - 133.1 Moderate (Alt) Chlorite>>

<<Alt: 132.15 - 133.1 Moderate (Alt) Albite>>

<<Vein: 129.92 - 134.18 3% Quartz-Carbonate-Sulphide 65 deg. >> QZ-PY-CA-PO-CP-SP

<<Struc: 129.5 - 131.63 Fault>> Narrow healed faults spaced tens of cm's apart.

132.17 133.17 OJ Heavilly disseminated sulphides in proximal altered rock

<<Min: 132.17 - 133.17 5% Min: Pyrrhotite>> DIS, BL

<<Min: 132.17 - 133.17 3% Min: Chalcopryite>> FRA

<<Alt: 133.1 - 133.85 Strong (Alt) Chlorite>>

<<Alt: 133.1 - 133.85 Moderate (Alt) Cordierite>>

133.17 136.87 OA Magnetite bearing sulphides

133.17 - 136.87: Logged as OD by Cominco.

<<Min: 133.17 - 136.87 10% Min: Pyrrhotite>>

<<Min: 133.17 - 136.87 3% Min: Chalcopryite>>

<<Min: 133.17 - 145.81 0.01% Min: Calcite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

127.90	128.90	1.00
--------	--------	------

128.90	129.50	0.60
--------	--------	------

129.50	130.17	0.67
--------	--------	------

130.17	131.17	1.00
--------	--------	------

131.17	132.17	1.00
--------	--------	------

132.17	133.17	1.00
--------	--------	------

133.17	134.17	1.00
--------	--------	------

134.17	135.17	1.00
--------	--------	------

135.17	136.17	1.00
--------	--------	------

136.17	136.87	0.70
--------	--------	------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-278W1
From (m) **To (m)** **Rocktype & Description**
136.87 139.83 OA Magnetite bearing sulphides

136.87 - 139.83: Classic laminated OA.

<<Min: 136.87 - 139.83 20% Min: Sphalerite>>

<<Min: 136.87 - 139.83 10% Min: Pyrrhotite>>

<<Min: 136.87 - 139.83 20% Min: Magnetite>>

139.83 140.60 OA Magnetite bearing sulphides

<<Min: 139.83 - 140.6 1% Min: Pyrrhotite>>

<<Min: 139.83 - 140.6 1% Min: Magnetite>>

140.60 141.37 OA Magnetite bearing sulphides

140.6 - 141.37: Logged as OD by Cominco.

<<Min: 140.6 - 141.37 15% Min: Sphalerite>>

<<Min: 140.6 - 141.37 10% Min: Pyrrhotite>>

<<Min: 140.6 - 141.37 20% Min: Magnetite>>

141.37 141.54 OJ Heavily disseminated sulphides in proximal altered rock

141.37 - 141.54: AK alteration.

<<Min: 141.37 - 141.55 5% Min: Pyrrhotite>>

<<Min: 141.37 - 141.55 3% Min: Magnetite>>

<<Alt: 141.37 - 141.54 Moderate (Alt) Chlorite>>

<<Alt: 141.37 - 141.54 Moderate (Alt) Cordierite>>

<<Alt: 141.37 - 141.54 Moderate (Alt) Biotite>>

141.54 142.32 OA Magnetite bearing sulphides

<<Min: 141.54 - 142.32 20% Min: Sphalerite>>

<<Min: 141.54 - 142.32 20% Min: Pyrrhotite>>

<<Min: 141.54 - 142.32 10% Min: Magnetite>>

142.32 144.66 OA Magnetite bearing sulphides

142.32 - 144.66: Logged as OD by Cominco.

<<Min: 142.32 - 144.66 30% Min: Sphalerite>>

<<Min: 142.32 - 144.66 20% Min: Pyrrhotite>>

<<Min: 142.32 - 144.66 10% Min: Magnetite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
136.87	137.87	1.00						

137.87	138.87	1.00
138.87	139.83	0.96

139.83	140.60	0.77
--------	--------	------

140.60	141.37	0.77
--------	--------	------

141.37	141.54	0.17
--------	--------	------

141.54	142.32	0.78
--------	--------	------

142.32	143.32	1.00
--------	--------	------

143.32	144.00	0.68
144.00	144.66	0.66

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-278W1

From (m) To (m) Rocktype & Description

144.66 145.30 OA Magnetite bearing sulphides

144.66 - 145.3: Classic OA with a small lens of OA dmng from 145.14-145.3m.

<<Min: 144.66 - 145.3 10% Min: Sphalerite>>

<<Min: 144.66 - 145.3 15% Min: Pyrrhotite>>

<<Min: 144.66 - 145.3 15% Min: Magnetite>>

145.30 145.81 OJ Heavily disseminated sulphides in proximal altered rock

145.3 - 145.81: AK alteration.

<<Min: 145.3 - 145.81 3% Min: Pyrrhotite>>

<<Alt: 145.3 - 145.81 Moderate (Alt) Chlorite>>

<<Alt: 145.3 - 145.81 Weak (Alt) Cordierite>>

<<Alt: 145.3 - 145.81 Moderate (Alt) Biotite>>

<<Vein: 145.79 - 149.63 10% Quartz-Carbonate-Sulphide 65 deg. >> QZ-CA-PY-PO-SP-GL

145.81 149.63 RHYcw Curdy textured-flow banded (flows, subvolcanics)

145.81 - 149.63: Uncertain on lithology. May be a MAF rock.

<<Min: 145.81 - 149.63 0.01% Min: Sphalerite>>

<<Min: 145.81 - 149.63 0.01% Min: Galena>>

<<Min: 145.81 - 149.63 5% Min: Calcite>>

<<Min: 145.81 - 161 0.01% Min: Pyrite>>

<<Min: 145.81 - 161 0.01% Min: Pyrrhotite>>

<<Alt: 145.81 - 149.63 Moderate (Alt) Muscovite>>

<<Struc: 147.13 - 150.81 Fault>> Narrow (2-5cm) faults filled with broken rock and gouge. Moderate intensity. Spaced metres apart.

149.63 161.00 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

<<Min: 149.63 - 161 15% Min: Calcite>>

<<Alt: 149.63 - 161 Moderate (Alt) Chlorite>>

<<Alt: 149.63 - 161 Moderate (Alt) Biotite>>

<<Vein: 149.63 - 161 20% Quartz-Carbonate 50 deg. >> CA-QZ

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
144.66	145.30	0.64						

145.30	145.81	0.51
--------	--------	------

145.81	146.81	1.00
--------	--------	------

146.81	147.81	1.00
147.81	148.81	1.00
148.81	149.63	0.82

149.63	150.63	1.00
--------	--------	------

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-278W1

From (m) To (m)

Rocktype & Description

From (m)

To (m)

Width

Sample

Ag PPM

Au PPM

Cu %

Pb %

Zn %

End of Hole @ 161

GeoSpark Logger ~ Drill Log

Project: KZK **Hole Number:** K15-279

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	David Nuttal
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	30-Sep-15
UTM Easting	415026.332	Core Size:	NQ3	Azimuth:	340	Date Logging Complete:	03-Oct-15
UTM Northing:	6815454.26	Casing Pulled?:	Yes	Dip:	-50	Drill Company:	Geotech
UTM Elev. (m):	1383.082	Casing Depth (m):	16.5	Length (m):	275	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	29-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	02-Oct-15
Local Elev. (m):						Purpose:	Resource/Met
Comments:						Parent Hole:	

The purpose of this hole is to confirm a historic sulphide intercept in K95-076 and investigate the potential of a hanging wall stockwork feeder zone. Drilling confirms existence of the sulphide intercept in K95-076 and encounters rocks that could potentially represent a stockwork feeder zone at the top of the sulphide intercept. The structural hanging wall is composed of a package of intercalated coherent/volcaniclastic felsic rocks and carbonaceous mudstones. Massive sulphide is present from 121.36m to 132.87m (OI, OG, OA, OH ore types respectively), 134.72m to 135.2m (OF, OI, OB, OI, OF ore types respectively), 144.81m to 168m (OB, OH, OB, OA, OC, OB ore types respectively), 169.16m to 175.04m (OI, OB ore types respectively) and from 191.52m to 193.6m (OI ore type). The structural footwall is composed of a package of volcaniclastic felsic rocks adjacent to the massive sulphides, underlain by chlorite altered mafics (MAFi unit) and a silicified rhyolite dike (unit RHYi), followed by a 3m fault zone underlain by MAFi, and a package of weakly chlorite altered RHYi rocks. Muscovite alteration intensifies towards the massive sulphide lenses in both the structural hanging wall and foot wall rocks. Chlorite alteration is pervasive in the MET 8 domain (top of massive sulphide lens) and in the foot wall mafics. Cordierite porphyroblasts occur throughout the massive sulphide lenses as well as proximal in the immediate hanging wall and footwall felsic rock packages. The RHYi unit is strongly silicified and rocks proximal to the RHYi unit exhibit moderate to weak silicification. This hole is significant due to well developed CP mineralization throughout the massive sulphide lenses proximally in altered/quartz veined rock packages.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-50	340	0	340	APS	Geotech	29-Sep-15		<input checked="" type="checkbox"/>	
23	-49.3	314.7	22.5	337.2	ReflexEVS	Geotech	29-Sep-15	5749	<input checked="" type="checkbox"/>	
53	-48.9	316	22.5	338.5	ReflexEVS	Geotech	29-Sep-15	5770	<input checked="" type="checkbox"/>	
83	-48.4	318.8	22.5	341.3	ReflexEVS	Geotech	30-Sep-15	5772	<input checked="" type="checkbox"/>	
113	-47.9	313.1	22.5	335.6	ReflexEVS	Geotech	30-Sep-15	6275	<input checked="" type="checkbox"/>	
143	-47.3	319.2	22.5	341.7	ReflexEVS	Geotech	30-Sep-15	5583	<input checked="" type="checkbox"/>	
173	-46.9	337.6	22.5	0.1	ReflexEVS	Geotech	30-Sep-15	5775	<input type="checkbox"/>	Erratic value, possible bad survey.
203	-46.6	328.4	22.5	350.9	ReflexEVS	Geotech	30-Sep-15	5775	<input checked="" type="checkbox"/>	
233	-45.9	328.2	22.5	350.7	ReflexEVS	Geotech	01-Oct-15	5771	<input checked="" type="checkbox"/>	
263	-44.8	330.3	22.5	352.8	ReflexEVS	Geotech	01-Oct-15	5765	<input checked="" type="checkbox"/>	
275	-44.7	330.7	22.5	353.2	ReflexEVS	Geotech	02-Oct-15	5774	<input type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	16.50	CASN									
		Casino									

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-279

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
16.50	28.18	RHYc Rhyolite coherant volcanics <<Min: 16.5 - 28.18 2% Min: Pyrrhotite>> <<Min: 16.5 - 28.18 0.5% Min: Calcite>> <<Min: 16.5 - 37.4 2% Min: Pyrite>> <<Alt: 16.5 - 44 Weak (Alt) Muscovite>>									
28.18	37.40	MDSw Coherent rhyolite flow with carbonaceous content 28.18 - 37.4: Carbonate content increases towards base of interval. <<Min: 28.18 - 31.25 1% Min: Calcite>> <<Min: 28.18 - 41.7 2% Min: Pyrrhotite>> <<Min: 31.25 - 47.3 0.5% Min: Calcite>>									
37.40	48.73	RHY undifferentiated rhyolite 37.4 - 48.73: Textures in this interval can be seen as (primary) fragmental and as pseudo fragmental disaggregation of coherent rhyolite by foliation widening. Cross section interpretation should consider both possibilities for correlation. <<Min: 37.4 - 41.7 0.5% Min: Pyrite>> <<Min: 41.7 - 44 2% Min: Pyrite>> <<Min: 41.7 - 44 1% Min: Pyrrhotite>> <<Min: 44 - 49.8 3% Min: Pyrrhotite>> <<Min: 44 - 53 1% Min: Pyrite>> <<Min: 47.3 - 56.4 1% Min: Calcite>> <<Alt: 37.4 - 40 Trace (Alt) Chlorite>> <<Alt: 44 - 56.4 Moderate (Alt) Muscovite>>									
48.73	49.95	RHYc Rhyolite coherant volcanics <<Min: 49.8 - 53 4% Min: Pyrrhotite>>									
49.95	56.40	RHY undifferentiated rhyolite 49.95 - 56.4: Possibly volcanoclastic or coherent felsics with pseudo-fragmental texture. <<Min: 53 - 61.4 3% Min: Pyrrhotite>> <<Min: 53 - 68.7 0.5% Min: Pyrite>>									
56.40	121.36	RHYc Rhyolite coherant volcanics 56.4 - 121.36: weak carbonaceous component from 104m to 110m <<Min: 56.4 - 101 0.5% Min: Calcite>>	118.50	120.00	1.50	B00268882	7.1	0.008	0.02	0.34	1.39
			120.00	121.50	1.50	B00268883	2.6	0.006	0.07	0.04	0.75



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-279

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 61.4 - 65.5 4% Min: Pyrrhotite>>											
<<Min: 65.5 - 68.7 1% Min: Pyrrhotite>>											
<<Min: 68.7 - 76.8 0.5% Min: Pyrrhotite>>											
<<Min: 68.7 - 99 1% Min: Pyrite>>											
<<Min: 76.8 - 121.36 1% Min: Pyrrhotite>>											
<<Min: 99 - 101 3% Min: Pyrite>>											
<<Min: 101 - 121.36 2% Min: Pyrite>>											
<<Min: 101 - 121.36 1% Min: Calcite>>											
<<Alt: 56.4 - 65.5 Weak-Moderate (Alt) Muscovite>>											
<<Alt: 61.5 - 65 Trace (Alt) Chlorite>>											
<<Alt: 65.5 - 118 Moderate (Alt) Muscovite>>											
<<Alt: 118 - 122.9 Strong (Alt) Muscovite>>											
<<Alt: 121 - 122.99 Moderate (Alt) Cordierite>>											
<<Alt: 121 - 127.75 Moderate (Alt) Chlorite>>											
<<Vein: 67.4 - 67.61 99% Quartz>>											
<<Vein: 78.31 - 79.28 94% Quartz>> sulphides: Spalerite, pyrite, pyrrhotite.											
<<Struc: 69.5 - 71 Fault>> Fault zone, gouge present from 70m to 70.25m.											
<<Struc: 89.7 - 91.7 Fault>>											
<<Struc: 95 - 99.5 Fault>> interval of sheared up rock, fault gouge present at base of interval (~20cm)											
<<Struc: 115.5 - 122 Fault>> Interval of brittle failure and faulting with gouge present locally.											
121.36	122.99	OI Heavily disseminated sulphides in host schist	121.50	122.99	1.49	B00268884	65.9	0.313	1.92	0.17	0.75
121.36 - 122.99: CP 5-10%, SP 8%, GL2%											
<<Min: 121.36 - 122.99 3% Min: Calcite>>											
<<Struc: 121.8 - 121.8 dominant foliation>>											
122.99	127.75	OG Chalcopyrite rich sulphides	122.99	124.00	1.01	B00268885	316	2.93	18	0.15	1.49
122.99 - 127.75: Interval is 40-60% CP, net textured with PO. Isolated patches of chlorite present and porphyroblastic cordierite											
<<Min: 122.99 - 135.85 0.5% Min: Calcite>>											
			124.00	125.00	1.00	B00268886	359	4.94	15.8	0.21	1.36
			125.00	126.00	1.00	B00268887	287	3.7	17.4	0.09	1.58
			126.00	127.00	1.00	B00268888	342	4.44	17.3	0.1	1.57
			127.00	127.75	0.75	B00268889	370	4.71	16.7	0.16	1.6



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-279

From (m) To (m) Rocktype & Description

127.75 131.72 OA Magnetite bearing sulphides

127.75 - 131.72: laminated and heavily disseminated magnetite. Cu poor interval.

<<Struc: 129.65 - 129.65 dominant foliation>>

131.72 132.87 OH Fine grained, megascopically homogeneous pyrite rock

132.87 134.72 RHYv Rhyolite volcaniclastic

<<Min: 132.87 - 134.72 1% Min: Pyrite>>

<<Min: 132.87 - 175.04 1% Min: Pyrrhotite>>

<<Alt: 132.87 - 134.72 Strong (Alt) Muscovite>>

<<Alt: 132.87 - 134.72 Trace (Alt) Chlorite>>

<<Alt: 132.87 - 134.72 Strong (Alt) Cordierite>>

<<Struc: 133.51 - 133.51 dominant foliation>>

134.72 135.20 OF Pyrrhotite rich sulphides

135.20 135.85 OI Heavily disseminated sulphides in host schist

135.2 - 135.85: complex interval, with abundant quartz, GL, SP, minor CP, and chlorite

135.85 141.25 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Min: 135.85 - 141.2 3% Min: Calcite>>

<<Min: 141.2 - 200.6 0.5% Min: Calcite>>

<<Struc: 141.05 - 141.05 dominant foliation>>

141.25 142.44 OI Heavily disseminated sulphides in host schist

142.44 143.51 OF Pyrrhotite rich sulphides

<<Struc: 142.44 - 142.44 dominant foliation>>

143.51 144.81 RHY undifferentiated rhyolite

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
127.75	128.75	1.00	B00268892	89.3	0.765	1.97	0.36	13.4

128.75	129.75	1.00	B00268893	111	0.286	0.36	1.5	16.6
129.75	130.75	1.00	B00268894	118	0.293	0.47	3.12	15.6
130.75	131.72	0.97	B00268895	94.7	0.332	0.61	2.39	19.5
131.72	132.87	1.15	B00268896	55	0.516	0.9	0.6	2.41

132.87	133.81	0.94	B00268897	1.6	0.015	0.03	0.02	0.08
133.81	134.72	0.91	B00268898	6.1	0.022	0.13	0.06	0.44

134.72	135.20	0.48	B00268899	35	0.066	0.47	0.64	4.05
135.20	135.85	0.65	B00268901	17.3	0.01	0.15	0.17	3.21

135.85	136.85	1.00	B00268902	169	1.05	0.93	0.56	4.64
--------	--------	------	-----------	-----	------	------	------	------

136.85	137.85	1.00	B00268903	197	1.7	1.12	0.63	2.56
137.85	138.85	1.00	B00268904	215	2.05	1.2	1.66	3.25
138.85	139.85	1.00	B00268905	316	2.51	1.33	2.66	6.28
139.85	140.85	1.00	B00268906	347	1.52	0.88	3.73	8.8
140.85	141.25	0.40	B00268907	297	1.15	1.06	2.12	8.15
141.25	142.44	1.19	B00268908	126	0.648	0.35	1.09	3.47

142.44	143.51	1.07	B00268909	121	0.378	0.45	2.73	8.35
--------	--------	------	-----------	-----	-------	------	------	------

143.51	144.81	1.30	B00268911	1.8	0.023	0.03	0.03	0.06
--------	--------	------	-----------	-----	-------	------	------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-279

From (m) To (m) Rocktype & Description

<<Alt: 143.51 - 144.81 Moderate (Alt) Muscovite>>

<<Alt: 143.51 - 144.81 Weak (Alt) Chlorite>>

<<Alt: 143.51 - 144.81 Moderate (Alt) Cordierite>>

144.81 145.59 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

145.59 146.50 OH Fine grained, megascopically homogeneous pyrite rock

146.50 151.23 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

146.5 - 151.23: CP ~5-8%

151.23 152.00 OA Magnetite bearing sulphides
152.00 153.50 OC Chalcopyrite-pyrrhotite net textured sulphides

<<Alt: 152 - 163.5 Weak (Alt) Cordierite>>

153.50 163.50 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
144.81	145.26	0.45	B00268912	57.5	1.02	2.03	0.13	1.96
145.26	145.59	0.33	B00268913	114	1.25	4.72	0.15	1.26
145.59	146.50	0.91	B00268914	41.5	0.548	1.08	0.14	0.61
146.50	147.50	1.00	B00268915	58.8	0.51	1.1	0.28	2.66
147.50	148.50	1.00	B00268916	72.6	0.594	1.09	0.54	2.3
148.50	149.50	1.00	B00268917	30.2	0.318	0.24	0.19	3.41
149.50	150.50	1.00	B00268918	36.2	0.28	0.25	0.34	3.8
150.50	151.23	0.73	B00268919	91.1	0.493	0.2	0.74	5.62
151.23	152.00	0.77	B00268921	228	3.25	4.32	1.06	2.49
152.00	153.00	1.00	B00268922	140	1.16	6.47	0.27	0.99
153.00	153.50	0.50	B00268923	134	2.84	5.6	0.2	1.07
153.50	154.50	1.00	B00268924	99.5	0.809	1.98	0.38	3.04
154.50	155.50	1.00	B00268925	85.2	1.01	1.54	0.29	3.35
155.50	156.50	1.00	B00268926	201	1.37	3.73	0.8	1.48
156.50	157.50	1.00	B00268927	198	2.66	5.15	0.61	0.84
157.50	158.50	1.00	B00268928	122	1.41	3.33	0.33	1.89
158.50	159.50	1.00	B00268929	61.7	0.627	0.75	0.26	1.36
159.50	160.50	1.00	B00268932	77.6	0.703	1.96	0.22	1.01
160.50	161.50	1.00	B00268933	46.8	0.491	0.79	0.17	1.87
161.50	162.50	1.00	B00268934	24.3	0.492	0.78	0.11	1.25
162.50	163.50	1.00	B00268935	55.6	1.23	2.41	0.07	0.72



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-279

From (m) To (m) Rocktype & Description

163.50 168.00 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

168.00 169.16 RHY undifferentiated rhyolite

<<Min: 168 - 169.16 0.5% Min: Sphalerite>>

<<Min: 168 - 169.16 1% Min: Pyrite>>

<<Alt: 168 - 170.62 Moderate (Alt) Muscovite>>

<<Alt: 168 - 170.62 Moderate (Alt) Cordierite>>

169.16 170.62 OI Heavily disseminated sulphides in host schist

169.16 - 170.62: Interval contains thick sulphide band ~20cm at 170.1m - 170.3m could be classified as OB

170.62 175.04 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Struc: 173 - 173 dominant foliation>>

<<Struc: 174.52 - 174.52 dominant foliation>>

175.04 176.70 RHY undifferentiated rhyolite

175.04 - 176.7: CP bearing (~4%), could be considered OI

<<Min: 175.04 - 176 4% Min: Chalcopyrite>>

<<Min: 175.04 - 191.52 2% Min: Pyrrhotite>>

<<Min: 175.04 - 204 1% Min: Pyrite>>

<<Alt: 175.04 - 175.6 Weak (Alt) Chlorite>>

<<Alt: 175.04 - 200.6 Moderate (Alt) Muscovite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
163.50	164.50	1.00	B00268936	124	0.923	1.57	0.54	6.18

164.50	165.50	1.00	B00268937	34.1	0.124	0.09	0.26	1.84
165.50	166.50	1.00	B00268938	96.9	0.536	0.25	0.74	4.49
166.50	167.50	1.00	B00268939	149	1.66	1.06	0.48	5.13
167.50	168.00	0.50	B00268941	128	1.88	1.78	0.67	2.54
168.00	169.16	1.16	B00268942	10.5	0.117	0.12	0.07	0.12

169.16	170.16	1.00	B00268943	54.3	2.06	1.8	0.32	1.07
--------	--------	------	-----------	------	------	-----	------	------

170.16	170.62	0.46	B00268944	53.6	1.47	1.06	0.43	1.47
170.62	171.62	1.00	B00268945	65.1	0.859	0.99	0.71	3.68

171.62	172.62	1.00	B00268946	88	1.18	0.19	0.73	5.92
172.62	173.62	1.00	B00268947	129	1.52	0.46	0.95	4.07
173.62	174.62	1.00	B00268948	153	1.63	0.39	1.62	6.84
174.62	175.04	0.42	B00268949	181	1.64	0.2	2.37	6.61
175.04	176.50	1.46	B00268951	38	0.448	0.78	0.09	0.17

176.50	178.00	1.50	B00268952	25.9	0.346	0.59	0.05	0.08
--------	--------	------	-----------	------	-------	------	------	------

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-279
From (m) To (m) Rocktype & Description
176.70 180.32 RHYv Rhyolite volcanoclastic

176.7 - 180.32: Coarse graine sized clasts, subrounded, siliceous. Coarse grained volcanoclastic rhyolite should be considered.

180.32 191.52 RHY undifferentiated rhyolite

180.32 - 191.52: Texturally complex interval of dominantly felsic composition with overprinted chlorite/muscovite alteration. Evidence of healed breccia, ribboned siliceous banding, fine-coarse grained clastics. Interval is intersected by mafic dikes at 188.15m to 188.23m

<<Alt: 184.65 - 195 Trace (Alt) Chlorite>>

<<Vein: 180.32 - 182.08 98% Quartz>>

<<Vein: 184.14 - 186.7 15% Quartz>>

<<Vein: 190.3 - 196.65 30% Quartz>> CP, PO in vein adjacent/within OI unit at 191.52 - 192.2m

191.52 193.60 OI Heavily disseminated sulphides in host schist

191.52 - 193.6: PO-rich, with minor CP, PY, SP.

193.60 198.92 RHY undifferentiated rhyolite

193.6 - 198.92: Interval is predominantly quartz veining and primary textures have been obliterated by alteration and replacement.

<<Min: 193.6 - 200.6 3% Min: Pyrrhotite>>

<<Alt: 198.9 - 200.6 Moderate (Alt) Chlorite>>

198.92 200.60 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

198.92 - 200.6: Interval is moderate to strongly chlorite and muscovite altered and contains wisps and clots of CP (~4%) in association with (net-textured) PO (~4%). Interval may be a failed or less altered OJ. Grain sizes are not discernable in host rock; due to pervasi

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
178.00	179.50	1.50	B00268953	0.3	-0.005	-0.01	-0.01	0.01

179.50	181.00	1.50	B00265295	0.7	-0.005	-0.01	-0.01	0.01
181.00	182.50	1.50	B00265296	-0.3	-0.005	-0.01	-0.01	0.04

182.50	184.00	1.50	B00265297	0.9	-0.005	-0.01	-0.01	0.09
184.00	185.50	1.50	B00265298	0.5	-0.005	-0.01	-0.01	0.09
185.50	187.00	1.50	B00265299	-0.3	-0.005	-0.01	-0.01	0.02
187.00	188.00	1.00	B00265301	0.3	-0.005	-0.01	-0.01	0.02
188.00	188.80	0.80	B00265302	0.5	-0.005	0.01	-0.01	0.03
188.80	190.30	1.50	B00268954	16.8	0.277	0.16	0.14	0.4
190.30	191.52	1.22	B00268955	-0.3	0.01	-0.01	-0.01	0.03
191.52	192.52	1.00	B00268956	41.9	0.361	0.91	0.33	1.95

192.52	193.60	1.08	B00268957	17.4	0.207	0.51	0.06	0.13
193.60	195.10	1.50	B00268958	0.3	-0.005	0.02	-0.01	0.03

195.10	196.65	1.55	B00268959	-0.3	-0.005	-0.01	-0.01	0.01
196.65	198.83	2.18	B00265303	-0.3	-0.005	-0.01	-0.01	0.01
198.83	200.00	1.17	B00265304	1.8	0.027	0.09	-0.01	0.06
200.00	200.60	0.60	B00265305	0.6	-0.005	0.05	-0.01	0.06

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-279

From (m) To (m) Rocktype & Description

200.60 227.07 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

200.6 - 227.07: Mafic intrusive package. Chlorite alteration ranges from 2 (weak) to 4 (moderate). Abundant calcite in foliation parallel bands as well as finely disseminated throughout. Mafic rocks encounter siliceous alteration and Rhyi unit at base of interval.

<<Min: 200.6 - 203.32 15% Min: Calcite>>

<<Min: 200.6 - 204.4 2% Min: Pyrrhotite>>

<<Min: 203.32 - 209.25 25% Min: Calcite>>

<<Min: 204 - 221 0.5% Min: Pyrite>>

<<Min: 204.4 - 209.2 4% Min: Pyrrhotite>>

<<Min: 209.2 - 221 0.5% Min: Pyrrhotite>>

<<Min: 209.25 - 221.46 12% Min: Calcite>>

<<Min: 221 - 225.3 1% Min: Pyrrhotite>>

<<Min: 221 - 235.3 1% Min: Pyrite>>

<<Min: 221.46 - 225.28 20% Min: Calcite>>

<<Min: 225.28 - 227.5 25% Min: Calcite>>

<<Min: 225.3 - 263.5 0.5% Min: Pyrrhotite>>

<<Alt: 203.4 - 204.33 Weak (Alt) Chlorite>>

<<Alt: 204.33 - 221.26 Moderate (Alt) Chlorite>>

<<Alt: 221.26 - 225.28 Weak (Alt) Chlorite>>

<<Alt: 225.28 - 227.07 Weak (Alt) Silicification>>

<<Alt: 225.28 - 227.07 Trace (Alt) Chlorite>>

227.07 259.18 RHYi Aphanitic Rhyolite (intrusion)

227.07 - 259.18: Presence of (possible) leucocine found intermittantly through interval. If leucocine is retained exclusively in mafic rocks then portions of this interval may be of mafic origins and have subsequently been intensely silicified.

<<Min: 227.5 - 259.2 8% Min: Calcite>>

<<Min: 235.2 - 259.2 1% Min: Sphalerite>>

<<Min: 235.2 - 259.2 0.5% Min: Galena>>

<<Min: 235.2 - 259.2 0.1% Min: Chalcopyrite>>

<<Min: 235.3 - 259.2 3% Min: Pyrite>>

<<Alt: 227.07 - 259.2 Moderate (Alt) Silicification>>

<<Alt: 227.07 - 259.2 Trace (Alt) Muscovite>>

<<Struc: 229.85 - 229.9 Fault>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
200.60	202.00	1.40	B00265306	2.7	0.011	0.03	0.01	0.04

202.00	203.00	1.00	B00265307	0.3	-0.005	-0.01	-0.01	0.02
--------	--------	------	-----------	-----	--------	-------	-------	------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-279

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %									
<<Struc: 243.22 - 243.28 Fault>>																				
259.18	260.65	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)																	
<<Min: 259.2 - 260.65 20% Min: Calcite>>																				
<<Min: 259.2 - 263.5 2% Min: Pyrite>>																				
<<Alt: 259.2 - 260.65 Moderate (Alt) Chlorite>>																				
<<Struc: 259.2 - 263.5 Fault>> Interval contains 6 faults (5cm - 50cm thickness). Base of fault zone is a 5cm piece of core with semi-massive sulphide (CP, PO, PY) that is juxtaposed to adjacent RHYvl unit below.																				
260.65	263.50	RHYc	Rhyolite coherant volcanics																	
<<Min: 260.65 - 263.5 5% Min: Calcite>>																				
<<Alt: 260.65 - 275 Weak-Moderate (Alt) Muscovite>>																				
263.50	268.50	RHYvl	Lapilli tuff																	
<<Min: 263.5 - 275 3% Min: Pyrite>>																				
<<Min: 263.5 - 275 3% Min: Pyrrhotite>>																				
<<Min: 263.5 - 275 0.5% Min: Calcite>>																				
<<Alt: 263.5 - 268.5 Weak (Alt) Chlorite>>																				
268.50	275.00	RHYvl	Lapilli tuff																	
End of Hole @ 275																				

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-280

Prospect:	GP4F	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Murray Jones
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	28-Sep-15
UTM Easting	419661.849	Core Size:	HQ	Azimuth:	180	Date Logging Complete:	05-Oct-15
UTM Northing:	6813561.684	Casing Pulled?:	Yes	Dip:	-70	Drill Company:	Geotech
UTM Elev. (m):	1325.275	Casing Depth (m):	9	Length (m):	408	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	27-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	04-Oct-15
Local Elev. (m):						Purpose:	Exploration
Comments:						Parent Hole:	

This hole was drilled to test the north-east extension of the GP4F horizon. Familiar GP4F stratigraphy is present, progressing from sediment/mafic/felsic layers at the top through a broad section of rhyolite, lapilli and quartz eye tuff to coherent flow, and the mineralized sequence of hanging wall QE tuff to altered and mineralized felsic tuff to footwall lapilli tuff (FP porphyry). Mineralization likely equivalent to the GP4F horizon was encountered from about 275 to 287 m. A second mineralized interval, narrow and higher grade, was hit between 364 and 366 m. The lower interval was associated with strong cordierite mineralization that extended well into the footwall (~380 m). This alteration was accompanied by MU and talc alteration (retrograde?). The hole was pushed to the carbonaceous sediments in the footwall seen in K95-261.

Overall, the mineralization encountered was not significant although the zone at 364-366 is possibly ore grade. It appears that the GP4F does not extend into this area.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-70	157.5	22.5	180	APS	Geotech	27-Sep-15		<input checked="" type="checkbox"/>	
14	-69.1	160.8	22.5	183.3	ReflexEVS	Geotech	27-Sep-15	5850	<input checked="" type="checkbox"/>	
45	-68.5	163.6	22.5	186.1	ReflexEVS	Geotech	28-Sep-15	5777	<input checked="" type="checkbox"/>	
90	-68.6	162.5	22.5	185	ReflexEVS	Geotech	28-Sep-15	5767	<input checked="" type="checkbox"/>	
120	-68	160.4	22.5	182.9	ReflexEVS	Geotech	29-Sep-15	5808	<input checked="" type="checkbox"/>	
150	-67.9	162.5	22.5	185	ReflexEVS	Geotech	29-Sep-15	5783	<input checked="" type="checkbox"/>	
192	-68	166.3	22.5	188.8	ReflexEVS	Geotech	30-Sep-15	5043	<input checked="" type="checkbox"/>	
222	-67.8	165.6	22.5	188.1	ReflexEVS	Geotech	30-Sep-15	5775	<input checked="" type="checkbox"/>	
252	-67.7	169.2	22.5	191.7	ReflexEVS	Geotech	30-Sep-15	5797	<input checked="" type="checkbox"/>	
282	-66.8	169.3	22.5	191.8	ReflexEVS	Geotech	30-Sep-15	5714	<input checked="" type="checkbox"/>	
312	-65.6	171	22.5	193.5	ReflexEVS	Geotech	30-Sep-15	5804	<input checked="" type="checkbox"/>	
342	-65.2	173.5	22.5	196	ReflexEVS	Geotech	30-Sep-15	5791	<input checked="" type="checkbox"/>	
372	-63.6	175.3	22.5	197.8	ReflexEVS	Geotech	30-Sep-15	5854	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	9.50	OVBN Overburden									



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-280

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0 - 9.5: Overburden - pelitic metasediment, rhyolite, and granite boulders.											
9.50	21.00	RHYva Coarse grained to ash tuff									
9.5 - 21: Brown and grey, partially oxidized to locally completely oxidized, foliated, fine grained, quartz-muscovite(-biotite) schist/rhyolite ash tuff. Locally contains up to 5% porphyroblastic biotite. Interbedded with narrow (5-10cm) zones of biotite rich pelitic metasediments. Narrow zones (10-30cm) contain up to 10% lapilli sized fragments. Oxidation seems to prefer quartz-muscovite zones. 8-9m broken core.											
<<Struc: 12 - 13 Moderate (Alt) Fault>>											
21.00	23.90	RHYif feldspar and quartz porphyry									
intrusions											
21 - 23.9: Light grey, massive, fine to medium grained, quartz-feldspar porphyry. Several 1-2mm bluish quartz crystals, with abundant 1-2mm feldspar crystals. No lapilli fragments interpreted. Sharp upper contact with possible alteration halo, broken core at lower contact.											
<<Struc: 21 - 21.1 Moderate (Alt) dominant foliation>>											
23.90	32.45	RHYv Rhyolite volcanoclastic									
grey-brown											
FMG											
23.9 - 32.45: Dark grey to greenish grey, foliated, fine to medium grained, heterogeneous, biotite-quartz-chlorite schist/epiclastic rock with minor felsic component. Narrow (1-10cm) zones with higher chlorite content could be mafic tuffaceous material. Bottom 50cm are biotite rich and could be pelitic sediment dominated.											
<<Struc: 30 - 30.1 Moderate (Alt) dominant foliation>>											
<<Struc: 30.6 - 31 Moderate (Alt) Fault>>											
32.45	36.70	MAFta Coarse grained to ash tuff									
brown											
FMG											
32.45 - 36.7: Green, grey, and brown, foliated and mottled, fine to medium grained, biotite-quartz-chlorite-schist/mafic tuff interbedded with minor metapelite. Could be peperite textures. This unit looks more fragmental towards the margins and more massive and irregular in the core.											
36.70	38.10	RHYvi Lapilli tuff									
grey-brown											
FMG											
36.7 - 38.1: Grey to brownish grey, foliated, fine to medium grained, quartz-biotite-muscovite schist/felsic fragmental?. Dominantly siliceous fragments with thin (<1mm) wispy biotite bands between fragments.											
38.10	44.30	SED undifferentiated Sediment									
grey-brown											
FG											
38.1 - 44.3: Grey to greenish grey, foliated, fine grained, biotite schist/pelitic metasediment. Locally up to 5% tuffaceous component. Locally weakly carbonaceous associated with the finest grained beds.											
44.30	46.98	MAFta Coarse grained to ash tuff									
green-brown											
FG											
44.3 - 46.98: Green, brown, and grey, foliated with irregular, mottled banding, fine grained, chlorite-biotite-carbonate schist/mafic tuff interbedded with pelitic sediments.											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-280

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
46.98	48.25	RHYvl Lapilli tuff	grey	FMG							
46.98 - 48.25: Grey, weakly foliated, fine to medium grained, feldspar-quartz-biotite schist/rhyolite feldspar crystal lapilli tuff with up to 10% fine grained foliated biotite.											
48.25	81.10	SED undifferentiated Sediment	grey-brown	FG							
48.25 - 81.1: Light grey, and brown, foliated and banded, fine grained, quartz-biotite schist/metapelite. Small zones (up to 30cm) with higher chlorite content, which may have a mafic component. Locally weakly carbonaceous in the finer grained bands. Locally weakly siliceous. Cut by occasional quartz vein.											
<<Vein: 51.35 - 51.45 90% Quartz 70 deg. >> quartz vein											
<<Vein: 54.1 - 54.2 90% Quartz 70 deg. >> quartz vein											
<<Vein: 70.5 - 70.7 90% Quartz 80 deg. >> quartz vein											
81.10	86.20	RHYva Coarse grained to ash tuff	light grey	MG							
81.1 - 86.2: Light grey, massive to weakly foliated, equigranular, quartz-muscovite-biotite ash crystal tuff (?) with small (~1-2mm) quartz eyes. Sharp lower contact, gradational upper contact. Very massive, homogeneous, medium grained unit. Could be intrusion, since it is medium grained.											
86.20	86.90	SED undifferentiated Sediment	green-brown	FG							
86.2 - 86.9: Green, brown, and grey, foliated and banded, fine grained, chlorite-biotite-carbonate schist/pelitic sediment with mafic tuffaceous component.											
86.90	92.80	MAFta Coarse grained to ash tuff	green-brown	FG							
86.9 - 92.8: Green and brown, foliated and weakly banded, fine grained, biotite-chlorite-actinolite schist/mafic tuff. Small (<2mm) actinolite porphyroblasts.											
92.80	104.80	RHYva Coarse grained to ash tuff	light grey	FG							
92.8 - 104.8: Light grey, weakly foliated to massive, fine grained, quartz-muscovite schist/rhyolite ash tuff with rare, small (1mm) bluish quartz crystals. Very similar composition to the above felsic unit although finer grained.											
<<Vein: 95 - 96 10% Quartz 5 deg. >> quartz-tourmaline vein											
104.80	105.65	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	brown	FG							
104.8 - 105.65: Brown, foliated, fine grained, biotite schist/mafic intrusion. Sharp upper and lower contacts and the lower contact appears to altered the unit below.											
105.65	114.20	RHYvl Lapilli tuff	light grey	FMG							
105.65 - 114.2: Light to medium grey, weakly foliated, fine to medium grained, quartz-muscovite schist/rhyolite lapilli and ash tuff. Abundant 2-4cm flat elongated siliceous lapilli in a fine grained, quartz-muscovite matrix. May contain feldspar crystals but no quartz eyes. Several bands of interbedded fine grained ash.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-280

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
114.20	114.50	MAFi Mafic Intrusions (primarily footwall mafic intrusion) 114.2 - 114.5: Brown, foliated, fine grained, biotite schist/mafic intrusion(?).	brown	FG							
114.50	115.50	RHYvl Lapilli tuff 114.5 - 115.5: Light to medium grey, weakly foliated, fine to medium grained, quartz-muscovite schist/rhyolite lapilli and ash tuff. Abundant 2-4cm flat elongated siliceous lapilli in a fine grained, quartz-muscovite matrix. May contain feldspar crystals but no quartz eyes.	light grey	FMG							
115.50	117.10	RHYvx Quartz and/or feldspar crystal tuff 115.5 - 117.1: Light grey, weakly foliated, fine to medium grained, quartz-muscovite schist/rhyolite quartz-feldspar crystal tuff with common small 1-2mm bluish quartz eyes.	light grey	FG							
117.10	117.90	MAFi Mafic Intrusions (primarily footwall mafic intrusion) 117.1 - 117.9: Greenish-brown, foliated, fine grained, biotite-actinolite schist/mafic dyke.	green-brown	FG							
117.90	122.80	RHYva Coarse grained to ash tuff 117.9 - 122.8: Grey, weakly foliated, fine grained, quartz-muscovite schist/rhyolite ash tuff. The base of this unit is a lapilli tuff that fines up hole to ash tuff that is overlain (with a narrow structural contact) by weakly carbonaceous schist (pelitic sediment).	grey	FG							
122.80	126.00	MAFta Coarse grained to ash tuff 122.8 - 126: Brown to greenish brown, weakly foliated to massive, biotite-chlorite schist/mafic intrusion. Narrow bands (1-5cm) are chlorite-rich. Sharp upper and lower contact. Cut by occasional quartz carbonate veins. <<Vein: 125.47 - 125.61 100% Quartz 70 deg. >> quartz vein	green-brown	FG							
126.00	130.20	RHYvx Quartz and/or feldspar crystal tuff 126 - 130.2: Grey, weakly foliated, fine to medium grained, quartz-muscovite schist/rhyolite feldspar crystal lapilli tuff. Abundant 1-2cm flat stretched lapilli with abundant <1cm blocky feldspar crystals in a fine quartz-muscovite-biotite matrix.	grey	FMG							
130.20	131.90	SED undifferentiated Sediment 130.2 - 131.9: Brown, foliated, fine grained, quartz-biotite schist/metapelite or mafic dyke.	brown	FG							

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-280

From (m)	To (m)	Rocktype & Description			From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
131.90	138.80	RHYvx	Quartz and/or feldspar crystal tuff	grey	FMG								
131.9 - 138.8: Grey, weakly foliated, fine to medium grained, quartz-muscovite schist/rhyolite feldspar crystal, lapilli tuff. Abundant 1-2cm flat stretched lapilli with abundant <1cm blocky feldspar crystals in a fine quartz-muscovite-biotite matrix.													
<<Struc: 135.4 - 138 Moderate-Strong (Alt) Fault>> fault zone with minor gouge development													
138.80	139.60	SED	undifferentiated Sediment	brown	FG								
138.8 - 139.6: Brown, foliated, fine grained, biotite schist/metapelite.													
139.60	149.60	RHYvl	Lapilli tuff	grey	FMG								
139.6 - 149.6: Grey, foliated, fine to medium grained, quartz-muscovite-biotite schist/rhyolite lapilli tuff with minor pelitic component. Several beds (20-50cm) of biotite rich pelitic sediments interbedded with rhyolite lapilli tuff. Some of the tuffaceous horizons are very biotite rich. Moderately sericite altered zone associated with small fault zone (49.0-40.5m)													
<<Alt: 149 - 149.6 Moderate (Alt) Muscovite>> fault hosted sericite alteration.													
<<Struc: 149 - 149.6 Moderate-Strong (Alt) Fault>> sericite altered fault zone.													
149.60	154.10	RHYvl	Lapilli tuff	grey-green	FMG								
149.6 - 154.1: Greenish grey, weakly foliated, fine to medium grained, quartz-muscovite schist/rhyolite lapilli tuff. Abundant small (<1cm), locally densely packed, siliceous, lapilli within a weakly altered quartz-muscovite (sericite) matrix. Light green color to this unit could be weak pervasive, sericite (or very weak chlorite) alteration. Cut by occasional very narrow (1mm), fine grained, pyrite veinlets. Abundant fractures at 30-40o ca.													
<<Alt: 149.6 - 154.1 Weak-Moderate (Alt) Muscovite>> fault hosted sericite alteration.													
154.10	154.80	SED	undifferentiated Sediment	brown	FG								
154.1 - 154.8: Brown, foliated, fine grained biotite schist/metapelite. Cut by abundant quartz veins.													
154.80	156.80	RHYvl	Lapilli tuff	grey	FMG								
154.8 - 156.8: Grey, foliated, fine to medium grained, quartz-muscovite schist/rhyolite lapilli tuff. Cut by occasional quartz veins.													
156.80	157.30	SED	undifferentiated Sediment	brown	FG								
156.8 - 157.3: Brown, foliated, fine grained biotite schist/metapelite. Cut by narrow carbonate veins.													
157.30	171.37	RHYvl	Lapilli tuff	grey	FMG								
157.3 - 171.37: Grey, foliated, weakly altered, fine to medium grained, quartz-muscovite schist/rhyolite lapilli tuff. Alteration is weak, pervasive sericite alteration with rare, narrow (1-2cm) bands with fine grained disseminated pyrite. Cut by occasional (10-20cm) quartz veins with trace pyrite.													
<<Alt: 157.3 - 171.37 Weak-Moderate (Alt) Muscovite>> weak pervasive sericite alteration													

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-280

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Vein: 164.2 - 164.4 80% Quartz-Sericite/White mica 70 deg. >> quartz sericite vein											
<<Vein: 169.6 - 170 90% Quartz-Sericite/White mica 70 deg. >> quartz sericite vein											
<<Struc: 164.2 - 164.4 Moderate (Alt) Vein>> quartz sericite vein.											
<<Struc: 165.5 - 165.8 Weak-Moderate (Alt) Fault>> broken core associated with fault zone											
<<Struc: 169.6 - 170 Moderate-Strong (Alt) Vein>> quartz sericite vein.											
171.37	173.10	SED	undifferentiated Sediment	brown							FG
171.37 - 173.1: Brown, foliated and faulted, fine grained biotite schist. 171.9-172.2m well developed fault gouge.											
<<Struc: 171.9 - 172.2 Strong (Alt) Fault>> well developed fault gouge.											
173.10	179.50	RHYvl	Lapilli tuff	grey							FMG
173.1 - 179.5: Grey, weakly to moderately altered, fine to medium grained, quartz-muscovite schist/rhyolite lapilli tuff. Alteration is weak to moderate, pervasive, sericite alteration with trace fine grained disseminated pyrite. From 174-179m faulted, broken rock, contains a mixture of biotite schist and muscovite schist in the fault zone.											
<<Alt: 173.1 - 179.5 Weak-Moderate (Alt) Muscovite>> weak pervasive sericite alteration											
<<Struc: 174 - 174.7 Weak-Moderate (Alt) Fault>> broken core associated with fault zone											
<<Struc: 178 - 179 Moderate-Strong (Alt) Fault>> fault zone.											
179.50	181.80	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)	brown							FMG
179.5 - 181.8: Brown, weakly foliated, fine to medium grained, biotite-(actinolite) schist/mafic dyke. Cut by rare quartz veins.											
181.80	189.00	RHYvl	Lapilli tuff	grey							FMG
181.8 - 189: Grey, foliated, medium grained, quartz-muscovite schist/rhyolite lapilli tuff. Alteration is weak to moderate pervasive, sericite alteration. This unit may contain feldspar crystals however alteration makes it difficult to determine.											
<<Vein: 183.2 - 183.5 80% Quartz 30 deg. >> quartz vein											
<<Vein: 183.8 - 184.9 5% Tourmaline 20 deg. >> tourmaline vein.											
<<Struc: 183.2 - 183.5 Strong (Alt) Vein>> quartz vein											
189.00	194.90	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)	green-brown							FG
189 - 194.9: Brown to greenish brown, fine grained, weakly foliated, biotite-actinolite schist/mafic intrusion. Locally massive and locally actinolite-rich bands.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-280

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
194.90	200.40	RHYvl Lapilli tuff	grey	FMG							
194.9 - 200.4: Grey, weakly foliated, fine to medium grained, weakly altered, quartz-muscovite schist/rhyolite lapilli tuff. Alteration is weak, pervasive sericite (plus pyrite) alteration. Trace fine grained disseminated pyrite. Broken core for the bottom 1m of this interval.											
<<Alt: 194.9 - 200.4 Weak-Moderate (Alt) Muscovite>> weak pervasive sericite alteration											
<<Struc: 199.8 - 200.4 Weak-Moderate (Alt) Fault>> fault zone.											
200.40	202.60	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	green-brown	FG							
200.4 - 202.6: Brown to greenish brown, fine grained, weakly foliated, biotite-actinolite schist/mafic intrusion. Locally massive and locally actinolite-rich bands.											
202.60	212.90	RHYvl Lapilli tuff	grey	FG							
202.6 - 212.9: Grey to greenish grey, weakly foliated, fine to medium grained, weakly to moderately altered, quartz-muscovite schist/rhyolite lapilli tuff (feldspar crystal tuff). The majority of 'fragments' are lithic lapilli with visible igneous textures in the lapilli. Alteration is weak to locally moderate, pervasive, sericite alteration with trace pyrite associated with the moderate alteration.											
<<Alt: 202.6 - 212.9 Weak-Moderate (Alt) Muscovite>> weak pervasive sericite alteration											
212.90	213.50	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	green-brown	FG							
212.9 - 213.5: Brown to greenish brown, fine grained, weakly foliated, biotite-actinolite schist/mafic intrusion.											
213.50	228.20	RHYvl Lapilli tuff	grey	FG							
213.5 - 228.2: Grey to greenish grey, weakly foliated, fine to medium grained, weakly to moderately altered, quartz-muscovite schist/rhyolite lapilli tuff (feldspar crystal tuff). The majority of 'fragments' are lithic lapilli with visible igneous textures in the lapilli. Alteration is weak to locally moderate, pervasive, sericite alteration with trace pyrite associated with the moderate alteration.											
<<Min: 213.5 - 228.2 2% Min: Pyrite>>											
<<Alt: 213.5 - 228.2 Moderate (Alt) Muscovite>> moderate sericite alteration											
<<Alt: 213.5 - 228.2 Weak (Alt) Chlorite>> weak, patchy chlorite alteration											
<<Vein: 227.8 - 228 90% Quartz 75 deg. >> quartz vein											
228.20	230.40	RHYva Coarse grained to ash tuff	grey	FG							
228.2 - 230.4: Grey, foliated, fine grained, weakly to moderately altered, quartz-muscovite schist/rhyolite ash tuff. Alteration is weak to moderate, pervasive sericite alteration with fine grained disseminated pyrite associated with the moderate alteration zones, QE locally? -rare											
<<Min: 228.2 - 230.4 2% Min: Pyrite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-280

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 228.2 - 230.4 Weak-Moderate (Alt) Muscovite>> weak pervasive sericite alteration											
230.40	232.40	SED undifferentiated Sediment brown FG									
230.4 - 232.4: Brown, foliated, fine grained, biotite schist. Alteration is weak to mdoerate pervaive sericite alteration with fine grained disseminated pyrite.											
<<Min: 230.4 - 230.9 2% Min: Pyrite>>											
<<Min: 230.9 - 232 1% Min: Pyrite>> wisps in a CL alt'd zone											
<<Min: 230.9 - 232 1% Min: Calcite>>											
<<Min: 232 - 234.2 1% Min: Pyrrhotite>> and in fracs											
<<Min: 232 - 234.2 5% Min: Calcite>> MAFi											
<<Alt: 230.4 - 230.9 Moderate (Alt) Muscovite>> moderate pervasive sericite alteration											
<<Alt: 230.4 - 231.45 Weak-Moderate (Alt) Chlorite>> weak pervasive chlorite alteration											
<<Alt: 231.8 - 234.2 Moderate (Alt) Chlorite>> bands to pervasive											
232.40	234.20	MAFi Mafic Intrusions (primarily green-brown MG footwall mafic intrusion)	233.18	234.18	1.00	B00269222	-0.3	-0.005	-0.01	-0.01	0.04
232.4 - 234.2: medium grained green to brown, AC in bands, QZ-CA vns, gradational contacts											
234.20	241.70	RHYva Coarse grained to ash tuff grey FG	234.18	235.40	1.22	B00269223	0.4	0.007	0.02	0.01	0.36
234.2 - 241.7: Grey, foliated, fine grained, weakly to moderately altered, quartz-muscovite schist/rhyolite ash tuff. Alteration is weak to moderate, pervasive sericite alteration with fine grained disseminated pyrite associated with the moderate alteration zones.											
<<Min: 234.2 - 237.2 0.5% Min: Sphalerite>> wisps in narrow bands											
<<Min: 234.2 - 237.2 5% Min: Pyrite>> bands and streaks, in fractures											
<<Min: 234.2 - 237.2 0.5% Min: Chalcopyrite>> blebs with PY bands											
<<Min: 234.2 - 237.9 3% Min: Calcite>> throughout											
<<Min: 237.2 - 247.9 1% Min: Pyrite>> in bands, fine diss'ns and fractures											
<<Min: 237.2 - 247.9 0.5% Min: Pyrrhotite>> also in bands with PO											
<<Alt: 234.2 - 237.2 Moderate (Alt) Chlorite>> in bands with PY and or CP, cut RHY											
<<Alt: 234.2 - 237.2 Moderate (Alt) Biotite>> fades with depth											
<<Alt: 234.2 - 238.95 Weak (Alt) Garnet>> scattered pblasts											
<<Alt: 237.2 - 246.95 Weak (Alt) Biotite>> with SI and PY, original?											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-280

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
241.70	255.10	RHYv Rhyolite volcanoclastic grey-green FCG									
241.7 - 255.1: ash to lapilli tuff, very well defined beds, sharp contacts, thin beds, 0.3 to several metres, lapilli are white, felsic, granular, QE's are bluish up to 5 mm, conc'n changes bed to bed, minor BI in groundmass, locally lapilli almost coalesce suggesting RHYc origins											
<<Min: 252.5 - 253.3 10% Min: Calcite>>											
<<Min: 253.3 - 267.6 1% Min: Calcite>> and diss'd blebs											
<<Alt: 241.7 - 255.1 Moderate (Alt) Muscovite>> in RHY, but coating fractures											
<<Vein: 246.95 - 247.9 85% Quartz>> QZ-CB(?) vns											
<<Struc: 252 - 254.5 Strong (Alt) Fault>> several zones of gouge, shattered core, weathered core											
255.10	265.00	RHYva Coarse grained to ash tuff grey-brown FMG	260.13	261.40	1.27	B00269225	1	-0.005	0.02	-0.01	0.03
255.1 - 265: ash with discrete lapilli beds, MAFi with BI envelopes or SED, darken ore,											
<<Min: 260 - 261.4 5% Min: Pyrite>> forms bands											
<<Min: 260 - 261.4 3% Min: Pyrrhotite>> in bands with PY											
<<Min: 261.4 - 265 3% Min: Pyrite>> fractures, diss'ns											
<<Min: 261.4 - 270 1% Min: Pyrrhotite>> t/o											
<<Alt: 255.1 - 265.1 Weak (Alt) Muscovite>> and coating fractures, crystalline, not greasy											
<<Alt: 260 - 261.4 Moderate (Alt) Chlorite>> Bands and patches, with PY/PO											
<<Alt: 264.6 - 277.8 Moderate (Alt) Chlorite>> in and out a bit, in fractures in the RHYc, on fol'n, looks like there is alt'n of the BI-rich units											
<<Alt: 264.8 - 293.2 Moderate (Alt) Biotite>> with CL usually											
<<Struc: 256.15 - 256.16 Strong (Alt) dominant foliation>> shearing and local gouge zones along fol'n											
265.00	276.73	RHYv Rhyolite volcanoclastic grey-green FG	267.60	268.90	1.30	B00269226	0.5	0.005	-0.01	0.01	0.02
265 - 276.73: very mixed section, short stretches of white, aphanitic RHYc(?), curdy to flow banded, mixed with med grey-green ash to lapilli tuff, and BI-rich MAFI or SED. SX mineralization is picking up and MU alt'n strengthening. QV's common. Flow band margins replaced by Cl, TO, sx in RHYc sections											
<<Min: 265 - 268.9 5% Min: Pyrite>> along fol'n											
<<Min: 267.6 - 277.7 5% Min: Calcite>> up to 10% locally, pervasive to fractures											
<<Min: 268.9 - 277.8 3% Min: Sphalerite>> bands and blebs in fol'n, and veins?											
<<Min: 268.9 - 277.8 10% Min: Pyrite>> blebs and diss'ns along fol'n, in veins, definitely con'd bands with SP, GL, PO											
<<Min: 268.9 - 277.8 0.5% Min: Galena>> scattered in sx bands, in QZ veins											
<<Min: 270 - 282 3% Min: Pyrrhotite>> local narrow bands, minor blebs, small masses											
<<Alt: 265.1 - 268.9 Moderate (Alt) Muscovite>> in fractures, faults, in bands along fol'n											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-280

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<p><<Alt: 268.9 - 277.8 Strong (Alt) Muscovite>> generally strong, locally intense, so much MU in bands that they are soft, almost gouge-like. What was weathere out? There appars to be the possibility of a yellowy green overprint (MS or EP?) patches, bleaches the BI-rich sections</p> <p><<Struc: 273.2 - 273.21 Moderate (Alt) Foliation>></p> <p>276.73 293.20 RHYvl Lapilli tuff grey-green FG</p> <p>276.73 - 293.2: still mixed section, ash, lapilli tuff and SED/MAFi, faulting picks up in lower half, heavy MU makes the core soft and friable locally, sx content strong.</p> <p>Late(?) overprint of EP(?) gives yellowish green colour, some SI associated, in bands and around veins, fractures, seems to reduce the sulphide content.CA is present through most of the section.</p> <p><<Min: 277.8 - 282 3% Min: Sphalerite>> in bands, veinlets, stringers</p> <p><<Min: 277.8 - 282 10% Min: Pyrite>> bands and lenses</p> <p><<Min: 277.8 - 282 1% Min: Galena>> with SP, PY</p> <p><<Min: 282 - 283.75 5% Min: Sphalerite>> bands, masses, 3 cm wide massive band at 283.5</p> <p><<Min: 282 - 283.75 15% Min: Pyrite>> bands, lenses</p> <p><<Min: 282 - 283.75 3% Min: Pyrrhotite>> small masses, diss'd lenses</p> <p><<Min: 282 - 283.75 3% Min: Galena>> blebs, wisps in sx bands, veins</p> <p><<Min: 283.75 - 287.37 3% Min: Sphalerite>> lenses, bands, wisps</p> <p><<Min: 283.75 - 287.37 5% Min: Pyrite>> in groundmass, blebs and pods in veins, fractures, faults</p> <p><<Min: 283.75 - 287.37 3% Min: Pyrrhotite>> throughout, wisps</p> <p><<Min: 283.75 - 287.37 1% Min: Galena>> in veins, diss'ns in groundmass</p> <p><<Min: 287.37 - 293.2 3% Min: Sphalerite>> and diss'd lenses</p> <p><<Min: 287.37 - 293.2 5% Min: Pyrite>> diss'd bands, blebs, small masses in veins, MU zones</p> <p><<Min: 287.37 - 293.2 0.5% Min: Galena>> with SP</p> <p><<Alt: 277.8 - 293.2 Strong (Alt) Chlorite>> narrow bands and patches in groundmass, usually with PY, minor SP, GL. Not pervasive like strong proximal alt'n. BI usually present.</p> <p><<Alt: 277.8 - 297.2 Intense (Alt) Muscovite>> possibly overprint, too, with EP? In the soft intervals, MU dominates in faults gouge, glitters!, minor CL as well</p> <p><<Vein: 285.25 - 285.5 20% Quartz-Sulphide 10 deg. >> 2 cm wide QZ-Sx vein with GL, PY, SP blebs, in fractures</p> <p><<Struc: 279.9 - 280.2 Weak (Alt) Fault>> 1.5 cm CA vein/bx included</p> <p><<Struc: 280.58 - 280.65 Weak (Alt) Fault>> gouge, broken core</p> <p><<Struc: 285.25 - 285.5 Moderate (Alt) Vein>> hosted by fault</p> <p><<Struc: 287.7 - 287.94 Strong (Alt) Fault>> gouge, broken core</p> <p><<Struc: 291.2 - 293.3 Moderate (Alt) Fault>> measured in gouge</p>											
276.73	277.80	1.07	B00269235	2.4	0.022	-0.01	0.15	1.23			
277.80	279.30	1.50	B00269236	5.5	0.013	-0.01	0.48	3.09			
279.30	280.80	1.50	B00269237	3.9	0.007	-0.01	0.35	1.77			
280.80	282.00	1.20	B00269238	2.2	0.009	-0.01	0.13	0.65			
282.00	283.00	1.00	B00269239	4.6	0.005	0.02	0.51	0.59			
283.00	283.75	0.75	B00269241	24	0.016	0.02	2.35	2.54			
283.75	285.00	1.25	B00269242	1.4	-0.005	0.01	0.09	0.27			
285.00	286.00	1.00	B00269243	7.5	0.007	0.01	0.42	0.4			
286.00	287.37	1.37	B00269244	6.7	0.008	0.02	0.23	0.36			
287.37	289.15	1.78	B00269245	1.8	-0.005	0.02	0.03	0.07			
289.15	290.00	0.85	B00269246	1.2	-0.005	-0.01	0.02	0.06			
290.00	291.00	1.00	B00269247	1.9	-0.005	0.02	0.09	0.49			
291.00	293.20	2.20	B00269248	2.6	-0.005	-0.01	0.21	0.98			

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-280

From (m) To (m) Rocktype & Description

293.20 297.25 MAFi Mafic Intrusions (primarily footwall mafic intrusion) brown FMG

293.2 - 297.25: mostly homogeneous, altered patches and margins, realted to late EP-MS?, CA-rich where unaltered

<<Alt: 297.2 - 300.5 Weak (Alt) Muscovite>> interstices?

297.25 299.71 RHYc Rhyolite coherant volcanics leucocratic FG

297.25 - 299.71: BI mixed with the MU, strong BI approaching the MAFi at bottom

<<Min: 299.33 - 300.5 20% Min: Calcite>>

299.71 300.50 MAFi Mafic Intrusions (primarily footwall mafic intrusion) brown

299.71 - 300.5: mottled, altered

300.50 316.01 RHYva Coarse grained to ash tuff grey-green FG

300.5 - 316.01: well fol'd, siliceous layers,locally rotten due to weathering and heavy MU content, significant MAFi component, strong faulting with MU-rich gouge

<<Min: 300.5 - 304.2 0.5% Min: Pyrite>>

<<Min: 300.5 - 304.2 3% Min: Pyrrhotite>> narrow bands, blebs in veins

<<Min: 300.5 - 308.46 1% Min: Calcite>>

<<Min: 304.2 - 305.9 0.5% Min: Pyrrhotite>> blebs

<<Min: 305.9 - 308.46 0.01% Min: Sphalerite>> possibly?, tace blebs in fault

<<Min: 305.9 - 308.46 5% Min: Pyrite>> in fault zones

<<Min: 308.46 - 310.58 0.5% Min: Pyrite>>

<<Min: 308.46 - 310.58 0.5% Min: Pyrrhotite>> local

<<Min: 308.46 - 315.9 3% Min: Calcite>> 1% in main lithologies, 10% in MAFi

<<Min: 310.58 - 329.1 1% Min: Pyrite>> blebs, veins, associated with faults and shears, not much in host rock

<<Min: 310.58 - 329.1 0.5% Min: Pyrrhotite>> in lenses, groundmass

<<Min: 315.9 - 329.1 1% Min: Calcite>>

<<Alt: 300.5 - 314.9 Strong (Alt) Muscovite>> strong in faults, between dykes

<<Alt: 300.5 - 314.9 Moderate (Alt) Chlorite>> darkens core in fault and heavy MU zones, with SX commonly

<<Alt: 314.9 - 329.1 Weak (Alt) Chlorite>> minor in shears, associated with MAFi

<<Struc: 302.98 - 303.66 Strong (Alt) Fault>> measured at top contact, gouge wit MU, broken core

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
293.20	294.70	1.50	B00269249	-0.3	-0.005	-0.01	-0.01	0.02

294.70	295.85	1.15	B00269252	0.3	-0.005	-0.01	-0.01	0.01
295.85	297.00	1.15	B00269253	-0.3	-0.005	-0.01	-0.01	0.01
297.00	298.00	1.00	B00269254	-0.3	-0.005	-0.01	-0.01	0.01
298.00	299.33	1.33	B00269255	-0.3	-0.005	-0.01	-0.01	-0.01

299.33	300.50	1.17	B00269256	0.5	-0.005	-0.01	-0.01	0.03
--------	--------	------	-----------	-----	--------	-------	-------	------

300.50	302.00	1.50	B00269257	1.9	-0.005	-0.01	0.03	0.07
--------	--------	------	-----------	-----	--------	-------	------	------

302.00	303.00	1.00	B00269258	1.6	-0.005	-0.01	0.01	0.02
303.00	304.20	1.20	B00269259	1.8	-0.005	-0.01	-0.01	0.03
304.20	305.00	0.80	B00269261	-0.3	-0.005	-0.01	-0.01	-0.01
305.00	306.00	1.00	B00269262	-0.3	-0.005	-0.01	-0.01	0.01
306.00	307.50	1.50	B00269263	2.2	-0.005	-0.01	0.02	0.05
307.50	308.50	1.00	B00269264	3.5	-0.005	0.01	0.02	0.24



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-280

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 306.05 - 308.46 Moderate (Alt) Fault>> gouge, veining, broken core, <<Struc: 312 - 313.9 Weak (Alt) Fault>> broken core, minor gouge <<Struc: 314.2 - 314.9 Moderate (Alt) Fault>> broken, gouge, measured on gouge/rock contact, slicks present											
316.01	320.70	RHYvl Lapilli tuff									
316.01 - 320.7: not well defined											
320.70	329.10	SED undifferentiated Sediment									
320.7 - 329.1: soft, micaceous, with intervals of more quartzose rock-Tuff?, might be RHYva but difficult to distinguish, MS-CL locally, TO or BI pblasts											
<<Struc: 328.25 - 330 Strong (Alt) Fault>> gouge, 25 cm lost core											
329.10	333.15	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
329.1 - 333.15: encloses a couple short RHYv intervals											
<<Struc: 331.15 - 334 Moderate (Alt) Fault>> broken mostly											
333.15	348.60	RHYv Rhyolite volcanoclastic									
333.15 - 348.6: heterogeneous, banded rock, mottled, greenish bands with calc-silicate minerals?, local alt'n from MAFi, CL-AC? In bands, with sx locally											
<<Min: 333.15 - 346.1 0.5% Min: Pyrite>>											
<<Min: 333.15 - 346.1 1% Min: Pyrrhotite>> and wisps along fol'n											
<<Min: 346.1 - 348.6 1% Min: Sphalerite>> in alt'd schist											
<<Min: 346.1 - 348.6 3% Min: Pyrite>> in fault and veins											
<<Alt: 333.15 - 342.15 Moderate (Alt) Chlorite>> scattered, lenses to bands, with SI?, AC?, medium green clour,											
<<Alt: 333.15 - 348.5 Weak (Alt) Muscovite>> occurs in fault zones, also bands in host but scattered											
<<Alt: 346.1 - 348.6 Moderate (Alt) Chlorite>> in schist within faut zone											
<<Alt: 348.5 - 354 Moderate (Alt) Muscovite>> to bands, approaching fault, lost core											
<<Struc: 337.5 - 337.8 Moderate (Alt) Fault>> irregular gouge											
<<Struc: 345.3 - 347.6 Strong (Alt) Fault>> big gouge at end, 0.6 m lost core											
348.60	352.70	RHYvl Lapilli tuff									
348.6 - 352.7: banded, mottled appearance due to variable alt'n of BI, MU in frags, shears and interstitial in groundmass.											
<<Min: 348.6 - 354.52 0.5% Min: Pyrrhotite>>											
<<Min: 348.6 - 354.52 3% Min: Calcite>> minor diss'd in groundmass											
<<Min: 352.54 - 357.82 0.5% Min: Pyrite>> late veinlets, minor diss'ns											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-280

From (m) To (m) Rocktype & Description

<<Struc: 352.5 - 354.52 Strong (Alt) Fault>> 1.3 m lost core, above 354 mostly

352.70 363.56 RHYva Coarse grained to ash tuff grey-brown FG

352.7 - 363.56: lapilli layers within finer schistose RHYva, BI in groundmass, bands and layers, wisps, MU occurs in soft seams in fractures, talcose feel, late QZ-TO veins with bleached envelopes,

<<Min: 354.52 - 357.82 3% Min: Pyrrhotite>> in CL bands especially

<<Min: 354.52 - 357.82 0.5% Min: Calcite>>

<<Min: 357.82 - 363.9 0.5% Min: Calcite>> minor fracs

<<Min: 357.82 - 364.25 1% Min: Pyrrhotite>> in bands

<<Alt: 354.52 - 357.82 Moderate (Alt) Chlorite>> weakly pervasive and narrow intensely altered bands, with cse BI, and PO

<<Alt: 357.82 - 363.9 Moderate (Alt) Muscovite>> weak pervasive but mostly in narrow seams, bands

363.56 383.25 RHYvx Quartz and/or feldspar crystal green-brown FCG tuff

363.56 - 383.25: strongly sheared and altered, CI, MU, talc?, BI occurs in groundmass in bands and patches, blue QE's t/o, minor MAFi (BI-AC), CL is not readily apparent, clay(?) alteration of micas results in soft, gouge-like zones, locally mineralized

<<Min: 364.25 - 365.75 15% Min: Sphalerite>> masses, bands, fracs

<<Min: 364.25 - 365.75 5% Min: Pyrrhotite>> scattered in sx

<<Min: 364.25 - 365.75 5% Min: Galena>> interstitial with CP

<<Min: 364.25 - 365.75 5% Min: Chalcopryrite>> in sx and QV

<<Min: 365.75 - 367.32 0.01% Min: Pyrrhotite>>

<<Min: 368.14 - 372.65 0.5% Min: Pyrite>> focused around MU alt'n

<<Min: 368.14 - 372.65 1% Min: Pyrrhotite>>

<<Min: 372.65 - 377.52 5% Min: Calcite>> strong in TA(?) alt'd sections, veins

<<Min: 372.65 - 379.1 0.5% Min: Pyrite>> sattered, small blebs, patchy, in preserved rock

<<Min: 379.1 - 383.25 1% Min: Pyrrhotite>> and diss'ns

<<Min: 382.32 - 383.25 3% Min: Pyrite>> lenses along fol'n

<<Alt: 363.9 - 365.99 Strong (Alt) Muscovite>> local fault zones

<<Alt: 364.25 - 365.78 Moderate (Alt) Chlorite>> in QV, in sx zones, with CI

<<Alt: 365.53 - 365.99 Intense (Alt) Cordierite>> masses, in patches at top of interval, mixed with SI clasts the rest of the way?

<<Alt: 365.78 - 366.05 Strong (Alt) Silicification>> bx'd clasts?, with very fine grained diss'd and laminated sx

<<Alt: 365.99 - 367.32 Moderate (Alt) Cordierite>>

<<Alt: 365.99 - 368.14 Intense (Alt) Muscovite>> anastomosing fol'n around bx'd silica

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
362.10	363.60	1.50	B00269265	1.6	-0.005	-0.01	-0.01	0.03

363.60	364.25	0.65	B00269266	19.9	0.119	0.02	0.02	-0.01
--------	--------	------	-----------	------	-------	------	------	-------

364.25	365.75	1.50	B00269267	492	0.798	0.27	3.45	6.8
365.75	367.00	1.25	B00269268	21.8	0.071	0.02	0.06	0.02
367.00	368.14	1.14	B00269269	4.2	-0.005	0.01	-0.01	0.01



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-280

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 367.32 - 368.14		Strong (Alt) Silicification>> bx'd clasts 367.32									
<<Alt: 367.32 - 368.14		Strong (Alt) Cordierite>> scattered pblasts in MU matrix, SI clasts?									
<<Alt: 368.14 - 372.65		Moderate (Alt) Muscovite>> on fol'n, narrow zones									
<<Alt: 372.65 - 378.22		Strong (Alt) Cordierite>> intense Cl alt'n in short patches of preserved rock i.e. not completely gone to talc or clay Talc(? , or some white clay) is probably after the Mg-rich alt'n that resulted in cordierite									
<<Alt: 372.65 - 379.1		Strong (Alt) Muscovite>> altered to clay?									
<<Alt: 372.65 - 379.1		Strong (Alt) Talc-serpentine>> sections of core, in veins with CA, QZ, magnesite									
<<Alt: 379.1 - 382.03		Moderate (Alt) Muscovite>>									
<<Alt: 382.32 - 383.25		Strong (Alt) Biotite>> to diss'd pblasts									
<<Alt: 382.32 - 383.25		Strong (Alt) Chlorite>> to pervasive									
<<Alt: 382.35 - 385.25		Weak (Alt) Muscovite>> in RHYc									
<<Vein: 364.36 - 365.5		60% Quartz-Sulphide 30 deg. >> QZ-sx vein, irregular, boudinaged, sulphides in fracs, flow around vein									
<<Vein: 373 - 373.3		90% Quartz-Carbonate 60 deg. >> QZ-CA-magnesite? Vein, Talc included?,									
<<Struc: 365 - 365.5		Moderate (Alt) Fault>> 0.5 m lost core in the middle of mineralized zone?, hard to place core loss exactly									
<<Struc: 369.4 - 369.41		Moderate (Alt) dominant foliation>> planar									
383.25	385.25	RHYc Rhyolite coherent volcanics grey-brown FG									
383.25 - 385.25: schistose, siliceous? Rock, disaggregated silicic bands, no QE apparent except in schistose interstitial layers											
<<Struc: 383.3 - 383.31		Moderate (Alt) dominant foliation>>									
385.25	393.00	RHYvl Lapilli tuff grey-brown									
385.25 - 393: well fol'd, fine to coarse whitish pseudo-lapilli variable BI content and alteration, sheared and gougy close to underlying fault.strong talcose feel on fol'n, minor MAFi dyke -altered											
<<Min: 385.25 - 389.54		0.5% Min: Pyrite>> and diss'ns									
<<Min: 385.25 - 389.54		0.01% Min: Galena>> rare									
<<Min: 385.25 - 393		1% Min: Calcite>> minor patches									
<<Min: 389.54 - 393		0.5% Min: Pyrrhotite>> in bands									
<<Min: 389.54 - 393		0.01% Min: Galena>> with CP, SP?									
<<Min: 389.54 - 393		0.5% Min: Chalcopryite>> small zones to fault contact with sed, related to CL alt'n, cuts MAFi?									
<<Alt: 385.25 - 389.54		Moderate (Alt) Muscovite>> generally weak but short sections of intense alteration (gougy)									
<<Alt: 389.54 - 393		Moderate (Alt) Chlorite>> possibly some MAFi, cut by CP-GL-SP minlz'n									
<<Alt: 389.54 - 393		Moderate (Alt) Biotite>> alternates with CL									
<<Vein: 390.42 - 391.1		70% Quartz 55 deg. >> QZ vein, broken core									



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-280

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 388.8 - 388.81 Moderate (Alt) dominant foliation>>											
<<Struc: 391.8 - 402 Intense (Alt) Fault>> graphitic slickenslided surface											
393.00	408.00	MDS	Carbonaceous dominant	black	FG						
mudstone											
393 - 408: laminated bedding, CA common, in lenses with QZ, extremely faulted rock, fault at upper contact. Faulting is locally sub parallel to core axis,											
<<Min: 393 - 408 1% Min: Pyrite>> minor blebs along fol'n, small lenses or bands along laminations in sed											
<<Min: 393 - 408 5% Min: Calcite>> in seds											
<<Alt: 406.8 - 408 Weak (Alt) Garnet>> rare pblasts noted at bottom of hole											
<<Vein: 407.2 - 407.44 100% Quartz-Carbonate 70 deg. >> QZ-CA-PO, bx'd,											
<<Struc: 402.15 - 406.8 Intense (Alt) Fault>> black sticky gouge wanders along core axis											
<<Struc: 403.9 - 403.91 Moderate (Alt) dominant foliation>> flaser banding											
End of Hole @ 408											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-281

Prospect:	ABM	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Cooper Campbell
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Cooper Campbell	Date Logging Start:	01-Oct-15
UTM Easting	414594	Core Size:	HQ3	Azimuth:	181.38	Date Logging Complete:	04-Oct-15
UTM Northing:	6815656	Casing Pulled?:	Yes	Dip:	-55	Drill Company:	Geotech
UTM Elev. (m):	1447.51	Casing Depth (m):	4.5	Length (m):	260	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	29-Sep-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	03-Oct-15
Local Elev. (m):						Purpose:	Resource/Met
Comments:						Parent Hole:	

The purpose of this hole was to sample the lower Pb poor magnetite sulphide lens (MET 4 Domain).

The upper portion of this hole contains RHYcw, RHYvx, RHYv, and RHYvl intruded by MAFi. One major lens of massive sulphide was intersected between 179.27-183.23 m. OA, OC, and OJ ore types were intersected. An interval of OJ was intersected from 192.31-193.87 m. RHYcw, and RHYvl sit structurally below the sulphide zone and are intruded by RHYi and MAFi. RHYvx, MDSt, and RHYvl were intersected below the RHYi and MAFi unit.

CI-CL zones were intersected above, within, and below the sulphide lens. Albite alteration was intersected in the structural hanging wall.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-55	181.38	0	181.38	APS	Cooper Campbell	29-Sep-15		<input checked="" type="checkbox"/>	
29	-55.7	162.3	22.5	184.8	ReflexEVS	Geotech	29-Sep-15	5801	<input checked="" type="checkbox"/>	
50	-55.8	160.4	22.5	182.9	ReflexEVS	Geotech	29-Sep-15	5807	<input checked="" type="checkbox"/>	
74	-55.9	159.3	22.5	181.8	ReflexEVS	Geotech	30-Sep-15	5822	<input checked="" type="checkbox"/>	
101	-56.3	161.7	22.5	184.2	ReflexEVS	Geotech	30-Sep-15	5697	<input checked="" type="checkbox"/>	
125	-56.2	160.7	22.5	183.2	ReflexEVS	Geotech	30-Sep-15	5811	<input checked="" type="checkbox"/>	
152	-57.1	160.3	22.5	182.8	ReflexEVS	Geotech	30-Sep-15	5789	<input checked="" type="checkbox"/>	
176	-57.9	161.3	22.5	183.8	ReflexEVS	Geotech	02-Oct-15	5837	<input checked="" type="checkbox"/>	
203	-57.9	168.8	22.5	191.3	ReflexEVS	Geotech	02-Oct-15	5772	<input checked="" type="checkbox"/>	
227	-58.7	167.4	22.5	189.9	ReflexEVS	Geotech	02-Oct-15	5812	<input checked="" type="checkbox"/>	
251	-58.6	165.4	22.5	187.9	ReflexEVS	Geotech	02-Oct-15	5822	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	4.50	OVBN Overburden									

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-281

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
4.50	7.33	MAFi									
		Mafic Intrusions (primarily footwall mafic intrusion)									
4.5 - 7.33: Core dropped from 6.0-7.58 m											
<<Min: 4.5 - 7.33 15% Min: Calcite>>											
<<Min: 4.8 - 21.78 0.01% Min: Sphalerite>>											
<<Min: 4.8 - 21.78 3% Min: Pyrite>> FD											
<<Min: 4.8 - 21.78 0.01% Min: Pyrrhotite>> DIS											
<<Alt: 4.5 - 7.33 Moderate (Alt) Chlorite>> Ankerite also											
<<Vein: 4.5 - 7.33 15% Quartz-Carbonate 55 deg. >> QZ-CA											
7.33	21.78	RHYcw									
		Curdy textured-flow banded (flows, subvolcanics)									
<<Min: 7.33 - 23.47 1% Min: Calcite>>											
<<Alt: 7.33 - 23.69 Moderate (Alt) Muscovite>>											
<<Vein: 7.33 - 9.2 2% Quartz-Carbonate 50 deg. >> QZ-CA											
21.78	23.69	RHYvx									
		Quartz and/or feldspar crystal tuff									
<<Min: 21.78 - 27.41 0.01% Min: Pyrrhotite>>											
<<Min: 23.47 - 24.58 15% Min: Calcite>>											
<<Vein: 23.47 - 24.58 15% Quartz-Carbonate 60 deg. >> CA-QZ											
23.69	24.58	MAFi									
		Mafic Intrusions (primarily footwall mafic intrusion)									
<<Alt: 23.69 - 24.58 Moderate (Alt) Chlorite>>											
24.58	35.75	RHYcw									
		Curdy textured-flow banded (flows, subvolcanics)									
<<Min: 24.58 - 35.75 1% Min: Calcite>>											
<<Min: 27.41 - 31.83 0.01% Min: Sphalerite>>											
<<Min: 27.41 - 31.83 0.01% Min: Pyrrhotite>> DIS											
<<Min: 27.41 - 31.83 0.01% Min: Chalcopyrite>>											
<<Min: 31.83 - 35 0.01% Min: Pyrite>>											
<<Min: 31.83 - 35 0.01% Min: Pyrrhotite>>											
<<Min: 35 - 42.19 0.5% Min: Sphalerite>>											
<<Min: 35 - 42.19 0.5% Min: Pyrrhotite>>											
<<Min: 35 - 42.19 0.5% Min: Galena>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-281

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 24.58 - 35.75 Weak (Alt) Muscovite>>											
<<Vein: 31.64 - 35 0.5% Quartz-Carbonate-Sulphide 20 deg. >> QZ-CA-PO-SP-GL											
35.75	36.85	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
<<Min: 35.75 - 36.85 15% Min: Calcite>>											
<<Alt: 35.75 - 48.03 Trace (Alt) Chlorite>>											
<<Vein: 36.23 - 42.18 0.5% Quartz-Carbonate-Sulphide 70 deg. >> QZ-CA-BI-CL-PO-SP-GL											
36.85	40.09	RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
<<Min: 36.85 - 40.09 2% Min: Calcite>>											
<<Alt: 36.85 - 40.09 Trace (Alt) Muscovite>>											
40.09	41.15	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
<<Min: 40.09 - 42.29 5% Min: Calcite>>											
41.15	48.03	RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
<<Min: 42.18 - 59.14 0.01% Min: Sphalerite>>											
<<Min: 42.18 - 59.14 0.5% Min: Pyrrhotite>> WIS											
<<Min: 42.18 - 59.14 0.01% Min: Galena>>											
<<Min: 42.18 - 59.14 0.01% Min: Chalcopyrite>>											
<<Min: 42.29 - 59.14 1% Min: Calcite>>											
<<Alt: 41.15 - 53 Weak (Alt) Muscovite>>											
48.03	53.00	RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
48.03 - 53: Trace MAFi in interval. RHYcw has CL overprint.											
<<Alt: 48.03 - 56 Weak (Alt) Chlorite>>											
53.00	53.60	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
53.60	59.14	RHYv	Rhyolite volcanoclastic								
53.6 - 59.14: 0.01% TO DIS											
<<Alt: 53.6 - 59.14 Moderate (Alt) Muscovite>>											
<<Alt: 57.26 - 59.14 Trace (Alt) Chlorite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-281

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
59.14	60.02	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
<<Min: 59.14 - 60.02 5% Min: Calcite>>											
<<Min: 59.14 - 69.12 0.01% Min: Pyrite>>											
<<Min: 59.14 - 69.12 0.01% Min: Pyrrhotite>>											
<<Min: 59.14 - 69.12 0.01% Min: Chalcopyrite>>											
<<Alt: 59.14 - 60.02 Moderate (Alt) Chlorite>>											
60.02	63.15	RHYv	Rhyolite volcaniclastic								
60.02 - 63.15: CL overprint											
<<Min: 60.02 - 63.57 1% Min: Calcite>>											
<<Alt: 60.02 - 63.15 Trace (Alt) Muscovite>>											
<<Alt: 60.02 - 65.13 Weak (Alt) Chlorite>>											
63.15	67.07	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
<<Min: 63.57 - 67.07 20% Min: Calcite>>											
<<Alt: 65.13 - 66.25 Moderate (Alt) Chlorite>>											
<<Alt: 66.25 - 69.12 Weak (Alt) Chlorite>>											
<<Vein: 66.25 - 69.12 2% Quartz-Carbonate-Sulphide 70 deg. >> QZ-CACL-PY. Talc? Very soft light green mineral.											
67.07	69.12	RHYv	Rhyolite volcaniclastic								
67.07 - 69.12: Possible lpl.											
<<Min: 67.07 - 69.12 2% Min: Calcite>>											
<<Alt: 67.07 - 80.71 Moderate (Alt) Muscovite>>											
69.12	80.71	RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
<<Min: 69.12 - 92.05 1% Min: Pyrite>> WIS											
<<Min: 69.12 - 92.05 2% Min: Pyrrhotite>>											
<<Min: 69.12 - 92.05 0.01% Min: Chalcopyrite>>											
<<Min: 69.12 - 116.03 0.01% Min: Calcite>>											
<<Struc: 73.17 - 73.24 Fault>> Narrow fault filled with broken rock. Low intensity.											
80.71	86.61	RHYvl	Lapilli tuff								
<<Alt: 80.71 - 116.03 Trace (Alt) Muscovite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-281

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
86.61	92.92	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
86.61 - 92.92: Trace MAFi.											
<<Min: 92.05 - 108.42 0.5% Min: Pyrite>> WIS, FD											
<<Min: 92.05 - 108.42 0.5% Min: Pyrrhotite>> WIS, FD											
<<Vein: 87.67 - 88.6 2% Quartz-Carbonate-Sulphide 40 deg. >> QZ--AK-CA-PY											
92.92	104.38	RHYvl Lapilli tuff									
104.38	108.51	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
<<Min: 108.42 - 110.05 0.01% Min: Sphalerite>>											
<<Min: 108.42 - 110.05 0.5% Min: Pyrrhotite>> FD, WIS											
108.51	114.31	RHYvl Lapilli tuff									
<<Min: 110.05 - 116.03 0.5% Min: Pyrite>>											
<<Min: 110.05 - 116.03 0.5% Min: Pyrrhotite>> FD											
<<Min: 110.05 - 116.03 0.01% Min: Galena>>											
<<Vein: 109.79 - 110.05 100% Quartz-Carbonate-Sulphide 20 deg. >> QZ-CA-PO-SP											
114.31	116.97	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
114.31 - 116.97: Moderate albite alteration at end of interval.											
<<Min: 116.03 - 120.51 0.01% Min: Pyrite>> BL											
<<Min: 116.03 - 124.17 0.5% Min: Calcite>>											
<<Alt: 116.03 - 116.97 Moderate (Alt) Albite>>											
116.97	124.17	RHYvx Quartz and/or feldspar crystal tuff									
116.97 - 124.17: Weak albite alteration at the top of the interval.											
<<Min: 120.51 - 124.17 0.01% Min: Pyrrhotite>> WIS											
<<Alt: 116.97 - 118.12 Strong (Alt) Albite>>											
<<Alt: 118.12 - 120.5 Weak (Alt) Albite>>											
124.17	124.65	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<<Min: 124.17 - 124.65 30% Min: Calcite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-281

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 124.17 - 124.65 Trace (Alt) Chlorite>>											
124.65 131.13 RHYv Rhyolite volcanoclastic											
<<Min: 124.65 - 127.69 0.5% Min: Pyrite>>											
<<Min: 124.65 - 127.69 0.5% Min: Pyrrhotite>>											
<<Min: 124.65 - 131.13 1% Min: Calcite>>											
<<Min: 127.69 - 131.13 1% Min: Pyrrhotite>> VN											
<<Alt: 124.65 - 125.56 Weak (Alt) Chlorite>>											
<<Alt: 124.65 - 131.47 Moderate (Alt) Muscovite>>											
<<Alt: 125.56 - 132.04 Trace (Alt) Chlorite>>											
<<Vein: 125.46 - 131.47 3% Quartz-Carbonate-Sulphide 50 deg. >> QZ-AK-CL-CA-PO-PY											
<<Struc: 124.83 - 126.05 Fault>> Narrow faults (1-4cm) filled with broken rock and gouge. Spaced tens of cm's apart. Moderate intensity.											
131.13 137.31 MDSc Carbonaceous dominant mudstone											
<<Min: 131.13 - 139.59 15% Min: Calcite>>											
<<Min: 131.13 - 139.95 0.01% Min: Pyrite>> VN											
<<Min: 131.13 - 139.95 0.5% Min: Pyrrhotite>>											
<<Struc: 134.9 - 141.75 Fault>> Narrow faults up to 10 cm thick filled with broken rock and gouge. Spaced metres apart. Moderate intensity.											
137.31 144.13 MDSt Rhyolite tuff dominant mudstone											
<<Min: 139.59 - 179.27 0.01% Min: Calcite>>											
<<Min: 139.95 - 146.08 2% Min: Pyrite>> Concentrated in carbonaceous laminations.											
<<Alt: 137.31 - 139.59 Moderate (Alt) Muscovite>>											
<<Alt: 139.59 - 152.16 Strong (Alt) Muscovite>>											
144.13 168.41 RHYvx Quartz and/or feldspar crystal tuff											
<<Min: 146.08 - 155 0.5% Min: Pyrite>> WIS											
<<Min: 155 - 158.37 1% Min: Pyrite>> FD											
<<Min: 158.37 - 176.5 0.5% Min: Pyrite>> FD											
<<Alt: 152.16 - 174.95 Moderate (Alt) Muscovite>>											
<<Struc: 149.85 - 154.13 Fault>> Narrow faults (1cm) filled with broken rock and gouge. Spaced tens of cm's apart. Low intensity.											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-281

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 154.13 - 154.83 Fault>> Moderate to high intensity fault zone. Broken rock and gouge. Gouge zone 7cm thick.											
<<Struc: 154.83 - 159.77 Fault>> Narrow faults (<1cm) filled with broken rock and gouge. Spaced metres apart. Zones of high fracture density up to 25 cm. Low intensity.											
<<Struc: 160.54 - 160.55 Foliation>>											
<<Struc: 160.62 - 160.63 dominant foliation>>											
<<Struc: 163.67 - 163.68 dominant foliation>>											
168.41	179.27	RHYc Rhyolite coherent volcanics	174.77	176.27	1.50	B00268276	0.6	-0.005	-0.01	-0.01	-0.01
168.41 - 179.27: Strong MU alt. Strong foliation. Fold nose.											
<<Min: 176.5 - 179.27 0.01% Min: Sphalerite>>			176.27	177.77	1.50	B00268277	2	0.008	0.03	0.12	0.26
<<Min: 176.5 - 179.27 0.5% Min: Pyrite>>			177.77	179.27	1.50	B00268278	4	0.044	0.07	0.11	0.15
<<Min: 176.5 - 179.27 0.5% Min: Pyrrhotite>>											
<<Min: 176.5 - 179.27 0.01% Min: Chalcopryite>>											
<<Alt: 174.95 - 179.14 Strong (Alt) Muscovite>>											
<<Alt: 178.07 - 179.14 Weak (Alt) Chlorite>>											
<<Alt: 179.14 - 180.76 Moderate (Alt) Chlorite>>											
<<Alt: 179.14 - 180.76 Strong (Alt) Cordierite>>											
<<Vein: 174.95 - 178.67 1% Quartz-Carbonate-Sulphide 60 deg. >> QZ-AK-CA-PY-SP											
<<Struc: 168.54 - 168.57 Fault>> Narrow fault filled with broken rock and gouge. Low intensity.											
<<Struc: 170 - 170.01 dominant foliation>>											
<<Struc: 175.54 - 175.55 dominant foliation>>											
<<Struc: 178.17 - 178.18 dominant foliation>>											
179.27	180.16	OC Chalcopyrite-pyrrhotite net textured sulphides	179.27	180.16	0.89	B00268279	15.3	0.119	1.27	0.07	1.32
179.27 - 180.16: Contains a large proportion of PO 40%PO. Also contains CI-CL. Could be logged as OF or OJ.											
<<Min: 179.27 - 180.16 50% Min: Pyrrhotite>>											
<<Min: 179.27 - 180.16 3% Min: Magnetite>>											
<<Min: 179.27 - 180.16 3% Min: Chalcopryite>> FRA											
<<Min: 179.27 - 182.88 0.01% Min: Calcite>>											
<<Vein: 179.27 - 182.64 0.5% Quartz-Chlorite-Sulphide 65 deg. >> QZ-CL-PO-PY-CP-SP-CA. Sulphide envelope.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-281

From (m)	To (m)	Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
180.16	180.84	OJ Heavily disseminated sulphides in proximal altered rock	CG	180.16	180.84	0.68	B00268281	47.8	0.953	5.58	0.02	0.52
180.16 - 180.84: Interval dominated by CI-CL but also semi massive PO-CP mineralization.												
<<Min: 180.16 - 180.84 10% Min: Pyrrhotite>>												
<<Min: 180.16 - 180.84 2% Min: Magnetite>>												
<<Min: 180.16 - 180.84 5% Min: Chalcopyrite>> FRA												
180.84	181.91	OA Magnetite bearing sulphides	MG	180.84	181.34	0.50	B00268282	27.9	0.391	1.53	0.21	5.05
<<Min: 180.84 - 181.91 5% Min: Pyrrhotite>>												
<<Min: 180.84 - 181.91 10% Min: Magnetite>>												
<<Min: 180.84 - 181.91 3% Min: Chalcopyrite>> FRA												
181.91	182.64	OC Chalcopyrite-pyrrhotite net textured sulphides	CG	181.91	182.64	0.73	B00268284	51.9	0.974	4.86	0.02	0.77
181.91 - 182.64: 10% CP, 10%PO.												
<<Min: 181.91 - 182.64 10% Min: Pyrrhotite>>												
<<Min: 181.91 - 182.64 10% Min: Chalcopyrite>>												
<<Alt: 181.91 - 182.64 Moderate (Alt) Chlorite>>												
<<Alt: 181.91 - 182.87 Weak (Alt) Cordierite>>												
<<Struc: 182 - 182.13 Fault>> High intensity fault filled with broken rock and gouge. Orientation uncertain due to grinding during drilling. May have been produced mechanically.												
182.64	183.23	OJ Heavily disseminated sulphides in proximal altered rock	MG	182.64	183.23	0.59	B00268285	12.6	0.166	1.05	0.04	0.16
<<Min: 182.64 - 183.23 3% Min: Pyrrhotite>>												
<<Min: 182.88 - 187.73 0.01% Min: Calcite>>												
<<Alt: 182.64 - 183.81 Strong (Alt) Chlorite>>												
<<Struc: 182.67 - 182.68 >> Trace of axial plane of parasitic fold.												
<<Struc: 182.68 - 182.69 Contact>>												
183.23	187.73	RHY undifferentiated rhyolite		183.23	184.73	1.50	B00268286	-0.3	-0.005	-0.01	-0.01	0.04
183.23 - 187.73: Likely RHYcw. Seems to have flow banding texture. Original character of rock obscured by CL alteration.												
<<Min: 183.23 - 187.73 0.01% Min: Pyrite>>												
<<Min: 183.23 - 187.73 0.01% Min: Arsenopyrite>>												
<<Min: 183.23 - 187.73 0.01% Min: Pyrite>>												
<<Min: 183.23 - 187.73 0.01% Min: Arsenopyrite>>												

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-281

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 183.81 - 187.71 Moderate (Alt) Muscovite>>											
<<Alt: 183.81 - 187.71 Moderate (Alt) Chlorite>>											
<<Struc: 183.77 - 183.78 >>											
<<Struc: 183.77 - 183.78 >> Trace of axial plane of parasitic fold.											
<<Struc: 183.78 - 183.79 >> Orientation of folded interpreted flow banding.											
<<Struc: 183.78 - 183.79 >> Orientation of folded interpreted flow banding.											
<<Struc: 183.86 - 183.87 >>											
<<Struc: 183.86 - 183.87 >>											
<<Struc: 183.88 - 183.89 >> Orientation of folded interpreted flow banding.											
<<Struc: 183.88 - 183.89 >> Orientation of folded interpreted flow banding.											
<<Struc: 186.13 - 186.14 >>											
<<Struc: 186.13 - 186.14 >> Trace of axial plane of parasitic fold.											
<<Struc: 186.18 - 186.19 >> Orientation of folded interpreted flow banding.											
<<Struc: 186.18 - 186.19 >>											
<<Struc: 187.13 - 189.52 Fault>> Narrow faults up to 17 cm. Filled with broken rock and gouge. Spaced tens of cm's apart. Moderate intensity.											
187.73	192.31	RHYcw Curdy textured-flow banded (flows, subvolcanics)	187.81	189.31	1.50	B00268289	1	-0.005	0.01	0.02	0.1
<<Min: 187.73 - 192.31 0.01% Min: Pyrite>>			189.31	190.81	1.50	B00268291	-0.3	-0.005	-0.01	-0.01	-0.01
<<Min: 187.73 - 192.31 0.5% Min: Pyrrhotite>>			190.81	192.31	1.50	B00268292	0.7	-0.005	0.03	-0.01	0.02
<<Min: 187.73 - 192.31 0.01% Min: Chalcopyrite>>											
<<Min: 187.73 - 210.61 0.01% Min: Calcite>>											
<<Alt: 187.73 - 192.31 Strong (Alt) Muscovite>>											
<<Alt: 191.86 - 192.21 Weak (Alt) Chlorite>>											
<<Alt: 191.86 - 192.21 Weak (Alt) Cordierite>>											
<<Alt: 192.21 - 193.87 Moderate (Alt) Cordierite>>											
192.31	193.87	OJ Heavily disseminated sulphides in proximal altered rock	192.31	193.06	0.75	B00268293	5.4	0.052	0.52	0.02	0.1
192.31 - 193.87: RHYcw likely protolith. Strong CI-CL alt obscures protolith.											
<<Min: 192.31 - 193.87 3% Min: Pyrrhotite>>			193.06	193.87	0.81	B00268294	4.9	0.054	0.43	0.02	0.13
<<Min: 192.31 - 197.25 1% Min: Chalcopyrite>>											
<<Alt: 192.31 - 193.87 Moderate (Alt) Chlorite>>											

MG



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-281

From (m) To (m) Rocktype & Description

<<Struc: 193.37 - 193.38 dominant foliation>>

<<Struc: 193.48 - 193.49 dominant foliation>>

193.87 195.00 RHYcw Curdy textured-flow banded (flows, subvolcanics)

<<Min: 193.87 - 197.25 0.01% Min: Sphalerite>>

<<Min: 193.87 - 197.25 0.5% Min: Pyrite>> DIS

<<Min: 193.87 - 197.25 3% Min: Pyrrhotite>>

<<Min: 193.87 - 197.25 0.5% Min: Chalcopryite>> VN

<<Alt: 193.87 - 197.25 Moderate (Alt) Muscovite>>

<<Alt: 193.87 - 197.25 Weak (Alt) Chlorite>>

195.00 200.55 RHYvl Lapilli tuff

<<Min: 197.25 - 210.92 0.01% Min: Sphalerite>> VN

<<Min: 197.25 - 210.92 2% Min: Pyrite>> DIS. PY-PO selectively replaces some lapilli

<<Min: 197.25 - 210.92 0.5% Min: Pyrrhotite>> PY-PO selectively replaces some lapilli

<<Alt: 197.25 - 213.53 Moderate (Alt) Muscovite>>

<<Struc: 197.23 - 197.24 dominant foliation>>

<<Struc: 199.92 - 199.93 dominant foliation>>

200.55 202.56 RHYcw Curdy textured-flow banded (flows, subvolcanics)

<<Min: 200.68 - 201.27 0.5% Min: Chalcopryite>>

202.56 210.92 RHYvl Lapilli tuff

<<Min: 210.61 - 213.59 3% Min: Calcite>>

<<Alt: 210.88 - 213.53 Moderate (Alt) Silicification>>

<<Vein: 208.01 - 208.19 100% Quartz-Carbonate-Sulphide 75 deg. >> QZ-AK-PY-SP

<<Struc: 205.92 - 205.93 dominant foliation>>

<<Struc: 207.17 - 208.18 Vein>>

<<Struc: 210.12 - 210.27 Fault>> Narrow faults (<1cm). Filled with broken rock and gouge. Spaced cm's apart. Low intensity.

210.92 213.47 RHYi Aphanitic Rhyolite (intrusion)

<<Min: 210.92 - 213.47 1% Min: Pyrite>> FD

<<Vein: 210.92 - 224.75 15% Quartz-Carbonate-Sulphide 70 deg. >> QZ-CA-PY-SP

213.47 214.73 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

193.87	195.37	1.50	B00268295	2.1	-0.005	0.05	0.03	0.16
--------	--------	------	-----------	-----	--------	------	------	------

195.37	196.87	1.50	B00268296	4.6	0.027	0.22	0.04	0.14
--------	--------	------	-----------	-----	-------	------	------	------

196.87	198.37	1.50	B00268297	0.7	-0.005	0.01	0.02	0.07
--------	--------	------	-----------	-----	--------	------	------	------

198.37	199.37	1.00	B00268298	0.3	-0.005	-0.01	0.01	0.04
--------	--------	------	-----------	-----	--------	-------	------	------

199.37	200.55	1.18	B00268299	1.5	0.009	0.02	0.03	0.15
--------	--------	------	-----------	-----	-------	------	------	------

200.55	201.55	1.00	B00268301	6.2	0.02	0.21	0.06	0.24
--------	--------	------	-----------	-----	------	------	------	------

201.55	202.56	1.01	B00268302	0.9	-0.005	-0.01	0.01	0.02
--------	--------	------	-----------	-----	--------	-------	------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-281

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 213.47 - 214.73 0.5% Min: Pyrrhotite>>											
<<Min: 213.59 - 230.88 5% Min: Calcite>>											
<<Alt: 213.53 - 214.65 Weak (Alt) Chlorite>>											
<<Alt: 214.65 - 217.17 Moderate (Alt) Silicification>>											
<<Alt: 214.65 - 217.17 Moderate (Alt) Muscovite>>											
214.73 224.75 RHYi Aphanitic Rhyolite (intrusion)											
<<Min: 214.73 - 224.75 1% Min: Sphalerite>> VN											
<<Min: 214.73 - 224.75 3% Min: Pyrite>> FD											
<<Alt: 217.17 - 224.75 Strong (Alt) Silicification>>											
<<Alt: 217.17 - 224.75 Weak (Alt) Muscovite>>											
224.75 230.88 MAFi Mafic Intrusions (primarily footwall mafic intrusion)											
<<Min: 224.75 - 230.2 0.01% Min: Pyrite>>											
<<Min: 224.75 - 230.2 0.01% Min: Pyrrhotite>>											
<<Min: 230.2 - 230.88 0.01% Min: Sphalerite>>											
<<Min: 230.2 - 230.88 0.5% Min: Pyrite>>											
<<Min: 230.2 - 230.88 0.01% Min: Pyrrhotite>>											
<<Min: 230.2 - 230.88 0.01% Min: Galena>>											
<<Alt: 224.75 - 229.74 Moderate (Alt) Muscovite>>											
<<Alt: 229.74 - 240.6 Strong (Alt) Muscovite>>											
<<Vein: 230.2 - 230.88 90% Quartz-Carbonate-Sulphide 70 deg. >> QZ-CA-PY-PO-GL-SP											
230.88 238.21 RHYvx Quartz and/or feldspar crystal tuff											
<<Min: 230.88 - 238.21 0.5% Min: Pyrite>> FD											
<<Min: 230.88 - 238.21 0.5% Min: Pyrrhotite>> FD											
<<Min: 230.88 - 250.71 0.01% Min: Calcite>>											
<<Struc: 230.88 - 234.78 Fault>> Narrow faults (<3cm). Filled with broken rock and gouge. Spaced metres apart. Low intensity.											
<<Struc: 237.02 - 238.21 Fault>> Narrow faults (<7cm). Filled with broken rock and gouge. Spaced tens of cm's apart. Moderate intensity.											
238.21 238.89 MDSt Rhyolite tuff dominant mudstone											
<<Min: 238.21 - 238.89 3% Min: Pyrite>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-281

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 238.21 - 238.89 Fault>> Strongly faulted zone. Filled with broken rock and gouge. Multiple orientations. Conjugate set.											
238.89 260.00 RHYvl Lapilli tuff											
<<Min: 238.89 - 247.56 0.5% Min: Pyrite>>											
<<Min: 238.89 - 247.56 0.01% Min: Pyrrhotite>>											
<<Min: 247.56 - 260 1% Min: Pyrite>> FD											
<<Min: 247.56 - 260 0.5% Min: Pyrrhotite>>											
<<Min: 250.71 - 260 1% Min: Calcite>>											
<<Alt: 240.6 - 260 Moderate (Alt) Muscovite>>											
<<Vein: 240.69 - 240.83 100% Quartz-Carbonate-Sulphide 60 deg. >> QZ-AK-PY											
<<Struc: 238.89 - 248.61 Fault>> Narrow faults (<5cm). Filled with broken rock and gouge. Low intensity. Spaced metres apart.											
<<Struc: 242.65 - 251.11 Fault>> Very narrow faults (<2mm). Filled with trace gouge. Foliation deflected into fault plane.											
<<Struc: 254.18 - 254.87 Fault>> Narrow faults (<1cm). Filled with broken rock and gouge. Moderate intensity. Spaced cm's apart.											
End of Hole @ 260											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-281W1

Prospect:	ABM	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Cooper Campbell
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Cooper Campbell	Date Logging Start:	04-Oct-15
UTM Easting	414594	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	05-Oct-15
UTM Northing:	6815656	Casing Pulled?:	Yes	Dip:	-55	Drill Company:	Geotech
UTM Elev. (m):	1447.51	Casing Depth (m):	4.5	Length (m):	199.6	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	03-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	04-Oct-15
Local Elev. (m):						Purpose:	Metallurgical Wedge
Comments:						Parent Hole:	K15-281

The purpose of this hole was to sample the lower Pb poor magnetite sulphide lens (MET 4 Domain) for metallurgical testing.

The upper portion of this hole contains RHYvx, and RHYc. One major lens of massive sulphide was intersected between 178.63-183.56 m. OA, OC, and OJ ore types were intersected. Two intervals of OJ were intersected from 192.23-194.1 m and 195.32-196.64 m. RHYcw, and RHYvl sit structurally below the sulphide zone.

CI-CL zones were intersected above, within, and below the sulphide lens.

The drill bit completely wore out at 199.6 m. Instructed drill crew to pull out and replace bit. Upon reaming during re-entry the reaming shoe broke. The hole was terminated after the attempted re-entry.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-55	181.38	0	181.38	APS	Cooper Campbell	29-Sep-15		<input checked="" type="checkbox"/>	Values taken from K15-281
29	-55.7	162.3	22.5	184.8	ReflexEVS	Geotech	29-Sep-15	5801	<input checked="" type="checkbox"/>	Values taken from K15-281
50	-55.8	160.4	22.5	182.9	ReflexEVS	Geotech	29-Sep-15	5807	<input checked="" type="checkbox"/>	Values taken from K15-281
74	-55.9	159.3	22.5	181.8	ReflexEVS	Geotech	30-Sep-15	5822	<input checked="" type="checkbox"/>	Values taken from K15-281
101	-56.3	161.7	22.5	184.2	ReflexEVS	Geotech	30-Sep-15	5697	<input checked="" type="checkbox"/>	Values taken from K15-281
125	-56.2	160.7	22.5	183.2	ReflexEVS	Geotech	30-Sep-15	5811	<input checked="" type="checkbox"/>	Values taken from K15-281
152	-57.1	160.3	22.5	182.8	ReflexEVS	Geotech	30-Sep-15	5789	<input checked="" type="checkbox"/>	Values taken from K15-281
161.5	-55.6	161.3	22.5	183.8	ReflexEVS	Geotech	03-Oct-15	5774	<input checked="" type="checkbox"/>	Wedge start; value copied from first wedge survey at 170m
170	-55.6	161.3	22.5	183.8	ReflexEVS	Geotech	03-Oct-15	5774	<input checked="" type="checkbox"/>	
198.5	-56.4	172	22.5	194.5	ReflexEVS	Geotech	04-Oct-15	5804	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
161.50	166.40	RHYvx Quartz and/or feldspar crystal tuff									

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-281W1

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 161.5 - 178.63 0.5% Min: Pyrite>> FD											
<<Min: 161.5 - 178.63 0.01% Min: Calcite>>											
<<Alt: 161.5 - 175.76 Moderate (Alt) Muscovite>>											
166.40	178.63	RHYc Rhyolite coherant volcanics	173.63	174.63	1.00						
<<Min: 176.44 - 178.63 0.5% Min: Sphalerite>>			174.63	175.63	1.00						
<<Min: 176.44 - 178.63 0.01% Min: Pyrrhotite>>			175.63	176.63	1.00						
<<Alt: 175.76 - 179.32 Strong (Alt) Muscovite>>			176.63	177.63	1.00						
<<Vein: 177.5 - 179.32 25% Quartz-Tourmaline-Sulphide 80 deg. >> QZ-TO-AK-CL-CP-PY-CA			177.63	178.63	1.00						
178.63	179.32	OJ Heavilly disseminated sulphides in proximal altered rock	178.63	179.32	0.69						
178.63 - 179.32: QZ-TO VN with CP. Soft green mineral, possibly talc. Scratches with fingernail.											
<<Min: 178.63 - 179.32 0.01% Min: Pyrrhotite>>											
<<Min: 178.63 - 179.32 0.01% Min: Chalcopyrite>>											
<<Min: 178.63 - 179.32 0.01% Min: Calcite>>											
<<Alt: 178.63 - 179.32 Weak (Alt) Chlorite>>											
<<Struc: 178.82 - 179 Fault>> Could have been generated mechanically during drilling. Possible strong fault gouge zone. Occurs right at the end of a drill run. Suspect.											
179.32	181.31	OC Chalcopyrite-pyrrhotite net textured sulphides	179.32	180.32	1.00						
<<Min: 179.32 - 181.31 50% Min: Pyrrhotite>>			180.32	181.31	0.99						
<<Min: 179.32 - 181.31 3% Min: Magnetite>>											
<<Min: 179.32 - 181.31 3% Min: Chalcopyrite>> FRA											
<<Min: 179.32 - 182.7 0.01% Min: Calcite>>											
<<Alt: 179.32 - 181.31 Moderate (Alt) Chlorite>>											
<<Alt: 179.32 - 181.31 Moderate (Alt) Cordierite>>											
181.31	182.06	OA Magnetite bearing sulphides	181.31	182.06	0.75						
<<Min: 181.31 - 182.06 5% Min: Pyrrhotite>>											
<<Min: 181.31 - 182.06 10% Min: Magnetite>>											
<<Min: 181.31 - 182.06 1% Min: Chalcopyrite>>											
182.06	182.70	OC Chalcopyrite-pyrrhotite net textured sulphides	182.06	182.70	0.64						
<<Min: 182.06 - 182.7 5% Min: Pyrrhotite>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-281W1

From (m)		To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 182.06 - 182.7 3% Min: Magnetite>>												
<<Min: 182.06 - 182.7 5% Min: Chalcopyrite>> DIS												
<<Alt: 182.06 - 182.7 Moderate (Alt) Chlorite>>												
<<Alt: 182.06 - 183.16 Weak (Alt) Cordierite>>												
182.70	183.56	OJ	Heavilly disseminated sulphides in proximal altered rock	182.70	183.56	0.86						
<<Min: 182.7 - 183.16 0.01% Min: Calcite>>												
<<Min: 182.7 - 183.56 1% Min: Pyrrhotite>>												
<<Alt: 182.7 - 187.93 Strong (Alt) Chlorite>>												
<<Vein: 182.7 - 187.93 10% Quartz-Carbonate 60 deg. >> QZ-AK												
183.56	187.93	RHY	undifferentiated rhyolite	183.56	184.56	1.00						
183.56 - 187.93: Original character of rock obscured by proximal alteration. Ankerite crystals and QZ-AK veining.												
<<Min: 183.56 - 187.93 0.01% Min: Pyrrhotite>>				184.56	185.56	1.00						
<<Min: 183.56 - 187.93 0.01% Min: Chalcopyrite>>				185.56	186.56	1.00						
<<Struc: 186.27 - 188.7 Fault>> Narrow faults (<2cm). Locally high fracture density. Filled with gouge and broken rock. Variable fault orientations. Moderate intensity.				186.56	187.24	0.68						
				187.24	187.93	0.69						
				187.93	188.93	1.00						
<<Min: 187.93 - 192.23 0.01% Min: Sphalerite>>				188.93	189.93	1.00						
<<Min: 187.93 - 192.23 0.5% Min: Pyrite>>				189.93	190.93	1.00						
<<Min: 187.93 - 192.23 1% Min: Pyrrhotite>>				190.93	191.58	0.65						
<<Min: 187.93 - 192.23 0.01% Min: Chalcopyrite>>				191.58	192.23	0.65						
<<Min: 187.93 - 194.56 0.01% Min: Calcite>>												
<<Alt: 187.93 - 192.23 Strong (Alt) Muscovite>>												
192.23	194.10	OJ	Heavilly disseminated sulphides in proximal altered rock	192.23	193.17	0.94						
<<Min: 192.23 - 194.1 0.5% Min: Sphalerite>>				193.17	194.10	0.93						
<<Min: 192.23 - 194.1 3% Min: Pyrrhotite>> BL												
<<Min: 192.23 - 194.1 3% Min: Chalcopyrite>> BL												
<<Alt: 192.23 - 194.1 Moderate (Alt) Chlorite>>												



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-281W1

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 192.23 - 194.1 Moderate (Alt) Cordierite>>											
194.10	195.32	RHYcw Curdy textured-flow banded (flows, subvolcanics)	194.10	194.82	0.72						
<<Min: 194.1 - 195.32 1% Min: Sphalerite>>			194.82	195.32	0.50						
<<Min: 194.1 - 195.32 0.01% Min: Pyrite>>											
<<Min: 194.1 - 195.32 3% Min: Pyrrhotite>>											
<<Min: 194.1 - 195.32 0.5% Min: Chalcopyrite>>											
<<Min: 194.56 - 196.64 0.01% Min: Calcite>>											
<<Alt: 194.1 - 195.32 Moderate (Alt) Muscovite>>											
<<Alt: 194.1 - 195.32 Weak (Alt) Chlorite>>											
<<Vein: 194.56 - 196.4 5% Quartz-Tourmaline-Sulphide 20 deg. >> QZ-TO-AK-CL-CP-PY-CA											
195.32	196.64	OJ Heavily disseminated sulphides in proximal altered rock	195.32	195.97	0.65						
195.32 - 196.64: QZ-TO VN with CP.											
<<Min: 195.32 - 196.64 0.01% Min: Sphalerite>>			195.97	196.64	0.67						
<<Min: 195.32 - 196.64 0.5% Min: Pyrite>> FRA											
<<Min: 195.32 - 196.64 1% Min: Pyrrhotite>>											
<<Min: 195.32 - 196.64 3% Min: Chalcopyrite>> WIS. TO VN.											
<<Alt: 195.32 - 196.64 Moderate (Alt) Chlorite>>											
<<Alt: 195.32 - 196.64 Moderate (Alt) Cordierite>>											
196.64	199.60	RHYvl Lapilli tuff	196.64	197.64	1.00						
<<Min: 196.64 - 199.6 3% Min: Pyrite>>			197.64	198.64	1.00						
<<Min: 196.64 - 199.6 0.5% Min: Pyrrhotite>>			198.64	199.60	0.96						
<<Min: 196.64 - 199.6 0.01% Min: Galena>>											
<<Min: 196.64 - 199.6 0.5% Min: Chalcopyrite>>											
<<Alt: 196.64 - 197.32 Trace (Alt) Chlorite>>											
<<Alt: 196.64 - 199.6 Moderate (Alt) Muscovite>>											
<<Vein: 197.53 - 197.66 100% Quartz-Carbonate-Sulphide 70 deg. >> QZ-AK-PO-PY-GL											
End of Hole @ 199.6											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-282

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	02-Oct-15
UTM Easting	415242.113	Core Size:	NQ3	Azimuth:	189.58	Date Logging Complete:	07-Oct-15
UTM Northing:	6815246.944	Casing Pulled?:	Yes	Dip:	-70	Drill Company:	Geotech
UTM Elev. (m):	1440.363	Casing Depth (m):	9	Length (m):	340	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	01-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	06-Oct-15
Local Elev. (m):						Purpose:	Exploration
Comments:						Parent Hole:	

Hole K15-282 is an exploration hole drilled to test the continuity of the lens intersected in K97-173 and to look for proximal alteration suggesting vicinity to sulphide lens. The upper units of this hole are composed of mafic tuff and mudstone underlain by rhyolite crosscut by aphanitic felsic and intermediate mafic dykes. The hole intersects a lens of massive sulphide zone from 243.72 to 245.37m, containing MG-PY-CP-SP-GL, OB and OA domains. The hole shows progressive muscovite alteration surrounding the mineralization from 197.58 to 256.73m. At this depth, the hole is cut by a mafic intrusion. From 299.30 to 314.40m, two massive sulphide lenses, separated by a 1.66m interval of mafic rock, are intersected. No proximal chlorite alteration is observed. The hole ends in the mafic intrusion at 340m. Note: due to a combination of run block errors, zones of poor recovery and general lack of diligence during the drilling, the massive sulfide core boxes had to be reorganized and rebuilt. There is a high level of confidence in the accuracy of this rebuilding.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-70	189.58	0	189.58	APS	Daniele Heon	05-Oct-15		<input checked="" type="checkbox"/>	
35	-69.8	165.2	22.5	187.7	ReflexEVS	Geotech	02-Oct-15	5805	<input checked="" type="checkbox"/>	
62	-69.4	164.2	22.5	186.7	ReflexEVS	Geotech	03-Oct-15	5774	<input checked="" type="checkbox"/>	
89	-69.3	165.4	22.5	187.9	ReflexEVS	Geotech	03-Oct-15	5785	<input checked="" type="checkbox"/>	
119	-69.4	165	22.5	187.5	ReflexEVS	Geotech	03-Oct-15	5778	<input checked="" type="checkbox"/>	
146	-69.9	167.4	22.5	189.9	ReflexEVS	Geotech	03-Oct-15	5779	<input checked="" type="checkbox"/>	
175	-69.3	167.7	22.5	190.2	ReflexEVS	Geotech	04-Oct-15	5790	<input checked="" type="checkbox"/>	
200	-69.2	170	22.5	192.5	ReflexEVS	Geotech	04-Oct-15	5771	<input checked="" type="checkbox"/>	
227	-67.7	170.2	22.5	192.7	ReflexEVS	Geotech	05-Oct-15	5813	<input checked="" type="checkbox"/>	
251	-66	168.2	22.5	190.7	ReflexEVS	Geotech	05-Oct-15	5763	<input checked="" type="checkbox"/>	
281	-65.9	168.5	22.5	191	ReflexEVS	Geotech	05-Oct-15	5763	<input checked="" type="checkbox"/>	
308	-66.2	204.6	22.5	227.1	ReflexEVS	Geotech	05-Oct-15	2316	<input type="checkbox"/>	Values not accepted due to low magnetic field
340	-66.8	172.8	22.5	195.3	ReflexEVS	Geotech	05-Oct-15	5796	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-282

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
9.00	12.80	MAFt Mafic Volcaniclastics									
grey-green											
9 - 12.8: Few BI, CA veinlets, locally argillitic											
<<Min: 9 - 32.5 8% Min: Calcite>>											
<<Min: 9 - 65 2% Min: Pyrite>>											
<<Min: 9 - 65 2% Min: Pyrrhotite>> Elongated and veinlets											
<<Alt: 9 - 64 Weak (Alt) Chlorite>>											
<<Alt: 9 - 65 Trace (Alt) Muscovite>>											
<<Vein: 9 - 32.5 Calcite>> CA veinlets associated with mafic rock.											
<<Struc: 9 - 35 Trace (Alt) Fault>> Rubble, broken zone. Poor recovery and highly fractured.											
12.80	19.55	MDSc Carbonaceous dominant mudstone									
black											
12.8 - 19.55: CA veining, vuggy texture locally.											
19.55	25.00	MAFt Mafic Volcaniclastics									
green-brown											
19.55 - 25: Weak chlorite, weak muscovite											
25.00	37.00	MDSc Carbonaceous dominant mudstone									
black											
<<Min: 32.5 - 71 4% Min: Calcite>>											
<<Alt: 34.5 - 36.5 Moderate (Alt) Silicification>> In MDSc, probably associated with QZ veins											
<<Vein: 32.5 - 38.5 Quartz>> QZ veins, 3cm to 50 cm, deformed.											
37.00	71.22	RHYva Coarse grained ash tuff									
light grey											
37 - 71.22: Highly fractured, fault gouge from 55 to 55.6m.											
<<Min: 65 - 122 0.5% Min: Pyrrhotite>>											
<<Min: 65 - 129.5 0.5% Min: Pyrite>> And patch.											
<<Alt: 65 - 129.82 Weak (Alt) Muscovite>> Locally moderate.											
<<Alt: 71 - 72.66 Moderate (Alt) Silicification>> Green-grey alteration associated with RHYi.											
<<Struc: 54.9 - 55.5 Moderate (Alt) Fault>> Fault gouge containing grey clay, Qz clasts, CA.											
71.22	86.89	RHYi Aphanitic Rhyolite (intrusion)									
beige											
71.22 - 86.89: Brecciated upper contact, stockwork texture, PY veining at lower contact. Probably albite in foliation at upper contact, flow aspect.											
<<Min: 84.2 - 126.62 5% Min: Calcite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-282

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 84.2 - 97.42 Moderate (Alt) Silicification>> Green-grey alteration, bleached.											
86.89	106.27	RHYv Rhyolite volcaniclastic									
86.89 - 106.27: Few QZ eyes. Dominantly ash, bleech alteration patchy due to RHYi proximity,BI patch from 96.70 to 97.90m. AK or dolomite replacing lapili.											
<<Alt: 96.7 - 97.9 Weak (Alt) Biotite>>											
106.27	110.52	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
106.27 - 110.52: Dyke. Brown mica, CA contrated at lower contact.											
110.52	126.60	RHYv Rhyolite volcaniclastic									
110.52 - 126.6: Few QE at upper contact, dominantly ash.											
<<Min: 122 - 178.64 1% Min: Pyrrhotite>>											
<<Vein: 112.8 - 112.9 Quartz>> QZ vein.											
<<Struc: 122 - 124 Weak (Alt) Shear>> Shear zone, crenulation with QZ veining or local flow banding.											
126.60	129.50	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
126.6 - 129.5: Dyke. Few PO, CA. BI phenoblasts at lower contact, chill margin at upper contact.											
<<Min: 126.62 - 129.5 8% Min: Calcite>> In MAFi.											
<<Struc: 127 - 164 Weak (Alt) Fault>> Multiple minor fault accentuated by fragmental texture and muscovite alteration.											
129.50	136.00	RHYvx Quartz and/or feldspar crystal tuff									
129.5 - 136: porphyritic texture. Foliaition well marked locally with felspar (?) flow texture. Ash in matrix. Could be felspar crystal or fragments. Locally QZ rich-veining.											
<<Min: 129.5 - 157.81 2% Min: Calcite>> and replacement.											
<<Min: 129.5 - 178.64 1% Min: Pyrite>> Associated with QZ.											
<<Alt: 129.82 - 197.58 Moderate (Alt) Muscovite>> Locally strong alteration.											
136.00	139.50	RHYva Coarse grained to ash tuff									
136 - 139.5: Local flow could be large clasts. QZ veins.											
139.50	157.81	RHYvx Quartz and/or feldspar crystal tuff									
139.5 - 157.81: Crystal tuff, locally lapilitic rich. Ash in soft matrix. AK or dolomite replacing clasts.											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-282

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 146.65 - 160 Weak (Alt) Chlorite>>											
<<Vein: 140.25 - 140.8 Quartz-Chlorite>> multiple 10 cm wide QZ-CL veins.											
157.81	167.80	RHYvl Lapilli tuff	grey-green								
157.81 - 167.8: With local fragmental zone.											
<<Min: 157.81 - 178.64 1% Min: Calcite>>											
167.80	178.64	RHY undifferentiated rhyolite	grey-green								
167.8 - 178.64: Banded dark QZ/MU, PY associated with QZ bands. Texture obscured by green-grey alteration.											
<<Alt: 170 - 196 Moderate (Alt) Silicification>> Green-grey alteration, QZ dyke proximity (?)											
178.64	182.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	dark grey								
178.64 - 182: Dyke, unfoliated, containing CA, PY and PO patch, maybe MG. The dyke in crosscut by QZ and RHYi (probably xenolith).											
<<Min: 178.64 - 182 5% Min: Pyrite>> and patchy.											
<<Min: 178.64 - 182 5% Min: Pyrrhotite>> in Mafi dyke.											
<<Min: 178.64 - 182 15% Min: Calcite>> In MAFi dyke.											
182.00	191.58	RHYi Aphanitic Rhyolite (intrusion)	beige								
182 - 191.58: Large QZ vein containing RHYi xenolith.											
<<Min: 182 - 243.72 1% Min: Pyrite>>											
<<Min: 182 - 243.72 1% Min: Pyrrhotite>>											
<<Vein: 184.9 - 191 Quartz-Chlorite>> Massive QZ vein associated with RHYi intruding MAFi dyke, .											
<<Struc: 182 - 194.2 Strong (Alt) Shear>> Sheared and broken zone. QZ-RHYi intruding mafic dyke. Fractured massive QZ vein, filled by TML. Strongly sheared at lower contact.											
191.58	193.13	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	dark grey								
191.58 - 193.13: Sheared lower contact of the dyke intruded by QZ vein and/or RHYi.											
193.13	199.38	RHY undifferentiated rhyolite	grey-green								
193.13 - 199.38: Strongly altered RHY probably RHYv.											
<<Min: 193.13 - 243.72 1% Min: Calcite>>											
<<Alt: 197.58 - 243.72 Strong (Alt) Muscovite>> Less marked in the MUDt.											
<<Vein: 194.24 - 194.26 Tourmaline>> TML veinpenetrating foliation, shallow angle											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-282

From (m)		To (m)		Rocktype & Description		From (m)		To (m)		Width		Sample		Ag PPM		Au PPM		Cu %		Pb %		Zn %	
199.38		211.00		RHY undifferentiated rhyolite		grey-green																	
199.38 - 211: Strongly altered RHY, could be RHYcw dislocated or volcanoclastic fragmental. SI rich.																							
<<Vein: 200 - 208 Quartz-Sulphide>> Dark QZ veining or bands, 3/10cm, PY associated.																							
<<Struc: 205.4 - 218 Weak (Alt) Shear>> Highly broken zone due to nature of rock and strong MU alteration.																							
211.00		235.90		MDSt Rhyolite tuff dominant mudstone		light grey																	
211 - 235.9: Probably ash dominant. Gradational contact, interbedding. PO needle and few PY disseminated.																							
<<Struc: 230 - 235 Moderate (Alt) Shear>>																							
235.90		243.72		RHYv Rhyolite volcanoclastic		grey-green		239.22		240.72		1.50		B00266894		-0.3		-0.005		-0.01		-0.01	
235.9 - 243.72: Probably ash dominant.																							
243.72		245.37		OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides		FMG		240.72		242.22		1.50		B00266895		-0.3		-0.005		-0.01		-0.01	
243.72 - 245.37: Sharpe contact, no proximalalteration, locally MG.																							
<<Min: 243.72 - 245.37 10% Min: Sphalerite>>																							
<<Min: 243.72 - 245.37 77% Min: Pyrite>>																							
<<Min: 243.72 - 245.37 3% Min: Magnetite>>																							
<<Min: 243.72 - 245.37 2% Min: Galena>>																							
<<Min: 243.72 - 245.93 5% Min: Calcite>>																							
245.37		245.93		OA Magnetite bearing sulphides		MG		244.55		245.37		0.82		B00266898		100		0.733		0.13		2.86	
245.37 - 245.93: Locally coarse grai PY.																							
<<Min: 245.37 - 245.93 2% Min: Sphalerite>>																							
<<Min: 245.37 - 245.93 70% Min: Pyrite>>																							
<<Min: 245.37 - 245.93 5% Min: Pyrrhotite>>																							
<<Min: 245.37 - 245.93 10% Min: Magnetite>>																							
<<Min: 245.37 - 245.93 2% Min: Galena>>																							
<<Min: 245.37 - 245.93 2% Min: Chalcopyrite>>																							

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-282
From (m) **To (m)** **Rocktype & Description**
245.93 256.73 RHY undifferentiated rhyolite grey-green

245.93 - 256.73: Probably RHYcw, disaggregated flow.

<<Min: 245.93 - 256.73 0.5% Min: Pyrite>> And aggregated.

<<Alt: 245.93 - 256.73 Strong (Alt) Muscovite>>

<<Struc: 253 - 255.5 Strong (Alt) Fault>> Fault gouge, brecciated. Could be minor fault but lot of core loss.

256.73 257.00 OA Magnetite bearing sulphides MG

256.73 - 257: Fault at upper contact.

<<Min: 256.73 - 257 3% Min: Sphalerite>>

<<Min: 256.73 - 257 2% Min: Galena>>

<<Min: 256.73 - 257 1% Min: Chalcopryrite>>

<<Min: 256.73 - 257 1% Min: Calcite>>

257.00 299.30 MAFi Mafic Intrusions (primarily grey-brown
footwall mafic intrusion)

257 - 299.3: Large QZ veins on top of the unit. Strong CA at upper contact decreasing downhole. CA in veins.

<<Min: 259.7 - 263.6 15% Min: Calcite>>

<<Min: 263.6 - 299.3 2% Min: Calcite>> Dominantly in vein. CA increase contact with MXSX.

<<Alt: 259.7 - 299.25 Strong (Alt) Chlorite>>

<<Vein: 257 - 259.7 Quartz-Chlorite>> QZ-CL and/or talc massive vein.

<<Vein: 286.25 - 286.26 Quartz-Chalcopryrite>> QZ vein with CP and PY

299.30 299.90 OA Magnetite bearing sulphides MG

299.3 - 299.9: Couldbe OB (buckshot tecture and SP lamination with MG. CA in matrix. Fine grain in MAFi at contact, could be chill margin.

<<Min: 299.3 - 299.9 15% Min: Sphalerite>>

<<Min: 299.3 - 299.9 64% Min: Pyrite>>

<<Min: 299.3 - 299.9 3% Min: Magnetite>>

<<Min: 299.3 - 299.9 3% Min: Galena>>

<<Min: 299.3 - 299.9 15% Min: Calcite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
245.93	247.43	1.50	B00266901	6.4	0.033	0.03	0.07	0.51

247.43	248.93	1.50	B00266902	-0.3	0.006	-0.01	-0.01	-0.01
248.93	250.00	1.07	B00266903	-0.3	-0.005	-0.01	-0.01	-0.01
250.00	251.50	1.50	B00266904	-0.3	0.008	-0.01	0.01	0.02
251.50	253.00	1.50	B00266905	-0.3	0.006	-0.01	-0.01	-0.01
253.00	254.00	1.00	B00266906	0.9	0.013	-0.01	-0.01	-0.01
254.00	256.00	2.00	B00266907	1.6	0.034	-0.01	0.02	0.07
256.00	257.00	1.00	B00266908	150	0.752	0.48	2.33	6.43

257.00	259.70	2.70	B00266909	4.5	0.021	0.02	0.06	0.13
--------	--------	------	-----------	-----	-------	------	------	------

259.70	261.20	1.50	B00266911	8.1	0.027	0.12	0.03	0.25
261.20	262.70	1.50	B00266912	1.6	0.009	0.01	0.03	0.06
294.80	296.30	1.50	B00266913	0.9	0.009	-0.01	-0.01	0.01
296.30	297.80	1.50	B00266914	2.6	0.016	-0.01	0.02	0.01
297.80	299.30	1.50	B00266915	5.7	0.023	-0.01	0.06	0.03
299.30	299.90	0.60	B00266916	241	1.34	0.03	3.35	9.58

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-282

From (m) To (m) Rocktype & Description

299.90 302.08 OB **Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides**

299.9 - 302.08: Weak lamination.

<<Min: 299.9 - 302.08 9% Min: Sphalerite>>

<<Min: 299.9 - 302.08 75% Min: Pyrite>>

<<Min: 299.9 - 302.08 1% Min: Galena>>

<<Min: 299.9 - 302.08 15% Min: Calcite>>

302.08 303.75 OB **Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides**

302.08 - 303.75: CA, probably BA-SI in matrix.

<<Min: 302.08 - 303.75 25% Min: Sphalerite>>

<<Min: 302.08 - 303.75 45% Min: Pyrite>>

<<Min: 302.08 - 303.75 5% Min: Galena>>

<<Min: 302.08 - 303.75 5% Min: Chalcopryrite>>

<<Min: 302.08 - 303.75 10% Min: Calcite>>

303.75 305.22 OB **Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides**

<<Min: 303.75 - 305.22 5% Min: Sphalerite>>

<<Min: 303.75 - 305.22 83% Min: Pyrite>>

<<Min: 303.75 - 305.22 1% Min: Galena>>

<<Min: 303.75 - 305.22 1% Min: Chalcopryrite>>

<<Min: 303.75 - 305.22 10% Min: Calcite>>

305.22 305.86 OA **Magnetite bearing sulphides**

305.22 - 305.86: Could be MET4

<<Min: 305.22 - 305.86 5% Min: Sphalerite>>

<<Min: 305.22 - 305.86 80% Min: Pyrite>>

<<Min: 305.22 - 305.86 1% Min: Pyrrhotite>>

<<Min: 305.22 - 305.86 5% Min: Magnetite>>

<<Min: 305.22 - 305.86 3% Min: Galena>>

FMG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
299.90	301.04	1.14	B00266917	313	2.8	0.4	2.43	8.62

301.04	302.08	1.04	B00266918	242	3.16	0.4	2.78	8.5
--------	--------	------	-----------	-----	------	-----	------	-----

FMG

302.08	302.79	0.71	B00266919	184	1.41	0.31	2.28	15.8
--------	--------	------	-----------	-----	------	------	------	------

302.79	303.75	0.96	B00266921	135	1.13	1.67	0.96	23.1
--------	--------	------	-----------	-----	------	------	------	------

FG

303.75	305.22	1.47	B00266922	99.3	0.817	0.28	1.96	6.33
--------	--------	------	-----------	------	-------	------	------	------

FG

305.22	305.86	0.64	B00266923	105	0.711	0.54	2.69	6.94
--------	--------	------	-----------	-----	-------	------	------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-282

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 305.22 - 305.86 0.1% Min: Chalcopryite>>											
<<Min: 305.22 - 305.86 5% Min: Calcite>>											
305.86	306.50	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FG								
<<Min: 305.86 - 306.5 3% Min: Sphalerite>>											
<<Min: 305.86 - 306.5 85% Min: Pyrite>>											
<<Min: 305.86 - 306.5 3% Min: Galena>>											
<<Min: 305.86 - 306.5 5% Min: Calcite>>											
306.50	308.34	OA Magnetite bearing sulphides	FG								
<<Min: 306.5 - 308.34 3% Min: Sphalerite>>											
<<Min: 306.5 - 308.34 69% Min: Pyrite>>											
<<Min: 306.5 - 308.34 10% Min: Pyrrhotite>>											
<<Min: 306.5 - 308.34 5% Min: Magnetite>>											
<<Min: 306.5 - 308.34 3% Min: Galena>>											
<<Min: 306.5 - 308.34 0.5% Min: Chalcopryite>>											
<<Min: 306.5 - 308.34 10% Min: Calcite>>											
308.34	310.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<<Min: 308.34 - 310 10% Min: Calcite>>											
310.00	312.80	OA Magnetite bearing sulphides	FMG								
310 - 312.8: Or OB with MG. Could be MET3											
<<Min: 310 - 312.8 2% Min: Sphalerite>>											
<<Min: 310 - 312.8 82% Min: Pyrite>>											
<<Min: 310 - 312.8 3% Min: Magnetite>>											
<<Min: 310 - 312.8 1% Min: Galena>>											
<<Min: 310 - 312.8 2% Min: Chalcopryite>>											
<<Min: 310 - 312.8 10% Min: Calcite>>											
<<Min: 312 - 312.8 2% Min: Sphalerite>>											
312.80	314.40	OA Magnetite bearing sulphides	FG								
312.8 - 314.4: Or OB with MG.											
<<Min: 312.8 - 314.4 3% Min: Sphalerite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-282
From (m) **To (m)** **Rocktype & Description**

<<Min: 312.8 - 314.4 90% Min: Pyrite>>

<<Min: 312.8 - 314.4 2% Min: Magnetite>>

<<Min: 312.8 - 314.4 5% Min: Calcite>>

**314.40 340.00 MAFi Mafic Intrusions (primarily
footwall mafic intrusion)**

314.4 - 340: Locally amphibole (gabbroide?). Hematite in fracture, irregular CA concentration average 10 per cent., intense at contact with MXSX. E.O.H..

<<Min: 314.4 - 340 10% Min: Calcite>> Irregular repartition, strong at contact with MxSx

<<Alt: 314.4 - 340 Strong (Alt) Chlorite>>

<<Alt: 314.4 - 340 Weak (Alt) Biotite>>

<<Struc: 314.7 - 315 Moderate (Alt) Fault>> Brecciated fault, PY-CA vein at lower contact.

End of Hole @ 340

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

314.40	315.50	1.10	B00266936	1.4	0.013	0.01	0.02	0.05
--------	--------	------	-----------	-----	-------	------	------	------

315.50	317.00	1.50	B00266937	1.9	0.019	-0.01	0.03	0.04
--------	--------	------	-----------	-----	-------	-------	------	------

317.00	318.50	1.50	B00266938	1.6	0.009	-0.01	0.02	0.03
--------	--------	------	-----------	-----	-------	-------	------	------

318.50	320.00	1.50	B00266939	1.1	0.013	-0.01	0.01	0.02
--------	--------	------	-----------	-----	-------	-------	------	------

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-283

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	David Nuttal
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	04-Oct-15
UTM Easting	415026.341	Core Size:	HQ3	Azimuth:	340	Date Logging Complete:	06-Oct-15
UTM Northing:	6815454.157	Casing Pulled?:	Yes	Dip:	-50	Drill Company:	Geotech
UTM Elev. (m):	1382.958	Casing Depth (m):	16.25	Length (m):	190.7	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	03-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	05-Oct-15
Local Elev. (m):						Purpose:	Metallurgical Twin
Comments:						Parent Hole:	K15-279

This hole was drilled as a twin of K15-279 to collect sample of MET8 & MET7 Domains.

The structural footwall is composed of a package of RHYc and MDSw. Sulphide intercepts are 111.45m to 115.1m (OI, OJ, OC, OG ore types within MET7 and MET8 domains), 116.34m to 119.25m (OI, OJ, OB, OG ore types within MET6, MET7 and MET8 domains), 145.41m to 160.83m (OA, OB, OJ ore types within MET3, MET4, MET7 and MET8 domains), and from 163.87m to 169.52m (OA, OB, OI ore types within MET4, MET6, MET7, MET8 domains). The structural footwall is composed of felsic volcanics. Muscovite and chlorite alteration intensifies towards the sulphide lenses.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-50	340	0	340	APS	David Nuttal	04-Oct-15		<input checked="" type="checkbox"/>	
26	-50.2	4.1	22.5	26.6	ReflexEVS	Geotech	03-Oct-15	504	<input type="checkbox"/>	Values not accepted due to low magnetic field
53	-51.2	318.2	22.5	340.7	ReflexEVS	Geotech	03-Oct-15	5725	<input checked="" type="checkbox"/>	
83	-50.6	319.7	22.5	342.2	ReflexEVS	Geotech	04-Oct-15	5780	<input checked="" type="checkbox"/>	
113	-50.3	323.2	22.5	345.7	ReflexEVS	Geotech	04-Oct-15	5749	<input checked="" type="checkbox"/>	
143	-49.6	324	22.5	346.5	ReflexEVS	Geotech	04-Oct-15	5461	<input checked="" type="checkbox"/>	
173	-49.6	326.8	22.5	349.3	ReflexEVS	Geotech	05-Oct-15	5766	<input checked="" type="checkbox"/>	
190.7	-49.7	325.3	22.5	347.8	ReflexEVS	Geotech	05-Oct-15	5799	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	16.25	CASN									
16.25	27.32	RHYc									
Casing Rhyolite coherent volcanics <<Min: 16.25 - 18.9 2% Min: Pyrrhotite>> <<Min: 16.25 - 27.32 2.5% Min: Pyrite>> <<Min: 16.25 - 49 0.25% Min: Calcite>> <<Min: 18.9 - 48.7 3% Min: Pyrrhotite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-283

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
		<<Alt: 16.25 - 70 Weak (Alt) Muscovite>>									
		<<Struc: 20.3 - 20.3 dominant foliation>>									
		<<Struc: 21.68 - 21.68 dominant foliation>>									
		<<Struc: 24.8 - 26.28 Moderate (Alt) Fault>> Sheared interval.									
27.32	37.45	MDSw Coherent rhyolite flow with carbonaceous content									
		<<Min: 27.32 - 48.7 1% Min: Pyrite>>									
		<<Alt: 27.32 - 33 Trace (Alt) Chlorite>>									
		<<Struc: 29.1 - 29.1 dominant foliation>>									
		<<Struc: 29.5 - 29.5 dominant foliation>>									
		<<Struc: 30.3 - 30.3 dominant foliation>>									
		<<Struc: 31.7 - 31.7 dominant foliation>>									
		<<Struc: 32.2 - 32.2 dominant foliation>>									
		<<Struc: 33.2 - 33.2 dominant foliation>>									
		<<Struc: 35.32 - 35.32 dominant foliation>>									
		<<Struc: 36.42 - 36.42 dominant foliation>>									
37.45	48.70	RHY undifferentiated rhyolite									
		<<Struc: 38.17 - 38.17 dominant foliation>>									
		<<Struc: 38.57 - 38.57 dominant foliation>>									
		<<Struc: 40.25 - 40.25 dominant foliation>>									
		<<Struc: 40.9 - 40.9 dominant foliation>>									
		<<Struc: 42.6 - 42.6 dominant foliation>>									
		<<Struc: 45.64 - 45.64 dominant foliation>>									
		<<Struc: 47.15 - 47.15 dominant foliation>>									
48.70	65.54	RHYc Rhyolite coherent volcanics									
48.7 - 65.54: Textures vary within interval, though dominantly devoid of volcanoclastic characteristics. Long convoluted banded domains of silica accompanied by ribboned foliation parallel pyrite domains. Interval from 53m to 56m lacks strong coherent rhyolite textures											
		<<Min: 48.7 - 53 5% Min: Pyrrhotite>>									
		<<Min: 48.7 - 59.3 2% Min: Pyrite>>									
		<<Min: 49 - 104.8 0.5% Min: Calcite>>									
		<<Min: 53 - 65.54 4% Min: Pyrrhotite>>									
		<<Min: 59.3 - 62 1% Min: Pyrite>>									

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-283
From (m) **To (m)** **Rocktype & Description**

<<Min: 62 - 71.5 2% Min: Pyrite>>
 <<Min: 63.54 - 95.5 2% Min: Pyrrhotite>>
 <<Struc: 51.85 - 51.85 dominant foliation>>
 <<Struc: 52.3 - 52.3 dominant foliation>>
 <<Struc: 57.64 - 58.2 Weak (Alt) Fault>>
 <<Struc: 59.3 - 59.35 Weak (Alt) Fault>>
 <<Struc: 59.35 - 59.35 dominant foliation>>
 <<Struc: 60 - 60 dominant foliation>>
 <<Struc: 62.1 - 62.1 dominant foliation>>
 <<Struc: 64 - 64 dominant foliation>>
 <<Struc: 64.5 - 64.5 dominant foliation>>

**65.54 67.34 MDSw Coherent rhyolite flow with
carbonaceous content**

67.34 111.45 RHYc Rhyolite coherent volcanics

<<Min: 71.5 - 89.5 1% Min: Pyrite>>
 <<Min: 89.5 - 100.75 3% Min: Pyrite>>
 <<Min: 95.5 - 98 1% Min: Pyrrhotite>>
 <<Min: 98 - 111.45 2% Min: Pyrrhotite>>
 <<Min: 100.75 - 111.45 2% Min: Pyrite>>
 <<Min: 104.8 - 111.45 2% Min: Calcite>>
 <<Min: 105.6 - 111.45 0.25% Min: Sphalerite>>
 <<Min: 105.6 - 111.45 0.25% Min: Galena>>
 <<Alt: 70 - 105.48 Weak-Moderate (Alt) Muscovite>>
 <<Alt: 105.48 - 111.45 Trace (Alt) Chlorite>>
 <<Alt: 105.48 - 125 Moderate (Alt) Muscovite>>
 <<Vein: 69.28 - 70.05 70% Quartz>>
 <<Vein: 90.8 - 97.54 10% Quartz>> sulphides: galena, sphalerite
 <<Vein: 105.48 - 106.46 20% Quartz>> galena and sphalerite
 <<Struc: 68.74 - 68.84 Fault>>
 <<Struc: 69.1 - 69.1 dominant foliation>>
 <<Struc: 70.67 - 70.67 dominant foliation>>
 <<Struc: 72.5 - 72.5 dominant foliation>>
 <<Struc: 73.63 - 74.2 Weak (Alt) Fault>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

107.00	108.00	1.00
108.00	109.00	1.00
109.00	110.00	1.00
110.00	111.00	1.00
111.00	111.45	0.45

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-283

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 74.3 - 74.3 dominant foliation>>											
<<Struc: 75.9 - 75.9 dominant foliation>>											
<<Struc: 80.7 - 81 Weak (Alt) Fault>>											
<<Struc: 84.45 - 84.45 dominant foliation>>											
<<Struc: 87.8 - 87.8 dominant foliation>>											
<<Struc: 89.7 - 89.7 dominant foliation>>											
<<Struc: 96.6 - 96.6 dominant foliation>>											
<<Struc: 100.15 - 100.15 dominant foliation>>											
<<Struc: 101.2 - 101.2 dominant foliation>>											
<<Struc: 102.1 - 102.1 dominant foliation>>											
<<Struc: 105.18 - 105.18 dominant foliation>>											
<<Struc: 111.2 - 111.2 dominant foliation>>											
111.45	112.05	OC Chalcopyrite-pyrrhotite net textured sulphides	111.45	112.05	0.60						
<<Min: 111.45 - 121.44 3% Min: Calcite>>											
<<Alt: 111.45 - 114.9 Moderate (Alt) Cordierite>> localized to outer margins of heavily disseminated sulphide margins											
<<Alt: 111.45 - 119.25 Moderate (Alt) Chlorite>> localized to outer margins of heavily disseminated sulphide margins											
112.05	112.68	OI Heavilly disseminated sulphides in host schist	112.05	112.68	0.63						
112.68	115.10	OJ Heavilly disseminated sulphides in proximal altered rock	112.68	113.66	0.98						
<<Struc: 114 - 114 dominant foliation>>			113.66	114.66	1.00						
			114.66	115.10	0.44						
115.10	116.34	RHYc Rhyolite coherant volcanics	115.10	116.34	1.24						
<<Struc: 115.33 - 116.34 Moderate (Alt) Fault>> Alpha angle is approximate											
116.34	118.08	OJ Heavilly disseminated sulphides in proximal altered rock	116.34	117.34	1.00						
			117.34	118.08	0.74						
118.08	118.43	OI Heavilly disseminated sulphides in host schist	118.08	118.43	0.35						

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-283

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
118.43	118.74	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	118.43	118.74	0.31						
<<Struc: 118.54 - 118.54 dominant foliation>>											
118.74	118.92	OI Heavily disseminated sulphides in host schist	118.74	118.92	0.18						
118.92	119.25	OG Chalcopyrite rich sulphides	118.92	119.25	0.33						
119.25	121.44	RHYv Rhyolite volcanoclastic	119.25	119.90	0.65						
<<Min: 119.25 - 130.64 1% Min: Sphalerite>>											
<<Min: 119.25 - 130.64 1% Min: Pyrite>>											
<<Min: 119.25 - 130.64 0.5% Min: Chalcopyrite>>											
<<Min: 119.25 - 132.8 1% Min: Pyrrhotite>>											
<<Min: 119.25 - 145.41 0.25% Min: Galena>>											
<<Alt: 119.25 - 130.62 Weak (Alt) Chlorite>> Localized in lapilli											
121.44	130.53	RHYvi Lapilli tuff	121.81	123.00	1.19						
121.44 - 130.53: Lapilli replaced by chlorite/sulphide											
<<Min: 121.44 - 134.8 0.25% Min: Calcite>>											
<<Alt: 125 - 147 Weak-Moderate (Alt) Muscovite>>											
<<Struc: 121.44 - 121.44 dominant foliation>>											
<<Struc: 123.06 - 123.1 Weak (Alt) Fault>> Alpha angle is approximate											
<<Struc: 125 - 125 dominant foliation>>											
130.53	132.80	RHYc Rhyolite coherent volcanics	123.00	124.00	1.00						
<<Min: 130.64 - 132.8 1% Min: Pyrrhotite>>											
<<Min: 130.64 - 145.41 0.5% Min: Sphalerite>>											
<<Min: 130.64 - 145.41 0.5% Min: Pyrite>>											
<<Min: 130.64 - 145.41 0.25% Min: Pyrrhotite>>											
<<Struc: 131.3 - 131.3 dominant foliation>>											
132.80	142.00	RHYvi Lapilli tuff	140.00	141.00	1.00						
132.8 - 142: Lapilli replaced by chlorite/sulphide											
<<Min: 134.8 - 139 2% Min: Calcite>>											
<<Min: 139 - 145.41 1% Min: Calcite>>											
<<Struc: 133.9 - 133.9 dominant foliation>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-283

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %						
<<Struc: 135 - 135 dominant foliation>>																	
<<Struc: 139 - 139 dominant foliation>>																	
142.00	145.41	RHYc Rhyolite coherant volcanics															
<<Alt: 143 - 147 Moderate (Alt) Cordierite>>																	
<<Struc: 143.5 - 145.5 Moderate (Alt) Fault>> (Faulted zone) gouge and gravel present, 3 faults ~15-30cm wide, spaced 10's of cm apart.																	
145.41	146.00	OJ Heavilly disseminated sulphides in proximal altered rock	145.41	145.93	0.52												
<<Min: 145.41 - 153.27 1% Min: Calcite>>			145.93	147.15	1.22												
<<Struc: 145.41 - 145.41 dominant foliation>>																	
146.00	147.15	OG Chalcopyrite rich sulphides															
146 - 147.15: High CP (~30-40%), present with abundant PO. Unit could also be classified as OC																	
147.15	147.45	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	147.15	147.45	0.30												
147.15 - 147.45: High CP (~15%)																	
147.45	148.00	OA Magnetite bearing sulphides	147.45	148.00	0.55												
147.45 - 148: High CP (~15%) with laminated magnetite (~15%)																	
148.00	153.27	OA Magnetite bearing sulphides	148.00	149.00	1.00												
148 - 153.27: Laminated magnetite (~7-12%)																	
			149.00	150.00	1.00												
			150.00	151.00	1.00												
			151.00	152.00	1.00												
			152.00	152.80	0.80												
			152.80	153.27	0.47												
153.27	157.00	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	153.27	154.27	1.00												
<<Min: 153.27 - 160.83 2% Min: Calcite>>			154.27	155.27	1.00												
			155.27	156.27	1.00												

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-283
From (m) To (m) Rocktype & Description

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
156.27	157.00	0.73						
157.00	158.00	1.00						

157.00 159.69 OA Magnetite bearing sulphides

157 - 159.69: Laminated magnetite (~5-10%)

158.00	159.00	1.00
159.00	159.69	0.69
159.69	160.83	1.14

159.69 160.83 OA Magnetite bearing sulphides

159.69 - 160.83: Minor component of economic mineralization visible.

160.83 163.87 RHYc Rhyolite coherent volcanics

<<Min: 160.83 - 163.87 0.25% Min: Sphalerite>>

<<Min: 160.83 - 163.87 1% Min: Pyrite>>

<<Min: 160.83 - 163.87 0.25% Min: Chalcopyrite>>

<<Min: 160.83 - 163.87 0.25% Min: Calcite>>

<<Alt: 160.83 - 163.87 Weak-Moderate (Alt) Muscovite>>

<<Alt: 163.4 - 165.86 Weak (Alt) Chlorite>> with cordierite

<<Struc: 161.7 - 163.7 Moderate (Alt) Fault>> (Faulted zone) parallel with foliation, intensity 4-6. Alpha angle is approximate

160.83	161.70	0.87
161.70	163.00	1.30
163.00	163.87	0.87

163.87 164.62 OA Magnetite bearing sulphides

<<Min: 163.87 - 169.52 1% Min: Calcite>>

<<Alt: 163.87 - 165.86 Weak (Alt) Cordierite>>

163.87	164.62	0.75
--------	--------	------

164.62 165.00 OI Heavily disseminated sulphides in host schist

164.62 - 165: 4%CP, 3%PO, 12%PY, 3%SP

164.62	165.00	0.38
--------	--------	------

165.00 165.86 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

165.00	165.86	0.86
--------	--------	------

165.86 168.90 OI Heavily disseminated sulphides in host schist

165.86 - 168.9: Interval is largely composed of quartz veining. ~7-10%CP, 5% PO, 4%PY, 4%PY, 1%SP

<<Alt: 165.86 - 168.9 Moderate-Strong (Alt) Muscovite>> Association with quartz veining?

<<Vein: 165.86 - 169.5 80% Quartz>> In main lithology this interval is entered as OI. Sulphides include CP, PO, PY, SP

165.86	166.86	1.00
--------	--------	------

166.86	167.86	1.00
167.86	168.90	1.04

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-283

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<div><<Struc: 167 - 167.1 Weak (Alt) Fault>> Alpha angle is approximate</div> <div><<Struc: 168.15 - 168.8 Strong (Alt) Fault>> (Faulted zone) gravel/sand/gouge present. Alpha is approximate (no orientation)</div>											
168.90	169.52	OB	<div>Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides</div> <div>168.9 - 169.52: Small lense of massive sulphide (OB), with margins containing quartz veining, CP, PO and Sp sulphides.</div>								
<div><<Alt: 168.9 - 190.7 Weak-Moderate (Alt) Muscovite>></div> <div><<Alt: 169.45 - 172.7 Trace (Alt) Chlorite>></div>											
169.52	187.75	RHYva	<div>Coarse grained to ash tuff grey-green</div> <div>169.52 - 187.75: Rock texture and sulphide mineralization is consistent through interval. From top of interval to bottom chlorite alteration increases from trace (1) to moderate (4). Calcite increases from trace (0.25%) at top of interval to ~3% at base. Not clear as to w</div>								
<div><<Min: 169.52 - 185 0.25% Min: Calcite>></div> <div><<Min: 169.52 - 187.75 0.25% Min: Pyrite>></div> <div><<Min: 169.52 - 187.75 4% Min: Pyrrhotite>></div> <div><<Min: 173 - 182 0.5% Min: Tetrahedrite>></div> <div><<Min: 185 - 188.81 3% Min: Calcite>></div> <div><<Alt: 172.7 - 174 Weak (Alt) Chlorite>></div> <div><<Alt: 174 - 188.81 Moderate (Alt) Chlorite>></div> <div><<Vein: 175.41 - 177.1 10% Quartz>> Galena and sphalerite</div> <div><<Struc: 171.6 - 171.6 dominant foliation>></div> <div><<Struc: 175.2 - 175.2 dominant foliation>></div> <div><<Struc: 177.5 - 177.5 dominant foliation>></div> <div><<Struc: 187.25 - 187.25 dominant foliation>></div> <div><<Struc: 187.38 - 187.62 Moderate (Alt) Fault>> Gouge present. Alpha angle is approximate</div>											
187.75	188.81	OJ	<div>Heavilly disseminated sulphides in proximal altered rock</div> <div>187.75 - 188.81: CP 2-3%, PO 4%, PY 4%.</div>								
188.81	190.70	RHYva	<div>Coarse grained to ash tuff grey-green</div> <div><<Min: 188.81 - 190.7 3% Min: Pyrrhotite>></div> <div><<Min: 188.81 - 190.7 0.25% Min: Calcite>></div>								



GeoSpark Logger ~ Drill Log

Project:		KZK		Hole Number:		K15-283					
	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %		

<<Alt: 188.81 - 190.7 Weak (Alt) Chlorite>>

End of Hole @ 190.7

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-284

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Cooper Campbell	
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	05-Oct-15	
UTM Easting	414653.695	Core Size:	HQ3	Azimuth:	180.1	Date Logging Complete:	09-Oct-15	
UTM Northing:	6815652.409	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech	
UTM Elev. (m):	1430.397	Casing Depth (m):	6.5	Length (m):	224	Drill Rig:	Zinex A5	
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	04-Oct-15	
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	07-Oct-15	
Local Elev. (m):						Purpose:	Resource/Met	
Comments:							Parent Hole:	

The purpose of this hole was to provide resource information for the space between historic holes K94-006 and K94-024. This hole was also designed to sample rocks of the MET 4 domain. This hole seemed like it may be verging on MET 2 but it seems the Pb mineralization appears to be in the form of remobilized galena in veins. This mineralization is not representative of the zone. Mineralization in this hole is characteristic of MET 4 domain.

The upper portion of this hole contains minor RHYcw and RHYvl intruded by MAFi. A unit of MDSt separates these rocks from a package of RHYcw with lesser RHYvl and RHYva. The MDSt intersected at 66.02 m suggests continuity of the upper PY MU MDS horizon depicted on the 414650 mE cross section. This package has also been intruded by MAFi. Below this MDSt, MDSw, and RHYcw were intersected. One major lens of massive sulphide was intersected between 167.26-182.61m. OA, OC, and OJ ore types were intersected. RHYcw, and RHYvl sit structurally below the sulphide zone and are intruded by MAFi and minor RHYi. A quartz eye RHY sits below the MAFi footwall unit.

CI-CL zones were intersected above, within, and below the sulphide lens.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	180.1	0	180.1	APS	Cooper Campbell	04-Oct-15		<input checked="" type="checkbox"/>	
26	-59.5	154.2	22.5	176.7	ReflexEVS	Geotech	04-Oct-15	5864	<input checked="" type="checkbox"/>	
50	-59.6	157.8	22.5	180.3	ReflexEVS	Geotech	05-Oct-15	5829	<input checked="" type="checkbox"/>	
74	-60.3	156.8	22.5	179.3	ReflexEVS	Geotech	05-Oct-15	5693	<input checked="" type="checkbox"/>	
101	-60.2	162.7	22.5	185.2	ReflexEVS	Geotech	05-Oct-15	5716	<input checked="" type="checkbox"/>	
125	-60.6	156.7	22.5	179.2	ReflexEVS	Geotech	05-Oct-15	5888	<input checked="" type="checkbox"/>	
152	-61.1	160.2	22.5	182.7	ReflexEVS	Geotech	06-Oct-15	5873	<input checked="" type="checkbox"/>	
176	-61.3	165.4	22.5	187.9	ReflexEVS	Geotech	06-Oct-15	3308	<input checked="" type="checkbox"/>	
200	-61.1	167.5	22.5	190	ReflexEVS	Geotech	06-Oct-15	5784	<input checked="" type="checkbox"/>	
224	-61.4	163.8	22.5	186.3	ReflexEVS	Geotech	06-Oct-15	5925	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	6.50	OVBN Overburden									

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-284

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
6.50	12.88	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
<<Min: 6.5 - 12.66 0.01% Min: Calcite>>											
<<Min: 6.5 - 12.88 0.5% Min: Pyrite>>											
<<Min: 6.5 - 12.88 1% Min: Pyrrhotite>> WIS											
<<Min: 6.5 - 21.45 0.01% Min: Chalcopryite>>											
<<Min: 12.66 - 16.2 30% Min: Calcite>> DIS											
<<Alt: 6.5 - 12.88 Weak (Alt) Muscovite>>											
<<Vein: 12.65 - 12.88 100% Quartz-Carbonate-Sulphide 30 deg. >> QZ-AK-CA-PO-CP											
12.88	16.10	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
12.88 - 16.1: Euhedral CA crystals.											
<<Min: 12.88 - 16.1 0.01% Min: Sphalerite>>											
<<Min: 12.88 - 16.1 0.5% Min: Pyrrhotite>> VN											
<<Min: 12.88 - 16.1 0.01% Min: Chalcopryite>>											
<<Alt: 12.88 - 16.1 Weak (Alt) Chlorite>>											
<<Vein: 12.88 - 16.1 20% Quartz-Carbonate-Sulphide 50 deg. >> CA-QZ-SP-PO											
16.10	21.45	RHYvl Lapilli tuff									
16.1 - 21.45: QE and TO DIS at top of interval.											
<<Min: 16.1 - 21.45 0.01% Min: Sphalerite>> WIS											
<<Min: 16.1 - 21.45 0.01% Min: Chalcopryite>> VN											
<<Min: 16.1 - 44.45 1% Min: Pyrrhotite>> VN											
<<Min: 16.2 - 21.45 0.5% Min: Calcite>>											
<<Alt: 16.1 - 27.78 Weak (Alt) Muscovite>>											
<<Vein: 16.1 - 17.51 3% Quartz-Carbonate-Sulphide 50 deg. >> QZ-AK-CA-PY-PO-SP-CP											
21.45	27.78	RHYvl Lapilli tuff									
<<Min: 21.45 - 23.47 5% Min: Calcite>>											
<<Min: 23.47 - 27.78 1% Min: Calcite>>											
<<Alt: 21.45 - 24.84 Weak (Alt) Chlorite>>											

Project:
KZK
Hole Number:
K15-284

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
27.78	34.01	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
27.78 - 34.01: Amygdules locally? Short intervals of RHYvl (QE) dispersed throughout dyke swarm.											
<<Min: 27.78 - 34.01 10% Min: Calcite>> DIS											
<<Min: 30.18 - 30.54 0.01% Min: Galena>>											
<<Alt: 27.78 - 46.86 Trace (Alt) Chlorite>>											
<<Vein: 30.18 - 30.54 50% Quartz-Carbonate-Sulphide 65 deg. >> QZ-AK-CA-SP-GL											
34.01	44.45	RHYvl Lapilli tuff									
<<Min: 34.01 - 44.45 3% Min: Calcite>>											
<<Min: 37.9 - 40.7 0.01% Min: Sphalerite>> WIS											
<<Min: 37.9 - 40.7 0.01% Min: Pyrite>>											
<<Min: 40.7 - 44.45 0.01% Min: Chalcopryite>>											
<<Min: 40.7 - 44.45 0.5% Min: Arsenopyrite>>											
<<Alt: 34.01 - 44.45 Weak (Alt) Muscovite>>											
44.45	55.06	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
44.45 - 55.06: Short intervals of RHYvl (QE) dispersed throughout dyke swarm.											
<<Min: 44.45 - 55.06 0.5% Min: Pyrite>>											
<<Min: 44.45 - 55.06 3% Min: Pyrrhotite>>											
<<Min: 44.45 - 55.06 0.01% Min: Chalcopryite>>											
<<Min: 44.45 - 55.06 30% Min: Calcite>> DIS											
<<Alt: 46.86 - 57.77 Weak (Alt) Chlorite>>											
<<Vein: 44.45 - 55.06 10% Quartz-Carbonate 65 deg. >> CA-QZ											
55.06	60.82	RHYvl Lapilli tuff									
<<Min: 55.06 - 60.95 0.5% Min: Pyrrhotite>>											
<<Min: 55.06 - 60.95 0.01% Min: Galena>>											
<<Min: 55.06 - 60.95 0.01% Min: Chalcopryite>> VN											
<<Min: 55.06 - 61.9 3% Min: Calcite>> VN											
<<Alt: 55.06 - 95.27 Weak (Alt) Muscovite>>											
<<Alt: 57.77 - 62.09 Trace (Alt) Chlorite>>											
<<Vein: 57.71 - 57.77 100% Quartz-Carbonate-Sulphide 70 deg. >> QZ-CA-CL-BI-GL-SP											
60.82	66.02	RHYvl Lapilli tuff									

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-284

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 60.95 - 66.02 0.5% Min: Pyrite>>											
<<Min: 60.95 - 66.02 1% Min: Pyrrhotite>> WIS											
<<Min: 60.95 - 66.02 0.01% Min: Chalcopyrite>>											
<<Min: 61.9 - 72.05 1% Min: Calcite>>											
<<Struc: 63.74 - 64.38 Weak (Alt) Fault>> Rubble and gouge zone. Poor recovery. Potential for mechanical comminution.											
66.02	69.28	MDSt Rhyolite tuff dominant mudstone									
<<Min: 66.02 - 69.28 0.5% Min: Pyrite>> DIS											
<<Min: 66.02 - 69.28 0.5% Min: Pyrrhotite>> DIS											
69.28	74.46	RHYvl Lapilli tuff									
<<Min: 69.28 - 73.93 1% Min: Sphalerite>>											
<<Min: 69.28 - 73.93 0.01% Min: Pyrite>>											
<<Min: 69.28 - 73.93 3% Min: Pyrrhotite>> BL											
<<Min: 72.05 - 74.82 0.5% Min: Calcite>>											
<<Min: 73.93 - 88.59 0.5% Min: Pyrite>> DIS											
<<Min: 73.93 - 88.59 1% Min: Pyrrhotite>> FD											
<<Alt: 72.05 - 111.82 Trace (Alt) Chlorite>>											
74.46	88.59	RHYvl Lapilli tuff									
74.46 - 88.59: BI overprint. MAFi intrudes RHYvl throughout interval.											
<<Min: 74.82 - 99 10% Min: Calcite>>											
88.59	92.73	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
88.59 - 92.73: BI overprint.											
<<Min: 88.59 - 99.95 0.5% Min: Pyrite>>											
<<Min: 88.59 - 99.95 1% Min: Pyrrhotite>>											
92.73	95.27	RHYvl Lapilli tuff									
92.73 - 95.27: BI overprint.											
95.27	96.80	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
95.27 - 96.8: BI overprint.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-284

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
96.80	99.95	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
96.8 - 99.95: BI overprint.											
<<Min: 99 - 112.13 5% Min: Calcite>>											
<<Alt: 96.8 - 124.16 Weak (Alt) Muscovite>>											
99.95	102.98	RHYvl Lapilli tuff									
99.95 - 102.98: BI overprint.											
<<Min: 99.95 - 125.4 0.5% Min: Pyrite>>											
<<Min: 99.95 - 125.4 1% Min: Pyrrhotite>>											
102.98	111.55	RHYva Coarse grained to ash tuff									
102.98 - 111.55: BI overprint.											
111.55	122.28	RHYvl Lapilli tuff									
<<Min: 112.13 - 128.95 0.5% Min: Calcite>>											
122.28	128.95	RHYva Coarse grained to ash tuff									
<<Min: 125.4 - 132.72 0.01% Min: Pyrite>>											
<<Min: 125.4 - 132.72 3% Min: Pyrrhotite>> VN											
<<Min: 125.4 - 132.72 0.01% Min: Galena>>											
<<Alt: 124.16 - 127.5 Moderate (Alt) Muscovite>>											
<<Alt: 127.5 - 128.94 Strong (Alt) Muscovite>>											
<<Alt: 128.94 - 131.42 Moderate (Alt) Muscovite>>											
<<Vein: 125.4 - 132.72 20% Quartz-Carbonate-Sulphide 55 deg. >> QZ-CA-PO-PY-GL											
128.95	132.95	MDSst Rhyolite tuff dominant mudstone									
<<Min: 128.95 - 132.95 5% Min: Calcite>>											
<<Min: 132.72 - 149.9 3% Min: Pyrite>> WIS											
<<Min: 132.72 - 149.9 0.01% Min: Pyrrhotite>>											
<<Alt: 131.42 - 135.6 Strong (Alt) Muscovite>>											
132.95	149.90	MDSw Coherent rhyolite flow with carbonaceous content									
<<Min: 132.95 - 149 0.5% Min: Calcite>>											
<<Min: 149 - 181.89 0.01% Min: Calcite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-284

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 169.46 - 169.47 >>											
<<Struc: 169.48 - 169.49 >>											
<<Struc: 169.48 - 169.49 >>											
170.87	171.71	OC Chalcopyrite-pyrrhotite net textured sulphides	MG	170.87	171.71	0.84	B00268312	77.8	0.506	3.39	0.38 2.88
<<Min: 170.87 - 171.71 10% Min: Pyrrhotite>> BL											
<<Min: 170.87 - 171.71 5% Min: Chalcopyrite>> BL											
<<Struc: 170.87 - 170.88 Vein>>											
<<Struc: 170.9 - 170.91 Contact>>											
171.71	179.50	OA Magnetite bearing sulphides	MG	171.71	172.71	1.00	B00268313	21.4	0.095	0.36	0.57 9.95
<<Min: 171.71 - 179.5 20% Min: Sphalerite>>											
<<Min: 171.71 - 179.5 5% Min: Pyrrhotite>> DIS											
<<Min: 171.71 - 179.5 15% Min: Magnetite>>											
<<Alt: 178.08 - 180.4 Moderate (Alt) Cordierite>>											
<<Alt: 178.08 - 182.15 Moderate (Alt) Chlorite>>											
<<Struc: 171.71 - 171.72 dominant foliation>>											
<<Struc: 171.72 - 171.73 Contact>>											
<<Struc: 174.64 - 174.65 dominant foliation>>											
179.50	180.40	OA Magnetite bearing sulphides		179.50	180.40	0.90	B00268322	17.4	0.146	0.46	0.08 0.72
<<Min: 179.5 - 180.4 3% Min: Pyrrhotite>>											
<<Min: 179.5 - 180.4 5% Min: Magnetite>>											
<<Struc: 179.5 - 179.51 dominant foliation>>											
<<Struc: 179.5 - 179.51 Contact>>											
180.40	182.00	OC Chalcopyrite-pyrrhotite net textured sulphides		180.40	181.40	1.00	B00268323	13.2	0.034	0.44	0.05 0.96
180.4 - 182: Contains >10% PO+CP, therefore OC. Also contains strong CI alteration and 10% MG. Decided that PO+CP content was more important than alteration or MG content. Chose not to use OJ or OA.											
<<Min: 180.4 - 182 10% Min: Pyrrhotite>> SMAS locally											
<<Min: 180.4 - 182 10% Min: Magnetite>>											
<<Min: 180.4 - 182 3% Min: Chalcopyrite>> BL											
<<Min: 181.89 - 186.28 15% Min: Calcite>> VEN											
<<Alt: 180.4 - 182.15 Strong (Alt) Cordierite>>											
<<Struc: 180.42 - 180.43 dominant foliation>>											
<<Min: 180.4 - 182 10% Min: Pyrrhotite>> SMAS locally											
<<Min: 180.4 - 182 10% Min: Magnetite>>											
<<Min: 180.4 - 182 3% Min: Chalcopyrite>> BL											
<<Min: 181.89 - 186.28 15% Min: Calcite>> VEN											
<<Alt: 180.4 - 182.15 Strong (Alt) Cordierite>>											
<<Struc: 180.42 - 180.43 dominant foliation>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-284

From (m) To (m) Rocktype & Description

<<Struc: 180.42 - 180.43 Contact>>

<<Struc: 181.71 - 181.72 dominant foliation>>

182.00 182.61 OJ Heavily disseminated sulphides in proximal altered rock

182 - 182.61: Weak CI-CL alteration with PO-CP mineralization <10%.

<<Min: 182 - 182.61 5% Min: Pyrrhotite>>

<<Alt: 182 - 189.37 Strong (Alt) Muscovite>>

<<Alt: 182.15 - 186.28 Weak (Alt) Chlorite>>

<<Alt: 182.15 - 186.28 Weak (Alt) Cordierite>>

<<Struc: 182 - 182.01 dominant foliation>>

<<Struc: 182 - 182.01 Contact>>

182.61 186.28 RHY undifferentiated rhyolite

182.61 - 186.28: Protolith obscured by strong MU alteration.

<<Min: 182.61 - 197.34 0.5% Min: Sphalerite>>

<<Min: 182.61 - 197.34 3% Min: Pyrite>> WIS

<<Min: 182.61 - 197.34 3% Min: Pyrrhotite>> WIS

<<Min: 182.61 - 197.34 0.5% Min: Chalcopyrite>>

186.28 189.37 RHYcw Curdy textured-flow banded (flows, subvolcanics)

<<Min: 186.28 - 197.34 0.01% Min: Calcite>>

<<Struc: 187.07 - 191.61 Weak (Alt) Fault>> Faults filled with gouge and broken rock. Spaced tens of cm's apart.

189.37 190.02 RHY undifferentiated rhyolite

189.37 - 190.02: Strong CL altered zone. Interpretted as proximal ateration of RHY. Protolith obscured by alteration. Could be MAFi but similar interceptions deeper in the hole don't make sense in terms of timing. Further down hole unit cuts green-grey alteration associat

<<Alt: 189.37 - 190.02 Strong (Alt) Chlorite>>

190.02 192.88 RHYcw Curdy textured-flow banded (flows, subvolcanics)

<<Alt: 190.02 - 197.34 Strong (Alt) Muscovite>>

<<Alt: 190.02 - 197.34 Weak (Alt) Chlorite>>

<<Struc: 192.77 - 192.78 dominant foliation>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
182.00	182.61	0.61	B00268325	3.5	0.015	0.06	0.03	0.24

182.61	184.11	1.50	B00268326	5.6	0.037	0.04	0.07	0.13
--------	--------	------	-----------	-----	-------	------	------	------

184.11	185.61	1.50	B00268327	2	0.005	0.01	0.02	0.11
185.61	186.28	0.67	B00268328	1.2	-0.005	-0.01	0.03	0.03

186.28	187.78	1.50	B00268329	1.7	0.006	0.03	0.02	0.02
--------	--------	------	-----------	-----	-------	------	------	------

187.78	188.78	1.00	B00268331	0.4	-0.005	-0.01	-0.01	-0.01
188.78	189.37	0.59	B00268332	1.5	-0.005	0.02	0.01	0.26
189.37	190.02	0.65	B00268333	17.7	0.044	0.4	0.11	0.09

190.02	191.52	1.50	B00268334	1.6	-0.005	0.03	0.01	0.06
--------	--------	------	-----------	-----	--------	------	------	------

191.52	192.88	1.36	B00268335	3.5	-0.005	0.05	0.06	0.29
--------	--------	------	-----------	-----	--------	------	------	------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-284
From (m) To (m) Rocktype & Description
192.88 197.34 RHYvl Lapilli tuff
197.34 200.24 RHY undifferentiated rhyolite

197.34 - 200.24: Moderate CL altered zone. Interpretted as proximal ateration of RHY. Protolith obscured by alteration. Could be MAFi but appears to have a sharp lower contact with MAFi. CP-PO mineralization.

<<Min: 197.34 - 200.24 0.01% Min: Sphalerite>>

<<Min: 197.34 - 200.24 0.5% Min: Pyrite>> WIS, DIS

<<Min: 197.34 - 200.24 0.5% Min: Pyrrhotite>>

<<Min: 197.34 - 200.24 0.5% Min: Chalcopyrite>> WIS

<<Min: 197.34 - 212.5 30% Min: Calcite>> DIS, BL

<<Alt: 197.34 - 200.24 Moderate (Alt) Chlorite>>

200.24 212.50 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

200.24 - 212.5: CL-BI. Cr mica. Trace RHYi with foliation parallel wisps of SP-PY.

<<Min: 200.24 - 212.5 0.01% Min: Sphalerite>>

<<Min: 200.24 - 212.5 0.01% Min: Pyrite>>

<<Min: 200.24 - 212.5 0.5% Min: Pyrrhotite>>

<<Min: 200.24 - 212.5 0.01% Min: Chalcopyrite>>

<<Alt: 200.24 - 204.03 Moderate (Alt) Chlorite>>

<<Alt: 204.03 - 213.95 Moderate (Alt) Muscovite>> Green-grey alteration. Cr mica locally.

<<Alt: 210.14 - 210.78 Weak (Alt) Silicification>>

<<Struc: 203.32 - 203.33 dominant foliation>>

<<Struc: 211.5 - 211.51 dominant foliation>>

212.50 214.63 RHY undifferentiated rhyolite

212.5 - 214.63: MU-SI alteration. Possible short RHYi intercept over interval.

<<Min: 212.5 - 220.96 1% Min: Pyrite>> DIS, WIS

<<Min: 212.5 - 220.96 0.01% Min: Pyrrhotite>>

<<Min: 212.5 - 220.96 15% Min: Calcite>>

<<Alt: 213.76 - 214.63 Moderate (Alt) Silicification>>

<<Alt: 214.26 - 217.4 Moderate (Alt) Muscovite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
195.84	197.34	1.50	B00268336	1.8	-0.005	-0.01	0.02	0.14
197.34	198.34	1.00	B00268337	6.4	0.021	0.12	0.06	0.07

198.34	199.34	1.00	B00268338	1.9	0.01	0.03	0.02	0.07
199.34	200.24	0.90	B00268339	9.9	0.081	0.19	0.1	0.13

200.24	201.74	1.50	B00268341	-0.3	-0.005	-0.01	-0.01	0.02
--------	--------	------	-----------	------	--------	-------	-------	------

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-284
From (m) **To (m)** **Rocktype & Description**

214.63 220.96 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

214.63 - 220.96: Wispy sulphides.

<<Alt: 217.4 - 220.96 Strong (Alt) Muscovite>> May be OR alteration. Looks like late MU overprint associated with RHYi.

<<Struc: 218.35 - 218.36 dominant foliation>>

220.96 221.69 RHY undifferentiated rhyolite

220.96 - 221.69: Strong CL altered zone. Interpreted as proximal alteration of RHY. Protolith obscured by alteration. Could be MAFi but doesn't make sense in terms of timing. Cuts green-grey alteration associated with RHYi. MAFi should be pre-RHYi. Has some kind of alumin

<<Min: 220.96 - 221.69 0.01% Min: Sphalerite>>

<<Min: 220.96 - 221.69 0.01% Min: Pyrite>>

<<Min: 220.96 - 221.69 0.5% Min: Pyrrhotite>>

<<Min: 220.96 - 221.69 0.5% Min: Chalcopyrite>>

<<Min: 220.96 - 224 0.5% Min: Calcite>>

<<Alt: 220.96 - 221.69 Strong (Alt) Chlorite>>

221.69 224.00 RHY undifferentiated rhyolite

221.69 - 224: Strong MU overprint.

<<Min: 221.69 - 224 1% Min: Pyrite>> WIS

<<Min: 221.69 - 224 0.01% Min: Pyrrhotite>>

<<Alt: 221.69 - 224 Strong (Alt) Muscovite>> May be OR alteration. Looks like late MU overprint associated with RHYi.

End of Hole @ 224

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
219.46	220.96	1.50	B00268342	0.6	-0.005	-0.01	-0.01	0.02

220.96	221.69	0.73	B00268343	7.2	0.047	0.16	0.05	0.23
--------	--------	------	-----------	-----	-------	------	------	------

221.69	223.19	1.50	B00268344	1.1	-0.005	-0.01	0.02	0.14
--------	--------	------	-----------	-----	--------	-------	------	------

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-284W1

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Cooper Campbell
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	09-Oct-15
UTM Easting	414653.695	Core Size:	HQ3	Azimuth:	180.1	Date Logging Complete:	10-Oct-15
UTM Northing:	6815652.409	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1430.397	Casing Depth (m):	6.5	Length (m):	191	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	07-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	07-Oct-15
Local Elev. (m):						Purpose:	Metallurgical Wedge
Comments:						Parent Hole:	K15-284

The purpose of this hole was to collect rock from the MET4 domain for metallurgical testing and to increase MET spatial coverage. This hole had less Pb mineralization than the parent hole, which further solidifies its place in the MET4 domain. Mineralization in this hole is characteristic of MET 4 domain.

The upper portion of this hole contains RHYcw and MDSt. One major lens of massive sulphide was intersected between 167.72-184.29m. OA, OC, OF ,and OJ ore types were intersected. RHYcw, and RHY(protocolith obscured by alteration) sit structurally below the sulphide zone.

CI-CL zones were intersected above, within, and below the sulphide lens.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	180.1	0	180.1	APS	Cooper Campbell	04-Oct-15		<input checked="" type="checkbox"/>	Values copied from K15-284
26	-59.5	154.2	22.5	176.7	ReflexEVS	Geotech	04-Oct-15	5864	<input checked="" type="checkbox"/>	Values copied from K15-284
50	-59.6	157.8	22.5	180.3	ReflexEVS	Geotech	05-Oct-15	5829	<input checked="" type="checkbox"/>	Values copied from K15-284
74	-60.3	156.8	22.5	179.3	ReflexEVS	Geotech	05-Oct-15	5693	<input checked="" type="checkbox"/>	Values copied from K15-284
101	-60.2	162.7	22.5	185.2	ReflexEVS	Geotech	05-Oct-15	5716	<input checked="" type="checkbox"/>	Values copied from K15-284
125	-60.6	156.7	22.5	179.2	ReflexEVS	Geotech	05-Oct-15	5888	<input checked="" type="checkbox"/>	Values copied from K15-284
144	-59.1	156.1	22.5	178.6	ReflexEVS	Geotech	07-Oct-15	5993	<input checked="" type="checkbox"/>	Wedge start; value copied from first wedge survey at 152m
152	-59.1	156.1	22.5	178.6	ReflexEVS	Geotech	07-Oct-15	5993	<input checked="" type="checkbox"/>	
170	-59.5	175.4	22.5	197.9	ReflexEVS	Geotech	07-Oct-15	6523	<input checked="" type="checkbox"/>	
191	-59.3	160.4	22.5	182.9	ReflexEVS	Geotech	07-Oct-15	5963	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
144.00	162.80	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
<<Min: 144 - 149.24 0.5% Min: Calcite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-284W1

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 144 - 167.08 0.5% Min: Pyrrhotite>>											
<<Min: 144 - 167.08 1% Min: Pyrite>>											
<<Min: 149.24 - 183.16 0.01% Min: Calcite>>											
<<Alt: 144 - 150.44 Moderate (Alt) Muscovite>>											
<<Alt: 150.44 - 170.05 Strong (Alt) Muscovite>>											
162.80	164.11	MDS _t Rhyolite tuff dominant mudstone	163.11	164.11	1.00						
164.11	167.72	RHY _{cw} Curdy textured-flow banded (flows, subvolcanics)	164.11	164.72	0.61						
<<Min: 167.08 - 167.72 0.5% Min: Sphalerite>>											
<<Min: 167.08 - 167.72 1% Min: Pyrrhotite>>											
<<Min: 167.08 - 167.72 0.01% Min: Chalcopyrite>>											
167.72	171.79	OJ Heavilly disseminated sulphides in proximal altered rock	167.72	168.72	1.00						
<<Min: 167.72 - 171.06 3% Min: Sphalerite>>											
<<Min: 167.72 - 171.06 3% Min: Pyrrhotite>>											
<<Min: 167.72 - 171.06 1% Min: Chalcopyrite>>											
<<Min: 171.06 - 171.79 1% Min: Pyrrhotite>>											
<<Min: 171.06 - 171.79 3% Min: Chalcopyrite>>											
<<Alt: 167.72 - 170.05 Moderate (Alt) Chlorite>>											
<<Alt: 167.72 - 170.05 Moderate (Alt) Cordierite>>											
<<Alt: 170.05 - 171.79 Strong (Alt) Chlorite>>											
<<Alt: 170.05 - 171.79 Strong (Alt) Cordierite>>											
<<Vein: 171.06 - 171.79 100% Quartz-Chlorite-Sulphide 55 deg. >> QZ-CI-CL-CP-PO-SP											
171.79	175.26	OA Magnetite bearing sulphides	171.79	172.29	0.50						
171.79 - 175.26: 26 cm zone of OC at the very top of this interval.											
<<Min: 171.79 - 175.26 20% Min: Sphalerite>>											
<<Min: 171.79 - 175.26 5% Min: Pyrrhotite>>											
<<Min: 171.79 - 175.26 15% Min: Magnetite>> BL											
<<Min: 171.79 - 175.26 1% Min: Chalcopyrite>>											
<<Alt: 171.79 - 172.05 Moderate (Alt) Chlorite>>											
<<Alt: 171.79 - 172.05 Moderate (Alt) Cordierite>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-284W1

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
175.26	176.00	OA Magnetite bearing sulphides	175.26	176.00	0.74						
<<Min: 175.26 - 176 1% Min: Pyrrhotite>>											
<<Min: 175.26 - 176 5% Min: Magnetite>> BL											
176.00	176.61	OA Magnetite bearing sulphides	176.00	176.61	0.61						
<<Min: 176 - 176.61 5% Min: Pyrrhotite>>											
<<Min: 176 - 176.61 10% Min: Magnetite>> BL											
176.61	177.11	OA Magnetite bearing sulphides	176.61	177.11	0.50						
<<Min: 176.61 - 177.11 1% Min: Pyrrhotite>>											
<<Min: 176.61 - 177.11 5% Min: Magnetite>>											
177.11	180.79	OA Magnetite bearing sulphides	177.11	178.11	1.00						
177.11 - 180.79: Interval contains short zones of mineralization that have CI-CL alteration and CP-PO mineralization. These short zones are OC but are not long enough to be broken out.											
<<Min: 177.11 - 180.79 20% Min: Sphalerite>>											
<<Min: 177.11 - 180.79 5% Min: Pyrrhotite>> BL											
<<Min: 177.11 - 180.79 15% Min: Magnetite>>											
<<Min: 177.11 - 180.79 3% Min: Chalcopyrite>>											
<<Alt: 178.61 - 180.99 Moderate (Alt) Cordierite>>											
<<Alt: 178.61 - 183.2 Moderate (Alt) Chlorite>>											
180.79	182.42	OC Chalcopyrite-pyrrhotite net textured sulphides	180.79	181.79	1.00						
<<Min: 180.79 - 182.42 10% Min: Pyrrhotite>> WIS											
<<Min: 180.79 - 182.42 10% Min: Magnetite>>											
<<Min: 180.79 - 182.42 3% Min: Chalcopyrite>> DIS											
<<Alt: 180.99 - 183.2 Strong (Alt) Cordierite>>											
182.42	183.16	OF Pyrrhotite rich sulphides	182.42	183.16	0.74						
<<Min: 182.42 - 183.16 5% Min: Sphalerite>>											
<<Min: 182.42 - 183.16 50% Min: Pyrrhotite>>											
<<Min: 182.42 - 183.16 3% Min: Chalcopyrite>> VN											
183.16	184.29	OJ Heavily disseminated sulphides in proximal altered rock	183.16	183.72	0.56						
<<Min: 183.16 - 184.29 3% Min: Pyrrhotite>>											
<<Min: 183.16 - 184.29 3% Min: Pyrrhotite>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-284W1

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 183.16 - 184.29 0.5% Min: Chalcopryite>> <<Min: 183.16 - 186.79 20% Min: Calcite>> DIS <<Alt: 183.2 - 185.39 Weak (Alt) Chlorite>> <<Alt: 183.2 - 189.94 Strong (Alt) Muscovite>> <<Alt: 183.96 - 185.29 Weak (Alt) Cordierite>> <<Vein: 183.2 - 183.92 60% Quartz-Carbonate-Sulphide 50 deg. >> QZ-CA-CL-PO-SP-CP <<Vein: 183.43 - 185.68 25% Carbonate-Chlorite 45 deg. >> CA-CL-TO											
184.29	187.12	RHY undifferentiated rhyolite	184.29	185.29	1.00						
<<Min: 184.29 - 191 1% Min: Pyrite>> WIS <<Min: 184.29 - 191 0.5% Min: Pyrrhotite>> WIS <<Min: 184.29 - 191 0.5% Min: Chalcopryite>> DIS <<Min: 186.79 - 191 0.01% Min: Calcite>> <<Alt: 185.39 - 186.54 Moderate (Alt) Chlorite>> <<Alt: 185.39 - 186.54 Moderate (Alt) Cordierite>> <<Alt: 186.54 - 187.12 Weak (Alt) Cordierite>> <<Struc: 187.03 - 188.7 Trace (Alt) Fault>> Narrow faults <1cm. Very weak continuity of fault between parent and daughter hole.											
187.12	189.94	RHYcw Curdy textured-flow banded (flows, subvolcanics)	187.12	188.12	1.00						
189.94	191.00	RHY undifferentiated rhyolite	188.12	189.12	1.00						
<<Alt: 189.94 - 190.71 Moderate (Alt) Chlorite>> <<Alt: 189.94 - 190.71 Weak (Alt) Cordierite>> <<Alt: 190.71 - 191 Strong (Alt) Muscovite>> <<Alt: 190.71 - 191 Weak (Alt) Chlorite>>											
End of Hole @ 191											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-285

Prospect:	GP4F	Hole Type:	DD	Survey Type:	APS	Logged By:	Murray Jones	
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Murray Jones	Date Logging Start:	06-Oct-15	
UTM Easting	419650	Core Size:	HQ3	Azimuth:	179	Date Logging Complete:	11-Oct-15	
UTM Northing:	6813355	Casing Pulled?:	Yes	Dip:	-70	Drill Company:	Geotech	
UTM Elev. (m):	1320	Casing Depth (m):	8	Length (m):	306	Drill Rig:	Hydracore	
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	05-Oct-15	
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	11-Oct-15	
Local Elev. (m):						Purpose:	Exploration	
Comments:							Parent Hole:	

This hole was drilled to fill in a gap on Section 419650E; it is a step out 170 m east of 1998 Section 9450E.

The hole intersected mineralization equivalent to the GP4F horizon but did not intersect significant massive sulphides. The stratigraphy is fairly typical of the GP4F section, an upper felsic volcanic and sediment section followed by the mineralized sequence with quartz porphyry overlying RHYva. Mineralization was encountered from 225 to 243 consisting of a few bands of massive SP-PO-PY-GL-CP up to 20 cm wide along with widely dispersed stringers and wisps of SP-PY-GL. The mineralization is associated with patchy MU and CL-BI-GA alteration. A second significant mineralized zone was encountered from about 280-281.4 m, consisting of a semi-massive PO with SP-CP-GL-PY and associated with CL-BI-GA alteration with stringer CP mineralization to 302 m. Downhole EM did not indicate a significant conductor below the hole.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-70	179	0	179	APS	Murray Jones	05-Oct-15		<input checked="" type="checkbox"/>	
24	-70.4	159.8	22.5	182.3	ReflexEVS	Geotech	05-Oct-15	5723	<input checked="" type="checkbox"/>	
54	-70.4	159.1	22.5	181.6	ReflexEVS	Geotech	05-Oct-15	5699	<input checked="" type="checkbox"/>	
84	-70.6	161.9	22.5	184.4	ReflexEVS	Geotech	05-Oct-15	5702	<input checked="" type="checkbox"/>	
114	-71.4	157.5	22.5	180	ReflexEVS	Geotech	05-Oct-15	5649	<input checked="" type="checkbox"/>	
156	-70.9	161.5	22.5	184	ReflexEVS	Geotech	05-Oct-15	5697	<input checked="" type="checkbox"/>	
186	-70.5	163	22.5	185.5	ReflexEVS	Geotech	05-Oct-15	5672	<input checked="" type="checkbox"/>	
216	-70.3	167	22.5	189.5	ReflexEVS	Geotech	05-Oct-15	5694	<input checked="" type="checkbox"/>	
246	-70.4	168.2	22.5	190.7	ReflexEVS	Geotech	05-Oct-15	5679	<input checked="" type="checkbox"/>	
276	-69.3	173	22.5	195.5	ReflexEVS	Geotech	09-Oct-15	5686	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	8.00	OVBN Overburden									
0 - 8: Casing depth											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-285

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
8.00	12.70	SED undifferentiated Sediment dark grey FG									
8 - 12.7: fine grained, dark grey, BI speckled sediment?, possibly tuff, relatively homogeneous, weathered strongly, minor MAFi included											
<<Min: 8 - 28.9 0.01% Min: Pyrite>> scattered in groundmass											
12.70	27.94	RHYvx Quartz and/or feldspar crystal grey FG tuff									
12.7 - 27.94: fine grained, siliceous tuff, minor local lapilli, bluish QE scattered t/o, poker chip foliation, 80° TCA											
<<Alt: 12.7 - 27.44 Weak (Alt) Muscovite>> narrow zones of MU											
<<Alt: 12.7 - 27.44 Weak (Alt) Chlorite>> green colour in groundmass locally, clots,											
<<Struc: 15 - 24.6 Strong (Alt) Fault>> broken core, lost core, some gouge											
27.94	76.40	RHYvi Lapilli tuff grey-brown FCG									
27.94 - 76.4: variable texture, lapilli content from 3 to 30%, lapilli from 2 to 25mm, elongate, white to grey and minor lt green, siliceous, in QZ-MU-BI groundmass, no phenos visible, MAFi dykes common											
<<Min: 28.9 - 29.25 10% Min: Pyrite>> bands, blebs along fol'n											
<<Min: 29.25 - 76.4 0.5% Min: Pyrite>> and scattered blebs in groundmass											
<<Alt: 28.9 - 29.25 Weak (Alt) Muscovite>>											
<<Alt: 28.9 - 29.25 Moderate (Alt) Chlorite>> associated with PY bands, veins											
<<Alt: 30.01 - 35.4 Weak (Alt) Muscovite>> 2-3 cm wide alt'n envelope to QZ-TO vein, TO in wall rock too											
<<Alt: 47.1 - 51.85 Moderate (Alt) Muscovite>> EP alt'n, plus TO-MU alt'n adjacent to QZ-TO-PY vein											
<<Alt: 54.72 - 57.65 Moderate (Alt) Muscovite>> related to fault? Or dyke, bleaching, possible silicification?											
<<Vein: 28.91 - 28.96 100% Quartz-Pyrite 65 deg. >> PY-QZ vein, in min'l'zd zone											
<<Vein: 35.01 - 35.35 20% Quartz-Tourmaline 10 deg. >> 2 cm wide QZ-TO vein, TO-MU alt'n envelope											
<<Vein: 48.1 - 51.85 30% Quartz-Tourmaline-Sulphide 0 deg. >> 2-4 cm wide, multi-stage QZ-TO-PY vein, parallels core axis											
<<Struc: 30.2 - 30.32 Weak (Alt) Vein>> QZ-CA vein, gouge zone adjacent											
<<Struc: 42.51 - 42.52 Moderate (Alt) Vein>> CA-QZ veinlet											
<<Struc: 42.76 - 42.77 Moderate (Alt) Contact>> small MAFi dykelet											
<<Struc: 71.6 - 71.65 Weak (Alt) Fault>> small gouge, measured on contact											
76.40	80.10	MAFi Mafic Intrusions (primarily footwall mafic intrusion) brown MG									
76.4 - 80.1: homogeneous,											
<<Min: 76.4 - 80.1 10% Min: Calcite>> and veins											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-285

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
80.10	86.03	RHYvl Lapilli tuff									
<p>grey-brown FCG</p> <p>80.1 - 86.03: white granular to grey siliceous clasts, 2-30 mm, flattened, mixed BI and MU in groundmass, no phenos apparent, percentage of clasts varies</p> <p><<Min: 80.1 - 86.03 0.5% Min: Pyrite>> and scattered fine diss'ns</p> <p><<Struc: 81.2 - 81.8 Weak (Alt) Fault>> broken core</p>											
86.03	89.35	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<p>green-brown MG</p> <p>86.03 - 89.35: banded to patchy green-brown with varying CL and BI, not alt'n, weak CA</p> <p><<Min: 86.03 - 89.35 5% Min: Calcite>></p>											
89.35	99.00	RHYvl Lapilli tuff									
<p>grey-brown FG</p> <p>89.35 - 99: dark colour generally, MU alt'n near fault, BI? Patches, lapilli similar to interval above, elongate but still rounded</p> <p><<Min: 89.35 - 95.25 0.5% Min: Pyrrhotite>> trace to .1%</p> <p><<Min: 89.35 - 99 0.5% Min: Pyrite>> and fine diss'ns</p> <p><<Alt: 95.25 - 99 Weak (Alt) Muscovite>></p> <p><<Alt: 95.25 - 99 Weak (Alt) Chlorite>></p>											
99.00	106.70	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<p>brown</p> <p>99 - 106.7: Fault zone, abundant lost core, depths are approximations at best, MAFi occurs in small sections, mixed with QV's, CL alt'n present, Coarse mafic crystals-AC? After PX? On the margins of the QV's, PY in fracs</p> <p><<Min: 99 - 106.7 1% Min: Pyrite>> along fol'n in CL alt'n</p> <p><<Min: 99 - 106.7 0.01% Min: Galena>> occurs in QV in one place, fracture</p> <p><<Alt: 99 - 106.7 Moderate (Alt) Chlorite>> intense? Locally</p> <p><<Vein: 99 - 106.7 Quartz>> QZ veining in intense fault, CL, PY, GL in fracs</p> <p><<Struc: 99 - 112.92 Intense (Alt) Fault>> big fault zone, lots of lost core, like ~10 m lost core</p>											
106.70	146.72	RHYvl Lapilli tuff									
<p>grey FMG</p> <p>106.7 - 146.72: lapilli in this section are much more flattened, siliceous, no granular tx, MU partings more pronounced and planar,</p> <p><<Min: 106.7 - 123.7 3% Min: Pyrite>> primarily but also along fractures</p> <p><<Min: 123.7 - 137 5% Min: Pyrite>> as bands, lenses, also blebs in veins, fractures</p> <p><<Min: 126.5 - 130 1% Min: Calcite>> in fault zone</p> <p><<Min: 131 - 137 0.5% Min: Sphalerite>> in bands with PY</p>											
			131.10	132.50	1.40	B00269271	1.2	-0.005	-0.01	0.02	0.04
			132.50	133.50	1.00	B00269272	3.7	0.009	-0.01	0.12	0.25
			133.50	134.50	1.00	B00269273	6.6	0.02	-0.01	0.15	0.17
			134.50	135.61	1.11	B00269274	4.5	0.014	-0.01	0.17	0.37



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-285

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<p><<Min: 131 - 137 0.01% Min: Galena>> in sx bands</p> <p><<Min: 137 - 147.7 1% Min: Calcite>> minor conc'ns in MAFI to 5%</p> <p><<Min: 137 - 157.12 0.5% Min: Pyrite>> also in fracs</p> <p><<Alt: 106.7 - 129 Weak (Alt) Silicification>> in layers, pseudo-lapilli</p> <p><<Alt: 106.7 - 137 Moderate (Alt) Muscovite>> bands.</p> <p><<Alt: 126.5 - 132 Weak (Alt) Chlorite>> and bands, weak alt'n in addition to MU</p> <p><<Vein: 145.8 - 146.1 40% Quartz-Tourmaline-Sulphide 0 deg. >> QZ-TO-PY vn/bx, continues as PY filled fracture below</p> <p><<Struc: 121.4 - 130 Strong (Alt) Fault>> broken core, minor gouge, measure in small gougy zone</p> <p><<Struc: 122 - 122.1 Moderate (Alt) Shear>> actually brittle fault, gouge zone</p> <p><<Struc: 127.5 - 129.7 Strong (Alt) Fault>> no recovery, small gouge above, broken core below</p> <p><<Struc: 142 - 143.9 Strong (Alt) Fault>> several sections of gouge, lost core</p>											
146.72	147.70	MAFI Mafic Intrusions (primarily footwall mafic intrusion)									
146.72 - 147.7: bands of CL-AC-rich and BI-rich rock											
147.70	157.12	RHYcq Quartz porphyry									
147.7 - 157.12: lge bluish QE to 5 mm, felsic pseudo-lapilli, flattened but not severely, some granular texture, from 152-152.9m sediment mixed with unit?, BI-rich, well foliate, but QE's locally											
<p><<Min: 153.9 - 167.6 1% Min: Calcite>> small patches</p> <p><<Vein: 152.7 - 155.8 25% Quartz-Carbonate>> QZ-CB, multiple veins in sediment(?) section</p>											
157.12	168.60	RHYvx Quartz and/or feldspar crystal tuff									
157.12 - 168.6: abdt BI-rich layers											
<p><<Min: 157.12 - 160.49 5% Min: Pyrite>> bands and fractures</p> <p><<Min: 157.12 - 168.6 5% Min: Calcite>> conc'd in BI-rich zones</p> <p><<Min: 160.49 - 165.82 3% Min: Pyrite>> in veins, bands in MU alt'n, wisps in BI zones, trace SP, GL in Qv's</p> <p><<Min: 165.82 - 168.6 5% Min: Pyrite>> bands, fractures</p> <p><<Alt: 157.12 - 160.49 Weak (Alt) Muscovite>></p> <p><<Alt: 163.1 - 164.88 Moderate (Alt) Muscovite>> slightly yellowish green colour</p> <p><<Struc: 157.12 - 158 Moderate (Alt) Fault>> structure in wall rock</p> <p><<Struc: 165.8 - 166.7 Moderate (Alt) Fault>> gouge, fault bx, 50 cm lost core</p>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-285

From (m) To (m) Rocktype & Description

168.60 200.25 RHYvl Lapilli tuff grey-brown MCG

168.6 - 200.25: mottled, variably textured, abdt QE's, and white lapilli, coalescing pseudo-lapilli could have been flow?, MAFi scattered t/o

<<Min: 168.6 - 190 0.5% Min: Calcite>>

<<Min: 168.6 - 198.8 0.01% Min: Pyrite>>

<<Min: 190 - 190.56 3% Min: Pyrrhotite>> scattered in strongly alt'd RHY

<<Min: 190 - 190.56 5% Min: Calcite>>

<<Min: 190.56 - 198.8 0.5% Min: Calcite>>

<<Min: 198.8 - 206.3 5% Min: Pyrite>> bands and patches, blebs and wisps, with SP/GL in conc'd zones

<<Min: 198.8 - 210 1% Min: Calcite>> and in fractures

<<Min: 199.9 - 206.3 5% Min: Sphalerite>> in bands, patches. Between 205.8 and 206.1, 30 cm lost core, coincides with best mineralization and alteration

<<Min: 199.9 - 206.3 1% Min: Galena>> in conc'd bands of sx

<<Min: 199.9 - 206.3 0.5% Min: Chalcopryite>> in conc'd bands of sx

<<Alt: 184.92 - 192.72 Weak (Alt) Muscovite>> bleaching related to gougy fractures and QZ-CA vnlt, becomes strongly bleached in core of interval, w/PO

<<Alt: 198.8 - 210.95 Moderate (Alt) Muscovite>> masked by CL locally

<<Vein: 170.6 - 170.85 5% Quartz-Tourmaline 8 deg. >> QZ-TO vnlt, 2-3 cm wide TO-MU envelope

<<Struc: 171.53 - 171.531 Strong (Alt) Contact>> upper contact of dyke, planar

<<Struc: 172.079 - 172.08 Strong (Alt) Contact>> lower contact of dyke, sharp, planar contact

<<Struc: 200.23 - 200.24 Moderate (Alt) Vein>> diss'd PY band in porphyry, bedding?

200.25 210.95 RHYif feldspar and quartz porphyry grey FCG intrusions

200.25 - 210.95: intrusion? Or QZ-FP porphyry version of unit above, blocky, broken FP(?) xtals scattered t/o, also small pseudo-lapilli, quickly into mineralized zone at top, strong silicification at lower contact with MAFI, porphyritic tx gone, RHYva?

<<Min: 205.8 - 206.3 10% Min: Pyrite>> in bands, masses

<<Min: 206.3 - 210.95 3% Min: Sphalerite>> scattered bands, diss'ns

<<Min: 206.3 - 210.95 5% Min: Pyrite>> in bands, small lenses.

<<Min: 206.65 - 210.95 3% Min: Calcite>> and around phenos/bx'd clasts

<<Alt: 200.25 - 203.44 Moderate (Alt) Chlorite>> to pervasive bands/patches, associated with apperance of GL/SP

<<Alt: 203.44 - 206.65 Strong (Alt) Chlorite>> pervasive locally, seems to wane a bit locally

<<Alt: 206.65 - 209.1 Strong (Alt) Silicification>> lenses and pervasive in groundmass, fills intersties to bx'd clasts and phenos

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
198.80	200.25	1.45	B00269275	4.6	0.014	-0.01	0.04	0.1

200.25	200.90	0.65	B00269276	29.5	0.08	-0.01	0.53	0.2
--------	--------	------	-----------	------	------	-------	------	-----

200.90	201.94	1.04	B00269277	17.8	0.06	0.01	0.42	0.94
201.94	203.44	1.50	B00269278	8.6	0.021	-0.01	0.2	0.43
203.44	204.44	1.00	B00269279	9.9	0.015	-0.01	0.13	0.39
204.44	205.44	1.00	B00269281	4.9	0.011	-0.01	0.06	0.24
205.44	206.30	0.86	B00269282	50.7	0.016	0.02	0.92	1.73
206.30	207.30	1.00	B00269283	2.5	0.019	-0.01	0.02	0.05
207.30	208.60	1.30	B00269284	2	0.019	-0.01	0.04	0.15



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-285

From (m) To (m) Rocktype & Description

<<Alt: 210.1 - 210.95 Strong (Alt) Silicification>> strong, texturally destructive?

<<Struc: 205.9 - 206.1 Moderate (Alt) Fault>> 30 cm missing core in the middle of heavy sx mineralization

210.95 217.15 MAFi Mafic Intrusions (primarily brown FG
footwall mafic intrusion)

210.95 - 217.15: massive BI, CA veining and minor patches of pervasive CA

<<Min: 210.95 - 217.15 1% Min: Calcite>> local pervasive patches

<<Struc: 210.98 - 211 Moderate (Alt) Vein>> vein/slip, bx'd, CL rich gouge

217.15 225.00 RHYvx Quartz and/or feldspar crystal brown MCG
tuff

217.15 - 225: partially weathered but not oxidized. Abundant bluish QE, small white lapilli, sheared,

<<Min: 217.15 - 222 0.01% Min: Pyrite>> is the RHYvl here a dyke?

<<Min: 218.65 - 224.8 15% Min: Calcite>> in altered wall rock to QV

<<Min: 222 - 225 5% Min: Sphalerite>> bands, masses in the altered RHY, also on edge of QV

<<Min: 222 - 225 5% Min: Pyrite>> frags in QV, but small lenses, masses in altered RHY

<<Min: 222 - 225 3% Min: Galena>> similar to SP

<<Min: 224.8 - 240.05 0.5% Min: Calcite>> fractures

<<Alt: 217.15 - 222 Moderate (Alt) Biotite>> on fol'n, after CL?

<<Alt: 222 - 225 Moderate (Alt) Chlorite>> patches in QV, RHY, such poor recovery difficult to determine the alt'n style, associated with sx

<<Alt: 222 - 225.5 Moderate (Alt) Muscovite>> in gouge, RHYva

<<Vein: 219 - 220 100% Quartz-Sulphide>> rough interval, QZ-SX vn in fault, blebs of SP, GL-PY

<<Vein: 224 - 224.8 25% Quartz-Carbonate>> QZ-CA-CL? Vn/bx

<<Struc: 218.85 - 225 Intense (Alt) Fault>> measured on gouge contact

225.00 229.90 RHYva Coarse grained to ash tuff grey FG

225 - 229.9: fg, homogeneous, tuff or sediment, QE in upper metre, minor SI lenses but mostly micaceous with quartz grains, mineralized and altered, banded sx in groundmass along fol'n

<<Min: 225 - 229.52 5% Min: Pyrite>> in conc'd bands, lenses, minor frags and veins

<<Min: 225.5 - 226.1 5% Min: Sphalerite>> bands, massive layer at 206.05-206.10

<<Min: 225.5 - 228.2 3% Min: Pyrrhotite>> along fol'n, in sx zones

<<Min: 226.1 - 226.77 0.5% Min: Galena>> late CA-QZ vein

<<Min: 226.77 - 228.2 10% Min: Sphalerite>>

<<Min: 226.77 - 228.2 3% Min: Galena>> in sx bands

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
208.60	210.10	1.50	B00269285	3.2	0.01	0.01	0.18	0.48
210.10	210.95	0.85	B00269286	-0.3	-0.005	-0.01	0.01	0.04

222.00	225.00	3.00	B00269287	39	0.305	0.02	0.71	1.22
--------	--------	------	-----------	----	-------	------	------	------

225.00	225.50	0.50	B00269288	6.7	0.07	-0.01	0.09	0.3
--------	--------	------	-----------	-----	------	-------	------	-----

225.50	226.10	0.60	B00269289	51.2	1.32	0.05	0.68	2.03
226.10	226.75	0.65	B00269292	2.8	0.026	-0.01	0.09	0.11
226.75	228.00	1.25	B00269293	29.4	0.197	0.01	1.99	3.5
228.00	229.50	1.50	B00269294	2.9	0.025	0.03	0.08	0.15
229.50	230.50	1.00	B00269295	100	0.382	0.12	1.79	3.34



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-285

From (m) To (m) Rocktype & Description

<<Struc: 239.85 - 240 Strong (Alt) Fault>> gouge

240.05 266.93 SED undifferentiated Sediment green-brown FG

240.05 - 266.93: banded sed, MU-BI, but also, greenish bands with AC?, possibly calc-silicate minerals?, MAFI occurs in small dykelets commonly faulted and altered as well

<<Min: 240.05 - 245 10% Min: Calcite>>

<<Min: 242.2 - 242.6 5% Min: Sphalerite>> bands with PO, GL, CP

<<Min: 242.2 - 242.6 1% Min: Galena>> with PO, CP

<<Min: 242.2 - 242.6 1% Min: Chalcopryrite>> with PO

<<Min: 245 - 246 20% Min: Calcite>> pervasive

<<Min: 246 - 255 10% Min: Calcite>> pervasive

<<Min: 247.9 - 266.93 0.01% Min: Sphalerite>> in QV's

<<Min: 247.9 - 266.93 0.5% Min: Pyrite>> xtals, blebs

<<Min: 247.9 - 266.93 3% Min: Pyrrhotite>> diss'd along fol'n, in cm sized patches.

<<Min: 247.9 - 266.93 0.01% Min: Galena>> in QV's

<<Min: 255 - 268.2 1% Min: Calcite>>

<<Alt: 240.05 - 266.93 Moderate (Alt) Muscovite>> scattered bands, of strong MU, narrow, weathered, overprints BI

<<Alt: 240.05 - 266.93 Moderate (Alt) Chlorite>> usually in patches, some calc-silicates?

<<Vein: 257.4 - 258.95 75% Quartz>> QZ vn zone, several veins, minor CL-PY included

<<Vein: 261.22 - 261.75 60% Quartz-Carbonate>> QZ-CA-CL

<<Struc: 240.4 - 240.43 Moderate (Alt) Vein>> folows slip with gouge

<<Struc: 253.5 - 253.65 Moderate (Alt) Fault>> gouge/bx zone, sharp contact

<<Struc: 259.15 - 259.16 Strong (Alt) dominant foliation>>

<<Struc: 262.25 - 263.2 Moderate (Alt) Fault>> measured at upper contact

266.93 279.40 RHYvl Lapilli tuff grey-brown FG

266.93 - 279.4: banded brown and grey, MU vs BI?, bedded with small lapilli and ash layers, locally BI-rich MAFi, minor narrow CL-rich bands (<1 cm) with PO occur locally, late CA vnlt common, bleaching associated and with PY

<<Min: 266.93 - 279.76 0.5% Min: Pyrite>> minor diss'd blebs

<<Min: 266.93 - 279.76 3% Min: Pyrrhotite>> diss'ns and blebs,

<<Min: 268.2 - 269.1 10% Min: Calcite>>

<<Min: 269.1 - 279.76 1% Min: Calcite>>

<<Alt: 269.1 - 272.1 Strong (Alt) Muscovite>> soft bands, tan colour, waxy feel

<<Alt: 269.1 - 272.1 Moderate (Alt) Chlorite>> small patches, minor bands with PO

<<Alt: 278.14 - 279.76 Moderate (Alt) Muscovite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

240.05	241.20	1.15	B00269305	0.9	-0.005	0.03	-0.01	0.33
--------	--------	------	-----------	-----	--------	------	-------	------

241.20	242.30	1.10	B00269306	6.8	0.008	0.05	0.33	2.12
--------	--------	------	-----------	-----	-------	------	------	------

242.30	243.30	1.00	B00269307	1.6	-0.005	0.04	0.11	0.11
--------	--------	------	-----------	-----	--------	------	------	------

278.10	279.40	1.30	B00269308	-0.3	-0.005	-0.01	-0.01	-0.01
--------	--------	------	-----------	------	--------	-------	-------	-------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-285
From (m) **To (m)** **Rocktype & Description**
279.40 287.15 RHYva Coarse grained to ash tuff grey-brown FG

279.4 - 287.15: possibly sediment, especially in upper portion, strongly faulted, sx mineralization included

<<Min: 279.76 - 280.86 3% Min: Pyrite>> and diss'd blebs
 <<Min: 279.76 - 280.86 3% Min: Pyrrhotite>> in bands and lenses
 <<Min: 279.76 - 280.86 3% Min: Chalcopryite>> blebs, diss'ns
 <<Min: 279.76 - 282.15 3% Min: Calcite>> scattered and in fracs
 <<Min: 280.86 - 281.4 10% Min: Sphalerite>> small masses, lenses, wisps with other sx
 <<Min: 280.86 - 281.4 25% Min: Pyrrhotite>> thick band at top, in fractures, masses
 <<Min: 280.86 - 281.4 1% Min: Galena>> in SX zones
 <<Min: 280.86 - 281.4 3% Min: Chalcopryite>> through zone, fractures
 <<Min: 282.15 - 287.15 1% Min: Sphalerite>> in lenses, veins
 <<Min: 282.15 - 287.15 1% Min: Pyrite>> fractures
 <<Min: 282.15 - 287.15 5% Min: Pyrrhotite>> in veins, bands, lenses
 <<Min: 282.15 - 287.15 0.01% Min: Galena>> in sx zones, in late CA vnlt's
 <<Min: 282.15 - 287.15 3% Min: Chalcopryite>> with PO, CL, in fractures in QV's.
 <<Min: 282.15 - 287.15 1% Min: Calcite>>
 <<Alt: 279.76 - 281.4 Strong (Alt) Muscovite>> grungy looking rock from heavy MU with CI
 <<Alt: 279.76 - 287.15 Strong (Alt) Chlorite>> small clots to patches, on fol'n, in fractures, with SX
 <<Struc: 281.45 - 282.15 Moderate (Alt) Fault>> strong gouge, in dyke, cuts sx zone
 <<Struc: 285 - 286.8 Strong (Alt) Fault>> broken, gouge

**287.15 290.40 MAFi Mafic Intrusions (primarily green-brown FMG
footwall mafic intrusion)**

287.15 - 290.4: faulting continues, cut by late CA vnlt's with PY, bleaching associated.

<<Min: 287.15 - 290.4 0.5% Min: Pyrite>> CA vns
 <<Min: 287.15 - 290.4 3% Min: Calcite>> small patches, conc'd in fault gouge
 <<Min: 290.2 - 290.4 5% Min: Chalcopryite>> in strongly CY altered, fault gouge/ dyke?, of CL-BI alt'n,
 <<Struc: 289.6 - 289.61 Strong (Alt) dominant foliation>>
 <<Struc: 289.7 - 290.4 Strong (Alt) Shear>> 30° on adjacent fol'n

**290.40 306.00 MDSc Carbonaceous dominant dark grey FG
mudstone**

290.4 - 306: anastomosing fol'n, faulting at top, carbonaceous partings, several MAFi dykes included, MDSc?

<<Min: 294.77 - 295.58 3% Min: Sphalerite>> lensy to narrow bands, blebs n QV's

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
279.40	280.02	0.62	B00269309	2.7	-0.005	0.05	-0.01	0.06

280.02	280.86	0.84	B00269311	12	0.016	0.08	0.37	0.21
280.86	281.40	0.54	B00269312	79.7	0.022	0.19	3.12	5.35
281.40	282.15	0.75	B00269313	4.4	0.006	-0.01	0.21	0.5
282.15	283.65	1.50	B00269314	2	0.007	0.1	0.06	0.24
283.65	285.00	1.35	B00269315	16.7	0.102	1.32	0.03	0.35
285.00	286.50	1.50	B00269316	1.2	-0.005	0.12	-0.01	0.44
286.50	287.15	0.65	B00269317	3.1	0.015	0.15	0.02	1.72

287.15	288.45	1.30	B00269318	2.2	-0.005	0.02	0.09	0.14
--------	--------	------	-----------	-----	--------	------	------	------

294.77	295.58	0.81	B00269319	3.5	-0.005	0.07	0.3	0.81
--------	--------	------	-----------	-----	--------	------	-----	------

295.58	297.03	1.45	B00269321	0.8	-0.005	0.01	0.04	0.1
--------	--------	------	-----------	-----	--------	------	------	-----

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-285

From (m) To (m) Rocktype & Description

<<Min: 295.58 - 297.03 3% Min: Pyrite>> and in fracs, veins.
 <<Min: 297.3 - 306 0.5% Min: Pyrite>> and bleb along fol'n
 <<Min: 299.43 - 300.9 1% Min: Sphalerite>>
 <<Min: 299.43 - 300.9 0.01% Min: Galena>>
 <<Min: 299.43 - 300.9 3% Min: Chalcopryrite>> and wis along fol'n, fracture filling
 <<Alt: 299.43 - 300.9 Moderate (Alt) Silicification>> locally, dark bluish grey, pervasive
 <<Alt: 299.43 - 300.9 Moderate (Alt) Garnet>> both purple and brown GA pblasts, small masses
 <<Alt: 299.43 - 300.9 Strong (Alt) Chlorite>> partings are combination of CL-BI
 <<Alt: 299.43 - 306 Moderate (Alt) Biotite>> usually with CL
 <<Vein: 298.1 - 298.7 70% Quartz 65 deg. >> QZ-CA vn, broken
 <<Struc: 290.85 - 290.86 Strong (Alt) dominant foliation>> dragged in fault?
 <<Struc: 291 - 293.1 Strong (Alt) Fault>> slickenslides on gouge surface
 <<Struc: 300.75 - 306 Strong (Alt) Fault>> sand seam at bottom, 1.2 m missing core

End of Hole @ 306

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
297.03	297.85	0.82	B00269322	-0.3	-0.005	-0.01	-0.01	0.04
298.70	299.43	0.73	B00269323	-0.3	-0.005	-0.01	-0.01	0.04
299.43	300.90	1.47	B00269324	3.4	0.027	0.29	-0.01	0.25

GeoSpark Logger ~ Drill Log

Project: KZK **Hole Number:** K15-286

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	08-Oct-15
UTM Easting	415149.864	Core Size:	NQ3	Azimuth:	180.46	Date Logging Complete:	10-Oct-15
UTM Northing:	6815496.371	Casing Pulled?:	Yes	Dip:	-65	Drill Company:	Geotech
UTM Elev. (m):	1405.517	Casing Depth (m):	20	Length (m):	200	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	06-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	08-Oct-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

K15-286 is a resource infill hole drilled between historic K15-015 and K15-134.

The upper units are made up of rhyolitic volcanoclastic units crosscut by mafic dykes.

The hole intersects a lens of massive sulfide zone from 123.92 to 157.50m, containing PY-CP-SP-GL, dominantly OG, OA and OB domains. The hole shows progressive muscovite alteration surrounding the mineralization from 54.65m to 170m with green grey alteration (MU-SI) under the mineralization. The hanging-wall consists in mineralized rhyolite(CP-PO, OI domains) followed by proximal CL alteration and moderate cordierite alteration. The footwall shows muscovite alteration in rhyolitic unit. The mafic intrusion intersected at 154.44m is locally altered MU-SI suggesting the proximity of a rhyolitic aphanitic dyke.

The hole ends on the mafic intrusion at 200m.

Note: between the woodblocks 125m to 128m, 1.07m of core is measured. There is no evidence of core loss and the pieces seem to match together therefore there might be something wrong in the marker position. However, a rod count asked at 179m was correct. 179m is a depth we can trust but we have to figure out how to recover the right depth of the massive sulfide and its width (overestimated if we maintain the block where they are now). The run between 128m and 131m is also short (1.48m) which lead me to consider that marker 128 is definitely at the wrong place. No shoulder samples have been taken above the mineralization due to poor recovery but sampling can be done later if required.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-65	180.46	0	180.46	APS	Jerome de Pasquale	06-Oct-15		<input checked="" type="checkbox"/>	
44	-64.4	159.4	22.5	181.9	ReflexEVS	Geotech	07-Oct-15	5782	<input checked="" type="checkbox"/>	
74	-64.6	164.8	22.5	187.3	ReflexEVS	Geotech	07-Oct-15	5760	<input checked="" type="checkbox"/>	
104	-64.7	163.9	22.5	186.4	ReflexEVS	Geotech	07-Oct-15	5703	<input checked="" type="checkbox"/>	
134	-64.5	175.2	22.5	197.7	ReflexEVS	Geotech	08-Oct-15	6194	<input type="checkbox"/>	Values not accepted due to high magnetic field
164	-64.2	166.2	22.5	188.7	ReflexEVS	Geotech	08-Oct-15	5960	<input checked="" type="checkbox"/>	
200	-64.7	167.1	22.5	189.6	ReflexEVS	Geotech	08-Oct-15	5782	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	20.00	CASN									
20.00	24.57	RHY									
20 - 24.57: Overburden, fractured.		Casing undifferentiated rhyolite	grey-green								

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-286

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
24.57	29.10	RHYvl Lapilli tuff									
24.57 - 29.1: PO elongated.											
<<Min: 24.57 - 29.1 1% Min: Calcite>>											
<<Min: 24.57 - 43.27 0.5% Min: Pyrrhotite>>											
<<Min: 24.57 - 77 0.1% Min: Pyrite>>											
29.10	30.33	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
29.1 - 30.33: Dyke, CA veins, altered chlorite. Foliated.											
<<Min: 29.1 - 30.33 10% Min: Calcite>> Dyke											
<<Alt: 30.32 - 43.27 Weak (Alt) Chlorite>> Dyke proximity.											
30.33	40.62	RHYv Rhyolite volcaniclastic									
30.33 - 40.62: Ash and lapilli, CA replacement of lapili, weakly CL altered, TML trace.											
<<Min: 30.33 - 43.27 1% Min: Calcite>>											
40.62	43.27	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
40.62 - 43.27: AK-CL, non-foliated.											
43.27	53.10	RHYvl Lapilli tuff									
43.27 - 53.1: Two foliations visible locally.											
<<Min: 43.27 - 53.1 0.1% Min: Pyrrhotite>>											
<<Min: 43.27 - 71.75 0.1% Min: Calcite>> Replacement or veinlets.											
<<Alt: 43.27 - 54.65 Weak (Alt) Muscovite>> maybe original too.											
53.10	54.65	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
53.1 - 54.65: Dyke, BI, AK-PO-PY. Foliated.											
<<Min: 53.1 - 54.65 10% Min: Ankerite>> Dyke											
<<Min: 53.1 - 77 0.5% Min: Pyrrhotite>>											
<<Min: 53.1 - 87.15 1% Min: Pyrite>>											
<<Min: 53.1 - 87.15 1% Min: Pyrrhotite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-286

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
54.65	71.75	RHYv Rhyolite volcaniclastic									
54.65 - 71.75: AK.											
<<Alt: 54.65 - 82.05 Moderate (Alt) Muscovite>>											
<<Struc: 62.68 - 62.73 Weak (Alt) Fault>> Sandy-clay oxydized fault gouge.											
71.75	78.72	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
71.75 - 78.72: Locally curdy texture.											
78.72	88.83	RHYva Coarse grained to ash tuff									
<<Min: 87.15 - 109.28 2% Min: Pyrrhotite>>											
<<Min: 87.15 - 119.2 0.5% Min: Pyrite>>											
<<Alt: 82.05 - 123 Strong (Alt) Muscovite>>											
88.83	103.93	RHY undifferentiated rhyolite									
88.83 - 103.93: Could be RHYcw.											
<<Struc: 90.64 - 103.8 Weak (Alt) Fault>> Broken zone accentuated by muscovite alteration											
103.93	122.20	MDS Sc Carbonaceous dominant mudstone									
103.93 - 122.2: AS locally, TML or andalousite (?).											
<<Min: 109 - 109.8 1% Min: Arsenopyrite>>											
<<Min: 109.28 - 122.2 0.5% Min: Pyrrhotite>>											
122.20	123.00	OI Heavilly disseminated sulphides in host schist	122.20	123.00	0.80	B00266941	72.8	0.822	3.27	0.05	0.17
122.2 - 123: In RHY.											
<<Min: 122.2 - 123 3% Min: Pyrite>>											
<<Min: 122.2 - 123 3% Min: Chalcopyrite>>											
<<Alt: 122.47 - 133.63 Strong (Alt) Chlorite>> And replacement of cordierite.											
123.00	123.88	OJ Heavilly disseminated sulphides in proximal altered rock	123.00	123.88	0.88	B00266942	85.9	0.839	3.21	0.11	0.17
<<Min: 123 - 123.88 5% Min: Pyrrhotite>>											
<<Min: 123 - 123.88 10% Min: Chalcopyrite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-286

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 123 - 128.98 Moderate (Alt) Cordierite>> Replaced locally.											
<<Struc: 123.68 - 123.69 dominant foliation>>											
123.88	126.92	OI Heavily disseminated sulphides in host schist	123.88	125.00	1.12	B00266943	12.9	0.145	0.54	0.01	0.05
<<Min: 123.88 - 126.92 5% Min: Chalcopyrite>>			125.00	126.00	1.00	B00266944	121	1.23	4.19	0.17	0.29
			126.00	126.92	0.92	B00266945	128	1	4.94	0.13	0.5
126.92	128.98	OG Chalcopyrite rich sulphides	126.92	127.90	0.98	B00266946	237	2.29	8.62	0.29	0.83
126.92 - 128.98: Could be OC.											
<<Min: 126.92 - 128.98 10% Min: Pyrrhotite>>			127.90	128.98	1.08	B00266947	178	4.1	8.21	0.18	0.97
<<Min: 126.92 - 128.98 30% Min: Chalcopyrite>>											
128.98	131.00	OA Magnetite bearing sulphides	128.98	130.00	1.02	B00266948	92.9	0.825	2.1	0.53	2.52
<<Min: 128.98 - 131 5% Min: Magnetite>>			130.00	131.00	1.00	B00266949	96.6	0.496	1.49	1.1	4.65
<<Min: 128.98 - 131 2% Min: Chalcopyrite>> One patch contained in sample B00266949.											
131.00	134.04	OA Magnetite bearing sulphides	131.00	131.97	0.97	B00266952	79.8	0.909	2.51	0.16	1
131 - 134.04: Brecciated locally, could be OD.											
<<Min: 131 - 134.04 3% Min: Pyrrhotite>>			131.97	132.83	0.86	B00266953	95.3	1.69	3.29	0.09	1.22
<<Min: 131 - 134.04 10% Min: Magnetite>>			132.83	133.43	0.60	B00266954	73.8	0.921	2.48	0.1	4.94
<<Min: 131 - 134.04 10% Min: Chalcopyrite>>			133.43	134.04	0.61	B00266955	133	2.64	5.35	0.14	2.93
134.04	134.56	OA Magnetite bearing sulphides	134.04	134.56	0.52	B00266956	139	0.798	1.06	2.05	11.7
<<Min: 134.04 - 134.46 10% Min: Magnetite>>											
<<Min: 134.46 - 135.1 3% Min: Sphalerite>>											
<<Min: 134.46 - 135.1 0.5% Min: Galena>>											
<<Min: 134.46 - 135.1 0.5% Min: Chalcopyrite>>											
134.56	135.10	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	134.56	135.10	0.54	B00266957	83.6	0.845	0.16	1.22	8.54
135.10	136.00	OA Magnetite bearing sulphides	135.10	136.00	0.90	B00266958	69.1	0.399	0.35	0.97	6.55
<<Min: 135.1 - 136 5% Min: Magnetite>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-286

From (m) To (m) Rocktype & Description

136.00 146.72 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

FG

136 - 146.72: 143 to 144.30, large dolomite patch or veins, and QZ with well developed SP crystals.

<<Min: 136 - 146.72 15% Min: Sphalerite>>

<<Min: 136 - 146.72 2% Min: Galena>>

<<Min: 136 - 146.72 1% Min: Chalcopryite>>

<<Vein: 143.21 - 143.62 Quartz-Sulphide>> QZ-CA veins with GL well developed cristals, PY and SP.

<<Struc: 136.94 - 136.95 dominant foliation>> Lamination in MxSx.

<<Struc: 140.77 - 140.78 dominant foliation>> Lamination in MxSx.

146.72 147.50 OA Magnetite bearing sulphides

FMG

<<Min: 146.72 - 147.5 10% Min: Sphalerite>>

<<Min: 146.72 - 147.5 5% Min: Magnetite>>

<<Min: 146.72 - 147.5 2% Min: Galena>>

147.50 154.44 RHYvl Lapilli tuff

grey-green

147.5 - 154.44: Large QZ vein at contact with MxSx, blurry texture.

<<Alt: 149 - 170 Moderate (Alt) Muscovite>> Locally strong, related to green-grey alteration (?).

<<Vein: 147.84 - 148.97 Quartz-Sulphide>> QZ veins, SP cristals, PY, CP trace contained and PY at lower contact.

<<Vein: 149.9 - 151.58 Quartz>> QZ vein.

154.44 170.47 MAFi Mafic Intrusions (primarily green footwall mafic intrusion)

154.44 - 170.47: Green-grey alteration and strong silicification locally, aphanitic dyke possibly (log as a unit bellow even if narrow) from 170.47 to 170.87m. Large BI patch surrounding the green-grey alteration. Leucoxene.

<<Min: 157 - 170 1% Min: Sphalerite>>

<<Min: 157 - 170 2% Min: Pyrite>> In foliation, discontinuous veinlets.

<<Min: 157 - 170 0.5% Min: Galena>>

<<Min: 170 - 184 10% Min: Calcite>>

<<Alt: 154.44 - 179 Moderate (Alt) Chlorite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
136.00	137.00	1.00	B00266959	115	2.07	0.44	1.14	7.56

137.00	138.00	1.00	B00266961	136	1.39	0.29	0.54	6.17
138.00	139.00	1.00	B00266962	139	1.55	0.47	0.3	2.77
139.00	140.00	1.00	B00266963	124	1.17	0.19	0.73	3.41
140.00	141.00	1.00	B00266964	144	2.75	0.21	0.8	3.51
141.00	142.00	1.00	B00266965	314	3.86	0.15	3.83	8.83
142.00	143.00	1.00	B00266966	144	1.3	0.1	2.22	7.22
143.00	144.00	1.00	B00266967	96.7	0.609	0.01	1.76	3.81
144.00	145.00	1.00	B00266968	115	0.697	0.03	2.04	4.86
145.00	146.00	1.00	B00266969	91.2	1.28	0.12	1.38	5.2
146.00	146.72	0.72	B00266972	341	1.77	0.41	3.92	7.43
146.72	147.50	0.78	B00266973	231	0.434	0.3	7.41	14.2

147.50	149.00	1.50	B00266974	29.8	0.114	0.1	0.45	1.75
--------	--------	------	-----------	------	-------	-----	------	------

149.00	151.00	2.00	B00266975	8.3	0.045	0.03	0.13	0.29
151.00	152.50	1.50	B00266976	2.5	0.009	-0.01	0.06	0.13



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-286

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 156.9 - 174.08 Strong (Alt) Silicification>> Green-grey alteration											
<<Struc: 154.81 - 154.82 dominant foliation>>											
<<Struc: 158.4 - 158.41 dominant foliation>>											
170.47	170.87	RHYi	Aphanitic Rhyolite (intrusion)								
170.47 - 170.87: Or strong silicification.											
170.87	200.00	MAFi	Mafic Intrusions (primarily green footwall mafic intrusion)								
170.87 - 200: Strong BI alteration locally or bleaching. E.O.H.											
<<Min: 184 - 200 3% Min: Calcite>>											
<<Alt: 174.08 - 179 Strong (Alt) Biotite>> And patchy.											
<<Alt: 179 - 200 Strong (Alt) Chlorite>>											
<<Struc: 171.4 - 179.5 Moderate (Alt) Fault>> Broken zone, locally fault gouge (grey clay).											
<<Struc: 189.3 - 189.31 dominant foliation>>											
<<Struc: 196.55 - 196.56 dominant foliation>>											
End of Hole @ 200											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-287

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	David Nuttal
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	07-Oct-15
UTM Easting	414800.584	Core Size:	NQ3	Azimuth:	179.98	Date Logging Complete:	08-Oct-15
UTM Northing:	6815438.876	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1400.207	Casing Depth (m):	6	Length (m):	131	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	06-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	08-Oct-15
Local Elev. (m):						Purpose:	Resource/Met
Comments:						Parent Hole:	

This hole is designed to be resource infill between historic holes K94-045 & K94-041.

The structural hanging wall is composed of RHYc, RHYvl and MDSt intervals. Massive sulphide is present in small lenses intercalated with host schists from 30.5m to 67.32m (predominantly OA with OB and OI ore types within MET3 and MET7 domains). The structural footwall is composed of the MAFi unit. Mu alteration intensifies towards sulphide mineralization/quartz veins. Chlorite alteration is moderate to strong in mafics and patchy within the massive sulphides. Green/grey alteration (green muscovite with silicification) is present in large portions of the MAFi unit.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	179.98	0	179.98	APS	David Nuttal	06-Oct-15		<input checked="" type="checkbox"/>	
23	-58	159.7	22.5	182.2	ReflexEVS	Geotech	06-Oct-15	5839	<input checked="" type="checkbox"/>	
53	-57.6	168.2	22.5	190.7	ReflexEVS	Geotech	06-Oct-15	6227	<input type="checkbox"/>	Values not accepted, high magnetic field
83	-57	77.5	22.5	100	ReflexEVS	Geotech	06-Oct-15	1944	<input type="checkbox"/>	Values not accepted, low magnetic field
113	-56.7	163.9	22.5	186.4	ReflexEVS	Geotech	06-Oct-15	5704	<input checked="" type="checkbox"/>	
131	-56.7	163.9	22.5	186.4	ReflexEVS	Geotech	07-Oct-15	5710	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	9.00	CASN									
9.00	14.50	MDSw									
Casing Coherent rhyolite flow with carbonaceous content 9 - 14.5: Minor carbonaceous component. <<Min: 9 - 14.5 10% Min: Ankerite>> Oxidized <<Min: 9 - 21.7 2% Min: Pyrite>> <<Min: 9 - 39.64 0.25% Min: Calcite>> <<Alt: 9 - 33 Weak (Alt) Muscovite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-287

From (m) To (m) Rocktype & Description

<<Min: 39.64 - 39.74 5% Min: Calcite>>

39.74 40.04 RHYv Rhyolite volcaniclastic
40.04 40.23 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Min: 40.04 - 40.23 8% Min: Calcite>>

40.23 40.59 OI Heavily disseminated sulphides in host schist

40.59 47.14 RHYv Rhyolite volcaniclastic

<<Min: 40.59 - 47.14 2% Min: Pyrite>> stringers foliation parallel

<<Min: 40.59 - 47.14 10% Min: Calcite>>

<<Min: 41.15 - 41.66 1% Min: Sphalerite>>

<<Min: 41.15 - 41.66 1% Min: Galena>>

<<Min: 41.15 - 41.66 1% Min: Chalcopryrite>>

<<Alt: 41.66 - 47.14 Moderate (Alt) Muscovite>>

<<Vein: 41.15 - 41.66 100% Quartz>> CP, GL, SP

<<Struc: 41.75 - 41.75 dominant foliation>>

<<Struc: 44.81 - 44.95 Weak (Alt) Fault>>

<<Struc: 45.31 - 45.7 Moderate (Alt) Fault>>

47.14 48.08 OA Magnetite bearing sulphides

<<Min: 47.14 - 56.18 3% Min: Calcite>>

<<Alt: 47.14 - 56.18 Trace (Alt) Chlorite>>

<<Struc: 47.2 - 47.2 dominant foliation>>

48.08 50.45 OA Magnetite bearing sulphides

48.08 - 50.45: laminated mg

50.45 54.73 OA Magnetite bearing sulphides

50.45 - 54.73: small (<10cm) intervals with laminated mg in unit.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
40.59	42.00	1.41	B00268971	53.7	0.667	0.24	0.05	0.08
42.00	42.95	0.95	B00268972	5	0.015	0.07	0.03	0.07
42.95	43.50	0.55	B00268973	1.1	0.007	0.02	-0.01	-0.01
43.50	45.00	1.50	B00268974	4.7	0.044	0.01	0.07	0.14
45.00	47.14	2.14	B00268975	2.6	0.014	0.03	0.07	0.11
47.14	48.14	1.00	B00268976	127	1.26	2.29	1.64	17.7
48.14	49.08	0.94	B00268977	152	2.61	4.48	1.44	4.75
49.08	49.58	0.50	B00268978	119	3.19	4.7	0.46	3.29
49.58	50.45	0.87	B00268979	99.8	1.75	2.81	0.73	5.65
50.45	51.45	1.00	B00268981	93.8	1.11	2.19	0.65	8.24
51.45	52.45	1.00	B00268982	123	1.1	1.71	1.54	9.39
52.45	53.45	1.00	B00268983	90.9	0.944	1.01	1.06	8.63
53.45	54.45	1.00	B00268984	146	0.787	0.95	2.75	13.7



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-287

From (m) To (m) Rocktype & Description

54.73 56.18 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

54.73 - 56.18: High sphalerite

56.18 57.00 RHYv Rhyolite volcaniclastic

56.18 - 57: ~30cm interval of RHYi at 57m

<<Min: 56.18 - 57.5 0.5% Min: Pyrite>>

<<Min: 56.18 - 63.87 10% Min: Calcite>>

<<Alt: 56.18 - 63.87 Moderate (Alt) Muscovite>>

<<Struc: 56.75 - 56.75 dominant foliation>>

57.00 57.30 RHYi Aphanitic Rhyolite (intrusion)

57.30 63.87 RHYv Rhyolite volcaniclastic

<<Min: 57.5 - 63.87 3% Min: Pyrite>> stringers foliation parallel

<<Struc: 57.5 - 57.5 Fault>>

<<Struc: 59 - 63.87 Strong (Alt) Fault>>

63.87 64.60 OA Magnetite bearing sulphides

<<Min: 63.87 - 67.32 1% Min: Calcite>>

64.60 65.28 RHYv Rhyolite volcaniclastic

<<Min: 64.6 - 65.28 3% Min: Pyrite>> stringers foliation parallel

<<Alt: 64.6 - 65.28 Moderate (Alt) Muscovite>>

65.28 65.64 OA Magnetite bearing sulphides

65.28 - 65.64: low Cu and Pb

65.64 66.88 OA Magnetite bearing sulphides

66.88 67.32 OA Magnetite bearing sulphides

67.32 67.80 RHYv Rhyolite volcaniclastic

<<Min: 67.32 - 76.1 0.25% Min: Sphalerite>>

<<Min: 67.32 - 76.1 2% Min: Pyrite>>

<<Min: 67.32 - 81.7 8% Min: Calcite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
54.45	54.78	0.33	B00268985	180	0.929	0.18	4.46	12
54.78	55.78	1.00	B00268986	398	2.87	0.64	4.66	8.14

55.78	56.18	0.40	B00268987	370	1.13	0.2	5.93	10
56.18	57.68	1.50	B00268988	3.1	0.01	-0.01	0.03	0.04

57.68	59.18	1.50	B00268989	1.8	0.019	-0.01	-0.01	0.04
59.18	60.68	1.50	B00268991	2.6	0.05	-0.01	0.01	0.07
60.68	62.18	1.50	B00268992	3.5	0.035	-0.01	0.07	0.31
62.18	63.87	1.69	B00268993	42.2	0.353	0.36	0.28	1.07
63.87	64.60	0.73	B00268994	69.1	0.34	0.08	3.27	7.63

64.60	65.28	0.68	B00268995	17.1	0.359	0.06	0.19	0.36
-------	-------	------	-----------	------	-------	------	------	------

65.28	65.64	0.36	B00268996	112	0.929	0.14	2.55	5.59
-------	-------	------	-----------	-----	-------	------	------	------

65.64	66.00	0.36	B00268997	107	0.837	0.12	2.16	5.08
66.00	66.88	0.88	B00268998	168	1.3	0.42	2.77	8.3
66.88	67.32	0.44	B00268999	154	0.791	0.11	3.55	10.7
67.32	68.82	1.50	B00269501	14.4	0.4	0.07	0.03	0.09



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-287

From (m) To (m) Rocktype & Description

<<Alt: 67.32 - 88.6 Moderate (Alt) Muscovite>>

67.80 71.13 RHYc Rhyolite coherent volcanics

71.13 73.00 RHYv Rhyolite volcaniclastic

71.13 - 73: Alteration lithology, adjacent to massive sulphide mineralization. Main components are silica and muscovite/sericite. High calcite content and calcite banding makes this unit interpretable as a mafic protolith. Absence of leucocine.

<<Struc: 72.3 - 72.3 Weak (Alt) Fault>>

73.00 73.20 RHYi Aphanitic Rhyolite (intrusion)

73.20 76.10 RHYv Rhyolite volcaniclastic

<<Struc: 73.9 - 73.9 dominant foliation>>

<<Struc: 75.5 - 75.63 Moderate (Alt) Fault>>

76.10 81.57 OI Heavily disseminated sulphides in host schist

76.1 - 81.57: sulphide mineralization is anomalously high in this interval. Concentration of mineralization is heavily disseminated locally within interval. Mostly pyrite, sphalerite

<<Struc: 78.41 - 79.11 Strong (Alt) Fault>>

<<Struc: 79.62 - 79.62 dominant foliation>>

<<Struc: 80.75 - 81.4 Moderate (Alt) Fault>>

81.57 84.80 RHYv Rhyolite volcaniclastic

81.57 - 84.8: Contains coherent and non coherent textures.

<<Min: 81.57 - 88.63 0.25% Min: Sphalerite>>

<<Min: 81.57 - 88.63 3% Min: Pyrite>>

<<Min: 81.57 - 88.63 0.25% Min: Galena>>

<<Min: 81.57 - 88.63 0.25% Min: Chalcopyrite>>

<<Min: 81.7 - 84.4 2% Min: Calcite>>

<<Min: 84.4 - 88 8% Min: Calcite>>

<<Struc: 82.95 - 82.95 dominant foliation>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

68.82	70.32	1.50	B00269502	0.6	-0.005	-0.01	0.01	0.04
-------	-------	------	-----------	-----	--------	-------	------	------

70.32	71.82	1.50	B00269503	-0.3	0.005	-0.01	-0.01	0.01
-------	-------	------	-----------	------	-------	-------	-------	------

75.10	76.10	1.00	B00269504	3.1	0.03	0.02	0.19	0.21
-------	-------	------	-----------	-----	------	------	------	------

76.10	77.10	1.00	B00269505	8.7	0.108	0.17	0.25	0.15
-------	-------	------	-----------	-----	-------	------	------	------

77.10	78.10	1.00	B00269506	66.9	0.331	0.43	1.24	6.96
-------	-------	------	-----------	------	-------	------	------	------

78.10	79.10	1.00	B00269507	37.3	0.509	0.07	0.86	1.92
-------	-------	------	-----------	------	-------	------	------	------

79.10	80.10	1.00	B00269508	71	0.479	0.12	1.48	3.57
-------	-------	------	-----------	----	-------	------	------	------

80.10	80.75	0.65	B00269509	2.1	0.022	0.01	0.05	0.07
-------	-------	------	-----------	-----	-------	------	------	------

80.75	81.57	0.82	B00269511	3.5	0.08	-0.01	0.1	0.28
-------	-------	------	-----------	-----	------	-------	-----	------

81.57	82.57	1.00	B00269512	1	0.17	-0.01	0.06	0.08
-------	-------	------	-----------	---	------	-------	------	------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-287
From (m) To (m) Rocktype & Description

84.80 109.27 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

84.8 - 109.27: Complex interval due to alteration. RHYi is suspected to be in proximity.

<<Min: 88 - 88.63 10% Min: Calcite>>

<<Min: 88.63 - 92.2 25% Min: Calcite>>

<<Min: 88.63 - 97 1% Min: Pyrite>>

<<Min: 92.2 - 96 8% Min: Calcite>>

<<Min: 96 - 99 5% Min: Calcite>>

<<Min: 97.5 - 101.9 5% Min: Sphalerite>>

<<Min: 99 - 102 6% Min: Calcite>>

<<Min: 101.9 - 105 0.5% Min: Chalcopryrite>>

<<Min: 101.9 - 107 0.5% Min: Pyrite>>

<<Min: 102 - 105.6 15% Min: Calcite>>

<<Min: 105 - 105.3 0.5% Min: Pyrrhotite>>

<<Min: 105 - 107 2% Min: Sphalerite>>

<<Min: 105.6 - 107.9 10% Min: Calcite>>

<<Min: 107 - 109.27 5% Min: Chalcopryrite>>

<<Min: 107 - 109.27 3% Min: Pyrite>>

<<Min: 107.9 - 109.63 20% Min: Calcite>>

<<Alt: 89 - 92.2 Moderate (Alt) Chlorite>>

<<Alt: 92.2 - 97.42 Weak (Alt) Silicification>> Green-grey alteration, abundant quartz + sericite/muscovite. Fuchsite present/chromandine muscovite. RHYi suspected to be in proximity.

<<Alt: 92.2 - 97.9 Moderate (Alt) Muscovite>> Green-grey alteration, abundant quartz + sericite/muscovite. Fuchsite present/chromandine muscovite. RHYi suspected to be in proximity.

<<Alt: 97.42 - 101 Moderate (Alt) Silicification>> Green-grey alteration, abundant quartz + sericite/muscovite. Fuchsite present/chromandine muscovite. RHYi suspected to be in proximity.

<<Alt: 97.9 - 98.25 Trace (Alt) Chlorite>> chlorite alteration of fine grained biotite-rich host rock

<<Alt: 98.25 - 99.15 Strong (Alt) Muscovite>> Green-grey alteration, abundant quartz + sericite/muscovite. Fuchsite present/chromandine muscovite. RHYi suspected to be in proximity.

<<Alt: 99.15 - 101 Moderate (Alt) Muscovite>> Green-grey alteration, abundant quartz + sericite/muscovite. Fuchsite present/chromandine muscovite. RHYi suspected to be in proximity.

<<Alt: 101 - 102.2 Strong (Alt) Muscovite>> Green-grey alteration, abundant quartz + sericite/muscovite. Fuchsite present/chromandine muscovite. RHYi suspected to be in proximity.

<<Alt: 101.4 - 101.85 Strong (Alt) Silicification>> Green-grey alteration, abundant quartz + sericite/muscovite. Fuchsite present/chromandine muscovite. RHYi suspected to be in proximity.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
107.00	107.77	0.77	B00269513	2.3	0.088	0.1	0.01	0.04

107.77	109.27	1.50	B00269514	-0.3	-0.005	-0.01	-0.01	-0.01
--------	--------	------	-----------	------	--------	-------	-------	-------

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-287

From (m)To (m)Rocktype & Description			From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 101.65 - 102.85 Moderate (Alt) Silicification>> Green-grey alteration, abundant quartz + sericite/muscovite. Fuchsite present/chromandine muscovite. RHYi suspected to be in proximity.											
<<Alt: 102.2 - 102.85 Moderate (Alt) Muscovite>> Green-grey alteration, abundant quartz + sericite/muscovite. Fuchsite present/chromandine muscovite. RHYi suspected to be in proximity.											
<<Alt: 102.85 - 105.82 Weak (Alt) Chlorite>>											
<<Alt: 105.82 - 107 Moderate (Alt) Muscovite>> Green-grey alteration, abundant quartz + sericite/muscovite. Fuchsite present/chromandine muscovite. RHYi suspected to be in proximity.											
<<Alt: 105.82 - 107 Moderate (Alt) Silicification>> Green-grey alteration, abundant quartz + sericite/muscovite. Fuchsite present/chromandine muscovite. RHYi suspected to be in proximity.											
<<Alt: 107 - 109.27 Weak (Alt) Silicification>>											
<<Alt: 107 - 109.27 Weak (Alt) Muscovite>>											
<<Struc: 92 - 92 dominant foliation>>											
<<Struc: 97.14 - 97.38 Weak (Alt) Fault>>											
<<Struc: 97.6 - 97.6 dominant foliation>>											
<<Struc: 101.24 - 101.24 dominant foliation>>											
<<Struc: 104.5 - 104.5 Foliation>> 2nd foliation.											
<<Struc: 104.5 - 104.5 dominant foliation>>											
<<Struc: 107.05 - 107.05 dominant foliation>>											
109.27	109.63	OJ	Heavilly disseminated sulphides in proximal altered rock								
109.27 - 109.63: Small interval. Chlorite alteration intensity is 4. CP is predominant sulphide mineral (~5%) forming foliation parallel lenses/clots. Host schist is very fine grained.											
<<Alt: 109.27 - 116.4 Moderate (Alt) Chlorite>>											
109.63	117.21	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
<<Min: 109.63 - 116.3 0.5% Min: Pyrite>>											
<<Min: 109.63 - 118 15% Min: Calcite>>											
<<Min: 116.3 - 117.5 0.5% Min: Chalcopyrite>>											
<<Min: 116.3 - 119.2 1% Min: Pyrite>>											
<<Min: 116.3 - 129.63 2% Min: Sphalerite>>											
<<Min: 116.3 - 129.63 4% Min: Pyrite>>											
<<Min: 116.3 - 131 5% Min: Pyrrhotite>>											
<<Min: 116.3 - 131 0.25% Min: Chalcopyrite>> with PO											
<<Alt: 116.4 - 119.2 Weak (Alt) Chlorite>>											
109.63	110.47		0.84	B00269516	-0.3	-0.005	0.01	-0.01	0.02		

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-287

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 112 - 112 Foliation>> 2nd foliation											
<<Struc: 112 - 112 dominant foliation>>											
<<Struc: 113.6 - 113.6 dominant foliation>>											
117.21	129.63	RHYv Rhyolite volcaniclastic									
117.21 - 129.63: Coarse grained to ash tuff, with angular to sub rounded crystals.											
<<Min: 118 - 131 0.5% Min: Calcite>>											
<<Alt: 119.2 - 131 Weak (Alt) Muscovite>>											
<<Struc: 119.1 - 119.1 dominant foliation>>											
<<Struc: 121.2 - 121.2 Foliation>> 2nd foliation											
<<Struc: 121.2 - 121.2 dominant foliation>>											
<<Struc: 127.9 - 127.9 dominant foliation>>											
129.63	130.26	MDSt Rhyolite tuff dominant mudstone									
130.26	131.00	RHYv Rhyolite volcaniclastic									
<<Struc: 130.7 - 130.7 dominant foliation>>											
End of Hole @ 131											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-288

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	David Nuttal
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	08-Oct-15
UTM Easting	414800.352	Core Size:	HQ3	Azimuth:	179.61	Date Logging Complete:	09-Oct-15
UTM Northing:	6815436.95	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1400.507	Casing Depth (m):	6	Length (m):	86	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	08-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	09-Oct-15
Local Elev. (m):						Purpose:	Metallurgical Twin
Comments:						Parent Hole:	K15-287

This hole is a twin of K15-287 to collect sample of MET3 & MET7 Domains.

The structural hanging wall is composed of RHYc, MDSw and MDSc intervals. Massive sulphide occurs in lenses intercalated with host schists from 28.63m to 55.52m and from 62.5m to 65.95m (predominantly OA with OB and OI ore types within MET3 and MET7 domains). The structural footwall is composed of a package of RHYv, RHYi, MAFi, and small lenses of OI. Mu alteration intensifies towards sulphide mineralization/quartz veins. Chlorite alteration is patchy within the massive sulphides.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	179.61	0	179.61	APS	Geotech	08-Oct-15		<input checked="" type="checkbox"/>	
26	-59.1	159.5	22.5	182	ReflexEVS	Geotech	08-Oct-15	5798	<input checked="" type="checkbox"/>	
53	-58.7	157.1	22.5	179.6	ReflexEVS	Geotech	08-Oct-15	5158	<input checked="" type="checkbox"/>	
74	-58.9	161.7	22.5	184.2	ReflexEVS	Geotech	08-Oct-15	5706	<input checked="" type="checkbox"/>	
86	-58.5	159.3	22.5	181.8	ReflexEVS	Geotech	09-Oct-15	5699	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	6.00	CASN Casing									
6.00	14.26	RHYc Rhyolite coherent volcanics									
6 - 14.26: minor carbonaceous component											
<<Min: 6 - 14.71 15% Min: Ankerite>>											
<<Min: 6 - 21.52 2% Min: Pyrite>>											
<<Min: 6 - 21.52 1% Min: Pyrrhotite>>											
<<Alt: 6 - 47.3 Moderate (Alt) Muscovite>> intensity varies from weak moderate- moderate to moderate strong. Weak and strong (2, 6) not to be used.											
<<Struc: 11.3 - 13.5 Strong (Alt) Fault>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-288

From (m)				To (m)				Width				Sample				Ag PPM				Au PPM				Cu %				Pb %				Zn %			
14.26				14.71				MDS				Carbonaceous dominant mudstone																							
14.71				21.52				RHYc				Rhyolite coherant volcanics																							
14.71 - 21.52: Trace carbonaceous component																																			
<<Min: 14.71 - 21.52 0.25% Min: Sphalerite>>																																			
<<Struc: 17.65 - 17.82 Moderate (Alt) Fault>>																																			
<<Struc: 18.85 - 19 Weak (Alt) Fault>>																																			
<<Struc: 20 - 20.2 Moderate (Alt) Fault>>																																			
21.52				28.63				RHYc				Rhyolite coherant volcanics																							
<<Min: 21.52 - 28.62 2% Min: Sphalerite>>																																			
<<Min: 21.52 - 37.84 3% Min: Pyrite>>																																			
<<Struc: 28.5 - 28.63 Moderate (Alt) Fault>>																																			
28.63				29.55				OI				Heavilly disseminated sulphides in host schist																							
28.63 - 29.55: OB type mineralization. High sphalerite (~10%)																																			
<<Min: 29.53 - 37.84 1% Min: Pyrrhotite>>																																			
29.55				37.84				RHYc				Rhyolite coherant volcanics																							
<<Struc: 29.75 - 29.9 Moderate (Alt) Fault>>																																			
<<Struc: 32.36 - 32.5 Moderate (Alt) Fault>>																																			
37.84				39.93				OI				Heavilly disseminated sulphides in host schist																							
<<Struc: 37.84 - 37.9 Weak (Alt) Fault>>																																			
39.93				47.30				RHYv				Rhyolite volcaniclastic																							
39.93 - 47.3: Small ~10cm interval of RHYi ? At 47m																																			
<<Min: 39.93 - 47.3 2% Min: Pyrite>>																																			
<<Vein: 40.53 - 41.2 100% Quartz>>																																			
<<Struc: 44.6 - 44.82 Moderate (Alt) Fault>>																																			
<<Struc: 45.32 - 45.67 Moderate (Alt) Fault>>																																			
<<Struc: 47 - 47.25 Weak (Alt) Fault>>																																			

CG



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-288

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
47.30	48.37	OA Magnetite bearing sulphides 47.3 - 48.37: CP ~ 8%-10%. Mt ~ 10%, medium grain mxsx <<Alt: 47.3 - 49.7 Weak (Alt) Chlorite>>	47.30	48.37	1.07						
48.37	49.70	OA Magnetite bearing sulphides 48.37 - 49.7: laminated mt ~10%, medium grain mxsx <<Struc: 49.28 - 49.58 Moderate (Alt) Fault>>	48.37	49.70	1.33						
49.70	53.25	OA Magnetite bearing sulphides 49.7 - 53.25: mt ~15%, cp ~5-7%, medium grain mxsx <<Struc: 53 - 53.15 Moderate (Alt) Fault>>	49.70	50.70	1.00						
53.25	54.41	OA Magnetite bearing sulphides 53.25 - 54.41: laminated mt ~10-15%, medium grain mxsx	50.70	51.70	1.00						
54.41	55.50	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides 54.41 - 55.5: Low values for economic sulphides, medium grain mxsx <<Min: 55.47 - 62.5 4% Min: Pyrite>> <<Alt: 55.47 - 62.5 Moderate (Alt) Silicification>> <<Alt: 55.47 - 62.5 Moderate (Alt) Muscovite>>	51.70	52.70	1.00						
55.50	57.00	RHY undifferentiated rhyolite 55.5 - 57: coarse grained sub angular crystals present (locally). Highly altered lithology due to proximal RHYi intrusion. <<Struc: 55.55 - 56 Moderate (Alt) Fault>>	52.70	53.25	0.55						
57.00	57.25	RHYi Aphanitic Rhyolite (intrusion)	53.25	54.00	0.75						
57.25	59.00	RHY undifferentiated rhyolite 57.25 - 59: coarse grained sub angular crystals present (locally). Highly altered lithology due to proximal RHYi intrusion. <<Struc: 58.75 - 59.2 Moderate (Alt) Fault>>	54.00	54.41	0.41						
59.00	62.50	RHYi Aphanitic Rhyolite (intrusion)	54.41	55.00	0.59						
			55.00	55.50	0.50						
			55.50	56.50	1.00						
			56.50	57.50	1.00						
			57.50	58.50	1.00						
			58.50	59.50	1.00						
			59.50	60.50	1.00						

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-288

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 59.6 - 60 Moderate (Alt) Fault>>			60.50	62.50	2.00						
<<Struc: 61 - 62.5 Strong (Alt) Fault>>											
62.50	63.35	OA Magnetite bearing sulphides	62.50	63.35	0.85						
62.5 - 63.35: laminated mt ~ 8%, medium grain mxsx											
63.35	63.67	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	63.35	64.36	1.01						
63.35 - 63.67: Sp 10%, medium grain mxsx											
63.67	64.36	RHYi Aphanitic Rhyolite (intrusion)									
63.67 - 64.36: Small fragment of RHYi at base of interval; cut off by fault at lower contact.											
<<Min: 63.67 - 64.36 2% Min: Sphalerite>>											
<<Min: 63.67 - 64.36 2% Min: Pyrite>>											
<<Alt: 63.67 - 64.36 Moderate (Alt) Silicification>>											
<<Alt: 63.67 - 64.36 Moderate (Alt) Muscovite>>											
<<Struc: 64 - 64.36 Moderate (Alt) Fault>>											
64.36	64.71	OA Magnetite bearing sulphides	64.36	64.71	0.35						
64.36 - 64.71: mt ~8%, medium grain mxsx											
64.71	65.95	OA Magnetite bearing sulphides	64.71	65.50	0.79						
64.71 - 65.95: laminated mt ~ 10-12%, medium grain mxsx											
65.95	67.80	RHYv Rhyolite volcanoclastic	65.50	65.95	0.45						
65.95 - 67.8: coarse grained sub angular crystals present (locally). Highly altered lithology due to proximal RHYi intrusion.			65.95	67.36	1.41						
<<Min: 65.95 - 66.2 1% Min: Chalcopyrite>>											
<<Min: 67.36 - 74.96 3% Min: Pyrite>>			67.36	68.36	1.00						
<<Alt: 65.95 - 86 Moderate (Alt) Silicification>>											
<<Alt: 65.95 - 86 Moderate (Alt) Muscovite>>											
<<Struc: 66.2 - 67.36 Intense (Alt) Fault>>											
67.80	70.50	RHYc Rhyolite coherent volcanics	68.36	69.36	1.00						
<<Struc: 67.85 - 68.1 Weak (Alt) Fault>>			69.36	70.36	1.00						
<<Struc: 69 - 69.3 Weak (Alt) Fault>>			70.36	71.36	1.00						

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-288

From (m)		To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
70.50	72.41	RHYv	Rhyolite volcanoclastic	71.36	72.36	1.00						
70.5 - 72.41: coarse grained sub angular crystals present (locally). Highly altered lithology due to proximal RHYi intrusion.												
<<Struc: 70.5 - 71.3 Strong (Alt) Fault>>												
<<Struc: 71.68 - 71.72 Weak (Alt) Fault>>												
72.41	72.70	RHYi	Aphanitic Rhyolite (intrusion)	72.36	73.36	1.00						
<<Min: 72.41 - 74.96 1% Min: Sphalerite>>												
72.70	74.96	RHYv	Rhyolite volcanoclastic	73.36	74.36	1.00						
72.7 - 74.96: coarse grained sub angular - sub rounded crystals present (locally). Highly altered lithology due to proximal RHYi intrusion.												
<<Vein: 73.39 - 74.66 90% Quartz>>												
74.96	75.20	OI	Heavilly disseminated sulphides in host schist	74.36	75.36	1.00						
75.20	77.90	RHYv	Rhyolite volcanoclastic	75.36	76.76	1.40						
75.2 - 77.9: coarse grained sub angular crystals present (locally). Highly altered lithology due to proximal RHYi intrusion.												
<<Struc: 76.85 - 77.4 Strong (Alt) Fault>>												
<<Struc: 77.6 - 78.44 Strong (Alt) Fault>>												
77.90	79.13	OI	Heavilly disseminated sulphides in host schist	76.76	78.13	1.37						
79.13	86.00	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)	78.13	79.13	1.00						
<<Min: 79.13 - 86 2% Min: Pyrite>> Also disseminated												
				80.13	81.13	1.00						
				81.13	82.13	1.00						
				82.13	83.13	1.00						
				83.13	84.13	1.00						
End of Hole @ 86												

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-289

Prospect:	ABM	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Cooper Campbell
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Cooper Campbell	Date Logging Start:	11-Oct-15
UTM Easting	414598	Core Size:	NQ3	Azimuth:	180.7	Date Logging Complete:	13-Oct-15
UTM Northing:	6815652	Casing Pulled?:	Yes	Dip:	-70	Drill Company:	Geotech
UTM Elev. (m):	1445.64	Casing Depth (m):	4.5	Length (m):	236	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	08-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	10-Oct-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

The purpose of this hole was to test the continuity/extension of the lower MET 4 magnetite sulphide lens. No significant sulphide lens was intersected in this hole.

The upper portion of this hole consists primarily of intercalated RHYcw, RHYvx, and RHYvl intruded by MAFi. The upper package of volcanics and flows grades into MDSt, MDSc, and MDSw. A major lens of massive sulphide was not intersected. RHYi was intersected from 181.65-194.28m. This is where the massive sulphide zone was anticipated. A very thin unit of MAFi was intersected below RHYi. Two narrow (<21cm) semi-massive sulphide intervals were intersected below RHYi. Weak SP mineralization was logged over these intervals. RHYc, MDSc, RHYcw, RHYvx, and RHYvl were intersected below the MAFi unit.

A small zone of what is interpreted as a weak CI-CL zone was intersected above RHYi. A weak CL zone straddles the weakly mineralized zone below RHYi.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-70	180.7	0	180.7	APS	Cooper Campbell	08-Oct-15		<input checked="" type="checkbox"/>	
26	-68.7	161.6	22.5	184.1	ReflexEVS	Geotech	09-Oct-15	5822	<input checked="" type="checkbox"/>	
50	-68.8	163.6	22.5	186.1	ReflexEVS	Geotech	09-Oct-15	5751	<input checked="" type="checkbox"/>	
77	-69	162.5	22.5	185	ReflexEVS	Geotech	09-Oct-15	5751	<input checked="" type="checkbox"/>	
101	-69.2	164.4	22.5	186.9	ReflexEVS	Geotech	09-Oct-15	5754	<input checked="" type="checkbox"/>	
125	-69.2	162.5	22.5	185	ReflexEVS	Geotech	09-Oct-15	5773	<input checked="" type="checkbox"/>	
150	-69	165.8	22.5	188.3	ReflexEVS	Geotech	09-Oct-15	5775	<input checked="" type="checkbox"/>	
176	-68.9	169.2	22.5	191.7	ReflexEVS	Geotech	09-Oct-15	5615	<input checked="" type="checkbox"/>	
200	-68.8	172.4	22.5	194.9	ReflexEVS	Geotech	10-Oct-15	5794	<input checked="" type="checkbox"/>	
224	-68.7	170.5	22.5	193	ReflexEVS	Geotech	10-Oct-15	5775	<input checked="" type="checkbox"/>	
236	-68.5	169.7	22.5	192.2	ReflexEVS	Geotech	10-Oct-15	5795	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	4.50	OVBN Overburden									

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-289

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
4.50	5.80	MAFi Mafic Intrusions (primarily footwall mafic intrusion) <<Min: 4.5 - 20.69 3% Min: Pyrite>> <<Min: 4.5 - 20.69 0.01% Min: Pyrrhotite>> <<Min: 4.5 - 63.39 5% Min: Calcite>> <<Alt: 4.5 - 5.8 Moderate (Alt) Chlorite>>									
5.80	20.69	RHYvl Lapilli tuff 5.8 - 20.69: ash locally. <<Alt: 5.8 - 41.26 Weak (Alt) Muscovite>>									
20.69	27.03	RHYvx Quartz and/or feldspar crystal tuff 20.69 - 27.03: MAFi locally <<Min: 20.69 - 39.34 0.01% Min: Sphalerite>> <<Min: 20.69 - 39.34 0.01% Min: Pyrite>> <<Min: 20.69 - 39.34 0.5% Min: Pyrrhotite>> <<Min: 20.69 - 39.34 0.01% Min: Galena>>									
27.03	27.58	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
27.58	28.95	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
28.95	34.39	RHYcw Curdy textured-flow banded (flows, subvolcanics) 28.95 - 34.39: Great example of crenulation cleavage creating pseudofragmental texture in RHYcw.									
34.39	35.55	MAFi Mafic Intrusions (primarily footwall mafic intrusion) <<Alt: 34.39 - 60.76 Weak (Alt) Chlorite>>									
35.55	39.34	RHYv Rhyolite volcanoclastic									
39.34	40.51	RHYc Rhyolite coherent volcanics 39.34 - 40.51: RHYv host rock., could be RHYi <<Min: 39.34 - 43.47 0.5% Min: Sphalerite>> VN									

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-289

From (m)			To (m)			Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 39.34 - 43.47 0.5% Min: Pyrrhotite>> VN															
<<Min: 39.34 - 43.47 0.01% Min: Galena>>															
<<Alt: 39.34 - 40.51 Weak (Alt) Silicification>>															
40.51 41.26 MAFi Mafic Intrusions (primarily footwall mafic intrusion)															
41.26 43.47 RHYc Rhyolite coherant volcanics															
41.26 - 43.47: RHYv host rock.could be RHYi															
<<Alt: 41.26 - 43.65 Moderate (Alt) Silicification>>															
<<Alt: 41.26 - 43.65 Moderate (Alt) Muscovite>>															
43.47 47.00 RHYvl Lapilli tuff															
43.47 - 47: Weak chlorite overprint.															
<<Min: 43.47 - 64.84 0.01% Min: Sphalerite>>															
<<Min: 43.47 - 64.84 0.01% Min: Pyrite>>															
<<Min: 43.47 - 64.84 1% Min: Pyrrhotite>> WIS															
<<Min: 43.47 - 64.84 0.01% Min: Chalcopryite>>															
<<Alt: 43.65 - 135.99 Weak (Alt) Muscovite>>															
47.00 50.46 MAFi Mafic Intrusions (primarily footwall mafic intrusion)															
47 - 50.46: MAFi dyke swarm in RHYv with CL overprint.															
50.46 55.74 RHYvl Lapilli tuff															
50.46 - 55.74: Toppo															
55.74 56.73 MAFi Mafic Intrusions (primarily footwall mafic intrusion)															
56.73 60.76 RHYvl Lapilli tuff															
60.76 63.39 MAFi Mafic Intrusions (primarily footwall mafic intrusion)															
<<Alt: 60.76 - 63.39 Moderate (Alt) Chlorite>>															
63.39 66.29 RHYvl Lapilli tuff															
<<Min: 63.39 - 84.86 0.5% Min: Calcite>>															
<<Min: 64.94 - 72.53 1% Min: Sphalerite>> WIS															

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-289

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 64.94 - 72.53 0.01% Min: Pyrite>>											
<<Min: 64.94 - 72.53 1% Min: Pyrrhotite>>											
<<Min: 64.94 - 72.53 0.01% Min: Chalcopyrite>>											
<<Alt: 63.39 - 66.29 Weak (Alt) Chlorite>>											
<<Alt: 63.39 - 66.29 Weak (Alt) Cordierite>>											
66.29	68.83	RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
68.83	71.66	RHYvl	Lapilli tuff								
71.66	72.53	RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
72.53	83.05	RHYvl	Lapilli tuff								
72.53 - 83.05: Trace fine grained MAFi up to 15cm.											
<<Min: 72.53 - 107.13 0.01% Min: Sphalerite>>											
<<Min: 72.53 - 107.13 0.5% Min: Pyrite>> FD											
<<Min: 72.53 - 107.13 1% Min: Pyrrhotite>> VN											
<<Min: 72.53 - 107.13 0.01% Min: Chalcopyrite>>											
<<Vein: 81.26 - 84.86 5% Carbonate-Kaolinite/White clay 50 deg. >> AK veinlets with white kaolinite? core.											
<<Struc: 76.87 - 76.88 Contact>>											
83.05	84.86	RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
84.86	88.26	RHYvl	Lapilli tuff								
<<Min: 84.86 - 97.72 5% Min: Calcite>>											
88.26	91.39	RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
88.26 - 91.39: Weak CL overprint with CL filled fractures.											
<<Alt: 90.42 - 97.72 Weak (Alt) Chlorite>>											
<<Vein: 89.41 - 97.72 1% Chlorite 70 deg. >> Chlorite stringers. Slickensided.											
91.39	107.13	RHYvl	Lapilli tuff								
91.39 - 107.13: Weak CL overprint with CL filled fractures.											
<<Min: 97.72 - 122.13 1% Min: Calcite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-289

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
107.13	122.13	RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
107.13 - 122.13: Trace BI overprint. Trace MAFi.											
<<Min: 107.13 - 122.82 1% Min: Pyrite>> FD											
<<Min: 107.13 - 122.82 1% Min: Pyrrhotite>> WIS											
122.13	131.21	RHYvl	Lapilli tuff								
<<Min: 122.13 - 135.99 10% Min: Calcite>>											
<<Min: 122.82 - 135.99 1% Min: Pyrrhotite>>											
<<Alt: 124.83 - 131.21 Weak (Alt) Silicification>>											
131.21	135.07	MDSt	Rhyolite tuff dominant mudstone								
135.07	135.99	MDS	Carbonaceous dominant mudstone								
135.99	146.50	MDSw	Coherent rhyolite flow with carbonaceous content								
<<Min: 135.99 - 139.59 0.01% Min: Sphalerite>>											
<<Min: 135.99 - 139.59 0.01% Min: Pyrrhotite>> DIS											
<<Min: 135.99 - 148.51 3% Min: Pyrite>> FD											
<<Min: 135.99 - 156.83 1% Min: Calcite>> DIS											
<<Alt: 135.99 - 144.04 Moderate (Alt) Muscovite>>											
<<Alt: 144.04 - 150.37 Strong (Alt) Muscovite>>											
<<Vein: 135.99 - 148.51 75% Quartz-Carbonate-Sulphide 65 deg. >> QZ-CA-SP-PO											
<<Struc: 135.99 - 136.59 Moderate (Alt) Fault>>											
146.50	157.14	RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
<<Min: 148.51 - 170.76 0.01% Min: Sphalerite>>											
<<Min: 148.51 - 170.76 1% Min: Pyrite>> FD											
<<Min: 148.51 - 170.76 0.01% Min: Pyrrhotite>>											
<<Min: 156.83 - 159.74 3% Min: Calcite>>											
<<Alt: 150.37 - 181.45 Moderate (Alt) Muscovite>>											
157.14	161.84	RHYvx	Quartz and/or feldspar crystal tuff								

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-289
From (m) **To (m)** **Rocktype & Description**

<<Min: 159.74 - 181.65 0.01% Min: Calcite>>

161.84 162.49 MDSc Carbonaceous dominant mudstone

<<Min: 161.84 - 162.49 0.5% Min: Sphalerite>>

162.49 178.37 MDSt Rhyolite tuff dominant mudstone

<<Min: 170.76 - 178.37 0.5% Min: Sphalerite>>

<<Min: 170.76 - 178.37 1% Min: Pyrrhotite>> WIS

<<Min: 170.76 - 178.37 0.01% Min: Chalcopryite>>

<<Alt: 170.76 - 177.51 Weak (Alt) Chlorite>>

<<Alt: 177 - 177.13 Weak (Alt) Cordierite>> Interpretted as Cl

178.37 181.65 RHY undifferentiated rhyolite

178.37 - 181.65: Protolith obscured due to strong sericitization and faulting.

<<Min: 178.37 - 181.65 0.5% Min: Sphalerite>> WIS

<<Min: 178.37 - 181.65 3% Min: Pyrite>> DIS

<<Min: 178.37 - 181.65 0.01% Min: Galena>>

<<Min: 178.37 - 181.65 0.01% Min: Chalcopryite>>

<<Alt: 181.45 - 182.2 Moderate (Alt) Muscovite>>

<<Alt: 181.45 - 194.31 Strong (Alt) Silicification>>

<<Struc: 178.37 - 180.52 Moderate (Alt) Fault>>

<<Struc: 180.52 - 181.45 Strong (Alt) Fault>>

181.65 194.28 RHYi Aphanitic Rhyolite (intrusion)

<<Min: 181.65 - 194.28 0.5% Min: Sphalerite>>

<<Min: 181.65 - 194.28 3% Min: Pyrite>> FD

<<Min: 181.65 - 194.28 3% Min: Calcite>>

<<Alt: 182.2 - 193.89 Weak (Alt) Muscovite>>

<<Alt: 193.89 - 196.86 Moderate (Alt) Muscovite>>

<<Vein: 181.65 - 194.28 5% Quartz-Carbonate-Sulphide 50 deg. >> QZ-PY-CA-SP

194.28 196.86 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

194.28 - 196.86: May be RHY. Protolith obscured by SI-MU overprint from RHYi.

<<Min: 194.28 - 198.41 10% Min: Calcite>> DIS

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

176.87	178.37	1.50	B00268345	3.6	-0.005	0.04	0.02	0.17
--------	--------	------	-----------	-----	--------	------	------	------

178.37	179.37	1.00	B00268346	9.5	0.008	0.02	0.24	0.07
--------	--------	------	-----------	-----	-------	------	------	------

179.37	180.37	1.00	B00268347	5.5	0.01	0.16	0.03	0.27
--------	--------	------	-----------	-----	------	------	------	------

180.37	181.00	0.63	B00268348	2.9	-0.005	0.05	0.1	0.65
--------	--------	------	-----------	-----	--------	------	-----	------

181.00	181.65	0.65	B00268349	1.1	-0.005	-0.01	0.02	0.39
--------	--------	------	-----------	-----	--------	-------	------	------

181.65	183.15	1.50	B00268351	2.8	0.171	-0.01	0.02	0.44
--------	--------	------	-----------	-----	-------	-------	------	------

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-289

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 194.28 - 203.3 0.5% Min: Sphalerite>> FD,VN											
<<Min: 194.28 - 203.3 3% Min: Pyrite>> FD											
<<Min: 194.28 - 203.3 0.5% Min: Pyrrhotite>>											
<<Alt: 194.31 - 194.95 Moderate (Alt) Silicification>>											
196.86 198.41 RHY undifferentiated rhyolite											
196.86 - 198.41: Protolith obscured by SI-MS-MU overprint from RHYi and QZ-CA veining.											
<<Alt: 196.86 - 198.41 Strong (Alt) Muscovite>>											
<<Vein: 197.12 - 198.96 20% Quartz-Carbonate-Sulphide 75 deg. >> CA-QZ-PY-SP											
198.41 206.05 RHYc Rhyolite coherant volcanics											
<<Min: 198.41 - 220.94 0.01% Min: Calcite>>											
<<Min: 203.3 - 212.46 0.5% Min: Pyrite>> WIS											
<<Min: 203.3 - 212.46 0.01% Min: Pyrrhotite>>											
<<Alt: 198.41 - 198.96 Moderate (Alt) Muscovite>>											
<<Alt: 198.96 - 212.46 Strong (Alt) Muscovite>>											
<<Struc: 199.44 - 199.45 dominant foliation>>											
<<Struc: 205.7 - 205.71 dominant foliation>>											
206.05 207.09 MDSc Carbonaceous dominant mudstone											
<<Min: 206.05 - 207.09 0.01% Min: Arsenopyrite>>											
207.09 212.46 RHYcw Curdy textured-flow banded (flows, subvolcanics)											
<<Struc: 211.67 - 211.68 dominant foliation>>											
212.46 224.19 RHYvx Quartz and/or feldspar crystal tuff			212.73	214.23	1.50	B00268352	0.5	-0.005	-0.01	0.02	0.02
212.46 - 224.19: QE											
<<Min: 212.46 - 214.23 1% Min: Pyrite>>			214.23	214.73	0.50	B00268353	6.9	0.015	-0.01	0.33	1.31
<<Min: 212.46 - 214.23 0.5% Min: Pyrrhotite>>			214.73	216.23	1.50	B00268354	-0.3	-0.005	-0.01	-0.01	0.02
<<Min: 214.23 - 214.27 1% Min: Magnetite>>			217.94	219.44	1.50	B00268355	0.9	0.005	0.01	-0.01	0.01
<<Min: 214.23 - 214.27 15% Min: Pyrite>>			219.44	219.94	0.50	B00268356	1.2	0.018	0.03	0.01	0.7
<<Min: 214.23 - 214.27 5% Min: Sphalerite>>			219.94	221.44	1.50	B00268357	-0.3	-0.005	-0.01	-0.01	-0.01
<<Min: 214.27 - 219.73 0.5% Min: Sphalerite>>											
<<Min: 214.27 - 219.73 0.01% Min: Chalcopyrite>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-289

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %									
<<Min: 214.27 - 219.73 1% Min: Pyrrhotite>>																				
<<Min: 214.27 - 219.73 3% Min: Pyrite>> DIS																				
<<Min: 219.73 - 219.94 1% Min: Magnetite>>																				
<<Min: 219.73 - 219.94 0.5% Min: Pyrrhotite>>																				
<<Min: 219.73 - 219.94 15% Min: Pyrite>>																				
<<Min: 219.73 - 219.94 3% Min: Sphalerite>>																				
<<Min: 219.73 - 219.94 0.01% Min: Chalcopyrite>>																				
<<Min: 219.94 - 236 0.01% Min: Pyrrhotite>>																				
<<Min: 219.94 - 236 0.01% Min: Pyrite>>																				
<<Min: 220.94 - 224.11 10% Min: Calcite>>																				
<<Min: 224.11 - 236 1% Min: Calcite>>																				
<<Alt: 212.46 - 214.18 Moderate (Alt) Muscovite>>																				
<<Alt: 214.18 - 227.95 Weak (Alt) Chlorite>>																				
<<Alt: 214.18 - 236 Weak (Alt) Muscovite>>																				
<<Struc: 216.27 - 216.28 dominant foliation>>																				
224.19	230.34	RHYvx	Quartz and/or feldspar crystal tuff																	
224.19 - 230.34: Resembles a MAFi. Coarse BI. Definitely contains QE though.																				
<<Struc: 226.78 - 226.79 dominant foliation>>																				
230.34	236.00	RHYvl	Lapilli tuff																	
<<Struc: 235.92 - 235.93 dominant foliation>>																				
End of Hole @ 236																				

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-290

Prospect:	ABM	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Jerome de Pasquale	Date Logging Start:	09-Oct-15
UTM Easting	415151	Core Size:	NQ3	Azimuth:	180.5	Date Logging Complete:	11-Oct-15
UTM Northing:	6815395	Casing Pulled?:	Yes	Dip:	-65	Drill Company:	Geotech
UTM Elev. (m):	1403.9	Casing Depth (m):	9	Length (m):	142	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	08-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	10-Oct-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

K15-290 is a resource infill hole drilled between historic holes K94-015 and K95-134.

The top of the hole is made up of rhyolitic units, dominantly volcanoclastic ashes, and carbonaceous mudstone. The hole intersects mineralization from 75.00 to 89.90m (massive and semi massive sulfide). The ore zone consists in OA, OB and OI domains containing PY-SP-MG-GL-CP.

The hanging-wall shows a progressive muscovite alteration (moderate to strong from 54.85m to 75.00m) followed by a narrow moderate CL-CI proximal alteration (0.8 metre). The footwall consists of mafic CL-CA-BI schist.

At 137.80m, a rhyolitic aphanitic dyke is intersected. The hole ends at 142.00m on this unit.

K15-290 does not show the green-grey alteration usually associated with the RHYi; sulfide assemblages are observed in the mafic sill (PY-GL-SP-CP trace, PO trace) as well as rhyolitic xenoliths.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-65	180.5	0	180.5	APS	Jerome de Pasquale	08-Oct-15		<input checked="" type="checkbox"/>	
18	-64	159.3	22.5	181.8	ReflexEVS	Geotech	08-Oct-15	5838	<input checked="" type="checkbox"/>	
51	-64.2	164.2	22.5	186.7	ReflexEVS	Geotech	08-Oct-15	5873	<input checked="" type="checkbox"/>	
78	-63.2	154.5	22.5	177	ReflexEVS	Geotech	09-Oct-15	6479	<input type="checkbox"/>	Values not accepted, high magnetic field
108	-62.6	165.6	22.5	188.1	ReflexEVS	Geotech	09-Oct-15	5690	<input checked="" type="checkbox"/>	
142	-62.9	166.9	22.5	189.4	ReflexEVS	Geotech	09-Oct-15	5731	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	9.00	CASN Casing									
9.00	25.10	RHYv Rhyolite volcanoclastic									
grey-green											
9 - 25.1: Dominantly RHYva. Weak CL alteration from 10 to 19.0m (dark color)											
<<Min: 9 - 39 0.5% Min: Pyrite>>											
<<Min: 9 - 39 0.5% Min: Pyrrhotite>>											
<<Min: 9 - 78 0.1% Min: Calcite>> and vein veins.											
<<Alt: 12 - 19.2 Weak (Alt) Chlorite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-290

From (m)	To (m)	Rocktype & Description										From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %		
<<Alt: 19.2 - 54.85 Moderate (Alt) Muscovite>>																						
25.10	30.85	RHYcw	Curdy textured-flow banded (flows, subvolcanics)										grey-green									
25.1 - 30.85: Curdy texture locally.																						
30.85	58.70	RHYva	Coarse grained to ash tuff										grey-green									
<<Min: 39 - 54.85 0.5% Min: Pyrite>>																						
<<Min: 39 - 54.85 1% Min: Pyrrhotite>>																						
<<Min: 54.85 - 75 2% Min: Pyrite>> and aggregated.																						
<<Min: 54.85 - 75 2% Min: Pyrrhotite>> and stringers.																						
<<Alt: 40 - 50 Weak (Alt) Chlorite>>																						
<<Alt: 54.85 - 75 Strong (Alt) Muscovite>>																						
58.70	65.70	RHY	undifferentiated rhyolite										grey-green									
58.7 - 65.7: Possibly RHYcw. Locally MDSw.																						
65.70	72.70	MDS	Carbonaceous dominant mudstone										black									
65.7 - 72.7: PY patch, PO stringers and needles.																						
72.70	75.00	RHY	undifferentiated rhyolite										grey-green									
72.7 - 75: Possibly RHYcw																						
<<Alt: 73.66 - 76.5 Moderate (Alt) Cordierite>>																						
75.00	75.81	OI	Heavilly disseminated sulphides in host schist										grey-green									
75 - 75.81: Mineralization in RHY.																						
<<Min: 75 - 75.81 2% Min: Sphalerite>>																						
<<Min: 75 - 75.81 0.5% Min: Pyrrhotite>>																						
<<Min: 75 - 75.81 2% Min: Galena>>																						
<<Min: 75 - 75.81 5% Min: Chalcopyrite>>																						
<<Alt: 75 - 75.81 Moderate (Alt) Chlorite>>																						

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-290
From (m) **To (m)** **Rocktype & Description**

75.81 76.62 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Min: 75.81 - 76.62 10% Min: Sphalerite>>

<<Min: 75.81 - 76.62 3% Min: Galena>>

<<Min: 75.81 - 76.62 0.5% Min: Chalcopyrite>>

76.62 78.00 OA Magnetite bearing sulphides

<<Min: 76.62 - 78 10% Min: Sphalerite>>

<<Min: 76.62 - 78 5% Min: Magnetite>>

<<Min: 76.62 - 78 2% Min: Galena>>

<<Struc: 77.43 - 77.44 dominant foliation>> SP lamination in MxSx.

78.00 82.00 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

78 - 82: Brecciated from 78.9m to 79.15m. Fractured. Medium grain locally. QZ-CL banded.

<<Min: 78 - 89.9 15% Min: Sphalerite>>

<<Min: 78 - 89.9 0.5% Min: Magnetite>>

<<Min: 78 - 89.9 3% Min: Galena>>

<<Min: 78 - 89.9 0.1% Min: Chalcopyrite>>

<<Min: 78 - 89.9 1% Min: Calcite>>

82.00 87.00 OI Heavily disseminated sulphides in host schist

82 - 87: In RHY, almost OB.

<<Alt: 84 - 87 Moderate (Alt) Chlorite>> OI mixed with SI-CL bands and RHY, almost OI.

87.00 89.90 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

87 - 89.9: Core loss at lower contact. MU alteration, maybe some cordierite. Weakly faulted, RHY mixed with sulfides.

<<Alt: 88.5 - 92 Weak (Alt) Muscovite>>

FG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
75.81	76.62	0.81	B00266982	81.3	1.26	1.84	0.49	8.71

FG

76.62	77.33	0.71	B00266983	102	1.01	0.1	1.85	17.4
77.33	78.00	0.67	B00266984	63.3	0.404	0.49	0.75	14.5

FG

78.00	79.00	1.00	B00266985	282	3.54	0.4	3.87	8.81
-------	-------	------	-----------	-----	------	-----	------	------

79.00	80.00	1.00	B00266986	320	4.76	0.8	4.2	9.81
80.00	81.00	1.00	B00266987	426	3.23	0.75	3.53	7.94
81.00	82.00	1.00	B00266988	390	3.02	0.8	2.81	6.75

82.00	83.00	1.00	B00266989	364	2.5	0.28	5.22	8.34
-------	-------	------	-----------	-----	-----	------	------	------

83.00	84.00	1.00	B00266992	244	1.53	0.13	3.36	6.19
84.00	85.50	1.50	B00266993	87.8	0.609	0.1	2.23	5.08
85.50	87.00	1.50	B00266994	265	2.2	0.25	2.33	5.94
87.00	88.50	1.50	B00266995	418	3.4	0.41	3.25	8.77

88.50	89.90	1.40	B00266996	148	0.757	0.27	1.73	5.23
-------	-------	------	-----------	-----	-------	------	------	------

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-290

From (m) To (m) Rocktype & Description

89.90 99.20 MAFi Mafic Intrusions (primarily footwall mafic intrusion) green

<<Min: 89.9 - 114 10% Min: Calcite>>

<<Vein: 89.9 - 90.6 Quartz>> QZ vein at lower contact of the MxSx.

99.20 100.20 RHY undifferentiated rhyolite grey-green

99.2 - 100.2: Probably xenolith. Mu alteration in RHY, associated with large QZ vein at lower contact.

<<Vein: 100.05 - 100.15 Quartz-Pyrrhotite>> QZ vein cotaining PO, CL, maybe CI, TM. At contact between RHY altered MU and MAFi.

100.20 126.03 MAFi Mafic Intrusions (primarily footwall mafic intrusion) green-brown

100.2 - 126.03: Orientation of the foliation changing (shallower).

<<Min: 114 - 132 5% Min: Calcite>>

<<Struc: 103.3 - 103.6 Fault>> With CL gouge.

<<Struc: 107.88 - 107.89 dominant foliation>>

<<Struc: 119.93 - 119.94 dominant foliation>>

<<Struc: 122.95 - 122.96 dominant foliation>>

126.03 127.00 RHY undifferentiated rhyolite grey-green

126.03 - 127: Probably xenolith. Sharpe contact (upper and lower).

127.00 137.80 MAFi Mafic Intrusions (primarily footwall mafic intrusion) green-brown

127 - 137.8: Texture changing at 132.50m, patch of mineralization PY-GL-SP, PO and CP trace.

<<Min: 132 - 137.8 10% Min: Calcite>>

<<Min: 132.5 - 137.8 0.5% Min: Sphalerite>>

<<Min: 132.5 - 137.8 1% Min: Pyrite>>

<<Min: 132.5 - 137.8 0.1% Min: Pyrrhotite>>

<<Min: 132.5 - 137.8 0.5% Min: Galena>>

<<Min: 132.5 - 137.8 0.1% Min: Chalcopyrite>>

<<Struc: 129.5 - 132 Fault>> Sheared and folded. Locally sandy-clay fault gouge.

137.80 142.00 RHYi Aphanitic Rhyolite (intrusion) beige

137.8 - 142: PY veins, few GL, few SP.

<<Min: 137.8 - 142 0.5% Min: Sphalerite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
89.90	91.40	1.50	B00266997	26.6	0.072	-0.01	0.37	0.89
91.40	92.90	1.50	B00266998	1.5	0.011	-0.01	0.01	0.03
92.90	94.40	1.50	B00266999	0.5	0.013	-0.01	-0.01	0.02

GeoSpark Logger ~ Drill Log

Project:	KZK		Hole Number:	K15-290					
	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %

<<Min: 137.8 - 142 2% Min: Pyrite>>
 <<Min: 137.8 - 142 0.5% Min: Galena>>

End of Hole @ 142

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-291

Prospect:	ABM	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	David Nuttal
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	David Nuttal	Date Logging Start:	10-Oct-15
UTM Easting	415073.1	Core Size:	NQ3	Azimuth:	216	Date Logging Complete:	13-Oct-15
UTM Northing:	6815745.6	Casing Pulled?:	Yes	Dip:	-50	Drill Company:	Geotech
UTM Elev. (m):	1387.57	Casing Depth (m):	21	Length (m):	242	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	09-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	12-Oct-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

This hole was planned to test the continuity/extension of massive sulphide lens. Drilling of hole K15-291 was successful in intersecting massive sulphide intervals, which confirm continuity/extension of the massive sulphide lens, down dip towards the north from previous intersections. The structural hanging wall is composed of a package of felsic volcanoclastic/coherent rocks, graphitic tuffaceous/coherent mudstones and foliation parallel mafic intrusives. Massive sulphide occurs from 218.34m to 221.24m (OB and OI style mineralization). The massive sulphide lens and hanging-wall shoulder lithologies are anomalously high in sphalerite content. The structural footwall is composed of felsic volcanoclastic/coherent rocks (adjacent to MXSX) underlain by chlorite altered mafics. Muscovite alteration intensifies towards the massive sulphide lens, though the intensity was not observed to reach strong or intense (6 - 7 on intensity scale). Chlorite alteration is trace to weak and is ubiquitously patchy throughout the hanging wall felsic volcanoclastic and mudstone units. Chlorite alteration is moderate (4) in mafic footwall.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-50	216.02	0	216.02	APS	David Nuttal	09-Oct-15		<input checked="" type="checkbox"/>	
32	-50.4	192.7	22.5	215.2	ReflexEVS	Geotech	10-Oct-15	5708	<input checked="" type="checkbox"/>	
59	-59	196.8	22.5	219.3	ReflexEVS	Geotech	10-Oct-15	5813	<input checked="" type="checkbox"/>	
83	-50.1	195.5	22.5	218	ReflexEVS	Geotech	10-Oct-15	5693	<input checked="" type="checkbox"/>	
107	-49.1	197.7	22.5	220.2	ReflexEVS	Geotech	10-Oct-15	5744	<input checked="" type="checkbox"/>	
134	-49.3	200.2	22.5	222.7	ReflexEVS	Geotech	11-Oct-15	5800	<input checked="" type="checkbox"/>	
158	-48.9	198	22.5	220.5	ReflexEVS	Geotech	11-Oct-15	5705	<input checked="" type="checkbox"/>	
182	-48.6	199.4	22.5	221.9	ReflexEVS	Geotech	11-Oct-15	5690	<input checked="" type="checkbox"/>	
209	-48.8	200.4	22.5	222.9	ReflexEVS	Geotech	12-Oct-15	5732	<input checked="" type="checkbox"/>	
233	-48.4	201.5	22.5	224	ReflexEVS	Geotech	12-Oct-15	5767	<input checked="" type="checkbox"/>	
242	-48	200.8	22.5	223.3	ReflexEVS	Geotech	12-Oct-15	5773	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	21.45	CASN									
21.45	23.16	RHYvl									
		Casing									
		Lapilli tuff									



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-291

From (m)		To (m)		Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 21.45 - 23.16 3% Min: Pyrite>>													
<<Min: 21.45 - 23.16 2% Min: Calcite>>													
<<Min: 21.45 - 24.76 1% Min: Pyrrhotite>>													
<<Alt: 21.45 - 93 Weak (Alt) Muscovite>>													
23.16	24.76	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)										
23.16 - 24.76: Fine grained margins and thin banded calcite.													
<<Min: 23.16 - 24.76 30% Min: Calcite>>													
24.76	35.15	RHYvl	Lapilli tuff										
<<Min: 24.76 - 35.15 3% Min: Calcite>>													
<<Min: 24.76 - 45 2% Min: Pyrrhotite>>													
<<Alt: 24.76 - 52.8 Trace (Alt) Chlorite>> Trace in felsic tuffs, patchy in mafic dikes.													
<<Vein: 33.02 - 33.08 25% Quartz>>													
<<Struc: 30 - 30.2 Weak (Alt) Fault>>													
35.15	35.73	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)										
<<Min: 35.15 - 35.73 30% Min: Calcite>>													
35.73	36.93	RHYvl	Lapilli tuff										
<<Min: 35.73 - 36.93 12% Min: Calcite>>													
36.93	39.35	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)										
36.93 - 39.35: Swarm of mafic dikes intercalated with rhyolite tuff.													
<<Min: 36.93 - 39.35 30% Min: Calcite>>													
39.35	52.80	RHYvl	Lapilli tuff										
39.35 - 52.8: Interval is mixed coarse grain - lapilli felsic tuff. Several small mafic dikes intersect the felsic tuffs, each <20cm spaced less than 1m apart between 44.27m to 46.5m													
<<Min: 39.95 - 52.8 4% Min: Calcite>>													
<<Min: 42 - 45 1% Min: Pyrite>>													
<<Min: 45 - 52.8 3% Min: Pyrite>>													
<<Min: 45 - 55.85 1% Min: Pyrrhotite>>													

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-291

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
52.80	55.85	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
52.8 - 55.85: chlorite alteration is moderate (4)											
<<Min: 52.8 - 55.85 0.25% Min: Pyrite>>											
<<Min: 52.8 - 58 10% Min: Calcite>>											
<<Alt: 52.8 - 55.85 Moderate (Alt) Chlorite>>											
55.85	57.15	RHYv Rhyolite volcanoclastic									
<<Min: 55.85 - 86 2% Min: Pyrite>>											
<<Min: 55.85 - 108 2% Min: Pyrrhotite>>											
57.15	57.61	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<<Alt: 57.15 - 57.61 Weak (Alt) Chlorite>>											
57.61	58.90	RHYvl Lapilli tuff									
<<Min: 58 - 62.3 1% Min: Calcite>>											
58.90	62.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<<Alt: 58.9 - 62 Moderate (Alt) Chlorite>>											
62.00	68.14	RHYvl Lapilli tuff									
<<Min: 62.3 - 68.14 3% Min: Calcite>>											
68.14	71.15	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<<Min: 68.14 - 78.38 10% Min: Calcite>>											
71.15	78.38	RHYvl Lapilli tuff									
78.38	78.88	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<<Min: 78.38 - 78.88 20% Min: Calcite>>											
78.88	91.11	RHYvl Lapilli tuff									
<<Min: 78.88 - 91.11 3% Min: Calcite>>											
<<Min: 86 - 91.11 1% Min: Pyrite>>											
91.11	93.66	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<<Min: 91.11 - 95 12% Min: Calcite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-291

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 91.11 - 93.66 Weak (Alt) Chlorite>>											
<<Alt: 93 - 100 Moderate (Alt) Muscovite>> OR?											
93.66	95.00	OI	Heavilly disseminated sulphides in host schist								
95.00	98.50	RHYvl	Lapilli tuff								
<<Min: 95 - 102 1% Min: Calcite>>											
<<Min: 95 - 104.8 2% Min: Pyrite>>											
<<Alt: 97.4 - 98 Trace (Alt) Chlorite>>											
98.50	98.90	OI	Heavilly disseminated sulphides in host schist								
98.90	122.61	RHYvl	Lapilli tuff								
<<Min: 102 - 106 3% Min: Calcite>>											
<<Min: 104.8 - 108 0.25% Min: Pyrite>>											
<<Min: 106 - 122.61 1% Min: Calcite>>											
<<Min: 108 - 114.5 2% Min: Pyrite>>											
<<Min: 108 - 122 1% Min: Pyrrhotite>>											
<<Min: 122 - 133.8 2% Min: Pyrrhotite>>											
<<Alt: 100 - 178 Weak (Alt) Muscovite>>											
122.61	128.00	MDSt	Rhyolite tuff dominant mudstone								
<<Min: 122.61 - 136.2 2% Min: Calcite>>											
128.00	160.38	RHYvl	Lapilli tuff								
<<Min: 133.8 - 147.6 3% Min: Pyrrhotite>>											
<<Min: 136.2 - 141.7 3% Min: Calcite>>											
<<Min: 141.7 - 150.5 6% Min: Calcite>>											
<<Min: 147.6 - 155.7 1% Min: Pyrrhotite>>											
<<Min: 150.5 - 171.4 8% Min: Calcite>>											
<<Min: 155.7 - 160.38 4% Min: Pyrrhotite>>											
<<Alt: 136.6 - 142 Trace (Alt) Chlorite>>											
<<Alt: 147.6 - 155.7 Trace (Alt) Chlorite>>											
160.38	176.15	MDSt	Rhyolite tuff dominant mudstone								
<<Min: 160.38 - 176.15 1% Min: Pyrrhotite>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-291

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 171.4 - 176.15 5% Min: Calcite>>											
<<Alt: 160.38 - 176.15 Trace (Alt) Chlorite>>											
176.15	178.00	RHYvl Lapilli tuff									
<<Min: 176.15 - 182.25 3% Min: Pyrrhotite>>											
<<Min: 176.15 - 193.4 2% Min: Calcite>>											
178.00	182.25	MDSr Rhyolite tuff dominant mudstone									
<<Alt: 178 - 227.13 Moderate (Alt) Muscovite>>											
182.25	186.58	RHYc Rhyolite coherent volcanics									
<<Min: 182.25 - 186.58 2% Min: Pyrite>>											
<<Min: 182.25 - 198.23 2% Min: Pyrrhotite>>											
186.58	188.00	MDSw Coherent rhyolite flow with carbonaceous content									
<<Min: 186.58 - 202.4 1% Min: Pyrite>>											
188.00	193.40	RHYc Rhyolite coherent volcanics									
<<Struc: 190 - 193.17 Moderate (Alt) Fault>> large faulted interval with small (<10cm) sections of fault gouge within broken rock, gravel and sand.											
193.40	196.44	MDSw Coherent rhyolite flow with carbonaceous content									
<<Min: 193.4 - 203 2% Min: Sphalerite>>											
<<Min: 193.4 - 212.26 0.5% Min: Calcite>>											
196.44	197.92	RHYc Rhyolite coherent volcanics	196.44	196.92	0.48	B00269517	1.6	0.007	-0.01	0.07	0.12
			196.92	197.92	1.00	B00269518	3	0.014	0.01	0.13	0.4
			197.92	198.23	0.31	B00269519	3	0.022	0.02	0.12	0.27
197.92	198.23	OI Heavily disseminated sulphides in host schist									
197.92 - 198.23: Disseminated sulphides (SP, CP, PY, PO) in RHYc											
198.23	202.40	RHYc Rhyolite coherent volcanics	198.23	199.23	1.00	B00269521	1.7	-0.005	-0.01	0.05	0.23
198.23 - 202.4: Sphalerite/PO ribbons											
<<Min: 198.23 - 212.26 1% Min: Pyrrhotite>>											
<<Struc: 200.31 - 200.31 dominant foliation>>											
			199.23	200.73	1.50	B00269522	1.8	-0.005	0.03	0.06	0.48
			200.73	202.40	1.67	B00269523	1.2	-0.005	0.03	0.03	0.48

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-291

From (m) To (m) Rocktype & Description

202.40 203.00 OI Heavily disseminated sulphides in host schist

202.4 - 203: Heavily disseminated SP, PO, PY, CP

<<Alt: 202.4 - 208.69 Weak (Alt) Chlorite>>

203.00 208.69 RHYc Rhyolite coherent volcanics

203 - 208.69: Disseminated sulphides (CP, Sp, PO)

<<Min: 203 - 208.69 2% Min: Sphalerite>>

<<Struc: 206.11 - 206.11 dominant foliation>>

208.69 213.84 MDS Carbonaceous Mudstone & Tuffaceous Mudstone

<<Min: 208.69 - 212.26 0.25% Min: Chalcopryite>>

<<Alt: 208.69 - 213 Moderate (Alt) Chlorite>>

<<Struc: 212.05 - 212.05 dominant foliation>>

213.84 218.34 RHY undifferentiated rhyolite

213.84 - 218.34: high sp disseminated/wispy

<<Min: 215 - 218.34 3% Min: Pyrite>>

<<Min: 216 - 218.34 0.25% Min: Chalcopryite>>

<<Min: 216.5 - 218.34 4% Min: Sphalerite>>

<<Min: 216.5 - 218.34 1% Min: Galena>>

218.34 220.20 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

218.34 - 220.2: PO ~1-2%

220.20 220.50 OI Heavily disseminated sulphides in host schist

220.2 - 220.5: PO ~1%

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
202.40	203.00	0.60	B00269524	10.1	0.035	0.03	0.44	5.84

203.00	204.50	1.50	B00269525	3	-0.005	0.02	0.16	0.51
--------	--------	------	-----------	---	--------	------	------	------

213.84	215.34	1.50	B00269526	0.8	-0.005	-0.01	-0.01	0.01
--------	--------	------	-----------	-----	--------	-------	-------	------

215.34	216.84	1.50	B00269527	5.9	0.031	0.1	0.03	0.31
--------	--------	------	-----------	-----	-------	-----	------	------

216.84	218.34	1.50	B00269528	6.2	0.026	0.11	0.05	0.38
--------	--------	------	-----------	-----	-------	------	------	------

218.34	219.36	1.02	B00269529	143	0.707	0.23	5.49	13.5
--------	--------	------	-----------	-----	-------	------	------	------

219.36	220.20	0.84	B00269532	128	0.795	0.26	4.21	7.28
--------	--------	------	-----------	-----	-------	------	------	------

220.20	220.50	0.30	B00269533	76.8	0.557	2.16	0.81	1.31
--------	--------	------	-----------	------	-------	------	------	------

MCG

FMG



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-291

From (m) To (m) Rocktype & Description

220.50 221.24 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

220.5 - 221.24: PO ~1-2%

221.24 224.10 RHYv Rhyolite volcanoclastic

<<Min: 221.24 - 227.13 1% Min: Pyrite>>

<<Struc: 223.9 - 223.9 dominant foliation>>

224.10 227.13 RHYc Rhyolite coherent volcanics

227.13 240.66 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

<<Min: 227.13 - 242 0.25% Min: Pyrite>>

<<Min: 227.13 - 242 2% Min: Pyrrhotite>>

<<Alt: 227.13 - 240.66 Moderate (Alt) Chlorite>>

<<Struc: 227.55 - 227.55 dominant foliation>>

<<Struc: 232.06 - 232.06 dominant foliation>>

<<Struc: 237.52 - 237.52 dominant foliation>>

<<Struc: 240 - 240.3 Moderate (Alt) Fault>>

240.66 242.00 RHYc Rhyolite coherent volcanics

End of Hole @ 242

FMG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
220.50	221.24	0.74	B00269534	124	0.664	0.39	3.45	7.65

221.24	221.54	0.30	B00269535	0.9	-0.005	-0.01	-0.01	0.01
221.54	223.04	1.50	B00269536	0.7	-0.005	-0.01	-0.01	0.01
223.04	224.10	1.06	B00269537	1	-0.005	-0.01	0.01	0.04
224.10	225.51	1.41	B00269538	0.7	-0.005	-0.01	-0.01	-0.01

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-292

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Jerome de Pasquale	Date Logging Start:	12-Oct-15
UTM Easting	415157	Core Size:	HQ3	Azimuth:	219.81	Date Logging Complete:	16-Oct-15
UTM Northing:	6815158	Casing Pulled?:	Yes	Dip:	-80	Drill Company:	Geotech
UTM Elev. (m):	1411.79	Casing Depth (m):	18	Length (m):	312	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	10-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	15-Oct-15
Local Elev. (m):						Purpose:	Exploration
Comments:						Parent Hole:	

K15-292 (fault block) was drilled in order to target TTK4 and EM conductor.

The upper units are made up of volcanoclastic rhyolite crosscut by mafic and intermediate dykes. From 124.12m to 170.48m, the hole intercepted a fault and shear zone. This major structure is followed two massive sulfide lens (OB domains, from 170.48m to 171.48m and 174.64m to 176.50m). The footwall consists of folded muscovite altered rhyolite followed by a CL-BI-CA altered mafic sill at 181.13m.

In the mafic unit, the drill hole intercepts a third massive sulfide lens, mineralized PY-SP-CP-GL-MG, from 217.15m to 243.00m (OA, OB, OG, and OI domains) and a narrow one from 247.25m to 248.41m (OB and OF domains) immediately followed by a felsic sequence (rhyolite).

A fault is encountered approximately where the intercept of the upper lens of hole K15-282 was projected. The two upper massive sulfide lenses could be the same one, crosscut twice due to offset (repetition of the sequence).

The interval in between the upper and the lower lenses in K15-292 is about the same than observed in K15-282 (around 50 metres).

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-80	219.81	0	219.81	APS	Jerome de Pasquale	10-Oct-15		<input checked="" type="checkbox"/>	
27	-80.1	197.3	22.5	219.8	ReflexEVS	Geotech	10-Oct-15	5791	<input checked="" type="checkbox"/>	
55	-79.4	194.8	22.5	217.3	ReflexEVS	Geotech	11-Oct-15	5795	<input checked="" type="checkbox"/>	
81	-79.5	195.2	22.5	217.7	ReflexEVS	Geotech	11-Oct-15	5876	<input checked="" type="checkbox"/>	
111	-80	192	22.5	214.5	ReflexEVS	Geotech	11-Oct-15	5746	<input checked="" type="checkbox"/>	
141	-80.6	190.4	22.5	212.9	ReflexEVS	Geotech	11-Oct-15	5782	<input checked="" type="checkbox"/>	
171	-80.4	196.8	22.5	219.3	ReflexEVS	Geotech	12-Oct-15	5775	<input checked="" type="checkbox"/>	
204	-79.9	198.9	22.5	221.4	ReflexEVS	Geotech	13-Oct-15	5798	<input checked="" type="checkbox"/>	
237	-79.9	197.3	22.5	219.8	ReflexEVS	Geotech	13-Oct-15	5802	<input checked="" type="checkbox"/>	
264	-79.7	197	22.5	219.5	ReflexEVS	Geotech	13-Oct-15	5874	<input checked="" type="checkbox"/>	
297	-78.5	192	22.5	214.5	ReflexEVS	Geotech	13-Oct-15	5742	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	8.50	OVBN Overburden									



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-292

From (m)	To (m)	Rocktype & Description			From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 0 - 17.2 Weak (Alt) Fault>> Sheared and fractured near surface, sandy gouge, oxidized.													
8.50	23.90	RHYcw	Curdy textured-flow banded (flows, subvolcanics)	grey-green									
8.5 - 23.9: Folded, MU altered.													
<<Min: 18 - 111.3 1% Min: Pyrite>> Locally aggregated.													
<<Min: 18 - 111.3 1% Min: Pyrrhotite>> Locally aggregated													
23.90	35.00	RHYva	Coarse grained to ash tuff	grey-green									
<<Min: 23.9 - 44.06 5% Min: Calcite>> and veinlets.													
35.00	37.00	RHYcw	Curdy textured-flow banded (flows, subvolcanics)	beige									
35 - 37: Could be large blocks													
37.00	39.50	RHYvl	Lapilli tuff	grey-green									
39.50	41.50	RHYcw	Curdy textured-flow banded (flows, subvolcanics)	grey-green									
39.5 - 41.5: Could be large blocks													
<<Struc: 40 - 41 Moderate (Alt) Shear>> Faulty breccia, PY, crenulation. Zone of multiple unit contact.													
41.50	44.06	RHYvl	Lapilli tuff	grey-green									
<<Vein: 43.08 - 43.57 Quartz>> QZ													
<<Struc: 41.96 - 41.97 dominant foliation>>													
44.06	45.09	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)	dark grey									
44.06 - 45.09: Dyke, CA rich.													
<<Min: 44.06 - 45.09 15% Min: Calcite>>													
45.09	48.00	RHYvl	Lapilli tuff	grey-green									
<<Min: 45.09 - 48 5% Min: Calcite>>													
48.00	50.28	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)	dark grey									
48 - 50.28: Dyke, chill margin.													
<<Min: 48 - 50.28 10% Min: Calcite>>													
50.28	54.78	RHYvl	Lapilli tuff	grey-green									

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-292

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 50.28 - 54.78 3% Min: Calcite>>											
54.78	56.78	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	dark grey								
54.78 - 56.78: Dyke, CA rich. Could be mafic tuff.											
<<Min: 54.78 - 56.97 15% Min: Calcite>>											
56.78	62.38	RHYvl Lapilli tuff	grey-green								
56.78 - 62.38: Shear zone, flow mixed with RHYvl, fault gouge. Probably peperitic texture.											
<<Min: 56.97 - 62.38 3% Min: Calcite>>											
<<Struc: 56.97 - 60 Moderate (Alt) Shear>> Fault breaccia, same type than at 41m. Almost the same context, contact flow and volcaiclastic unit. Could be considered as strong structure because repeated.											
62.38	63.10	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	light grey								
62.38 - 63.1: CA rich.											
<<Min: 62.38 - 63.1 5% Min: Calcite>>											
63.10	78.83	RHYva Coarse grained to ash tuff	grey-green								
<<Min: 63.1 - 78.83 3% Min: Calcite>>											
<<Vein: 75.62 - 76.45 Quartz-Pyrite 20 deg. >> veinlet set, PY-QZ											
<<Struc: 71.24 - 71.8 Weak (Alt) Fault>> Fault breccia, clasts up to 1 cm.											
<<Struc: 71.8 - 71.81 Fault>> Fracture atcontact with fault gouge.											
78.83	79.60	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	dark grey								
78.83 - 79.6: CA rich. Upper contact blurry, could be the edge of the dyke (mixed with rhyolite).											
<<Min: 78.83 - 79.6 10% Min: Calcite>>											
79.60	85.50	RHYva Coarse grained to ash tuff	grey-green								
<<Min: 79.6 - 111.3 1% Min: Calcite>>											
85.50	109.03	RHYvl Lapilli tuff	grey-green								
<<Alt: 87.49 - 114.26 Weak (Alt) Muscovite>> Locally moderate.											
<<Vein: 87.65 - 87.68 Tourmaline-Sulphide 30 deg. >> PY-TML, penetrating foliation											
<<Vein: 91.2 - 91.21 Quartz-Tourmaline 28 deg. >> QZ, probably TML											
<<Struc: 90 - 102 Weak (Alt) Fault>> Multiple minor faults and broken zone.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-292

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
109.03	111.30	MAFi Mafic Intrusions (primarily footwall mafic intrusion) light grey									
109.03 - 111.3: Mineralized PY-PO, CA in matrix,											
111.30	115.40	RHY undifferentiated rhyolite	111.30	112.30	1.00	B00265101	0.9	-0.005	-0.01	-0.01	-0.01
111.3 - 115.4: Could be RHYi. QZ veins or local silicification, PY-PO veinlets, could be relic of the highest mineralized lens (pitching).											
<<Min: 111.3 - 115.4 2% Min: Pyrite>>											
<<Min: 111.3 - 115.4 2% Min: Pyrrhotite>>											
<<Alt: 111.3 - 115.4 Strong (Alt) Chlorite>> Could be related to the upper mineralized lens or just CL coming with the QZ veins.											
<<Alt: 114.26 - 124.12 Moderate (Alt) Muscovite>>											
<<Vein: 111.3 - 115.4 Quartz>> Multiple QZ vein. Could be associated with CL.											
115.40	124.12	RHYv Rhyolite volcanoclastic grey-green	112.30	113.30	1.00	B00265102	0.3	-0.005	-0.01	-0.01	0.04
115.4 - 124.12: PO patch at lower contact.											
<<Min: 115.4 - 169.2 1% Min: Calcite>>											
<<Alt: 115.4 - 117.77 Moderate (Alt) Silicification>> Green-grey alteration.											
<<Struc: 124.1 - 135.1 Strong (Alt) Fault>> Fault gouge dominantly containing PY fragments, RHY, grey and dark grey clay. Quartz fragments up to 5cm,											
124.12	135.10	FBX Fault Breccia	113.30	114.30	1.00	B00265103	1.2	-0.005	-0.01	-0.01	-0.01
124.12 - 135.1: Grey-black clay containing sulfide clasts and rhyolite, few CA.											
<<Struc: 134.8 - 134.81 Fault>> Main angle of the shear zone (average).											
135.10	159.00	RHY undifferentiated rhyolite grey-green	114.30	115.30	1.00	B00265104	0.4	-0.005	-0.01	-0.01	-0.01
135.1 - 159: Deformed, shear fabric. Relic of QZ-TML veinlets penetrating foliation, shallow angle, confirming RHY unit.											
<<Alt: 135.1 - 170.48 Strong (Alt) Muscovite>> Locally moderate.											
<<Vein: 145.7 - 145.75 Quartz-Tourmaline>> QZ-TML vein deformed and sheared in the fault zone. CL.											
<<Struc: 135.1 - 159 Strong (Alt) Shear>> In RHY.											
159.00	165.00	FBX Fault Breccia	163.50	165.00	1.50	B00265105	0.4	0.008	-0.01	-0.01	-0.01
159 - 165: Probably mostly rhyolitic clasts.											
<<Struc: 159 - 164.85 Strong (Alt) Fault>> Fault breccia.											
<<Struc: 164.85 - 170.48 Strong (Alt) Shear>> In RHY.											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-292

From (m) To (m) Rocktype & Description

165.00 170.48 RHY undifferentiated rhyolite

grey-green

165 - 170.48: MxSx preserved in QZ vein, QZ-CL at lower contact.

<<Min: 169.2 - 170.48 3% Min: Calcite>>

170.48 171.48 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

FMG

<<Min: 170.48 - 171.48 8% Min: Sphalerite>>

<<Min: 170.48 - 171.48 60% Min: Pyrite>>

<<Min: 170.48 - 171.48 2% Min: Galena>>

<<Min: 170.48 - 171.48 10% Min: Calcite>>

<<Struc: 170.48 - 170.49 Contact>> RHY/MxSx

171.48 173.54 RHY undifferentiated rhyolite

grey-green

171.48 - 173.54: Could be flow banded. Folded, crenulations, locally fault gouge.

<<Min: 171.48 - 173.54 3% Min: Calcite>>

<<Min: 173.29 - 173.37 3% Min: Pyrrhotite>> Elongated in the primary foliation and crosscutting the secondary foliation.

<<Struc: 171.48 - 171.49 Contact>> MxSx/RHY

173.54 174.64 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

green-brown

<<Min: 173.54 - 174.54 10% Min: Calcite>> And vein in MAFi.

<<Min: 174.54 - 176.5 3% Min: Galena>>

<<Min: 174.54 - 176.5 15% Min: Calcite>>

<<Alt: 173.54 - 174 Moderate (Alt) Biotite>>

174.64 175.20 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

FMG

174.64 - 175.2: Interbedded with probably MAFi.

<<Min: 174.64 - 176.5 5% Min: Sphalerite>>

<<Min: 174.64 - 176.5 60% Min: Pyrite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
165.00	167.50	2.50	B00265106	1.2	0.011	-0.01	-0.01	-0.01

167.50	169.00	1.50	B00265107	36.3	0.106	0.01	0.52	0.87
169.00	170.48	1.48	B00265108	1	0.011	-0.01	-0.01	-0.01
170.48	171.48	1.00	B00265109	317	1.34	0.22	4.87	8.72

171.48	172.48	1.00	B00265112	21	0.163	0.06	0.27	0.65
--------	--------	------	-----------	----	-------	------	------	------

172.48	173.54	1.06	B00265113	4	0.019	-0.01	0.03	0.01
--------	--------	------	-----------	---	-------	-------	------	------

173.54	174.64	1.10	B00265114	1.4	0.007	-0.01	0.02	0.05
--------	--------	------	-----------	-----	-------	-------	------	------

174.64	175.20	0.56	B00265115	264	1.01	0.15	3.81	5.86
--------	--------	------	-----------	-----	------	------	------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-292

From (m) To (m) Rocktype & Description

175.20 176.50 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

FG

175.2 - 176.5: Faulted lower contact. Could be the same lens than at 170.48 (off set and same sequence).

176.50 181.13 RHY undifferentiated rhyolite grey-green

176.5 - 181.13: Probably flow, QZ rich, locally folded and sulfide rich.

<<Min: 180.52 - 186 10% Min: Calcite>>

<<Alt: 180.13 - 217.15 Strong (Alt) Chlorite>>

<<Vein: 179.24 - 182 Quartz>> Multiple QZ veins.

181.13 217.15 MAFi Mafic Intrusions (primarily footwall mafic intrusion) green

181.13 - 217.15: Sharp upper contact. CA decreasing. BI rich at lower contact.

<<Min: 186 - 208.55 1% Min: Calcite>>

<<Min: 208.55 - 217.15 3% Min: Calcite>> Increase at lower contact.

<<Alt: 210 - 217.15 Strong (Alt) Biotite>>

217.15 225.30 OA Magnetite bearing sulphides

FMG

<<Min: 217.15 - 225.3 15% Min: Sphalerite>>

<<Min: 217.15 - 225.3 30% Min: Pyrite>>

<<Min: 217.15 - 225.3 0.5% Min: Pyrrhotite>>

<<Min: 217.15 - 225.3 10% Min: Magnetite>>

<<Min: 217.15 - 225.3 5% Min: Galena>>

<<Min: 217.15 - 225.3 1% Min: Chalcopryrite>>

<<Min: 217.15 - 225.3 0.5% Min: Calcite>>

225.30 225.81 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

FG

<<Min: 225.3 - 225.81 2% Min: Sphalerite>>

<<Min: 225.3 - 225.81 60% Min: Pyrite>>

<<Min: 225.3 - 225.81 0.5% Min: Galena>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
175.20	175.79	0.59	B00265116	330	3.09	1.52	4.83	8.59
175.79	176.50	0.71	B00265117	262	0.986	0.73	3.31	8.05
176.50	178.95	2.45	B00265118	4.5	0.025	-0.01	0.03	0.05
178.95	179.45	0.50	B00265119	2.4	0.011	-0.01	0.02	0.04
179.45	180.45	1.00	B00265121	11.2	0.039	-0.01	0.1	0.02
212.65	214.15	1.50	B00265122	-0.3	-0.005	-0.01	-0.01	0.01
214.15	215.65	1.50	B00265123	-0.3	0.007	-0.01	-0.01	0.01
215.65	217.15	1.50	B00265124	2.5	0.011	-0.01	0.04	0.02
217.15	218.00	0.85	B00265125	271	1.17	0.81	6.17	9.08
218.00	219.00	1.00	B00265126	266	2.18	0.48	6.97	8.02
219.00	220.00	1.00	B00265127	242	0.666	0.13	6.43	8.56
220.00	221.00	1.00	B00265128	294	0.848	0.09	6.61	8.14
221.00	222.00	1.00	B00265129	341	1.2	0.09	5.7	6.93
222.00	223.00	1.00	B00265132	257	1.1	0.06	6.01	6.98
223.00	224.00	1.00	B00265133	218	1.13	0.42	6.28	7.92
224.00	224.59	0.59	B00265134	258	1.04	0.35	6.53	8.26
224.59	225.30	0.71	B00265135	254	1.54	0.68	5.67	7.41
225.30	225.81	0.51	B00265136	217	1.15	0.01	4.61	5.36

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-292

From (m) To (m) Rocktype & Description

225.81 226.70 OI Heavily disseminated sulphides in host schist

<<Min: 225.81 - 226.7 5% Min: Sphalerite>>

<<Min: 225.81 - 226.7 25% Min: Pyrite>>

<<Min: 225.81 - 226.7 5% Min: Magnetite>>

<<Min: 225.81 - 226.7 1% Min: Galena>>

<<Min: 225.81 - 226.7 2% Min: Chalcopryite>>

226.70 227.55 OI Heavily disseminated sulphides in host schist

<<Min: 226.7 - 227.55 3% Min: Sphalerite>>

<<Min: 226.7 - 227.55 20% Min: Pyrite>> DIS and wispy bands around lithic clasts

<<Min: 226.7 - 227.55 3% Min: Galena>>

<<Min: 226.7 - 227.55 0.5% Min: Chalcopryite>>

<<Min: 226.7 - 227.55 1% Min: Calcite>>

227.55 232.01 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

227.55 - 232.01: Locally brecciated. MAFi fabric visible.

<<Min: 227.55 - 232.01 20% Min: Sphalerite>>

<<Min: 227.55 - 232.01 40% Min: Pyrite>>

<<Min: 227.55 - 232.01 5% Min: Galena>>

<<Min: 227.55 - 232.01 3% Min: Chalcopryite>>

<<Min: 227.55 - 232.01 3% Min: Calcite>>

232.01 232.51 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Min: 232.01 - 232.51 15% Min: Sphalerite>>

<<Min: 232.01 - 232.51 35% Min: Pyrite>>

<<Min: 232.01 - 232.51 5% Min: Magnetite>>

<<Min: 232.01 - 232.51 5% Min: Galena>>

<<Min: 232.01 - 232.51 2% Min: Chalcopryite>>

<<Min: 232.01 - 232.51 2% Min: Calcite>>

<<Min: 232.01 - 234.98 5% Lith: Graphite>>

FG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
225.81	226.70	0.89	B00265137	282	1.9	0.37	5.07	5.84

FG

226.70	227.55	0.85	B00265138	325	1.96	0.31	4.89	6.13
--------	--------	------	-----------	-----	------	------	------	------

FG

227.55	228.17	0.62	B00265139	375	2.53	1.31	4.73	14.5
--------	--------	------	-----------	-----	------	------	------	------

FG

228.17	229.00	0.83	B00265141	433	1.61	0.64	5.4	13.7
229.00	230.00	1.00	B00265142	400	1.66	0.38	5.01	8.53
230.00	231.00	1.00	B00265143	348	1.48	0.07	5.36	9.2
231.00	231.50	0.50	B00265144	222	1.91	0.47	3.05	6.21
231.50	232.01	0.51	B00265145	329	2.18	0.59	4.53	8.8
232.01	232.51	0.50	B00265146	355	2.32	1.14	4.68	11.3

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-292

From (m)	To (m)	Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 232.01 - 234.98 10% Min: Calcite>>												
232.51	234.98	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG	232.51	233.01	0.50	B00265147	309	1.94	1.13	4.19	14.1
<<Min: 232.51 - 234.98 30% Min: Sphalerite>>												
<<Min: 232.51 - 234.98 40% Min: Pyrite>>												
<<Min: 232.51 - 234.98 3% Min: Chalcopryite>>												
234.98	235.57	OG Chalcopryite rich sulphides	FG	234.98	235.57	0.59	B00265152	286	4.76	5.1	2.1	8.29
<<Min: 234.98 - 235.57 10% Min: Sphalerite>>												
<<Min: 234.98 - 235.57 30% Min: Pyrite>>												
<<Min: 234.98 - 235.57 1% Min: Galena>>												
<<Min: 234.98 - 235.57 30% Min: Chalcopryite>>												
<<Min: 234.98 - 235.57 10% Min: Calcite>>												
235.57	237.00	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FG	235.57	236.27	0.70	B00265153	225	1.46	0.72	3.15	9.79
<<Min: 235.57 - 237 25% Min: Sphalerite>>												
<<Min: 235.57 - 237 35% Min: Pyrite>>												
<<Min: 235.57 - 237 1% Min: Galena>>												
<<Min: 235.57 - 237 0.1% Min: Chalcopryite>>												
<<Min: 235.57 - 237 5% Min: Calcite>>												
237.00	237.56	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG	237.00	237.56	0.56	B00265155	328	2.3	1.25	5.01	17.7
<<Min: 237 - 237.56 40% Min: Sphalerite>>												
<<Min: 237 - 237.56 20% Min: Pyrite>>												
<<Min: 237 - 237.56 5% Min: Galena>>												
<<Min: 237 - 237.56 5% Min: Chalcopryite>>												
<<Min: 237 - 237.56 10% Min: Calcite>>												
237.56	238.50	OG Chalcopryite rich sulphides	FMG	237.56	238.50	0.94	B00265156	319	3.49	3.1	4.64	15.2
<<Min: 237.56 - 238.5 30% Min: Sphalerite>>												
<<Min: 237.56 - 238.5 25% Min: Pyrite>>												
<<Min: 237.56 - 238.5 1% Min: Magnetite>>												

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-292
From (m) **To (m)** **Rocktype & Description**

<<Min: 241.75 - 243 2% Min: Galena>>

<<Min: 241.75 - 243 0.5% Min: Chalcopryite>>

<<Min: 241.75 - 243 3% Min: Calcite>>

243.00 247.25 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

<<Min: 243 - 247.25 15% Min: Calcite>>

247.25 247.91 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Min: 247.25 - 247.91 10% Min: Sphalerite>>

<<Min: 247.25 - 247.91 55% Min: Pyrite>>

<<Min: 247.25 - 247.91 3% Min: Magnetite>>

<<Min: 247.25 - 247.91 0.5% Min: Galena>>

<<Min: 247.25 - 247.91 0.1% Min: Chalcopryite>>

247.91 248.41 OF Pyrrhotite rich sulphides

<<Min: 247.91 - 248.41 2% Min: Sphalerite>>

<<Min: 247.91 - 248.41 70% Min: Pyrrhotite>>

<<Min: 247.91 - 248.41 2% Min: Chalcopryite>>

248.41 257.92 RHYvl Lapilli tuff

248.41 - 257.92: With AK, PY(sometime euhedral) and PO patch, few TML.

<<Min: 248.41 - 273 2% Min: Pyrite>>

<<Min: 248.41 - 273 1% Min: Pyrrhotite>> Elongated.

<<Min: 255.5 - 282 2% Min: Calcite>>

<<Alt: 248.41 - 261 Moderate (Alt) Muscovite>>

<<Struc: 251.6 - 251.72 Moderate (Alt) Fault>> Fault breccia, minor.

257.92 259.31 MAFi Mafic Intrusions (primarily black footwall mafic intrusion)

257.92 - 259.31: Probably foliated dyke interbedded with RHY.CA in matrix, altered CL.

<<Struc: 258.09 - 258.1 dominant foliation>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

243.00	244.00	1.00	B00265165	3.8	0.066	-0.01	0.05	0.09
--------	--------	------	-----------	-----	-------	-------	------	------

244.00	245.00	1.00	B00265166	4.1	0.034	-0.01	0.04	0.07
--------	--------	------	-----------	-----	-------	-------	------	------

245.00	246.25	1.25	B00265167	2.8	0.026	-0.01	0.04	0.07
--------	--------	------	-----------	-----	-------	-------	------	------

246.25	247.25	1.00	B00265168	3.5	0.025	-0.01	0.06	0.05
--------	--------	------	-----------	-----	-------	-------	------	------

247.25	247.91	0.66	B00265169	45.2	0.16	0.28	0.59	2.86
--------	--------	------	-----------	------	------	------	------	------

247.91	248.41	0.50	B00265171	68.4	0.174	1.01	0.39	8.3
--------	--------	------	-----------	------	-------	------	------	-----

248.41	249.90	1.49	B00265172	2.2	0.008	0.03	0.02	0.29
--------	--------	------	-----------	-----	-------	------	------	------

249.90	251.40	1.50	B00265173	0.7	0.006	0.01	-0.01	0.02
--------	--------	------	-----------	-----	-------	------	-------	------

251.40	252.90	1.50	B00265174	0.6	-0.005	-0.01	-0.01	0.03
--------	--------	------	-----------	-----	--------	-------	-------	------

grey-green

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-292

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
259.31	286.45	RHYvl Lapilli tuff									
grey-green											
259.31 - 286.45: BI-sulfide rich bands from 273 to 276m. Few TML. Sheared locally. CL-BI. Strongly sericitic.											
<<Min: 273 - 276 1% Min: Pyrrhotite>>											
<<Min: 273 - 288 0.5% Min: Pyrrhotite>>											
<<Min: 273 - 296 3% Min: Pyrite>>											
<<Min: 282 - 312 2% Min: Calcite>>											
<<Alt: 261 - 312 Weak (Alt) Muscovite>>											
<<Alt: 279.35 - 287.45 Moderate (Alt) Chlorite>>											
<<Struc: 264.14 - 264.15 dominant foliation>>											
<<Struc: 272.6 - 272.61 dominant foliation>>											
<<Struc: 274.65 - 274.66 dominant foliation>>											
<<Struc: 275.95 - 275.96 dominant foliation>>											
<<Struc: 278.94 - 278.95 dominant foliation>>											
<<Struc: 279.66 - 279.67 dominant foliation>>											
<<Struc: 282.28 - 282.29 dominant foliation>>											
<<Struc: 283.35 - 286.15 Moderate (Alt) Fault>> Sheared over 1 metre, fault gouge.											
286.45	296.60	RHY undifferentiated rhyolite									
grey-green											
286.45 - 296.6: Probably RHYva. Few TML. Fractured from 299.50m to 312m.											
<<Min: 288 - 303 2% Min: Pyrite>>											
<<Alt: 294.9 - 305.1 Moderate (Alt) Silicification>>											
<<Struc: 293.4 - 293.4 dominant foliation>>											
296.60	312.00	RHYvl Lapilli tuff									
grey-green											
296.6 - 312: Fractured from 299.50m to 312m. Few TML.											
<<Min: 303 - 312 0.5% Min: Pyrrhotite>>											
<<Alt: 305.1 - 312 Moderate (Alt) Silicification>>											
<<Alt: 305.1 - 312 Moderate (Alt) Chlorite>>											
<<Struc: 299 - 312 Moderate (Alt) Fault>> Multiple high density fracture and fault gouge up to 30 cm wide. Minor to moderate.											
End of Hole @ 312											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-293

Prospect:	ABM	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Cooper Campbell
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Cooper Campbell	Date Logging Start:	14-Oct-15
UTM Easting	414598	Core Size:	NQ3	Azimuth:	180.7	Date Logging Complete:	16-Oct-15
UTM Northing:	6815652	Casing Pulled?:	Yes	Dip:	-86	Drill Company:	Geotech
UTM Elev. (m):	1445.64	Casing Depth (m):	3.7	Length (m):	239	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	11-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	13-Oct-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

The purpose of this hole was to test the continuity/extension of the lower MET 4 magnetite sulphide lens. No significant sulphide lens was intersected in this hole. Low grade OI and OJ ore types were intercepted.

The upper portion of this hole consists primarily of intercalated RHYcw, RHYvx, RHYva, and RHYvl intruded by MAFi. The mudstone units intersected in ABM4 (K15-289) become very narrow in this hole and consist only of MDSt. A major lens of massive sulphide was not intersected. Low grade OI and OJ was intersected from 147.09-148.10m, and 149.23-155.3m. RHYi was intersected from 180.7-198.15m. This is close to where the massive sulphide zone was anticipated. The weakly mineralized zone of OI, and OJ could represent the down dip expression of the massive sulphide zone. RHYc, RHYcw, and RHYvl were intersected below the weakly mineralized zone.

A small zone of weak to moderate CI-CL zone was intersected above RHYi. There was associated pervasive MU-alteration surrounding the occurrences of heavily disseminated sulphide.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-86	180.7	0	180.7	APS	Cooper Campbell	11-Oct-15		<input checked="" type="checkbox"/>	
26	-85.4	162.9	22.5	185.4	ReflexEVS	Geotech	11-Oct-15	5788	<input checked="" type="checkbox"/>	
50	-85	172.1	22.5	194.6	ReflexEVS	Geotech	11-Oct-15	5783	<input checked="" type="checkbox"/>	
77	-85.3	167.9	22.5	190.4	ReflexEVS	Geotech	11-Oct-15	5807	<input checked="" type="checkbox"/>	
101	-85.5	165.5	22.5	188	ReflexEVS	Geotech	11-Oct-15	5775	<input checked="" type="checkbox"/>	
125	-83.4	161.9	22.5	184.4	ReflexEVS	Geotech	12-Oct-15	5693	<input checked="" type="checkbox"/>	
152	-83.2	169.8	22.5	192.3	ReflexEVS	Geotech	12-Oct-15	5759	<input checked="" type="checkbox"/>	
176	-82.9	169.1	22.5	191.6	ReflexEVS	Geotech	13-Oct-15	5746	<input checked="" type="checkbox"/>	
200	-82.4	167.1	22.5	189.6	ReflexEVS	Geotech	13-Oct-15	5781	<input checked="" type="checkbox"/>	
224	-81.9	172.9	22.5	195.4	ReflexEVS	Geotech	13-Oct-15	5717	<input checked="" type="checkbox"/>	
239	-81.2	175.1	22.5	197.6	ReflexEVS	Geotech	13-Oct-15	5779	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	3.70	OVBN Overburden									



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-293

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
3.70	6.77	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
<<Min: 3.7 - 76.15 5% Min: Calcite>>											
<<Min: 4.5 - 23.65 3% Min: Pyrite>>											
<<Min: 4.5 - 23.65 0.01% Min: Pyrrhotite>>											
<<Alt: 3.7 - 5.97 Moderate (Alt) Chlorite>>											
<<Alt: 3.7 - 63.82 Weak (Alt) Muscovite>>											
6.77	18.13	RHYvl	Lapilli tuff								
18.13	23.71	RHYvl	Lapilli tuff								
<<Min: 23.65 - 24.59 0.5% Min: Sphalerite>>											
<<Min: 23.65 - 24.59 0.01% Min: Pyrrhotite>>											
<<Alt: 18.13 - 18.78 Moderate (Alt) Chlorite>>											
<<Vein: 23.65 - 24.59 50% Quartz-Carbonate-Sulphide 60 deg. >> QZ-CA-SP-PO											
23.71	27.22	RHYvx	Quartz and/or feldspar crystal tuff								
<<Min: 24.59 - 51.82 0.01% Min: Sphalerite>> FD											
<<Min: 24.59 - 51.82 0.01% Min: Pyrite>>											
<<Min: 24.59 - 51.82 0.5% Min: Pyrrhotite>> VN											
<<Min: 24.59 - 51.82 0.01% Min: Chalcopyrite>> FD											
27.22	27.54	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
<<Alt: 27.22 - 27.54 Weak (Alt) Chlorite>>											
27.54	31.99	RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
27.54 - 31.99: Looks like the pseudo-fragmental RHYcw from K15-289.											
31.99	34.24	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
<<Alt: 31.99 - 34.24 Weak (Alt) Chlorite>>											
34.24	40.42	RHYv	Rhyolite volcaniclastic								
<<Vein: 35.81 - 36.07 100% Quartz-Carbonate-Sulphide 80 deg. >> QZ-CA-PO-PY-SP-CP											
40.42	41.59	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-293

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
41.59	52.18	RHYvl Lapilli tuff									
41.59 - 52.18: Trace MAFi.											
<<Min: 51.82 - 67.24 0.5% Min: Pyrite>>											
<<Min: 51.82 - 67.24 3% Min: Pyrrhotite>> WIS											
<<Alt: 41.59 - 53.53 Weak (Alt) Chlorite>>											
52.18	52.51	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
52.51	53.23	RHYvl Lapilli tuff									
53.23	62.00	RHYvl Lapilli tuff									
<<Alt: 57.43 - 63.82 Weak (Alt) Chlorite>>											
62.00	63.82	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
63.82	67.26	RHYvl Lapilli tuff									
63.82 - 67.26: Trace Cippo? Toppo											
<<Min: 63.82 - 73 0.01% Min: Sphalerite>> FD											
<<Min: 63.82 - 73 0.5% Min: Pyrite>> VN											
<<Min: 63.82 - 73 3% Min: Pyrrhotite>> VN											
<<Min: 63.82 - 73 0.5% Min: Galena>> VN											
<<Min: 63.82 - 73 0.01% Min: Chalcopryrite>>											
<<Alt: 63.82 - 64.67 Trace (Alt) Chlorite>>											
<<Alt: 63.82 - 64.82 Trace (Alt) Cordierite>>											
<<Alt: 63.82 - 67.26 Weak (Alt) Muscovite>>											
67.26	73.00	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
67.26 - 73: Trace RHYvl											
<<Alt: 67.26 - 78.97 Weak (Alt) Muscovite>>											
<<Alt: 70.08 - 73 Moderate (Alt) Muscovite>>											
<<Vein: 70.17 - 73 90% Quartz-Carbonate-Sulphide 25 deg. >> QZ-AK-CA-TO-PY-PO-SP-GL-CP											
73.00	74.58	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<<Min: 73 - 83.01 0.5% Min: Sphalerite>> WIS											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-293
From (m) **To (m)** **Rocktype & Description**

<<Min: 73 - 83.01 1% Min: Pyrite>> WIS

<<Min: 73 - 83.01 3% Min: Pyrrhotite>> DIS, VEN

<<Min: 73 - 83.01 0.01% Min: Galena>>

<<Min: 73 - 83.01 0.01% Min: Chalcopryrite>>

<<Alt: 73 - 78.05 Weak (Alt) Chlorite>>

**74.58 78.97 RHYcf Feldspar & feldspar quartz
porphyry**

74.58 - 78.97: Trace MAFi.

<<Min: 76.15 - 89.41 0.5% Min: Calcite>>

78.97 83.01 RHYvl Lapilli tuff

78.97 - 83.01: Trace RHYcw

<<Alt: 78.97 - 88.43 Weak (Alt) Muscovite>>

**83.01 83.76 OI Heavilly disseminated
sulphides in host schist**

<<Min: 83.01 - 83.76 3% Min: Sphalerite>>

<<Min: 83.01 - 83.76 1% Min: Pyrite>>

<<Min: 83.01 - 83.76 3% Min: Pyrrhotite>>

<<Min: 83.01 - 83.76 0.01% Min: Chalcopryrite>>

83.76 86.97 RHYvl Lapilli tuff

<<Min: 83.76 - 88.43 0.5% Min: Sphalerite>> WIS

<<Min: 83.76 - 88.43 1% Min: Pyrite>> WIS

<<Min: 83.76 - 88.43 3% Min: Pyrrhotite>> DIS, VN

<<Min: 83.76 - 88.43 0.01% Min: Chalcopryrite>> VN

<<Alt: 84.84 - 86.97 Weak (Alt) Chlorite>>

**86.97 88.43 RHYcw Curdy textured-flow banded
(flows, subvolcanics)**
88.43 94.43 RHYvl Lapilli tuff

88.43 - 94.43: Potentially pseudo-fragmental RHYcw.

<<Min: 88.43 - 96.51 0.01% Min: Sphalerite>>

<<Min: 88.43 - 96.51 0.5% Min: Pyrite>>

<<Min: 88.43 - 96.51 1% Min: Pyrrhotite>> BL

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

81.51	83.01	1.50	B00268358	0.7	-0.005	0.01	0.02	0.02
-------	-------	------	-----------	-----	--------	------	------	------

83.01	83.76	0.75	B00268359	9	-0.005	0.04	0.4	1.02
-------	-------	------	-----------	---	--------	------	-----	------

83.76	85.26	1.50	B00268361	4.4	-0.005	0.03	0.08	0.1
-------	-------	------	-----------	-----	--------	------	------	-----

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-293

From (m)		To (m)		Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 88.43 - 96.51 0.01% Min: Chalcopryite>>													
<<Min: 89.41 - 104.99 0.01% Min: Calcite>>													
<<Alt: 88.43 - 130.96 Weak (Alt) Muscovite>>													
94.43		96.51		RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
94.43 - 96.51: Driller inserted "Dropped Core" block at 96.19m.													
96.51		104.99		RHYvl	Lapilli tuff								
<<Min: 96.51 - 104.99 0.01% Min: Sphalerite>>													
<<Min: 96.51 - 104.99 3% Min: Pyrite>> DIS													
<<Min: 96.51 - 104.99 0.5% Min: Pyrrhotite>>													
<<Min: 96.51 - 104.99 0.01% Min: Galena>>													
<<Min: 96.51 - 104.99 0.01% Min: Chalcopryite>>													
<<Vein: 104.2 - 104.46 90% Carbonate-Sulphide 60 deg. >> AK-CA-CL-PY-PO-SP													
104.99		108.51		MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
<<Min: 104.99 - 112 0.01% Min: Pyrite>>													
<<Min: 104.99 - 112 3% Min: Pyrrhotite>> VN													
<<Min: 104.99 - 112 0.01% Min: Chalcopryite>> Trace malachite on one joint.													
<<Min: 104.99 - 112 30% Min: Calcite>>													
<<Vein: 107.92 - 108.23 100% Carbonate-Chlorite 85 deg. >> CA-AK-CL-TO-BI-PO-PY-CP													
108.51		110.58		RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
<<Alt: 108.96 - 112.43 Weak (Alt) Chlorite>>													
110.58		112.00		MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
112.00		115.93		RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
<<Min: 112 - 123.16 20% Min: Calcite>> VN													
<<Min: 112 - 123.78 0.01% Min: Sphalerite>> VN													
<<Min: 112 - 123.78 0.5% Min: Pyrite>> WIS, FD													
<<Min: 112 - 123.78 1% Min: Pyrrhotite>>													
<<Min: 112 - 123.78 0.01% Min: Galena>>													

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-293

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
115.93	116.53	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
116.53	117.89	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
117.89	119.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<<Vein: 118.96 - 123.27 20% Quartz-Carbonate-Sulphide 40 deg. >> QZ-CA-PO-SP-GL											
119.00	123.78	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<<Min: 123.16 - 181 0.01% Min: Calcite>>											
123.78	129.90	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
123.78 - 129.9: cm spaced cleavage typical of RHYcw. May be a RHYv.											
<<Min: 123.78 - 130.96 1% Min: Pyrite>>											
<<Min: 123.78 - 130.96 0.01% Min: Pyrrhotite>>											
<<Min: 123.78 - 130.96 0.01% Min: Arsenopyrite>>											
129.90	130.96	MDSt Rhyolite tuff dominant mudstone									
129.9 - 130.96: Strong fault gouge.											
<<Struc: 129.92 - 130.96 Strong (Alt) Fault>>											
130.96	142.02	RHYvx Quartz and/or feldspar crystal tuff									
<<Min: 130.96 - 142.02 3% Min: Pyrite>>											
<<Alt: 130.96 - 138.91 Moderate (Alt) Muscovite>>											
<<Alt: 138.91 - 142.75 Strong (Alt) Muscovite>>											
<<Vein: 139 - 142.1 20% Quartz>> A zone with massive QZ veining											
<<Struc: 130.96 - 132.77 Weak (Alt) Fault>>											
<<Struc: 136.05 - 137.88 Weak (Alt) Fault>>											
<<Struc: 140.9 - 141 Weak-Moderate (Alt) Fault>>											
142.02	147.09	RHYva Coarse grained to ash tuff	142.60	144.10	1.50	B00268362	1.9	-0.005	0.01	0.06	0.39
<<Min: 142.02 - 147.09 0.5% Min: Sphalerite>>											
<<Min: 142.02 - 147.09 3% Min: Pyrrhotite>>											
			144.10	145.60	1.50	B00268363	15.9	0.005	-0.01	0.31	0.26
			145.60	147.09	1.49	B00268364	1.1	-0.005	0.01	-0.01	0.23



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-293
From (m) To (m) Rocktype & Description

<<Min: 142.02 - 147.09 0.01% Min: Chalcopryite>>

<<Alt: 142.75 - 147.09 Moderate (Alt) Muscovite>>

<<Struc: 145.23 - 145.24 dominant foliation>>

**147.09 148.10 OJ Heavily disseminated
sulphides in proximal altered
rock**

<<Min: 147.09 - 148.1 3% Min: Pyrrhotite>>

<<Alt: 147.09 - 148.44 Moderate (Alt) Chlorite>>

<<Alt: 147.09 - 148.44 Weak (Alt) Cordierite>>

148.10 149.23 RHYva Coarse grained to ash tuff

<<Min: 148.1 - 149.23 0.5% Min: Sphalerite>>

<<Min: 148.1 - 149.23 1% Min: Pyrite>>

<<Alt: 148.44 - 149.23 Weak (Alt) Muscovite>>

**149.23 151.00 OJ Heavily disseminated
sulphides in proximal altered
rock**

<<Min: 149.23 - 151 5% Min: Sphalerite>>

<<Min: 149.23 - 151 1% Min: Pyrite>>

<<Min: 149.23 - 151 2% Min: Pyrrhotite>>

<<Min: 149.23 - 151 1% Min: Galena>>

<<Min: 149.23 - 151 1% Min: Chalcopryite>>

<<Alt: 149.23 - 150.7 Moderate (Alt) Muscovite>>

<<Alt: 149.23 - 150.7 Moderate (Alt) Chlorite>>

<<Alt: 149.23 - 150.7 Weak (Alt) Cordierite>>

<<Alt: 150.7 - 151 Weak (Alt) Chlorite>>

<<Alt: 150.7 - 175.05 Moderate (Alt) Muscovite>>

**151.00 155.30 OI Heavily disseminated
sulphides in host schist**

<<Min: 151 - 155.3 3% Min: Sphalerite>>

<<Min: 151 - 155.3 1% Min: Pyrite>>

<<Min: 151 - 155.3 2% Min: Pyrrhotite>>

<<Min: 151 - 155.3 1% Min: Galena>>

<<Alt: 154.95 - 156.9 Moderate (Alt) Chlorite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
147.09	148.10	1.01	B00268365	11.3	0.039	0.25	0.04	3.63
148.10	149.23	1.13	B00268366	1.1	-0.005	0.02	-0.01	0.17
149.23	150.00	0.77	B00268367	18	0.06	0.4	0.05	4.37
150.00	151.00	1.00	B00268368	3.3	-0.005	0.05	0.01	1.55
151.00	152.00	1.00	B00268369	1.7	-0.005	0.06	0.01	1.94
152.00	152.90	0.90	B00268371	2.1	-0.005	0.07	0.02	2.8
152.90	153.80	0.90	B00268372	3	-0.005	0.05	0.08	1.11
153.80	154.60	0.80	B00268373	3.2	-0.005	0.05	0.08	0.39
154.60	155.30	0.70	B00268374	14.2	0.005	0.02	0.44	0.97

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-293

From (m) To (m) Rocktype & Description

155.30 162.20 RHYvl Lapilli tuff

<<Min: 155.3 - 159.1 2% Min: Sphalerite>>
<<Min: 155.3 - 159.1 1% Min: Pyrrhotite>>
<<Min: 159.1 - 160 0.5% Min: Pyrrhotite>>
<<Min: 160 - 164.35 1% Min: Sphalerite>>
<<Min: 160 - 164.35 1% Min: Pyrrhotite>>
<<Min: 160 - 164.35 0.5% Min: Chalcopryite>>
<<Alt: 160 - 164.35 Weak (Alt) Chlorite>>

162.20 180.70 RHYcw Curdy textured-flow banded (flows, subvolcanics)

<<Min: 164.35 - 172.5 2% Min: Sphalerite>>
<<Min: 164.35 - 172.5 1% Min: Pyrrhotite>>
<<Min: 172.5 - 175.05 0.5% Min: Sphalerite>>
<<Min: 172.5 - 175.05 1% Min: Pyrrhotite>>
<<Min: 175.05 - 180.7 3% Min: Pyrite>>
<<Min: 175.05 - 180.7 1% Min: Pyrrhotite>>
<<Alt: 172.5 - 175.05 Weak (Alt) Chlorite>>
<<Alt: 175.05 - 179 Strong (Alt) Muscovite>>
<<Alt: 179 - 180.7 Weak (Alt) Muscovite>>
<<Struc: 175.75 - 175.76 dominant foliation>>

180.70 198.15 RHYi Aphanitic Rhyolite (intrusion)

<<Min: 180.7 - 198.15 2% Min: Sphalerite>>
<<Min: 180.7 - 198.15 2% Min: Pyrite>>
<<Min: 180.7 - 198.15 2% Min: Pyrrhotite>>
<<Min: 181 - 194 5% Min: Calcite>>
<<Min: 194 - 198.15 20% Min: Calcite>>
<<Alt: 180.7 - 201.3 Moderate (Alt) Silicification>>
<<Alt: 180.7 - 201.3 Moderate (Alt) Muscovite>>
<<Struc: 181.34 - 181.35 dominant foliation>>
<<Struc: 183.19 - 183.2 dominant foliation>>
<<Struc: 189.02 - 189.03 dominant foliation>>

198.15 213.40 RHYc Rhyolite coherent volcanics

<<Min: 198.15 - 213.4 2% Min: Pyrite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
155.30	156.80	1.50	B00268375	1.6	-0.005	-0.01	0.04	0.3
156.80	158.30	1.50	B00268376	4	0.005	0.04	0.29	0.56
158.30	159.80	1.50	B00268377	1	-0.005	-0.01	0.03	0.09
159.80	161.30	1.50	B00268378	2.2	-0.005	0.03	0.06	0.48
161.30	162.20	0.90	B00268379	0.6	-0.005	-0.01	-0.01	0.02
162.20	163.20	1.00	B00268381	2.3	-0.005	0.05	0.06	0.5
163.20	164.35	1.15	B00268382	7	-0.005	0.01	0.17	0.82

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-293

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 198.15 - 239 0.5% Min: Calcite>>											
<<Struc: 198.16 - 198.17 dominant foliation>>											
<<Struc: 202.87 - 202.88 dominant foliation>>											
<<Struc: 205.18 - 205.19 dominant foliation>>											
213.40 239.00 RHYvl Lapilli tuff											
213.4 - 239: Rhyolitic lpl in a green CL+QZ+/-MU groundmass											
<<Min: 213.4 - 239 2% Min: Pyrite>>											
<<Min: 213.4 - 239 2% Min: Pyrrhotite>>											
<<Alt: 213.4 - 239 Weak (Alt) Chlorite>>											
<<Vein: 236.2 - 236.7 70% Quartz>> 2 QZ+CL+CA veins											
<<Struc: 217.29 - 217.3 dominant foliation>>											
<<Struc: 220.74 - 220.75 dominant foliation>>											
<<Struc: 223.79 - 223.8 Vein>> Small CA-CL veinlet											
<<Struc: 227.13 - 227.14 Vein>> Small CA veinlet											
<<Struc: 229.72 - 229.73 dominant foliation>>											
End of Hole @ 239											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-294

Prospect:	GP4F	Hole Type:	DD	Survey Type:	APS	Logged By:	Murray Jones
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Murray Jones	Date Logging Start:	12-Oct-15
UTM Easting	419406	Core Size:	NQ3	Azimuth:	180	Date Logging Complete:	17-Oct-15
UTM Northing:	6813500	Casing Pulled?:	Yes	Dip:	-85	Drill Company:	Geotech
UTM Elev. (m):	1377	Casing Depth (m):	0.3	Length (m):	306	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	11-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	16-Oct-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

This hole was designed fill in a gap on Section 9450E. No massive sulphide was encountered but lesser sulphide mineralization was intersected at the GP4F horizon.

K15-294 intersected a dark sedimentary unit over the first 12m and then primarily felsic volcanic rocks, rhyolite lapilli tuff and coherent rhyolite commonly with bluish quartz eyes, with minor MAFi and sediment to about 294 m depth. A short stretch of darkly coloured, BI-rich sediment occurs in a fault zone at the bottom of the hole but it is difficult to determine if this is the carbonaceous sediments seen at depth in hole K15-261 and K15-280.

Moderate to intense chlorite, biotite, cordierite and garnet alteration is present from approximately 223 to 254 m. This is accompanied by pyrrhotite-pyrite and strong stringer to wispy-style sphalerite-galena and chalcopyrite mineralization from 226m to 246 metres. Another zone of primarily pyrrhotite-pyrite mineralization occurs from 267 to 269 m, along with cordierite-biotite alteration.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-85	180	0	180	APS	Murray Jones	11-Oct-15		<input checked="" type="checkbox"/>	
30	-83.3	159.6	22.4	182	ReflexEVS	Geotech	12-Oct-15	5753	<input checked="" type="checkbox"/>	
60	-82.2	152.5	22.4	174.9	ReflexEVS	Geotech	12-Oct-15	5752	<input type="checkbox"/>	
90	-82.1	159.8	22.4	182.2	ReflexEVS	Geotech	12-Oct-15	5710	<input checked="" type="checkbox"/>	
120	-82.1	158.7	22.4	181.1	ReflexEVS	Geotech	13-Oct-15	5757	<input checked="" type="checkbox"/>	
150	-81.5	153.5	22.4	175.9	ReflexEVS	Geotech	13-Oct-15	5733	<input type="checkbox"/>	
180	-81.1	161.1	22.4	183.5	ReflexEVS	Geotech	13-Oct-15	5749	<input checked="" type="checkbox"/>	
210	-79.3	159.4	22.4	181.8	ReflexEVS	Geotech	13-Oct-15	5694	<input checked="" type="checkbox"/>	
240	-77.9	297.2	22.4	319.6	ReflexEVS	Geotech	13-Oct-15	2421	<input type="checkbox"/>	Value not accepted due, low magnetic field
270	-75.4	154	22.4	176.4	ReflexEVS	Geotech	13-Oct-15	5759	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	0.30	CASN Casing									

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-294

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.30	12.00	SED undifferentiated Sediment dark grey									
0.3 - 12: ragged laminated black and lt grey coloured SED, not carbonaceous, quartzose in lenses, contorted locally, lt brown laminae after BI, cut by BIAC MAFi, CA lenses and wisps t/o											
<<Min: 0.3 - 12 10% Min: Calcite>> CA in lenses with QZ? Interlayered with BI-rich layers in meta-sediment											
12.00	13.88	MAFi Mafic Intrusions (primarily brown footwall mafic intrusion)									
12 - 13.88: faulted, gouge											
<<Struc: 12 - 13.75 Moderate (Alt) Fault>> mostly gouge, fault hosts MAFi											
13.88	51.61	RHYvx Quartz and/or feldspar crystal dark grey FMG tuff									
13.88 - 51.61: dark grey to tan-green locally, RHYv with 1-4mm crystals of QZ and possibly FP (small, blocky), very dark locally due to varying BI content, BI as speckles and pervasive in groundmass, also as envelopes to fractures, BI-rich clasts locally, groundmass is well indurated, tan to grey, feldspathic, leucoxene(?) locally as well.											
Unit is somewhat variable volcanoclastic rhyolite, with varying amounts of lapilli t/o, generally low concentrations, lt coloured, and small phenos present normally. Dark BI-rich clasts occur locally, e.g. between 31 and 35 m.											
<<Min: 40.27 - 42.38 5% Min: Calcite>> in fractures, groundmass											
<<Alt: 13.88 - 24 Weak (Alt) Silicification>> bleaching of groundmass around fractures											
<<Alt: 50.3 - 51.61 Moderate (Alt) Silicification>> fractured zone a lower contact of RHYv											
<<Alt: 50.3 - 51.61 Moderate (Alt) Muscovite>> bleaches rock											
<<Alt: 50.3 - 51.61 Weak (Alt) Chlorite>> patchy in groundmass											
<<Struc: 23.8 - 25.6 Moderate (Alt) Fault>> mostly broken, weathered core, minor gouge mixed in											
51.61	55.08	MAFi Mafic Intrusions (primarily green-brown MCG footwall mafic intrusion)									
51.61 - 55.08: BI to BI-AC rich, unit, strongly faulted and weathered, CA focused in weathered sections											
55.08	67.66	RHYvx Quartz and/or feldspar crystal grey FG tuff									
55.08 - 67.66: small bluish QE, continues from section above dyke, lapili appear at base below 66.9, in and out of unit											
<<Min: 60 - 65.5 3% Min: Calcite>> or fractures and small patches											
<<Min: 60 - 67.66 0.01% Min: Pyrite>> fine diss'ns											
<<Min: 65.5 - 76.3 1% Min: Calcite>>											
<<Alt: 60 - 65.7 Moderate (Alt) Muscovite>> almost silvery grey in sections											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-294

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 58.65 - 58.9 Moderate (Alt) Fault>> narrow gouge zone, overall not badly broken <<Struc: 61.1 - 63.1 Moderate (Alt) Fault>> measured on QZ vein, oxidized section, hosts Dyke 67.66 80.10 RHYvl Lapilli tuff grey-green 67.66 - 80.1: scattered intervals of lapilli, generally <2 cm long, altered around large fault in lower half <<Min: 67.66 - 80.1 0.5% Min: Pyrite>> and in fractures <<Alt: 72.43 - 76.8 Moderate (Alt) Muscovite>> schistose partings more prevalent <<Alt: 73.9 - 77.2 Moderate (Alt) Chlorite>> and bands, fades at fault boundary <<Alt: 76.8 - 77.2 Moderate (Alt) Silicification>> <<Alt: 76.8 - 79.75 Strong (Alt) Muscovite>> locally intense in fault between 77.20 and 79.75 <<Alt: 79.75 - 80.4 Weak (Alt) Garnet>> scattered pblasts adjacent to alt'n in fault zone <<Struc: 69 - 70.8 Moderate (Alt) Fault>> about 1.2 m lost core <<Struc: 77.2 - 79.75 Strong (Alt) Fault>> low angle fault, results in wide zone of alt'n in fault envelope 80.10 87.90 SEDc calcareous Sediment grey 80.1 - 87.9: patchy, speckled with TO pblast, greenish patches with calc-silicate(?), possible AC, minor RHYvl intervals, variable appearance partly due to proximity of altered fault zone, and MAFI that wanders in and out of the core trace e.g. at bottom of section <<Min: 80.1 - 87.9 0.5% Min: Pyrrhotite>> scattered <<Struc: 81.6 - 81.8 Moderate (Alt) Vein>> TO vnl't with wide bleached alt'n envelope 87.90 115.38 RHYvl Lapilli tuff grey-brown MG 87.9 - 115.38: variable texture from conc'd lapilli to scattered lapilli to ash(?) locally, minor leucoxene locally, RHYc appears, disaggregated silicic bands from 104 to 110.4 <<Min: 87.9 - 106.61 0.5% Min: Pyrite>> minor fine diss'ns <<Min: 104.1 - 106.61 1% Min: Pyrrhotite>> scattered, small diss'd patches <<Min: 106.61 - 112.44 3% Min: Pyrite>> and in fractures <<Min: 106.61 - 112.44 0.5% Min: Pyrrhotite>> in PY bands but local <<Alt: 104.1 - 109.22 Moderate (Alt) Muscovite>> waxes and wanes a bit, stronger around QV's <<Alt: 106.61 - 108.2 Moderate (Alt) Chlorite>> in fractures, discolours QV <<Alt: 107.52 - 109.22 Moderate (Alt) Biotite>> fractures and with CL <<Alt: 108.2 - 109.22 Strong (Alt) Chlorite>> with BI <<Alt: 109.22 - 110.38 Strong (Alt) Muscovite>> <<Alt: 110.38 - 112.44 Moderate (Alt) Muscovite>> <<Alt: 110.38 - 112.44 Strong (Alt) Chlorite>> with BI <<Alt: 110.38 - 112.44 Moderate (Alt) Biotite>> with CL											
			106.61	108.00	1.39	B00269325	-0.3	-0.005	-0.01	-0.01	-0.01
			108.00	109.22	1.22	B00269326	0.4	-0.005	-0.01	-0.01	-0.01
			109.22	110.38	1.16	B00269327	-0.3	-0.005	-0.01	-0.01	-0.01
			110.38	111.40	1.02	B00269328	-0.3	-0.005	0.02	-0.01	0.01
			111.40	112.44	1.04	B00269329	0.4	-0.005	0.02	-0.01	-0.01



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-294

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %							
<<Vein: 91.6 - 91.74 10% Quartz-Tourmaline 10 deg. >> QZ-TO-CB gash vein, weak envelope,																		
<<Vein: 94.47 - 95.48 60% Quartz-Chalcopyrite 10 deg. >> QZ-CB, TO selvages, CL-PY in fractures																		
<<Vein: 107.52 - 110.38 25% Quartz-Chalcopyrite>> QZ-CB? Veining, disaggregated, MU-CL-sx in frags																		
115.38	121.80	RHYc Rhyolite coherant volcanics	grey-brown	FG														
115.38 - 121.8: curdy texture more than flow banded, lapilli sections?																		
<<Min: 120.8 - 123.31 10% Min: Calcite>> and veins																		
121.80	123.31	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	brown															
121.8 - 123.31: calcareous																		
123.31	133.09	RHYvl Lapilli tuff	grey-brown	FMG														
123.31 - 133.09: bluish to grey QE's, BI in groundmass, locally MU partings, siliceous, light coloured sections, Lapilli conc'd, fairly homogeneous section, minor QV's with EP? In fractures																		
<<Min: 126.6 - 129.91 3% Min: Pyrite>> as lenses, bands, in fractures																		
<<Min: 126.6 - 129.91 0.5% Min: Pyrrhotite>> scattered																		
<<Min: 129.91 - 131.4 10% Min: Calcite>> lenses and veins																		
<<Min: 133.01 - 135.38 25% Min: Calcite>> pervasive blebs,																		
133.09	137.38	SEDc calcareous Sediment	brown	FG														
133.09 - 137.38: brownish to tan colour, bands, BI-MU in groundmass, siliceous lenses, well fol'd,																		
<<Alt: 137.2 - 140.5 Moderate (Alt) Muscovite>>																		
<<Struc: 136.6 - 136.9 Moderate (Alt) Fault>> gouge, broken core, CA veinlets																		
137.38	159.46	RHYvl Lapilli tuff	grey-brown	FG														
137.38 - 159.46: lapilli generally <1 cm, sparse crystals, whitish QE?, locally ash tuff, TO pblasts scattered but common - fracture related?, looks sedimentary locally, bleached around faults, dykes.																		
<<Min: 137.38 - 158.67 1% Min: Pyrrhotite>> wisps and blebs scattered																		
<<Min: 151.4 - 156.77 10% Min: Calcite>>																		
<<Alt: 139 - 140.1 Moderate (Alt) Chlorite>> adjacent to MU altered fault																		
<<Struc: 153.4 - 155 Moderate (Alt) Fault>> broken core, weak measurement																		
159.46	181.08	RHYc Rhyolite coherant volcanics	grey															
159.46 - 181.08: RHYi?,scattered QE's (White to grey to blue) locally, rock has silicified appearance, MU/BI in groundmass as patches,bands, curdy or lapilli tx common, also massive silica, QE occur locally, not common, MU increases around faults, veins																		

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-294

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 159.46 - 173.5 0.01% Min: Pyrite>> rare <<Min: 159.46 - 181.08 0.5% Min: Pyrrhotite>> diss'd <<Min: 173.5 - 176 3% Min: Pyrite>> in bnds with CL <<Alt: 159.46 - 164.9 Weak (Alt) Silicification>> glassy rock, <<Alt: 164.9 - 167.52 Intense (Alt) Muscovite>> local bands of strong MU, interstitial to siliceous rock <<Alt: 167.52 - 168.2 Moderate (Alt) Muscovite>> <<Alt: 167.52 - 180 Weak (Alt) Silicification>> glassy <<Alt: 169.1 - 175.75 Moderate (Alt) Muscovite>> focused around fault <<Alt: 173.5 - 174.9 Moderate (Alt) Chlorite>> clots and minor bands, fracture coatings, with PY in bands <<Vein: 166.6 - 167.1 30% Quartz>> QZ vns, trace PO, CL on margins <<Vein: 169.1 - 169.3 5% Quarzt-Tourmaline-Sulphide 13 deg. >> TO-SI-PO vnlrt, <<Struc: 170 - 173.6 Moderate (Alt) Fault>> small gouge in broken rock											
181.08	187.02	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
181.08 - 187.02: calcareous, cut by late QZ-CL-CB-PY veins											
<<Min: 181.08 - 187.02 10% Min: Calcite>> in dyke primarily											
187.02	209.80	RHYva Coarse grained to ash tuff									
187.02 - 209.8: silicified locally?, schistose, MU or MU/BI in groundmass,											
<<Min: 187.02 - 198 5% Min: Calcite>> in groundmass, associated with fault, in fractures											
<<Min: 187.75 - 192.42 3% Min: Pyrite>> in bands, blebs, fractures and in fault gouge											
<<Min: 192.42 - 198 0.5% Min: Pyrite>>											
<<Min: 198 - 199.17 20% Min: Calcite>>											
<<Min: 199.17 - 204.12 1% Min: Pyrrhotite>> scattered											
<<Min: 199.17 - 209.8 3% Min: Calcite>> diss'd blebs											
<<Min: 206.12 - 206.76 5% Min: Pyrite>> in bands											
<<Min: 206.76 - 214.6 1% Min: Pyrrhotite>> scattered, also diss'ns in lenses											
<<Alt: 187.75 - 195.5 Strong (Alt) Muscovite>> surrounds fault											
<<Alt: 202.14 - 204.12 Moderate (Alt) Silicification>>											
<<Alt: 204.12 - 206.12 Strong (Alt) Muscovite>>											
<<Alt: 206.12 - 206.76 Moderate (Alt) Chlorite>> with PY											
<<Alt: 206.76 - 208.8 Moderate (Alt) Muscovite>> minor BI bands											
<<Struc: 187.75 - 196 Strong (Alt) Fault>> several strands, abundant lost core, gouge											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-294

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
209.80	214.60	SED undifferentiated Sediment	210.60	212.10	1.50	B00269331	2.1	0.008	0.02	0.04	0.38
209.8 - 214.6: banded, schistose rock, BI-MU layers											
<<Min: 209.8 - 214.6 1% Min: Sphalerite>> in fractures, scattered diss'ns along fol'n											
<<Min: 209.8 - 214.6 5% Min: Calcite>> in sediment											
<<Alt: 209.8 - 211.7 Moderate (Alt) Muscovite>>											
214.60	216.04	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	216.60	216.04	1.44	B00269334	2.3	0.017	0.05	0.16	0.65
214.6 - 216.04: recrystallized, calc-silicate, SX locally, dark margins in surrounding rocks, CL-BI alt'n											
<<Min: 214.6 - 216.04 3% Min: Pyrite>> along fol'n, in fracs											
<<Min: 214.6 - 216.04 5% Min: Pyrrhotite>> with PY, in fracs, veins											
<<Min: 214.6 - 216.04 3% Min: Calcite>>											
<<Alt: 214.6 - 216.04 Moderate (Alt) Chlorite>>											
<<Alt: 214.6 - 216.54 Moderate (Alt) Biotite>>											
216.04	224.65	RHYvx Quartz and/or feldspar crystal tuff	216.04	217.50	1.46	B00269335	-0.3	-0.005	-0.01	-0.01	0.01
216.04 - 224.65: local zones of lapilli, and some RHYc?, alt'n is in and out, dark intervals with strong BI, SED layers?											
<<Min: 216.04 - 220.94 0.01% Min: Pyrite>>											
<<Min: 216.04 - 220.94 1% Min: Calcite>>											
<<Min: 220.94 - 223.9 1% Min: Pyrite>>											
<<Min: 220.94 - 223.9 3% Min: Pyrrhotite>> along fol'n											
<<Min: 220.94 - 223.9 3% Min: Calcite>> in alt'n zone?											
<<Min: 223.9 - 226.78 5% Min: Pyrite>> along fol'n											
<<Min: 223.9 - 226.78 5% Min: Pyrrhotite>> and blebs in veins											
<<Min: 223.9 - 226.78 0.5% Min: Chalcopryrite>> in QV's with TO, PO											
<<Alt: 220.94 - 222.1 Moderate (Alt) Chlorite>> patches, mixed with BI											
<<Alt: 220.94 - 222.1 Strong (Alt) Biotite>> in bands, groundmass, dark colour											
<<Alt: 223.9 - 226.78 Moderate (Alt) Chlorite>> patchy											
<<Alt: 223.9 - 226.78 Strong (Alt) Biotite>>											
224.65	240.00	RHY undifferentiated rhyolite	224.65	225.75	1.10	B00269343	0.4	0.02	0.06	-0.01	0.2
224.65 - 240: heavily altered lithology, seems to be islands of RHYvl(?) remaining but also looks like SED or BI-AC MAFI locally, CL t/o pervasive, massive locally, clots in lenses with MU(?), MU in background and appears in lesser CL zones. Banding prominent locally and also massive rock											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-294

From (m)	To (m)	Rocktype & Description
<<Min: 226.78 - 230.03	1% Min: Galena>>	and in fractures
<<Min: 226.78 - 230.03	10% Min: Pyrrhotite>>	wisps, lenses, blebs
<<Min: 226.78 - 230.03	5% Min: Pyrite>>	blebs, xtals along fol'n
<<Min: 226.78 - 230.03	3% Min: Sphalerite>>	stringers
<<Min: 226.78 - 230.03	3% Min: Chalcopryite>>	with PO, in fracs, veins
<<Min: 226.78 - 235.1	3% Min: Magnetite>>	scattered throughout, conc'd in CL zones
<<Min: 230.03 - 231.55	15% Min: Sphalerite>>	masses and lenses, stringers
<<Min: 230.03 - 231.55	1% Min: Chalcopryite>>	with PO?
<<Min: 230.03 - 231.55	3% Min: Galena>>	with SP
<<Min: 230.03 - 231.55	5% Min: Pyrrhotite>>	and stringers
<<Min: 230.03 - 232.77	5% Min: Pyrite>>	and stringers, blebs in veins
<<Min: 231.55 - 233.23	0.5% Min: Chalcopryite>>	
<<Min: 231.55 - 233.23	1% Min: Galena>>	
<<Min: 231.55 - 233.23	1% Min: Pyrrhotite>>	scattered
<<Min: 231.55 - 233.23	5% Min: Sphalerite>>	stringers
<<Min: 233.23 - 235.1	1% Min: Galena>>	
<<Min: 233.23 - 235.1	5% Min: Sphalerite>>	wisps, and stringers
<<Min: 233.23 - 239.8	5% Min: Pyrite>>	and veins, fractures
<<Min: 233.23 - 239.8	3% Min: Chalcopryite>>	with PO masses, in fractures
<<Min: 233.23 - 239.8	10% Min: Pyrrhotite>>	wispy lenses, masses, along fol'n
<<Alt: 225.7 - 235.1	Moderate (Alt) Garnet>>	scattered, conc'd in short intervals
<<Alt: 226.78 - 230.03	Strong (Alt) Chlorite>>	bands, locally intense
<<Alt: 226.78 - 232.77	Moderate (Alt) Biotite>>	patchy
<<Alt: 230.03 - 231.55	Strong (Alt) Cordierite>>	occurs in conc'd zones it seems
<<Alt: 230.03 - 231.55	Intense (Alt) Chlorite>>	
<<Alt: 231.55 - 232.77	Moderate (Alt) Muscovite>>	patches
<<Alt: 231.55 - 232.77	Moderate (Alt) Chlorite>>	and clots
<<Alt: 232.77 - 234.06	Intense (Alt) Chlorite>>	fg, black rock
<<Alt: 232.77 - 234.06	Intense (Alt) Biotite>>	fg
<<Alt: 234.06 - 235.1	Moderate (Alt) Chlorite>>	fractures
<<Alt: 234.06 - 236.1	Moderate (Alt) Muscovite>>	
<<Alt: 234.06 - 239.8	Moderate (Alt) Biotite>>	
<<Alt: 235.1 - 239.8	Strong (Alt) Chlorite>>	
<<Alt: 236.1 - 239.8	Strong (Alt) Muscovite>>	

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
225.75	226.78	1.03	B00269344	1.6	-0.005	0.03	0.01	0.03
226.78	227.80	1.02	B00269345	4	0.006	0.04	0.35	0.9
227.80	229.00	1.20	B00269346	10.3	0.013	0.05	1.85	2.22
229.00	230.00	1.00	B00269347	3.7	0.015	0.09	0.21	2.23
230.00	230.75	0.75	B00269348	17.5	0.055	0.33	1.05	4.99
230.75	231.55	0.80	B00269349	2.6	0.005	-0.01	0.17	0.2
231.55	232.66	1.11	B00269351	5.8	0.021	0.12	0.42	1.47
232.66	233.23	0.57	B00269352	4	0.009	0.04	0.23	1.09
233.23	234.06	0.83	B00269353	10.5	0.042	0.18	0.56	6.06
234.06	235.10	1.04	B00269354	20.4	0.262	0.57	0.29	3.5
235.10	236.20	1.10	B00269355	3	0.008	0.04	0.13	0.66
236.20	237.00	0.80	B00269356	2.7	0.007	0.03	0.13	1.91
237.00	240.00	3.00	B00269357	5.5	0.016	0.2	0.07	0.53



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-294

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 237 - 239.8		Strong (Alt) Cordierite>>									
<<Alt: 239.8 - 246		Moderate (Alt) Muscovite>>									
<<Struc: 229.6 - 229.61		Strong (Alt) dominant foliation>>									
<<Struc: 235.1 - 239.8		Moderate (Alt) Fault>> gouge and lost core									
240.00	243.00	No Core No Core									
240 - 243: mismatch, leaves about 1.6 m of rubble, including 0.35m of RHYc, relatively unaltered											
243.00	272.50	RHY undifferentiated rhyolite green-brown	243.00	244.20	1.20	B00269358	6.1	0.005	0.01	0.07	0.63
243 - 272.5: highly broken section, overall poor recovery, highly altered rock, generally, locally can see RHYl tx, also RHYva, maybe SED?,											
<<Min: 243 - 244.2	1% Min: Pyrrhotite>>	along fol'n	244.20	245.00	0.80	B00269359	19.3	0.019	0.05	0.03	0.03
<<Min: 243 - 244.2	1% Min: Pyrite>>	in fractures	245.00	245.65	0.65	B00269361	3.6	0.008	-0.01	0.03	0.07
<<Min: 243 - 244.2	5% Min: Sphalerite>>		245.65	247.00	1.35	B00269362	9	0.015	0.02	0.03	0.02
<<Min: 243 - 244.2	1% Min: Galena>>	scattered	247.00	248.00	1.00	B00269363	5.6	0.008	-0.01	0.02	0.1
<<Min: 244.2 - 245	0.5% Min: Chalcopryite>>		248.00	248.90	0.90	B00269364	9.2	0.013	-0.01	0.06	0.03
<<Min: 244.2 - 245	20% Min: Pyrrhotite>>	wisps, irregular lenses	248.90	250.20	1.30	B00269365	1.3	0.008	-0.01	-0.01	0.01
<<Min: 244.2 - 245	10% Min: Pyrite>>	blebs with PO	250.20	251.20	1.00	B00269366	11	0.042	0.04	0.1	0.09
<<Min: 245 - 249.9	3% Min: Sphalerite>>		251.20	252.03	0.83	B00269367	6.9	0.025	0.02	0.15	0.09
<<Min: 245 - 252.03	5% Min: Pyrite>>	blebs, veins	252.03	253.10	1.07	B00269368	33.4	0.058	0.01	1.54	1.45
<<Min: 245 - 252.03	5% Min: Pyrrhotite>>	scattered, diss'ns in lenses, conc'd bands	253.10	254.23	1.13	B00269369	13.8	-0.005	-0.01	0.91	0.78
<<Min: 252.03 - 255.2	0.5% Min: Galena>>	blebs in fracs in QV	255.00	258.00	3.00	B00269371	2.2	0.011	0.01	0.05	0.38
<<Min: 252.03 - 256	1% Min: Pyrite>>	with TO in fault	258.00	259.00	1.00	B00269372	1.8	-0.005	0.02	0.02	0.52
<<Min: 252.03 - 258.8	3% Min: Pyrrhotite>>	along fol'n, with BI/CI, MG present?	259.00	259.80	0.80	B00269373	3.4	-0.005	0.03	0.07	1.36
<<Min: 258.8 - 267.3	0.5% Min: Pyrrhotite>>	rare diss'ns, blebs in fault near bottom	259.80	260.75	0.95	B00269374	2.1	-0.005	-0.01	0.02	0.42
<<Min: 258.8 - 267.3	0.5% Min: Pyrite>>	wisps, in fractures, faults	267.00	268.00	1.00	B00269375	9.6	-0.005	0.2	0.29	1.41
<<Min: 267.3 - 268	30% Min: Pyrrhotite>>		268.00	270.00	2.00	B00269376	2	-0.005	0.02	0.03	0.2
<<Min: 267.3 - 268	15% Min: Pyrite>>		270.00	271.00	1.00	B00269377	1	-0.005	0.02	-0.01	0.12
<<Min: 267.3 - 268	3% Min: Sphalerite>>	present?, hard to distinguish from PO in messed up core									
<<Min: 268 - 271	3% Min: Pyrrhotite>>	in BI bands									
<<Min: 268 - 271	1% Min: Pyrite>>										
<<Min: 271 - 282	10% Min: Calcite>>										
<<Alt: 243 - 248.9	Strong (Alt) Chlorite>>	fractures, blebs									
<<Alt: 245.65 - 248.9	Moderate (Alt) Cordierite>>	conc'd in bands and lenses, small masses									
<<Alt: 245.65 - 252	Strong (Alt) Muscovite>>	intense bands that disintegrate-weathered?, CY after?									



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-294

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
		<<Alt: 250.3 - 254.23 Moderate (Alt) Chlorite>> patches and bands									
		<<Alt: 252 - 259.8 Strong (Alt) Cordierite>> bands and small masses									
		<<Alt: 252 - 259.8 Strong (Alt) Biotite>> massive bands, groundmass, with Cordierite									
		<<Alt: 258.8 - 267.3 Weak (Alt) Biotite>> metamorphic?									
		<<Alt: 267.3 - 268 Moderate (Alt) Chlorite>> in sx zone									
		<<Alt: 267.3 - 271 Strong (Alt) Cordierite>> small masses, pblasts through zone									
		<<Alt: 268 - 271 Moderate (Alt) Muscovite>> locally massive bands									
		<<Alt: 268 - 271 Strong (Alt) Biotite>> to patches									
		<<Alt: 271 - 276.3 Moderate (Alt) Chlorite>> in groundmass									
		<<Vein: 252.03 - 255.2 25% Quartz-Carbonate-Sulphide 48 deg. >> QZ-CB-sx, veins									
		<<Struc: 248.4 - 248.9 Moderate (Alt) Fault>> gouge									
		<<Struc: 254.23 - 257.9 Strong (Alt) Fault>> gouge with TO-PY vein									
		<<Struc: 269.75 - 269.76 Moderate (Alt) dominant foliation>>									
		<<Struc: 270.7 - 272.5 Moderate (Alt) Fault>> gouge, broken core									
272.50	294.00	RHYcf Feldspar & feldspar quartz porphyry	grey-brown	FMG							
272.5 - 294: altered at top, bluish QE most distinguishing feature, lapilli or FP phenos/domains give tx,											
		<<Min: 282 - 288 0.5% Min: Pyrite>>									
		<<Min: 282 - 288 1% Min: Pyrrhotite>> along fol'n									
		<<Min: 282 - 288 3% Min: Calcite>> and patches									
		<<Min: 288 - 291.5 10% Min: Calcite>>									
		<<Min: 291.5 - 306 3% Min: Calcite>> and veins									
		<<Alt: 279 - 282 Moderate (Alt) Muscovite>> fault, CY after MU, weathered rock?									
		<<Struc: 274.8 - 295 Intense (Alt) Fault>> big fault zone, multiple strong gouge zones, lots of lost core, and broken to bottom of hole									
294.00	297.40	SED undifferentiated Sediment	dark grey								
294 - 297.4: layered, siliceous bands, mixed with MAFi, BI pervasive but black, not brown that is typical of MAFi											
		<<Min: 294 - 297.5 0.5% Min: Pyrite>>									
297.40	303.00	RHYvl Lapilli tuff	grey-brown								
297.4 - 303: small blue and white QE's, lapilli, or FP domains, more schistose than RHYcf above SED											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-294

From (m) To (m)

Rocktype & Description

**303.00 306.00 MAFi Mafic Intrusions (primarily
footwall mafic intrusion)**

303 - 306: banded rock, weakly magnetic locally (PO?),

<<Min: 303 - 306 1% Min: Pyrrhotite>>

End of Hole @ 306

green-brown

From (m)

To (m)

Width

Sample

Ag PPM

Au PPM

Cu %

Pb %

Zn %

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-295

Prospect:	ABM	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	David Nuttal
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	David Nuttal	Date Logging Start:	13-Oct-15
UTM Easting	415049.2	Core Size:	NQ3	Azimuth:	179.97	Date Logging Complete:	16-Oct-15
UTM Northing:	6815664	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1381.92	Casing Depth (m):	10.5	Length (m):	201.5	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	12-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	15-Oct-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

This hole is intended as a resource infill between historic holes K95-071 & K94-033.

The structural hanging wall is composed of a package of RHYv1 / RHYc and foliation parallel MAFi, underlain by MDSt, RHYv and RHYc units. The hole lacks a massive sulphide intercept, though abundant disseminated sulphides are present between 134m to 150m in rocks with strong muscovite, chlorite and cordierite alteration. The structural footwall is composed of a package of RHYv / RHYc and MDSt, underlain by MAFi and RHYi. Intensity of muscovite, chlorite and cordierite alteration increases towards interval of heavily disseminated sulphide mineralization. Silicification is present at contact between MAFi and RHYi in footwall rocks. Green grey (Mu + Si alteration) is absent in contact between MAFi and RHYi.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	179.97	0	179.97	APS	David Nuttal	13-Oct-15		<input checked="" type="checkbox"/>	
32	-60.9	158.9	22.5	181.4	ReflexEVS	Geotech	13-Oct-15	5696	<input checked="" type="checkbox"/>	
59	-61.1	163	22.5	185.5	ReflexEVS	Geotech	13-Oct-15	5768	<input checked="" type="checkbox"/>	
83	-61.2	163.6	22.5	186.1	ReflexEVS	Geotech	13-Oct-15	5718	<input checked="" type="checkbox"/>	
107	-61.4	163.7	22.5	186.2	ReflexEVS	Geotech	14-Oct-15	5729	<input checked="" type="checkbox"/>	
134	-61.9	164.6	22.5	187.1	ReflexEVS	Geotech	14-Oct-15	5789	<input checked="" type="checkbox"/>	
155	-61.5	165	22.5	187.5	ReflexEVS	Geotech	14-Oct-15	5766	<input checked="" type="checkbox"/>	
185	-62.2	153.6	22.5	176.1	ReflexEVS	Geotech	15-Oct-15	6372	<input type="checkbox"/>	Value not accepted, low magnetic field
200	-61.9	165.1	22.5	187.6	ReflexEVS	Geotech	15-Oct-15	5797	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	17.12	OVB									
<<Min: 0 - 26 1% Min: Pyrite>>											
<<Min: 0 - 33.55 1% Min: Pyrrhotite>>											
<<Min: 10.5 - 26 5% Min: Calcite>>											
17.12	18.50	RHYv1									
Lapilli tuff											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-295

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 17.15 - 94 Weak (Alt) Muscovite>> Variable intensity, 2-3 is more accurate											
18.50	18.68	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
18.68	24.58	RHYvl	Lapilli tuff								
24.58	26.00	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
26.00	32.68	RHYvl	Lapilli tuff								
<<Min: 26 - 33.55 0.25% Min: Pyrite>>											
<<Min: 26 - 62.4 2% Min: Calcite>>											
32.68	33.55	RHYc	Rhyolite coherant volcanics								
33.55	58.50	RHYvl	Lapilli tuff								
33.55 - 58.5: Several small intervals resemble pseudo-fragmental textures (~54m to 63m and 68m to 75m and again from 81m to 83m). Difficult to confirm that rock was originally coherent in nature. Small intervals of carbonaceous MDSt intercalated with RHYvl (53.2m to 53											
<<Min: 33.55 - 50 3% Min: Pyrite>>											
<<Min: 33.55 - 50.4 2% Min: Pyrrhotite>>											
<<Min: 50 - 61 1% Min: Pyrite>>											
<<Min: 50.4 - 57.5 3% Min: Pyrrhotite>>											
<<Min: 57.5 - 110 1% Min: Pyrrhotite>>											
<<Alt: 45.5 - 47 Trace (Alt) Chlorite>>											
58.50	63.50	RHYc	Rhyolite coherant volcanics								
<<Min: 61 - 62.1 0.5% Min: Pyrite>>											
<<Min: 62.1 - 83.43 2% Min: Pyrite>>											
<<Min: 62.4 - 68 3% Min: Calcite>>											
63.50	73.96	RHYvl	Lapilli tuff								
<<Min: 68 - 74.5 1% Min: Calcite>>											
<<Vein: 64.75 - 65.17 98% Quartz>> PO											
73.96	74.56	RHYc	Rhyolite coherant volcanics								
<<Min: 74.5 - 77.3 3% Min: Calcite>>											
74.56	80.32	RHYvl	Lapilli tuff								
<<Min: 77.3 - 92 0.5% Min: Calcite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-295

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
80.32	80.65	MAFi									
		Mafic Intrusions (primarily footwall mafic intrusion)									
80.65	82.10	RHY									
		undifferentiated rhyolite									
80.65 - 82.1: Siliceous +/- flow textures.											
82.10	85.50	RHYc									
		Rhyolite coherant volcanics									
82.1 - 85.5: Siliceous +/- flow textures.											
<<Min: 83.43 - 92 0.25% Min: Pyrite>>											
85.50	89.59	RHYvi									
		Lapilli tuff									
85.5 - 89.59: Trace chlorite and biotite alteration (patchy) within lapillii. Indicator of proximity to MXSX?											
89.59	90.17	RHYc									
		Rhyolite coherant volcanics									
90.17	119.02	RHYvi									
		Lapilli tuff									
<<Min: 92 - 104 1% Min: Pyrite>>											
<<Min: 92 - 105 3% Min: Calcite>>											
<<Min: 104 - 120.8 0.1% Min: Pyrite>>											
<<Min: 105 - 124.39 5% Min: Calcite>>											
<<Min: 110 - 119 2% Min: Pyrrhotite>>											
<<Min: 119 - 128 0.5% Min: Pyrrhotite>>											
<<Alt: 94 - 136 Moderate (Alt) Muscovite>>											
<<Alt: 105.6 - 124.39 Trace (Alt) Chlorite>>											
<<Struc: 115.8 - 115.8 dominant foliation>>											
119.02	120.95	MDSst									
		Rhyolite tuff dominant mudstone									
<<Min: 120.8 - 127.7 0.25% Min: Pyrite>>											
120.95	124.39	RHYv									
		Rhyolite volcaniclastic									
124.39	127.70	RHYc									
		Rhyolite coherant volcanics									
<<Min: 124.39 - 143 1% Min: Calcite>>											
127.70	134.19	RHYv									
		Rhyolite volcaniclastic									
<<Min: 128 - 146.02 2% Min: Pyrrhotite>>											
<<Min: 134.18 - 146.02 0.5% Min: Pyrite>>											
<<Alt: 132.5 - 134.19 Trace (Alt) Chlorite>>											
<<Struc: 129.3 - 129.3 dominant foliation>>											

130.00	131.50	1.50	B00269539	0.8	-0.005	-0.01	-0.01	0.04
131.50	133.00	1.50	B00269541	0.7	-0.005	-0.01	0.01	0.02
133.00	134.19	1.19	B00269542	1	-0.005	-0.01	0.04	0.06

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-295

From (m) To (m) Rocktype & Description

134.19 138.50 OJ **Heavily disseminated sulphides in proximal altered rock**

134.19 - 138.5: PO 5%

<<Alt: 134.19 - 138.5 Weak (Alt) Chlorite>>

<<Alt: 134.19 - 139 Moderate (Alt) Cordierite>>

<<Alt: 136 - 164 Strong (Alt) Muscovite>> variable intensity 4-6

<<Struc: 136.8 - 136.8 dominant foliation>> possible second foliation as azimuth is significantly different

138.50 142.30 RHYv **Rhyolite volcanoclastic**

142.30 146.02 OJ **Heavily disseminated sulphides in proximal altered rock**

142.3 - 146.02: PO 4%

<<Min: 143 - 176.26 1% Min: Calcite>>

<<Alt: 142.3 - 146.02 Weak (Alt) Chlorite>>

<<Alt: 142.3 - 146.02 Moderate (Alt) Cordierite>>

<<Struc: 143.6 - 143.6 dominant foliation>>

<<Struc: 144 - 144 dominant foliation>>

<<Struc: 144.55 - 144.55 dominant foliation>>

<<Struc: 145.4 - 145.4 dominant foliation>>

146.02 146.65 RHYc **Rhyolite coherent volcanics**

<<Min: 146.02 - 186.28 1% Min: Pyrrhotite>>

146.65 149.53 OJ **Heavily disseminated sulphides in proximal altered rock**

146.65 - 149.53: po4%

<<Alt: 149.1 - 149.53 Weak (Alt) Chlorite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
134.19	135.19	1.00	B00269543	5	0.018	0.02	0.5	0.62

135.19	136.19	1.00	B00269544	1	-0.005	-0.01	0.05	0.05
136.19	137.19	1.00	B00269545	2.6	-0.005	0.01	0.14	0.23
137.19	138.19	1.00	B00269546	8.2	0.014	0.05	0.39	1.47
138.19	138.50	0.31	B00269547	32.4	1.2	0.65	0.96	0.78
138.50	140.00	1.50	B00269548	0.9	-0.005	0.03	-0.01	0.07
140.00	141.30	1.30	B00269549	0.7	-0.005	-0.01	-0.01	0.01
141.30	142.30	1.00	B00269551	1.1	-0.005	0.01	-0.01	0.03
142.30	143.30	1.00	B00269552	25.3	0.107	0.06	0.66	7.6

143.30	144.30	1.00	B00269553	2.8	0.013	0.02	0.05	1.09
144.30	145.30	1.00	B00269554	3.4	-0.005	-0.01	0.13	0.33
145.30	146.02	0.72	B00269555	12.2	0.018	0.02	0.27	1.78

146.02	146.65	0.63	B00269556	4.9	-0.005	0.01	0.17	0.24
--------	--------	------	-----------	-----	--------	------	------	------

146.65	147.65	1.00	B00269557	5.4	-0.005	0.03	0.1	0.47
--------	--------	------	-----------	-----	--------	------	-----	------

147.65	148.65	1.00	B00269558	3.2	0.031	0.02	0.12	1.58
148.65	149.53	0.88	B00269559	1.9	0.012	0.01	0.03	1.7

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-295

From (m) To (m) Rocktype & Description

149.53 157.63 RHYv Rhyolite volcaniclastic

149.53 - 157.63: Texturally similar to MDS t unit below. Carbonaceous component absent.

157.63 164.28 MDSt Rhyolite tuff dominant mudstone

<<Alt: 157.63 - 160 Weak (Alt) Chlorite>>

<<Alt: 163 - 170 Moderate (Alt) Chlorite>>

<<Alt: 164 - 176.26 Moderate (Alt) Muscovite>>

164.28 164.45 MDSc Carbonaceous dominant mudstone

164.45 170.25 MDSt Rhyolite tuff dominant mudstone

170.25 174.98 RHYv Rhyolite volcaniclastic

<<Alt: 173.3 - 188 Moderate (Alt) Chlorite>>

<<Struc: 173.15 - 173.45 Weak (Alt) Fault>>

174.98 176.26 OJ Heavily disseminated sulphides in proximal altered rock

174.98 - 176.26: PO ~3%

176.26 188.38 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

<<Min: 176.26 - 188.38 0.5% Min: Pyrite>>

<<Min: 176.26 - 188.38 15% Min: Calcite>>

<<Min: 186.28 - 186.58 12% Min: Pyrrhotite>>

<<Min: 186.58 - 188.38 5% Min: Pyrrhotite>>

<<Alt: 176.26 - 201.5 Trace (Alt) Muscovite>>

<<Alt: 188 - 188.38 Moderate (Alt) Silicification>>

188.38 201.50 RHYi Aphanitic Rhyolite (intrusion)

<<Min: 188.38 - 195 8% Min: Calcite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
149.53	150.53	1.00	B00269561	0.5	-0.005	-0.01	-0.01	0.01

150.53	152.00	1.47	B00269562	0.5	-0.005	-0.01	-0.01	0.01
152.00	153.50	1.50	B00269563	0.4	-0.005	-0.01	-0.01	0.02
153.50	155.00	1.50	B00269564	0.4	-0.005	-0.01	-0.01	0.01

174.98	175.50	0.52	B00269565	10	0.048	0.43	0.06	0.19
--------	--------	------	-----------	----	-------	------	------	------

175.50	176.26	0.76	B00269566	4.6	0.149	0.17	0.04	0.07
176.26	177.26	1.00	B00269567	-0.3	-0.005	-0.01	-0.01	0.02

177.26	178.26	1.00	B00269568	0.3	-0.005	0.01	-0.01	0.02
184.78	186.28	1.50	B00269569	0.8	-0.005	0.02	-0.01	0.02
186.28	187.28	1.00	B00269571	37.8	0.163	0.44	0.4	2.07
187.28	188.38	1.10	B00269572	22.4	0.076	0.48	0.34	2.35

188.38	189.88	1.50	B00269573	0.6	0.006	-0.01	-0.01	0.01
--------	--------	------	-----------	-----	-------	-------	-------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-295

From (m) To (m)

Rocktype & Description

From (m)

To (m)

Width

Sample

Ag PPM

Au PPM

Cu %

Pb %

Zn %

<<Min: 188.38 - 201.5 4% Min: Pyrite>>

<<Min: 195 - 201.5 2% Min: Calcite>>

<<Alt: 188.38 - 201.5 Strong (Alt) Silicification>>

End of Hole @ 201.5

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-296

From (m) To (m) Rocktype & Description

<<Alt: 5.3 - 17.1 Strong (Alt) Silicification>>

<<Alt: 15.4 - 17.1 Strong (Alt) Muscovite>>

**17.10 17.60 OI Heavily disseminated
sulphides in host schist**

17.1 - 17.6: Semi-massive PY+SP+GL in a MU+CL groundmass

<<Min: 17.1 - 17.6 20% Min: Sphalerite>>

<<Min: 17.1 - 17.6 5% Min: Galena>>

<<Min: 17.1 - 23.6 1% Min: Calcite>>

<<Alt: 17.1 - 17.6 Weak (Alt) Chlorite>>

<<Alt: 17.1 - 19.2 Moderate (Alt) Muscovite>>

**17.60 18.60 RHYcw Curdy textured-flow banded
(flows, subvolcanics)**

<<Min: 17.6 - 18.6 1% Min: Pyrite>>

**18.60 19.20 OI Heavily disseminated
sulphides in host schist**

18.6 - 19.2: Heavily disseminated CP+PY+SP+GL in MU-RHYcw

<<Min: 18.6 - 19.2 4% Min: Chalcopryite>>

19.20 20.30 OA Magnetite bearing sulphides

19.2 - 20.3: Massive PY+/-SP+/-CP with disseminated cg MG

**20.30 23.00 OB Wispy laminate, fine
buckshot textured, non-
magnetite bearing sulphides**

20.3 - 23: Massive PY with minor bands of SP+GL and trace disseminated CP

23.00 23.60 OA Magnetite bearing sulphides

23 - 23.6: Massive PY+/-SP with laminated MG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
14.10	15.60	1.50	B00268389	24.3	0.249	0.08	0.22	0.57
15.60	17.10	1.50	B00268391	0.9	0.01	-0.01	-0.01	0.01
17.10	17.60	0.50	B00268392	283	0.772	0.11	6.05	10.9

17.60	18.60	1.00	B00268393	2.8	0.021	-0.01	0.04	0.06
-------	-------	------	-----------	-----	-------	-------	------	------

18.60	19.20	0.60	B00268394	66.4	1.06	2.08	0.22	0.98
-------	-------	------	-----------	------	------	------	------	------

19.20	20.30	1.10	B00268395	64	1.15	0.86	0.78	4.05
-------	-------	------	-----------	----	------	------	------	------

20.30	21.00	0.70	B00268396	106	1.92	0.55	0.92	5.97
-------	-------	------	-----------	-----	------	------	------	------

21.00	22.00	1.00	B00268397	124	2.13	0.49	1.16	5.66
22.00	23.00	1.00	B00268398	192	3.08	0.79	1.53	7.71
23.00	23.60	0.60	B00268399	52	1.53	0.26	0.84	9.59

MCG

MG

MCG

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-296

From (m) To (m) Rocktype & Description

**23.60 25.20 OB Wispy laminate, fine
buckshot textured, non-
magnetite bearing sulphides**

MCG

23.6 - 25.2: Banded PY+SP+GL with disseminated CA gangue (~10%)

<<Min: 23.6 - 25.2 10% Min: Calcite>>

25.20 35.00 RHYv Rhyolite volcanoclastic

25.2 - 35: Unclear contact due to faulting

<<Min: 25.2 - 35 1% Min: Pyrite>>

<<Min: 25.2 - 35 15% Min: Calcite>>

<<Alt: 25.2 - 35 Moderate (Alt) Muscovite>>

<<Struc: 29 - 34.4 Weak (Alt) Fault>> Moderately fractured core with local ~1-5 cm intervals of fault gouge

35.00 50.20 RHYi Aphanitic Rhyolite (intrusion)

35 - 50.2: Interlayered RHYi and RHYv dominated by RHYi

<<Min: 35 - 50.2 0.5% Min: Sphalerite>>

<<Min: 35 - 50.2 3% Min: Pyrite>>

<<Min: 35 - 50.2 5% Min: Calcite>>

<<Alt: 35 - 50.2 Strong (Alt) Silicification>>

<<Alt: 35 - 53.65 Strong (Alt) Muscovite>>

**50.20 53.40 MAFi Mafic Intrusions (primarily
footwall mafic intrusion)**

50.2 - 53.4: MU-altered MAFi with CA blebs

<<Min: 50.2 - 53.4 15% Min: Calcite>>

<<Min: 50.2 - 53.65 2% Min: Pyrite>>

53.40 54.40 RHYvi Lapilli tuff

53.4 - 54.4: volcanoclastic rhyolite with QZ-lpl. Zone of CL-CA-BI MAFi from 53.65-54 m.

<<Min: 53.4 - 53.65 2% Min: Calcite>>

<<Min: 53.65 - 54 20% Min: Calcite>>

<<Min: 53.65 - 62 0.5% Min: Pyrrhotite>>

<<Min: 54 - 54.4 1% Min: Calcite>>

<<Alt: 53.65 - 54 Strong (Alt) Chlorite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
23.60	24.20	0.60	B00268401	219	2.97	0.81	0.9	10.2

24.20	25.20	1.00	B00268402	410	4.76	0.63	4.53	9.26
25.20	26.70	1.50	B00268403	1.9	0.01	-0.01	0.01	0.08

26.70	28.20	1.50	B00268404	1.4	0.008	-0.01	0.01	0.07
28.20	29.70	1.50	B00268405	1.2	0.008	-0.01	-0.01	0.01



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-296

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 53.65 - 54 Strong (Alt) Biotite>>											
<<Alt: 54 - 54.4 Moderate (Alt) Muscovite>>											
54.40	60.70	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
54.4 - 60.7: CL-CA-BI mafic schist											
<<Min: 54.4 - 60.7 20% Min: Calcite>>											
<<Alt: 54.4 - 60.7 Strong (Alt) Chlorite>>											
<<Alt: 54.4 - 60.7 Strong (Alt) Biotite>>											
<<Struc: 56.54 - 56.55 dominant foliation>>			CA band in MAFi								
<<Struc: 58.94 - 58.95 dominant foliation>>			CA band in MAFi								
60.70	61.45	RHYv	Rhyolite volcaniclastic								
60.7 - 61.45: Blebs to bands of QZ with yellowish-green Mu cleavages											
<<Min: 60.7 - 61.45 1% Min: Calcite>>											
<<Alt: 60.7 - 61.45 Strong (Alt) Muscovite>>			Unsure whether original or overprint								
61.45	62.00	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
61.45 - 62: CL-CA-BI mafic schist											
<<Min: 61.45 - 62 20% Min: Calcite>>											
<<Alt: 61.45 - 62 Strong (Alt) Chlorite>>											
<<Alt: 61.45 - 62 Strong (Alt) Biotite>>											
End of Hole @ 62											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-297

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Sean Suttie	Date Logging Start:	17-Oct-15
UTM Easting	415055	Core Size:	HQ3	Azimuth:	144.97	Date Logging Complete:	21-Oct-15
UTM Northing:	6815303	Casing Pulled?:	Yes	Dip:	-45	Drill Company:	Geotech
UTM Elev. (m):	1386.07	Casing Depth (m):	15	Length (m):	350	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	15-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	20-Oct-15
Local Elev. (m):						Purpose:	Exploration
Comments:						Parent Hole:	

K15-297 was drilled to test the up-dip resource extension of the ABM deposit, gain geotechnical and structural data from the East fault, as well as test the resource extension of the newly discovered mafic-hosted/associated massive sulphide lens.

K15-297 drilled through the main ABM deposit, consisting of OJ, OA, OI, and OB, from 104-17.3 m. The ABM deposit was overlain by MU-altered rhyolite from 10.9-14 m. The footwall of the ABM deposit (17.3-96 m) consists of MU-altered rhyolite, followed by mixed MAFi, RHYcw, and RHYi. From 96-101.4 m the East fault was encountered, characterized by ~5 m of fault breccia. The structural footwall of the East fault consisted of MU-altered rhyolite from 101.4-208.5 m, where heavily disseminated to massive sulphide (~40 cm lenses) were encountered sporadically to a depth of 229.15 m. These sulphide occurrences were hosted within MU-altered rhyolite. Below this MAFi was encountered from 229.15-285.1 m, directly followed by massive sulphide, consisting of OA, OI, and OB. The mafic showed a bleached contact from ~284.7-285.1 m. Below the massive sulphide occurrence, another MAFi occurs from 302.7-309.7 m. Followed by another 2 m occurrence of massive sulphide, consisting of OA and OF. The footwall of this lowest sulphide lens consists of progressively less MU-altered rhyolite, from 311.7-350 m (EOH).

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-45	144.97	0	144.97	APS	Sean Suttie	15-Oct-15		<input checked="" type="checkbox"/>	
26	-44.4	122.2	22.5	144.7	ReflexEVS	Geotech	15-Oct-15	5763	<input checked="" type="checkbox"/>	
50	-44.9	121.5	22.5	144	ReflexEVS	Geotech	19-Oct-15	5785	<input checked="" type="checkbox"/>	
77	-46	120.2	22.5	142.7	ReflexEVS	Geotech	16-Oct-15	5782	<input checked="" type="checkbox"/>	
101	-46.6	121.7	22.5	144.2	ReflexEVS	Geotech	16-Oct-15	5790	<input checked="" type="checkbox"/>	
125	-47.5	121.7	22.5	144.2	ReflexEVS	Geotech	17-Oct-15	5775	<input checked="" type="checkbox"/>	
152	-48.8	121.8	22.5	144.3	ReflexEVS	Geotech	17-Oct-15	5787	<input checked="" type="checkbox"/>	
176	-49.5	125.2	22.5	147.7	ReflexEVS	Geotech	17-Oct-15	5808	<input checked="" type="checkbox"/>	
200	-50.9	123.1	22.5	145.6	ReflexEVS	Geotech	17-Oct-15	5737	<input checked="" type="checkbox"/>	
226	-51.6	125.1	22.5	147.6	ReflexEVS	Geotech	18-Oct-15	5786	<input checked="" type="checkbox"/>	
251	-52.5	126.3	22.5	148.8	ReflexEVS	Geotech	18-Oct-15	5792	<input checked="" type="checkbox"/>	
275	-53.7	127.4	22.5	149.9	ReflexEVS	Geotech	18-Oct-15	5870	<input checked="" type="checkbox"/>	
299	-54.3	128.6	22.5	151.1	ReflexEVS	Geotech	18-Oct-15	5570	<input checked="" type="checkbox"/>	
326	-55.1	126.6	22.5	149.1	ReflexEVS	Geotech	19-Oct-15	5826	<input checked="" type="checkbox"/>	
350	-55.3	125.4	22.5	147.9	ReflexEVS	Geotech	19-Oct-15	5775	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	10.90	OVBN Overburden									
10.90	14.00	RHYcw Curdy textured-flow banded (flows, subvolcanics)	11.00	12.50	1.50	B00268406	8	0.038	-0.01	0.11	0.15
<<Min: 10.9 - 14 2% Min: Pyrite>>			12.50	14.00	1.50	B00268407	16.1	0.053	-0.01	0.43	0.75
<<Min: 10.9 - 14 0.5% Min: Calcite>>											
<<Alt: 10.9 - 13.7 Moderate (Alt) Muscovite>>											
<<Alt: 13.7 - 14.7 Weak (Alt) Muscovite>>											
<<Alt: 13.7 - 14.7 Moderate (Alt) Chlorite>>											
<<Struc: 13.2 - 13.7 Moderate (Alt) Fault>> fault gouge consisting of sulphide+Mu+CL											
14.00	14.70	OJ Heavily disseminated sulphides in proximal altered rock	14.00	14.70	0.70	B00268408	81.7	1.89	2.31	0.3	2.15
14 - 14.7: Heavily disseminated PY+CP in MU-CL schist											
<<Min: 14 - 14.7 2% Min: Chalcopryite>>											
14.70	15.30	OA Magnetite bearing sulphides	14.70	15.30	0.60	B00268409	128	1.54	2.73	0.53	4.14
14.7 - 15.3: Massive PY+CP with disseminated MG											
<<Min: 14.7 - 15.3 15% Min: Magnetite>>											
15.30	16.00	OI Heavily disseminated sulphides in host schist	15.30	16.00	0.70	B00268412	114	1.63	3.82	0.19	1.48
15.3 - 16: heavily disseminated PY+MG+PO+CP in AB-MU schist											
<<Min: 15.3 - 16 10% Min: Magnetite>>											
<<Min: 15.3 - 16 1% Min: Calcite>>											
<<Alt: 15.3 - 16 Moderate (Alt) Muscovite>>											
<<Alt: 15.3 - 16 Strong (Alt) Albite>>											
16.00	16.70	OA Magnetite bearing sulphides	16.00	16.70	0.70	B00268413	181	0.706	1.4	3.67	11.3
16 - 16.7: Banded/laminated PY+MG+SP+/-CP											
<<Min: 16 - 16.2 30% Min: Chalcopryite>>											
<<Min: 16 - 16.7 10% Min: Pyrrhotite>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-297
From (m) **To (m)** **Rocktype & Description**

16.70 17.30 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

16.7 - 17.3: Banded PY and PY+SP+GL

<<Min: 16.7 - 17.3 5% Min: Calcite>>

17.30 21.00 RHYv Rhyolite volcanoclastic

17.3 - 21: Strongly foliated MU-QZ schist

<<Min: 17.3 - 21 1% Min: Pyrite>>

<<Min: 17.3 - 21 10% Min: Calcite>>

<<Alt: 17.3 - 21 Strong (Alt) Muscovite>>

<<Struc: 18.75 - 19.1 Weak (Alt) Fault>> Foliated/faulted RHYv

<<Struc: 20 - 20.8 Weak (Alt) Fault>> Foliated/faulted RHYv

21.00 40.50 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

21 - 40.5: CL-CA-BI schist from 21-27.3 m, CL-BI schist from 27.3-36 m, BI-CL-CA schist from 36-40.5 m.

<<Min: 21 - 27.3 20% Min: Calcite>>

<<Min: 27.3 - 36 5% Min: Calcite>>

<<Min: 36 - 40.5 20% Min: Calcite>>

<<Alt: 21 - 36 Strong (Alt) Chlorite>>

<<Alt: 21 - 36 Moderate (Alt) Biotite>>

<<Alt: 36 - 40.5 Moderate (Alt) Chlorite>>

<<Alt: 36 - 40.5 Strong (Alt) Biotite>>

<<Struc: 29.2 - 29.21 dominant foliation>> CL-BI band in MAFi

<<Struc: 34.66 - 34.67 dominant foliation>> CL-BI band in MAFi

<<Struc: 37.45 - 37.46 dominant foliation>> CL-BI band in MAFi

40.50 49.70 RHYcw Curdy textured-flow banded (flows, subvolcanics)

<<Min: 40.5 - 49.3 0.5% Min: Pyrite>>

<<Min: 40.5 - 49.7 1% Min: Calcite>>

<<Alt: 40.5 - 43 Strong (Alt) Muscovite>> overprint or original?

<<Alt: 43 - 49.7 Weak (Alt) Muscovite>> overprint or original?

<<Vein: 45.8 - 46.2 90% Quartz>> Massive QZ+CA+/-GL vein

MCG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
16.70	17.30	0.60	B00268414	67.1	0.321	0.3	1.4	5.84

17.30	18.80	1.50	B00268415	1.1	0.008	-0.01	-0.01	0.01
-------	-------	------	-----------	-----	-------	-------	-------	------

18.80	19.90	1.10	B00268416	0.6	0.007	-0.01	-0.01	0.01
-------	-------	------	-----------	-----	-------	-------	-------	------

19.90	21.00	1.10	B00268417	0.6	0.01	-0.01	-0.01	-0.01
-------	-------	------	-----------	-----	------	-------	-------	-------

21.00	22.50	1.50	B00268418	25.2	0.068	0.02	0.4	0.28
-------	-------	------	-----------	------	-------	------	-----	------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-297

From (m)		To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 49.1 - 49.4 Weak (Alt) Fault>> fractured with some fault gouge												
49.70		67.40		MAFi		Mafic Intrusions (primarily footwall mafic intrusion)						
49.7 - 67.4: BI-CL-CA schist with Mu-alteration (overprint) from 65.4-67.4 m												
<<Min: 49.7 - 67.4 20% Min: Calcite>>												
<<Alt: 49.7 - 65.4 Moderate (Alt) Chlorite>>												
<<Alt: 49.7 - 65.4 Strong (Alt) Biotite>>												
<<Alt: 65.4 - 67.4 Moderate (Alt) Muscovite>>												
<<Alt: 65.4 - 67.4 Weak (Alt) Chlorite>>												
<<Alt: 65.4 - 67.4 Moderate (Alt) Biotite>>												
<<Struc: 54.1 - 54.6 Weak (Alt) Fault>> Fractured with some fault gouge												
67.40		93.30		RHYI		Aphanitic Rhyolite (intrusion)						
<<Min: 67.4 - 93.3 2% Min: Sphalerite>> Fractures contain PY+SP												
<<Min: 67.4 - 93.3 5% Min: Pyrite>>												
<<Min: 67.4 - 93.3 2% Min: Calcite>>												
<<Alt: 67.4 - 93.3 Strong (Alt) Silicification>>												
<<Alt: 67.4 - 93.3 Weak (Alt) Muscovite>>												
<<Vein: 78.2 - 79.5 50% Quartz>> Zone with massive QZ veins												
<<Vein: 82.5 - 84.9 50% Quartz>> Zone with massive QZ+CL+/-SP+/-GL+/-PY												
<<Struc: 76.8 - 77.5 Moderate (Alt) Fault>> Healed fault gouge breccia												
<<Struc: 88.8 - 92.6 Moderate (Alt) Fault>> Strongly fractured with fault gouge and local poor core recovery												
93.30		96.00		MAFi		Mafic Intrusions (primarily footwall mafic intrusion)						
93.3 - 96: Strongly deformed CL-BI-CA schist												
<<Min: 93.3 - 94.4 20% Min: Calcite>>												
<<Min: 94.4 - 96 5% Min: Calcite>>												
<<Alt: 93.3 - 94.4 Moderate (Alt) Chlorite>>												
<<Alt: 93.3 - 94.4 Strong (Alt) Biotite>>												
<<Alt: 94.4 - 96 Strong (Alt) Chlorite>>												
<<Alt: 94.4 - 96 Weak (Alt) Biotite>>												
<<Struc: 93.3 - 94.4 Strong (Alt) Shear>> Sheared MAFi with strong variation in foliation direction with shear bands at a high angle to foliation/core axis												

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-297

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
96.00	101.40	FBX									
		Fault Breccia									
96 - 101.4: Polyolithic fault gouge breccia											
<<Min: 96 - 101.4 1% Min: Pyrite>> Minor massive PY clasts in FBX											
<<Min: 96 - 101.4 3% Min: Calcite>>											
<<Struc: 96 - 101.4 Intense (Alt) Fault>> alpha of foliation developed in fault gouge varies from ~25-60 degrees											
101.40	102.60	RHYvl									
		Lapilli tuff									
101.4 - 102.6: Grey volcanoclastic rhyolite with CA+clay lpl and ash matrix											
<<Min: 101.4 - 116.7 1% Min: Pyrite>>											
<<Min: 101.4 - 116.7 3% Min: Pyrrhotite>>											
<<Min: 101.4 - 116.7 10% Min: Calcite>>											
102.60	105.40	RHYva									
		Coarse grained to ash tuff									
102.6 - 105.4: Grey ash tuff											
105.40	116.70	RHYvl									
		Lapilli tuff									
105.4 - 116.7: Grey volcanoclastic rhyolite with CA+clay lpl and ash matrix											
116.70	125.70	MAFi									
		Mafic Intrusions (primarily footwall mafic intrusion)									
116.7 - 125.7: Olive green CL-BI-CA schist											
<<Min: 116.7 - 125.7 0.5% Min: Pyrrhotite>>											
<<Min: 116.7 - 125.7 15% Min: Calcite>>											
<<Alt: 116.7 - 125.7 Strong (Alt) Chlorite>>											
<<Alt: 116.7 - 125.7 Moderate (Alt) Biotite>>											
125.70	129.90	RHYcf									
		Feldspar & feldspar quartz porphyry									
125.7 - 129.9: FD porphyry, QE-bearing rhyolite. Locally the FD are altered to CL with bands of semi-massive PO+PY.											
<<Min: 125.7 - 127.1 1% Min: Pyrite>>											
<<Min: 125.7 - 129.9 2% Min: Calcite>>											
<<Min: 127.1 - 129.9 3% Min: Pyrite>> Bands of semi-massive PO+PY											
<<Min: 127.1 - 129.9 10% Min: Pyrrhotite>> Bands of semi-massive PO+PY											
<<Alt: 127.1 - 129.9 Weak (Alt) Chlorite>> CL-altered FD porphyries											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-297

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
129.90	132.00	RHYva Coarse grained to ash tuff									
129.9 - 132: Light grey volcanoclastic rhyolite with local lpl. Small unit of MAFi within from 131.15-131.55 m.											
<<Min: 129.9 - 131.15 2% Min: Calcite>>											
<<Min: 131.15 - 131.55 20% Min: Calcite>>											
<<Min: 131.55 - 139.8 2% Min: Calcite>>											
132.00	137.00	RHYvl Lapilli tuff									
132 - 137: Medium grey rhyolite lpl tuff											
<<Struc: 133.43 - 133.44 dominant foliation>> elongated lpl forming a foliation											
137.00	139.80	RHYc Rhyolite coherent volcanics									
137 - 139.8: Silica and MU banded rhyolite											
<<Struc: 139.55 - 139.56 dominant foliation>> Discontinuous BI foliation											
139.80	140.20	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
139.8 - 140.2: Light purple-green BI-CL schist											
<<Min: 139.8 - 140.2 20% Min: Calcite>>											
140.20	142.40	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
140.2 - 142.4: Good flow banded rhyolite with olive green sericite groundmass											
<<Min: 140.2 - 142.4 1% Min: Calcite>>											
<<Struc: 140.7 - 140.71 dominant foliation>> Discontinuous BI foliation											
142.40	142.80	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
142.4 - 142.8: Light purple-green BI-CL schist											
<<Min: 142.4 - 142.8 20% Min: Calcite>>											
142.80	195.75	RHYvl Lapilli tuff									
142.8 - 195.75: Heterogeneous volcanoclastic lpl-tuff. Varying from abundant ~1-2 cm sized CL+QZ+BI+CA lpl within a well foliated MU groundmass to ~2 mm sized PO+PY lpl within a well foliated MU+QZ groundmass.											
<<Min: 142.8 - 176.8 7% Min: Calcite>>											
<<Min: 142.8 - 194.2 2% Min: Pyrite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-297

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 142.8 - 194.2 2% Min: Pyrrhotite>>											
<<Min: 176.8 - 185.4 2% Min: Calcite>>											
<<Min: 185.4 - 194.2 5% Min: Calcite>>											
<<Min: 194.2 - 197 8% Min: Pyrrhotite>>											
<<Min: 194.2 - 220.6 1% Min: Calcite>>											
<<Alt: 142.8 - 171.1 Weak (Alt) Muscovite>>											
<<Alt: 171.1 - 189.8 Moderate (Alt) Muscovite>>											
<<Alt: 189.8 - 229.15 Strong (Alt) Muscovite>>											
<<Vein: 172.9 - 175 50% Quartz>> Zone of QZ+CA+TML veining in fault zone											
<<Vein: 178.8 - 179.4 50% Quartz>> Zone of QZ+carbonate veining											
<<Vein: 192.7 - 193.3 90% Quartz>> Massive QZ+carbonate vein											
<<Vein: 194.2 - 195.75 80% Quartz>> Zone of QZ+carbonate veining											
<<Struc: 171.1 - 175 Moderate (Alt) Fault>> Fault zone with deformed MU-schist and local fault gouge											
<<Struc: 179 - 181.2 Moderate (Alt) Fault>> Fault zone with local highly fractured and healed MU-schist and QZ-veining											
<<Struc: 187.28 - 187.29 dominant foliation>> MU cleavage											
195.75 198.50 RHYc Rhyolite coherant volcanics											
195.75 - 198.5: QZ+MU schist, with MU cleavages and siliceous microlithons											
<<Min: 197 - 208.6 2% Min: Pyrite>>											
<<Min: 197 - 208.6 3% Min: Pyrrhotite>>											
<<Vein: 196.6 - 197 90% Quartz>> Massive QZ+carbonate vein											
198.50 200.00 FBX Fault Breccia											
198.5 - 200: Strongly faulted polyolithic fault breccia											
<<Vein: 198.5 - 199.1 70% Quartz>> Zone of massive QZ+carbonate veining in fault zone with minor cg PO											
<<Struc: 198.5 - 200.2 Moderate-Strong (Alt) Fault>> Fault gouge breccia											
200.00 202.20 RHYc Rhyolite coherant volcanics											
200 - 202.2: QZ+MU schist, with MU cleavages and siliceous microlithons											
202.20 208.60 RHY undifferentiated rhyolite											
202.2 - 208.6: QZ-MU schist											
<<Struc: 205.5 - 212.3 Moderate (Alt) Fault>> Highly fractured with local fault gouge and fault breccia											
<<Struc: 207.9 - 208.25 Moderate (Alt) Fault>> Fault gouge breccia											
			204.10	205.60	1.50	B00268419	0.4	0.006	-0.01	-0.01	0.01
			205.60	207.10	1.50	B00268421	-0.3	0.01	-0.01	-0.01	0.01
			207.10	208.60	1.50	B00268422	-0.3	0.005	-0.01	-0.01	0.01



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-297

From (m) To (m) Rocktype & Description

208.60 212.00 OI Heavily disseminated sulphides in host schist

208.6 - 212: Heavily disseminated to locally semi-massive PY+PO in QZ+MU schist

<<Min: 208.6 - 209.2 10% Min: Pyrite>>

<<Min: 208.6 - 209.2 3% Min: Pyrrhotite>>

<<Min: 209.2 - 209.45 35% Min: Pyrite>>

<<Min: 209.2 - 209.45 5% Min: Pyrrhotite>>

<<Min: 209.45 - 212 15% Min: Pyrite>>

<<Min: 209.45 - 212 3% Min: Pyrrhotite>>

212.00 213.00 RHYc Rhyolite coherent volcanics

212 - 213: Silica bands with MU cleavages

<<Min: 212 - 213 0.5% Min: Sphalerite>>

<<Min: 212 - 213 5% Min: Pyrite>>

213.00 213.70 OI Heavily disseminated sulphides in host schist

213 - 213.7: Heavily disseminated PY+PO in QZ+MU schist

<<Min: 213 - 213.7 25% Min: Pyrite>>

<<Min: 213 - 213.7 1% Min: Pyrrhotite>>

213.70 220.60 RHYc Rhyolite coherent volcanics

213.7 - 220.6: Siliceous bands with MU cleavages and local MU crenulation cleavage

<<Min: 213.7 - 215.2 3% Min: Pyrite>>

<<Min: 213.7 - 215.2 5% Min: Pyrrhotite>>

<<Min: 215.2 - 220.6 3% Min: Pyrite>>

<<Min: 215.2 - 220.6 1% Min: Pyrrhotite>>

<<Vein: 218.3 - 220.9 50% Quartz>> Zone with massive QZ+carbonate veining

<<Struc: 217.65 - 217.66 dominant foliation>> MU cleavage

220.60 221.10 OI Heavily disseminated sulphides in host schist

220.6 - 221.1: Heavily disseminated to locally massive PY+/-SP in QZ+MU schist

<<Min: 220.6 - 221.7 5% Min: Calcite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
208.60	209.60	1.00	B00268423	1.4	0.035	-0.01	-0.01	0.02

209.60	210.50	0.90	B00268424	0.8	0.024	-0.01	0.01	0.01
210.50	211.40	0.90	B00268425	0.7	0.032	-0.01	0.01	-0.01
211.40	212.00	0.60	B00268426	1.5	0.039	-0.01	0.02	-0.01

212.00	213.00	1.00	B00268427	2	0.01	-0.01	0.03	0.16
--------	--------	------	-----------	---	------	-------	------	------

213.00	213.70	0.70	B00268428	2.1	0.04	-0.01	0.02	0.03
--------	--------	------	-----------	-----	------	-------	------	------

213.70	215.20	1.50	B00268429	3.9	0.025	0.01	0.03	0.13
--------	--------	------	-----------	-----	-------	------	------	------

215.20	216.70	1.50	B00268431	1.3	0.01	-0.01	-0.01	-0.01
216.70	218.20	1.50	B00268432	1.3	0.008	-0.01	-0.01	-0.01
218.20	219.20	1.00	B00268433	6.7	0.047	-0.01	0.03	0.02
219.20	220.60	1.40	B00268434	8.4	0.033	0.02	0.03	0.18

220.60	221.70	1.10	B00268435	146	1.08	0.09	1.08	3.46
--------	--------	------	-----------	-----	------	------	------	------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-297

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
221.10	221.50	OB	MG								
Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides											
221.1 - 221.5: Massive PY+SP with wispy CA											
<<Struc: 221.15 - 221.16 dominant foliation>> Sulphide lamination											
221.50	221.70	OI	MG								
Heavilly disseminated sulphides in host schist											
221.5 - 221.7: Heavily disseminated PY+SP in QZ+MU schist											
221.70	227.30	RHY	undifferentiated rhyolite								
221.7 - 227.3: QZ+MU schist											
<<Min: 221.7 - 227.3 2% Min: Pyrite>>											
<<Min: 221.7 - 227.3 0.5% Min: Pyrrhotite>>											
<<Min: 221.7 - 227.3 1% Min: Calcite>>											
<<Struc: 222.8 - 222.81 dominant foliation>> MU cleavage											
<<Struc: 225.1 - 225.3 Weak-Moderate (Alt) Fault>> Strongly fractured with some fault gouge											
<<Struc: 226.7 - 226.71 dominant foliation>> MU cleavage											
<<Struc: 227.2 - 227.3 Weak (Alt) Fault>> Fault gouge breccia											
227.30	227.90	OB	MG								
Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides											
227.3 - 227.9: Two lenses of massive PY+SP+/-GL with a ~10 cm section of rhyolite (227.55-227.65 m) between.											
<<Min: 227.3 - 227.9 10% Min: Calcite>>											
227.90	228.80	RHY	undifferentiated rhyolite								
227.9 - 228.8: QZ+MU schist											
<<Min: 227.9 - 228.9 1% Min: Pyrite>>											
<<Min: 227.9 - 228.9 1% Min: Calcite>>											
228.80	229.15	OB	MCG								
Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides											
228.8 - 229.15: semi-massive to massive PY+SP+/-GL in MU+QZ+CA groundmass											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-297

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 228.9 - 229.15 15% Min: Calcite>>			229.15	230.60	1.45	B00268444	-0.3	0.007	-0.01	-0.01	0.02
229.15	285.10	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
229.15 - 285.1: CL+BI+CA schist from 229.15-232.3 m, CL+BI schist from 232.3-257.2 m, CL+EP+AC+BI+CA schist from 257.2-259.1 m, CL+BI schist from 259.1-279.5 m, CL+BI+CA schist from 279.5-285.1 m. Minor bleaching (Green to green-grey) from 284.6-285.1 m.											
<<Min: 229.15 - 232.2 20% Min: Calcite>>			230.60	232.10	1.50	B00268445	-0.3	-0.005	-0.01	-0.01	-0.01
<<Min: 229.15 - 285.1 0.5% Min: Pyrite>>			232.10	233.60	1.50	B00268446	0.7	0.017	-0.01	-0.01	0.02
<<Min: 229.15 - 285.1 0.5% Min: Pyrrhotite>>			280.60	282.10	1.50	B00268447	1	0.011	-0.01	-0.01	0.01
<<Min: 232.2 - 257.2 2% Min: Calcite>>			282.10	283.60	1.50	B00268448	2	0.016	-0.01	0.01	0.02
<<Min: 257.2 - 259.1 2% Min: Pyrrhotite>>			283.60	285.10	1.50	B00268449	2.8	0.051	0.01	0.02	0.02
<<Min: 257.2 - 259.1 8% Min: Calcite>>											
<<Min: 259.1 - 279.5 2% Min: Calcite>>											
<<Min: 279.5 - 282.3 10% Min: Calcite>>			Increasing disseminated and fracture-hosted calcite from 279.5-282.3 m								
<<Min: 282.3 - 285.1 20% Min: Calcite>>			Disseminated and fracture-hosted CA								
<<Alt: 229.15 - 285.1 Strong (Alt) Chlorite>>											
<<Alt: 231 - 282.9 Moderate (Alt) Biotite>>											
<<Alt: 284.5 - 284.9 Strong (Alt) Biotite>>											
<<Struc: 230.8 - 230.81 dominant foliation>>			Discontinuous BI foliation								
<<Struc: 231.95 - 231.96 dominant foliation>>			Discontinuous BI foliation								
<<Struc: 232.2 - 232.21 dominant foliation>>			Discontinuous BI foliation								
<<Struc: 237.6 - 237.61 dominant foliation>>			Discontinuous BI foliation								
<<Struc: 241.8 - 241.81 dominant foliation>>			Discontinuous BI foliation								
<<Struc: 242.5 - 243.2 Moderate (Alt) Shear>>			Sheared MAFi with foliation wrapping into the shear on either side								
<<Struc: 242.88 - 242.89 Foliation>>			BI band in sheared MAFi								
<<Struc: 243.5 - 243.51 dominant foliation>>			Discontinuous BI foliation								
<<Struc: 243.9 - 243.91 dominant foliation>>			Discontinuous BI foliation								
<<Struc: 244.9 - 244.91 dominant foliation>>			Discontinuous BI foliation								
<<Struc: 246.2 - 246.21 dominant foliation>>			Discontinuous BI foliation								
<<Struc: 247.9 - 247.91 dominant foliation>>			Discontinuous BI foliation								
<<Struc: 249.3 - 249.31 dominant foliation>>			Discontinuous BI foliation								
<<Struc: 251.15 - 251.16 dominant foliation>>			Discontinuous BI foliation								
<<Struc: 253.35 - 253.36 dominant foliation>>			Discontinuous BI foliation								
<<Struc: 256.75 - 256.76 dominant foliation>>			Discontinuous BI foliation								

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-297

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %	
<<Struc: 259.65 - 259.66	dominant foliation>>	Discontinuous BI foliation										
<<Struc: 262.2 - 262.21	dominant foliation>>	Discontinuous BI foliation										
<<Struc: 267.48 - 267.49	dominant foliation>>	Discontinuous BI foliation										
<<Struc: 272.12 - 272.13	dominant foliation>>	Discontinuous BI foliation										
<<Struc: 274.37 - 274.38	dominant foliation>>	Discontinuous BI foliation										
<<Struc: 278.64 - 278.65	dominant foliation>>	Discontinuous BI foliation										
<<Struc: 281.45 - 281.46	dominant foliation>>	Discontinuous BI foliation										
<<Struc: 282.82 - 282.83	dominant foliation>>	Discontinuous BI foliation										
285.10	286.70	OA Magnetite bearing sulphides	MCG	285.10	285.90	0.80	B00268452	560	1.72	0.34	6.66	8.35
285.1 - 286.7: Banded PY+PO+MG+/-CP and QZ+CA with local disseminated CL												
<<Min: 285.1 - 286.7	5% Min: Pyrrhotite>>			285.90	286.70	0.80	B00268453	448	2.48	0.27	5.39	7.63
<<Min: 285.1 - 286.7	15% Min: Magnetite>>											
<<Min: 285.1 - 286.7	15% Min: Calcite>>											
<<Alt: 285.9 - 286.2	Strong (Alt) Chlorite>>	CL in the groundmass of MSXS										
286.70	288.90	OI Heavilly disseminated sulphides in host schist	MG	286.70	287.80	1.10	B00268454	187	1.21	0.12	1.7	3.2
286.7 - 288.9: Heavily disseminated to semi-massive PY+SP+/-GL in a QZ+MU+/-CA+/-chloritoid schist												
<<Min: 286.7 - 288.9	1% Min: Pyrite>>			287.80	288.90	1.10	B00268455	169	1.87	0.16	1.16	2.4
<<Min: 286.7 - 288.9	1% Min: Pyrrhotite>>											
<<Min: 286.7 - 288.9	5% Min: Calcite>>											
<<Alt: 286.7 - 288.9	Strong (Alt) Muscovite>>											
<<Struc: 287.25 - 287.26	dominant foliation>>	CA+PY lamination										
288.90	293.70	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	288.90	289.90	1.00	B00268456	384	4.31	0.48	4.6	10.3
288.9 - 293.7: Semi-massive to massive PY+SP+/-GL in CA matrix. Local bands of PY+PO+CP with disseminate MG (OA) from 290.25-290.55 m and 291.4-291.8 m.												
<<Min: 288.9 - 290.25	5% Min: Calcite>>			289.90	290.90	1.00	B00268457	307	1.67	0.95	3.72	8.59
<<Min: 288.9 - 290.55	5% Min: Magnetite>>			290.90	291.90	1.00	B00268458	315	2.72	1.38	3.94	9.39
<<Min: 290.25 - 290.55	30% Min: Pyrrhotite>>			291.90	292.70	0.80	B00268459	323	1.71	0.19	4.56	9.09
<<Min: 290.25 - 290.55	5% Min: Calcite>>			292.70	293.70	1.00	B00268461	4.9	1.08	0.07	5.5	10.5
<<Min: 290.55 - 293.7	20% Min: Calcite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-297

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 291.4 - 292.3 5% Min: Magnetite>>											
293.70	294.90	OA Magnetite bearing sulphides	MCG								
293.7 - 294.9: Massive PY+CP+/-SP+/-PO with disseminated MG			293.70	294.40	0.70	B00268462	250	3.06	4.18	2.63	8.36
<<Min: 293.7 - 294.9 2% Min: Pyrrhotite>>											
<<Min: 293.7 - 294.9 10% Min: Magnetite>>											
<<Min: 293.7 - 296.3 5% Min: Calcite>>											
294.90	301.70	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MCG								
294.9 - 301.7: Banded PY+SP+/-GL+/-CP with QZ+CA matrix			294.90	295.60	0.70	B00268464	167	1.47	0.6	2.38	8.99
<<Min: 294.9 - 301.7 2% Min: Magnetite>>			295.60	296.30	0.70	B00268465	301	1.01	0.61	4.07	13.9
<<Min: 296.3 - 301.7 20% Min: Calcite>>			296.30	297.30	1.00	B00268466	360	2.36	2.51	3.94	6.78
<<Struc: 301.47 - 301.48 dominant foliation>> Sulphide lamination			297.30	298.30	1.00	B00268467	333	2.12	1.09	4.11	9.6
			298.30	299.30	1.00	B00268468	199	1.69	0.28	2.14	8.37
			299.30	300.30	1.00	B00268469	180	2.69	0.29	1.57	6.3
			300.30	301.00	0.70	B00268472	215	2.78	0.21	2.22	7.07
			301.00	301.70	0.70	B00268473	285	2.78	0.13	3.51	8.02
301.70	302.70	OA Magnetite bearing sulphides	MG								
301.7 - 302.7: 3 lenses of PY+SP+MG+/-PO+/-GL in a CL+CA matrix, with sections of CL+BI+CA (MAFi) schist between. The MAFi shows grain size increase and high BI-concentrations within ~5 cm of the MSXS.			301.70	302.70	1.00	B00268474	229	1.59	0.18	2.92	6.01
<<Min: 301.7 - 302.2 10% Min: Magnetite>>											
<<Min: 301.7 - 302.2 10% Min: Calcite>>											
<<Min: 302.2 - 302.6 15% Min: Calcite>>											
<<Min: 302.6 - 302.7 10% Min: Calcite>>											
<<Alt: 302.2 - 302.25 Intense (Alt) Biotite>> Very high concentrations of BI next to MSXS											
<<Alt: 302.25 - 302.6 Strong (Alt) Chlorite>>											
<<Alt: 302.25 - 302.6 Moderate (Alt) Biotite>>											
<<Struc: 302.45 - 302.46 dominant foliation>> Discontinuous BI foliation											
302.70	309.70	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
302.7 - 309.7: CL+BI+CA schist with local BI-rich layer (~1cm wide) on upper contact.			302.70	304.20	1.50	B00268475	5.9	0.04	0.02	0.05	0.08



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-297

From (m) To (m) Rocktype & Description

<<Min: 302.7 - 309.7 0.5% Min: Pyrite>>

<<Min: 302.7 - 309.7 20% Min: Calcite>>

<<Alt: 302.7 - 309.7 Strong (Alt) Chlorite>>

<<Alt: 302.7 - 309.7 Moderate (Alt) Biotite>>

<<Struc: 304.92 - 304.93 dominant foliation>> Discontinuous BI foliation

<<Struc: 307.67 - 307.68 dominant foliation>> Discontinuous BI foliation

309.70 311.45 OA Magnetite bearing sulphides

309.7 - 311.45: Massive PY+MG+/-SP+/-GL. MG banded to heavily disseminated.

<<Min: 309.7 - 311.45 25% Min: Magnetite>>

<<Min: 309.7 - 311.45 1% Min: Calcite>>

<<Struc: 311.23 - 311.24 dominant foliation>> MG lamination

311.45 311.70 OF Pyrrhotite rich sulphides

311.45 - 311.7: Massive PO with disseminated PY+MG+/-CP

<<Min: 311.45 - 311.7 90% Min: Pyrrhotite>>

<<Min: 311.45 - 311.7 5% Min: Magnetite>>

311.70 340.50 RHYvl Lapilli tuff

311.7 - 340.5: QZ+MU+CL+BI+CA schist. CL+BI+CA+QZ blebs resemble lpl with a MU+QZ groundmass displaying a continuous foliation.

<<Min: 311.7 - 313.5 3% Min: Pyrite>>

<<Min: 311.7 - 313.5 2% Min: Pyrrhotite>>

<<Min: 311.7 - 350 1% Min: Calcite>>

<<Min: 312.8 - 312.85 90% Min: Pyrrhotite>>

<<Min: 313.5 - 340.5 2% Min: Pyrite>>

<<Min: 313.5 - 340.5 2% Min: Pyrrhotite>>

<<Alt: 311.7 - 318.1 Moderate (Alt) Muscovite>>

<<Alt: 318.1 - 350 Weak (Alt) Muscovite>>

<<Vein: 320.9 - 321 90% Quartz>> Massive QZ vein

<<Struc: 325.5 - 325.51 dominant foliation>> Discontinuous foliation defined by elongated lpl

<<Struc: 330.75 - 330.76 dominant foliation>> Discontinuous foliation defined by elongated lpl

340.50 350.00 RHYvl Lapilli tuff

340.5 - 350: Rhyolitic lpl within a QZ+MU schist

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
304.20	305.70	1.50	B00268476	2.2	0.025	-0.01	0.02	0.05
305.70	306.70	1.00	B00268477	2.4	0.018	-0.01	0.04	0.06
306.70	308.20	1.50	B00268478	1.3	0.018	-0.01	0.02	0.03
308.20	309.70	1.50	B00268479	1.1	0.01	-0.01	0.02	0.04

MCG

309.70	310.70	1.00	B00268481	78.7	0.404	0.69	1.29	4.85
--------	--------	------	-----------	------	-------	------	------	------

310.70	311.45	0.75	B00268482	102	0.208	0.37	1.64	6.75
--------	--------	------	-----------	-----	-------	------	------	------

MCG

311.45	311.70	0.25	B00268483	26.1	0.102	1.25	0.1	5.38
--------	--------	------	-----------	------	-------	------	-----	------

311.70	313.20	1.50	B00268484	5.9	0.01	0.06	0.04	1.7
--------	--------	------	-----------	-----	------	------	------	-----

313.20	314.70	1.50	B00268485	0.9	0.006	-0.01	0.02	0.05
--------	--------	------	-----------	-----	-------	-------	------	------

314.70	316.20	1.50	B00268486	-0.3	0.007	-0.01	-0.01	0.02
--------	--------	------	-----------	------	-------	-------	-------	------

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-297

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 340.5 - 350 4% Min: Pyrite>>											
<<Struc: 341.7 - 341.71 dominant foliation>> Discontinuous foliation defined by elongated lpl											
<<Struc: 346.8 - 350 Moderate (Alt) Fault>> Strongly fractured with moderate fault gouge and minor fault breccia											
End of Hole @ 350											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-298

Prospect:	ABM	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Jerome de Pasquale	Date Logging Start:	16-Oct-15
UTM Easting	415151	Core Size:	NQ3	Azimuth:	179.74	Date Logging Complete:	17-Oct-15
UTM Northing:	6815341	Casing Pulled?:	Yes	Dip:	-75	Drill Company:	Geotech
UTM Elev. (m):	1405.56	Casing Depth (m):	30	Length (m):	114	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	15-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	17-Oct-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

K15-298 is a resource infill drill hole between historic holes K95-121 and 94-028.
The hanging-wall is made up of moderate to strongly muscovite altered rhyolite and mudstone.
The ore zone (PY-SP-GL-CP-MG), is intercepted from 54.40m to 67.20m (OB, OA and OI domains).
The footwall consists of a mafic sill (CL-CA-BI) which shows close-spaced variations in the orientation of foliation.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-75	179.74	0	179.74	APS	Jerome de Pasquale	15-Oct-15		<input checked="" type="checkbox"/>	Rig at 11 m from the collar. Dip changed from -65 to -75.
48	-73.3	162.1	22.5	184.6	ReflexEVS	Geotech	16-Oct-15	5824	<input checked="" type="checkbox"/>	
78	-73.5	161.9	22.5	184.4	ReflexEVS	Geotech	16-Oct-15	5772	<input checked="" type="checkbox"/>	
114	-73.5	163.1	22.5	185.6	ReflexEVS	Geotech	16-Oct-15	5755	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	15.00	CASN Casing									
0 - 15: Overburden											
15.00	44.50	RHY undifferentiated rhyolite grey-green									
15 - 44.5: Strongly MU altered, strongly foliated. PY disseminated, PO elongated.											
<<Min: 15 - 44.5 2% Min: Pyrite>>											
<<Min: 15 - 54.4 3% Min: Pyrrhotite>> Elongated and stringers in MDSc.											
<<Alt: 18 - 54.15 Strong (Alt) Muscovite>>											
<<Struc: 26 - 34 Moderate (Alt) Fault>> Lots of core loss. Fault gouge sandy-clay (subsurface).											
<<Struc: 37.3 - 37.6 Weak (Alt) Fault>> Faultgouge, grey clay.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-298

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
44.50	47.80	MDS _t Rhyolite tuff dominant mudstone	grey-green								
44.5 - 47.8: Or MDS _{cw} .											
<<Min: 44.5 - 54.4 2% Min: Pyrrhotite>> Discontinuous vein or patch.											
47.80	54.40	MDS _c Carbonaceous dominant mudstone	48.00	49.50	1.50	B00265175	2.7	0.089	0.02	0.02	0.22
47.8 - 54.4: PY and PO stringers. MU altered, fault gouge and QZ vein at lower contact.											
<<Vein: 54.2 - 54.3 Quartz>> QZ			49.50	51.00	1.50	B00265176	0.6	-0.005	-0.01	-0.01	0.1
<<Struc: 50.94 - 50.95 dominant foliation>>			51.00	54.40	3.40	B00265177	0.9	-0.005	-0.01	-0.01	0.04
<<Struc: 51 - 54 Fault>> Core loss. Nearby contact with MxSx. Intensity non-estimated.											
54.40	55.65	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	54.40	54.90	0.50	B00265178	507	1.48	4.11	3.95	11.6
54.4 - 55.65: Large CP patch at upper contact, sharp. Too narrow for OG domain. Maybe RHY on top of the MxSx, fault upper and QZ vein containing muscovite altered rhyolite.											
<<Min: 54.4 - 55.65 10% Min: Sphalerite>>			54.90	55.65	0.75	B00265179	141	1.28	0.13	1.97	13.2
<<Min: 54.4 - 55.65 0.5% Min: Galena>>											
<<Min: 54.4 - 55.65 3% Min: Chalcopyrite>> One 10 cm patch at lower contact.											
<<Min: 54.4 - 67.2 3% Min: Calcite>>											
55.65	57.15	OA Magnetite bearing sulphides	55.65	56.43	0.78	B00265181	119	0.892	0.19	1.53	9.54
<<Min: 55.65 - 57.15 3% Min: Sphalerite>>			56.43	57.15	0.72	B00265182	144	1.53	1.06	1.71	9.56
<<Min: 55.65 - 57.15 5% Min: Magnetite>>											
<<Min: 55.65 - 57.15 0.5% Min: Galena>>											
<<Min: 55.65 - 57.15 0.5% Min: Chalcopyrite>>											
57.15	58.85	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	57.15	58.00	0.85	B00265183	238	1.79	0.4	3.08	7.4
<<Min: 57.15 - 58.85 10% Min: Sphalerite>>											
<<Min: 57.15 - 58.85 5% Min: Magnetite>>			58.00	58.85	0.85	B00265184	180	1.96	0.44	1.8	6.93
<<Min: 57.15 - 58.85 2% Min: Galena>>											
58.85	59.33	OA Magnetite bearing sulphides	58.85	59.33	0.48	B00265185	134	0.711	0.08	1.91	13.6
<<Min: 58.85 - 59.35 10% Min: Sphalerite>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-298

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 58.85 - 59.35 1% Min: Galena>>											
59.33	59.91	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG	59.33	59.91	0.58	B00265186	236	0.891	0.01	4.63 10.1
<<Min: 59.35 - 59.91 10% Min: Sphalerite>>											
<<Min: 59.35 - 59.91 5% Min: Magnetite>>											
<<Min: 59.35 - 59.91 1% Min: Galena>>											
59.91	61.28	OA Magnetite bearing sulphides	FG	59.91	60.53	0.62	B00265187	182	0.828	0.32	3.59 10.3
59.91 - 61.28: Maybe cordierite TML replaced.											
<<Min: 59.91 - 61.25 15% Min: Sphalerite>>											
<<Min: 59.91 - 61.25 5% Min: Magnetite>>											
<<Min: 59.91 - 61.25 3% Min: Galena>>											
<<Min: 59.91 - 61.25 2% Min: Chalcopyrite>>											
<<Min: 61.25 - 63.44 5% Min: Sphalerite>>											
<<Min: 61.25 - 63.44 3% Min: Galena>>											
<<Min: 61.25 - 63.44 1% Min: Chalcopyrite>>											
61.28	63.44	OI Heavily disseminated sulphides in host schist	FG	61.28	62.00	0.72	B00265189	148	1.03	0.72	3.61 6.92
61.28 - 63.44: in RHY.											
<<Min: 62.00 - 62.74 15% Min: Sphalerite>>											
<<Min: 62.74 - 63.44 3% Min: Galena>>											
63.44	67.20	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG	62.00	62.74	0.74	B00265192	147	0.647	0.25	3.7 6.5
63.44 - 67.2: CA increase in veining and matrix. QZ veins. Fault gouge at lower contact.											
<<Min: 63.44 - 67.2 15% Min: Sphalerite>>											
<<Min: 63.44 - 67.2 3% Min: Galena>>											
<<Min: 63.44 - 67.2 0.1% Min: Chalcopyrite>> Mostly in OB domains (matrix) and increasing around contact with											
<<Vein: 64.8 - 66.5 Quartz-Carbonate>> QZ-CA veins in massive sulfide.											
<<Min: 64.00 - 65.00 15% Min: Sphalerite>>											
<<Min: 65.00 - 66.00 3% Min: Galena>>											
<<Min: 66.00 - 67.20 0.1% Min: Chalcopyrite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-298
From (m) **To (m)** **Rocktype & Description**

**67.20 114.00 MAFi Mafic Intrusions (primarily green
footwall mafic intrusion)**

67.2 - 114: Foliation angle progressive changing, locally along the core axis. Could be ductile deformation or due to multiple blocks in disorder. E.O.H.

<<Min: 67.2 - 114 10% Min: Calcite>> Average, irregular.
<<Alt: 67.2 - 114 Strong (Alt) Chlorite>>
<<Struc: 68.64 - 68.65 dominant foliation>>
<<Struc: 74.94 - 74.95 dominant foliation>>
<<Struc: 83.84 - 83.85 dominant foliation>>
<<Struc: 89.7 - 90 Weak (Alt) Fault>> Sandy-clay fault gouge.
<<Struc: 92.95 - 92.96 dominant foliation>>
<<Struc: 95.94 - 95.95 dominant foliation>>
<<Struc: 99.92 - 99.93 dominant foliation>>
<<Struc: 113.94 - 113.95 dominant foliation>>

End of Hole @ 114

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
67.20	68.70	1.50	B00265198	3.7	0.013	-0.01	0.04	0.1

68.70	70.20	1.50	B00265199	7.6	0.025	-0.01	0.06	0.16
70.20	71.70	1.50	B00265201	3	0.013	-0.01	0.04	0.02

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-299

Prospect:	ABM	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	David Nuttal	
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	David Nuttal	Date Logging Start:	17-Oct-15	
UTM Easting	415074	Core Size:	NQ3	Azimuth:	205	Date Logging Complete:	18-Oct-15	
UTM Northing:	6815570	Casing Pulled?:	Yes	Dip:	-63	Drill Company:	Geotech	
UTM Elev. (m):	1383.43	Casing Depth (m):	12	Length (m):	170	Drill Rig:	Hydracore	
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	16-Oct-15	
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	17-Oct-15	
Local Elev. (m):						Purpose:	Resource Confirmation	
Comments:							Parent Hole:	

This hole was drilled as resource confirmation of sulphide intercept in historic hole K94-014.

The structural hanging wall is composed of a package of RHYc, RHYv and MDS (t/c) with foliation parallel MAFi intrusives. Massive sulphide is observed from 99.08m to 124.8m (composed mostly of OA (dmg) and OB ore types; high amounts of CP are noted from 113.23m to 114.53m). The structural footwall is composed of a package of undifferentiated RHY and carbonaceous sediments (MDS) underlain by MAFi and RHYi. A 33cm interval of OB is present at the contact between MDS and MAFi (140.28m depth). Muscovite, chlorite and cordierite alteration intensify proximally to the sulphide body. Chlorite alteration is moderate in the footwall MAFi unit, and Si alteration is moderate to strong throughout the RHYi interval.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-63	205	0	205	APS	David Nuttal	17-Oct-15		<input checked="" type="checkbox"/>	
53	-63.7	178.7	22.5	201.2	ReflexEVS	Geotech	16-Oct-15	5755	<input checked="" type="checkbox"/>	
77	-64.6	178.6	22.5	201.1	ReflexEVS	Geotech	16-Oct-15	5763	<input checked="" type="checkbox"/>	
101	-65.1	185.4	22.5	207.9	ReflexEVS	Geotech	17-Oct-15	5368	<input type="checkbox"/>	Survey rejected because of out of place mag field.
125	-64.5	177	22.5	199.5	ReflexEVS	Geotech	17-Oct-15	5742	<input checked="" type="checkbox"/>	
152	-64.9	182.3	22.5	204.8	ReflexEVS	Geotech	17-Oct-15	5775	<input checked="" type="checkbox"/>	
170	-65.2	181.2	22.5	203.7	ReflexEVS	Geotech	17-Oct-15	5792	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	13.89	OVB									
13.89	17.53	MAFi									
Overburden Mafic Intrusions (primarily footwall mafic intrusion) <<Min: 13.89 - 17.53 25% Min: Calcite>> <<Min: 13.89 - 97 1% Min: Pyrrhotite>> <<Alt: 13.89 - 83.64 Weak (Alt) Muscovite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-299

From (m)	To (m)	Rocktype & Description										From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
17.53	19.31	RHYcw	Curdy textured-flow banded (flows, subvolcanics)																	
<<Min: 17.53 - 19.31 8% Min: Calcite>>																				
19.31	21.22	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)																	
<<Min: 19.31 - 21.22 25% Min: Calcite>>																				
<<Vein: 19.4 - 19.77 98% Quartz>>																				
21.22	28.15	RHYc	Rhyolite coherant volcanics																	
21.22 - 28.15: Portions of this interval are texturally similar to RHYi. Felsic, aphanitic, coherent rhyolite with high calcite content and pyrite stringers. Though, no angular - subrounded translucent crystals and not in a locality known to host RHYi.																				
<<Min: 21.22 - 28.15 5% Min: Calcite>>																				
<<Min: 25 - 77.62 2% Min: Pyrite>>																				
<<Vein: 25.67 - 29 85% Quartz>>																				
28.15	43.72	RHYc	Rhyolite coherant volcanics																	
<<Min: 28.15 - 44.82 2% Min: Calcite>>																				
<<Min: 28.15 - 69.52 0.25% Min: Sphalerite>>																				
<<Min: 28.15 - 69.52 0.1% Min: Galena>>																				
43.72	44.82	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)																	
44.82	57.60	RHY	undifferentiated rhyolite																	
44.82 - 57.6: Coherent rhyolite texture is present throughout this interval.																				
<<Min: 44.82 - 69.52 3% Min: Calcite>>																				
57.60	60.98	RHYcw	Curdy textured-flow banded (flows, subvolcanics)																	
60.98	69.52	RHYcw	Curdy textured-flow banded (flows, subvolcanics)																	
60.98 - 69.52: Likely to be the same unit as RHYcw structurally above.																				
69.52	76.43	RHY	undifferentiated rhyolite																	
69.52 - 76.43: Alteration obscures primary textures. No coherent textures observed.																				
<<Min: 69.52 - 97 0.25% Min: Calcite>>																				

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-299
From (m) **To (m)** **Rocktype & Description**

<<Alt: 69.52 - 81 Trace (Alt) Chlorite>>

76.43 77.62 MDS Carbonaceous Mudstone & Tuffaceous Mudstone
77.62 83.06 RHY undifferentiated rhyolite

<<Min: 77.62 - 83.64 1% Min: Pyrite>>

<<Struc: 78.9 - 78.9 dominant foliation>>

<<Struc: 80.25 - 80.25 dominant foliation>>

<<Struc: 81.5 - 82.7 Weak (Alt) Fault>>

83.06 83.64 MDSc Carbonaceous dominant mudstone

83.06 - 83.64: Carbonaceous component present. Protolith uncertain.

83.64 99.08 RHYc Rhyolite coherent volcanics

83.64 - 99.08: Brittle deformation and alteration obscure primary textures. High silica content and sulphide stringer mineralization support coherent felsic lithology.

<<Min: 83.64 - 104.18 2% Min: Pyrite>>

<<Alt: 83.64 - 95 Moderate (Alt) Muscovite>>

<<Alt: 95 - 104.18 Strong (Alt) Muscovite>>

<<Alt: 99 - 120.38 Moderate (Alt) Chlorite>>

<<Vein: 88 - 88.25 90% Quartz>>

<<Struc: 88.7 - 88.9 Weak (Alt) Fault>>

<<Struc: 92.1 - 92.5 Moderate (Alt) Fault>>

<<Struc: 94.65 - 94.65 dominant foliation>>

<<Struc: 96.1 - 96.85 Moderate (Alt) Fault>>

99.08 104.18 OJ Heavily disseminated sulphides in proximal altered rock

99.08 - 104.18: Abundant CP and SP. Brittle deformation and alteration obscure primary textures. High silica content and sulphide stringer mineralization support coherent felsic lithology.

<<Alt: 99.08 - 104.18 Moderate (Alt) Cordierite>>

<<Struc: 102.5 - 102.8 Weak (Alt) Fault>>

<<Struc: 103.47 - 103.47 dominant foliation>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

94.58	96.08	1.50	B00269574	2.6	0.011	0.02	0.13	0.57
-------	-------	------	-----------	-----	-------	------	------	------

96.08	97.58	1.50	B00269575	0.7	-0.005	-0.01	0.03	0.03
-------	-------	------	-----------	-----	--------	-------	------	------

97.58	99.08	1.50	B00269576	12.1	0.019	0.02	0.34	0.41
-------	-------	------	-----------	------	-------	------	------	------

99.08	100.08	1.00	B00269577	18.2	0.028	0.05	0.56	1.43
-------	--------	------	-----------	------	-------	------	------	------

100.08	101.08	1.00	B00269578	15.9	0.043	0.39	0.12	1.65
--------	--------	------	-----------	------	-------	------	------	------

101.08	102.08	1.00	B00269579	107	0.418	1.86	2.27	6.82
--------	--------	------	-----------	-----	-------	------	------	------

102.08	103.08	1.00	B00269581	117	3.42	3.42	1.09	7.45
--------	--------	------	-----------	-----	------	------	------	------

103.08	104.18	1.10	B00269582	7.6	0.06	0.34	-0.01	0.96
--------	--------	------	-----------	-----	------	------	-------	------

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-299

From (m)	To (m)	Rocktype & Description											
104.18	105.23	OA	Magnetite bearing sulphides	FMG	104.18	105.23	1.05	B00269583	136	1.32	2.5	1.4	9.18
					104.18 - 105.23: Magnetite 10-15%, SP 10%, CP 3-5%, PO 2-5%								
105.23	108.55	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG	105.23	106.23	1.00	B00269584	148	1.22	0.69	1.35	7.22
					105.23 - 108.55: Sp ~10%								
108.55	108.86	OA	Magnetite bearing sulphides	FMG	106.23	107.23	1.00	B00269585	138	1.08	0.5	1.87	5.25
					107.23	107.73	0.50	B00269586	169	1.73	0.31	2.59	6.67
					107.73	108.55	0.82	B00269587	173	1.7	0.24	1.67	6.84
					108.55	108.86	0.31	B00269588	70.9	1.26	0.51	1.01	9.62
108.55 - 108.86: Magnetite ~5-7%, PO 1%													
108.86	110.86	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG	108.86	109.86	1.00	B00269589	288	1.87	0.33	3.7	9.06
					108.86 - 110.86: po ~2 %								
110.86	111.44	OJ	Heavilly disseminated sulphides in proximal altered rock		109.86	110.86	1.00	B00269592	201	1.72	0.35	2.28	6.89
					110.86	111.44	0.58	B00269593	87.3	0.2	-0.01	1.8	4.42
110.86 - 111.44: PO ~ 5%													
111.44	113.23	OA	Magnetite bearing sulphides	FMG	111.44	112.44	1.00	B00269594	132	0.863	0.39	1.53	7.74
					111.44 - 113.23: magnetite ~10%, PO ~ 5%, SP ~15%								
<<Struc: 112.75 - 112.75 dominant foliation>>													
113.23	114.53	OG	Chalcopyrite rich sulphides	FMG	112.44	113.23	0.79	B00269595	104	0.56	0.44	1.4	5.74
					113.23	114.00	0.77	B00269596	316	5.91	9.28	0.36	1.64
113.23 - 114.53: Mt ~5-8%, CP ~25%, PO 7-10%													
114.53	114.80	OA	Magnetite bearing sulphides	FMG	114.00	114.53	0.53	B00269597	249	3.19	7.95	0.34	1.22
					114.53	114.80	0.27	B00269598	123	0.986	1.74	0.49	3.43
114.53 - 114.8: mt ~10%, po~3-5%													

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-299

From (m) To (m) Rocktype & Description

114.80 120.58 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

114.8 - 120.58: Sp 10-15%, PO 3-5%

<<Min: 120.38 - 123.14 2% Min: Pyrite>>

<<Alt: 120.38 - 136 Strong (Alt) Muscovite>>

<<Struc: 115.08 - 115.25 Weak (Alt) Fault>>

120.58 123.14 RHYv Rhyolite volcanoclastic

<<Vein: 122.06 - 122.57 85% Quartz>>

123.14 124.98 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

123.14 - 124.98: PO ~5%

<<Alt: 124.14 - 124.98 Moderate (Alt) Cordierite>>

<<Alt: 124.14 - 140.28 Moderate (Alt) Chlorite>>

124.98 132.45 RHY undifferentiated rhyolite

<<Min: 125 - 132.45 1% Min: Pyrrhotite>>

<<Vein: 124.98 - 126 98% Quartz>>

<<Vein: 127.66 - 127.75 95% Quartz>>

<<Struc: 124.98 - 124.98 Contact>>

<<Struc: 127.88 - 127.88 dominant foliation>>

<<Struc: 130.5 - 130.5 dominant foliation>>

132.45 140.28 MDSt Rhyolite tuff dominant mudstone

132.45 - 140.28: chlorite alteration. Very fine grain size.

<<Min: 136 - 140.28 1% Min: Pyrite>>

<<Alt: 136 - 140.28 Moderate (Alt) Muscovite>>

<<Struc: 136.85 - 136.85 dominant foliation>>

<<Struc: 139.97 - 140.1 Weak (Alt) Fault>>

FMG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
114.80	115.80	1.00	B00269599	131	0.831	0.24	1.59	8.25

115.80	116.80	1.00	B00269601	291	2.31	0.41	3.8	10.1
116.80	117.80	1.00	B00269602	314	2.66	0.46	3.92	13
117.80	118.80	1.00	B00269603	281	1.7	0.24	4.18	10.6
118.80	119.80	1.00	B00269604	104	0.692	0.12	1.6	6.33
119.80	120.38	0.58	B00269605	98.6	0.889	0.11	1.09	8.98
120.38	121.88	1.50	B00269606	6.8	0.026	-0.01	0.09	0.18
121.88	123.14	1.26	B00269607	7	0.016	-0.01	0.1	0.77

MG

123.14	124.14	1.00	B00269608	109	1.12	2.66	0.63	2.22
--------	--------	------	-----------	-----	------	------	------	------

124.14	124.98	0.84	B00269609	71.7	0.539	1.32	0.38	1.83
--------	--------	------	-----------	------	-------	------	------	------

124.98	126.48	1.50	B00269611	27.1	0.224	0.54	0.08	0.34
126.48	127.98	1.50	B00269612	2.3	-0.005	-0.01	0.01	0.06
127.98	129.48	1.50	B00269613	0.6	-0.005	-0.01	-0.01	0.02

135.00	136.00	1.00	B00265289	-0.3	-0.005	-0.01	-0.01	0.02
--------	--------	------	-----------	------	--------	-------	-------	------

136.00	137.50	1.50	B00265291	0.6	0.006	0.02	-0.01	0.19
137.50	138.78	1.28	B00265292	0.5	-0.005	-0.01	-0.01	0.03
138.78	140.28	1.50	B00269614	2.6	0.015	0.03	0.02	0.28

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-299

From (m) To (m) Rocktype & Description

140.28 140.51 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

140.28 - 140.51: PO ~5%

<<Alt: 140.28 - 147.05 Moderate (Alt) Chlorite>>

<<Alt: 140.28 - 170 Weak (Alt) Muscovite>>

<<Struc: 140.28 - 140.28 Contact>>

140.51 170.00 RHYi Aphanitic Rhyolite (intrusion)

<<Min: 140.51 - 147.05 1% Min: Pyrite>>

<<Min: 140.51 - 147.05 0.5% Min: Pyrrhotite>>

<<Min: 147.05 - 170 2% Min: Sphalerite>>

<<Min: 147.05 - 170 4% Min: Pyrite>>

<<Alt: 147.05 - 170 Moderate (Alt) Silicification>>

<<Struc: 143.23 - 143.23 dominant foliation>>

<<Struc: 151.6 - 151.6 dominant foliation>>

<<Struc: 159.75 - 159.75 dominant foliation>>

<<Struc: 166.5 - 166.6 Weak (Alt) Fault>>

End of Hole @ 170

FMG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
140.28	140.51	0.23	B00269615	95.8	0.254	0.59	1.38	5.17

140.51	142.01	1.50	B00269616	0.9	-0.005	-0.01	0.02	0.05
142.01	143.50	1.49	B00265293	-0.3	-0.005	-0.01	-0.01	0.01
143.50	145.00	1.50	B00265294	-0.3	-0.005	-0.01	-0.01	-0.01

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-300

Prospect:	ABM	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Sean Suttie	Date Logging Start:	18-Oct-15
UTM Easting	415250	Core Size:	HQ3	Azimuth:	125.25	Date Logging Complete:	21-Oct-15
UTM Northing:	6815495	Casing Pulled?:	Yes	Dip:	-45	Drill Company:	Geotech
UTM Elev. (m):	1447.67	Casing Depth (m):	3	Length (m):	200.1	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	17-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	20-Oct-15
Local Elev. (m):						Purpose:	Geotech
Comments:						Parent Hole:	

K15-300 was drilled in order to collect geotechnical data on the east side of the ABM deposit.
The upper units of K15-300 are made up of a felsic sequence (coherent and volcanoclastic rhyolite) crosscut by mafic dykes until the hole intercepts a fault from 131.10m to 143.66m (fault gouge, fault breccia and shearing).
The structure is underlain by a strongly foliated and QZ-CA veined graphitic mudstone.
The hole ends at 200.1m in highly fractured graphitic mudstone.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-45	125.25	0	125.25	APS	Sean Suttie	17-Oct-15		<input checked="" type="checkbox"/>	
17	-44.2	98.8	22.5	121.3	ReflexEVS	Geotech	17-Oct-15	5834	<input checked="" type="checkbox"/>	
47	-48.8	103.2	22.5	125.7	ReflexEVS	Geotech	18-Oct-15	5788	<input checked="" type="checkbox"/>	
77	-50	106.3	22.5	128.8	ReflexEVS	Geotech	18-Oct-15	5762	<input checked="" type="checkbox"/>	
107	-50.6	109	22.5	131.5	ReflexEVS	Geotech	18-Oct-15	5768	<input checked="" type="checkbox"/>	
155	-51	110.6	22.5	133.1	ReflexEVS	Geotech	19-Oct-15	5769	<input checked="" type="checkbox"/>	
185	-50.5	110.7	22.5	133.2	ReflexEVS	Geotech	20-Oct-15	5766	<input checked="" type="checkbox"/>	
200	-50.2	109.4	22.5	131.9	ReflexEVS	Geotech	20-Oct-15	5761	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	3.00	CASN	Casing								
3.00	11.45	OVBN	Overburden								
3 - 11.45: Boulders.											
<<Min: 8.5 - 14.28 15% Min: Calcite>> In matrix and veining.											
<<Vein: 9.5 - 9.65 Quartz-Carbonate>> QZ vein.											
<<Struc: 10 - 72.01 dominant foliation>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-300

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 11 - 73.01 dominant foliation>>											
11.45	14.28	MDS Carbonaceous Mudstone & Tuffaceous Mudstone	black								
11.45 - 14.28: Foliated, CA in matrix and veining.											
<<Struc: 14 - 14.01 Vein>> CA.											
14.28	19.33	RHYvl Lapilli tuff	grey-green								
14.28 - 19.33: Mid strain. AK replacement of lapilli.											
<<Min: 14.28 - 59.76 0.5% Min: Pyrite>> Associated with QZ-CA veining.											
<<Min: 14.28 - 59.76 5% Min: Calcite>> Veining and replacement.											
<<Min: 14.28 - 200 0.1% Min: Pyrrhotite>> With PY and in dykes.											
<<Alt: 14.28 - 41.4 Weak (Alt) Muscovite>> Locally moderate.											
<<Struc: 15.7 - 15.71 dominant foliation>>											
<<Struc: 18 - 18.01 dominant foliation>>											
19.33	22.00	RHYcw Curdy textured-flow banded (flows, subvolcanics)	grey-green								
19.33 - 22: Including QZ vein.											
<<Vein: 20.95 - 21.25 Quartz-Tourmaline>> QZ vein- TML at lower contact.In oxydized zone.											
<<Struc: 21.16 - 21.31 Weak (Alt) Fault>> Fault gouge											
22.00	35.46	RHYvl Lapilli tuff	grey-green								
22 - 35.46: Moderate to strong strain.											
<<Struc: 24.5 - 24.51 dominant foliation>>											
<<Struc: 25.8 - 25.83 Weak (Alt) Fault>> minor fault gouge.											
<<Struc: 33.27 - 33.28 dominant foliation>>											
35.46	36.52	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	dark grey								
35.46 - 36.52: CA rich. PY/PO . Foliated											
36.52	39.98	RHYvl Lapilli tuff	grey-green								
36.52 - 39.98: mid strain.											
<<Struc: 38 - 38.01 dominant foliation>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-300

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
39.98	43.57	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
39.98 - 43.57: CA rich. Amygdaloidal. CA/PO veining.											
<<Alt: 41.4 - 143.66 Moderate (Alt) Muscovite>> Could overprint silicification locally.											
<<Struc: 40.2 - 41 Vein>> Black colored. QZ, few CA, PY.											
<<Struc: 43.5 - 43.51 dominant foliation>>											
43.57	55.56	RHYva Coarse grained to ash tuff									
43.57 - 55.56: Mid strain.											
<<Vein: 53.68 - 200 Quartz-Carbonate-Sulphide>> QZ/CA and often PY stringers.											
<<Struc: 47.5 - 47.51 dominant foliation>>											
<<Struc: 48.7 - 48.71 dominant foliation>>											
<<Struc: 54.82 - 54.83 dominant foliation>>											
55.56	56.16	RHYvl Lapilli tuff									
55.56 - 56.16: High strain. PY/dark QZ veining or pods											
<<Struc: 55.9 - 55.91 dominant foliation>>											
56.16	59.36	RHY undifferentiated rhyolite									
56.16 - 59.36: Mix of RHYc and RHYva crosscut by MAFi dyke (light grey) from 57.0m to 57.43m). Probably peperitic texture.											
<<Struc: 57.2 - 57.21 dominant foliation>>											
59.36	69.95	RHYcf Feldspar & feldspar quartz porphyry									
59.36 - 69.95: Silica rich. Glassy.											
<<Min: 59.76 - 87.78 3% Min: Calcite>> Higher concentrated in mafic dyke.											
<<Min: 59.76 - 113.02 1% Min: Pyrite>> In dark QZ stringers.											
<<Struc: 62.45 - 62.46 dominant foliation>>											
<<Struc: 63.75 - 63.76 dominant foliation>>											
<<Struc: 67.1 - 67.11 dominant foliation>>											
69.95	73.26	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
69.95 - 73.26: Trace of hematite?											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-300

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 72.36 - 72.37 dominant foliation>>											
<<Struc: 73.06 - 73.07 dominant foliation>>											
73.26	74.48	MAFt Mafic Volcaniclastics									
73.26 - 74.48: Maybe ash. Look volcaniclastic but could be intrusive.											
74.48	75.57	RHYcw Curdy textured-flow banded (flows, subvolcanics)	grey-green								
74.48 - 75.57: Silica rich.											
75.57	78.46	RHYva Coarse grained to ash tuff	grey-green								
75.57 - 78.46: MU rich, locally flow banded, peperitic texture, QE aggregated.											
<<Struc: 75.87 - 75.88 dominant foliation>>											
78.46	79.44	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
78.46 - 79.44: CA rich.											
79.44	81.31	RHYva Coarse grained to ash tuff	grey-green								
79.44 - 81.31: Lapilli, silica rich.											
81.31	84.59	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	dark grey								
81.31 - 84.59: QZ vein at lower contact.											
<<Vein: 84.5 - 84.64 Quartz>> QZ vein at lower contact of MAFi											
84.59	87.78	RHYcw Curdy textured-flow banded (flows, subvolcanics)	grey-green								
84.59 - 87.78: MU/SI banded, PY/QZ veining, folded/crenulations.											
87.78	92.22	RHYvl Lapilli tuff	grey-green								
87.78 - 92.22: or RHYcf, MU altered.											
<<Min: 87.78 - 131 1% Min: Calcite>>											
<<Struc: 87.78 - 87.79 dominant foliation>>											
<<Struc: 88 - 88.01 dominant foliation>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-300

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
92.22	93.14	RHYva Coarse grained to ash tuff									
92.22 - 93.14: MU/QZ/PY banded.											
93.14	93.49	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
93.14 - 93.49: CA rich											
<<Struc: 93.4 - 95 Weak (Alt) Fault>> Accentuated by MU alteration.											
93.49	111.41	RHY undifferentiated rhyolite									
93.49 - 111.41: RHYvl with fragment of lapilli but SI rich and texture of RHYc with possibly xtl. Could also be identify as RHYvx. QE heterogeneous.											
<<Struc: 94 - 94.01 Vein>> CA.											
<<Struc: 94.85 - 94.86 dominant foliation>>											
<<Struc: 95 - 95.01 Fault>> Fault gouge.											
<<Struc: 96.8 - 96.81 Vein>> PY?											
<<Struc: 97.5 - 97.51 dominant foliation>>											
<<Struc: 100.3 - 100.31 dominant foliation>>											
<<Struc: 104 - 104.01 dominant foliation>>											
<<Struc: 107 - 107.01 dominant foliation>>											
111.41	112.27	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
111.41 - 112.27: Could be clastic (MAFt).											
<<Struc: 111.5 - 111.75 Weak (Alt) Fault>> Fault gouge.											
112.27	113.02	RHYvl Lapilli tuff									
<<Struc: 112.85 - 112.86 Vein>> CA fracture filling.											
113.02	113.83	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
113.02 - 113.83: Or ashes.											
<<Min: 113.02 - 131 0.5% Min: Pyrite>>											
<<Struc: 113.7 - 117.71 Weak (Alt) Fault>> Fault gouge.											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-300

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
113.83	116.00	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)	dark grey							
113.83 - 116: CA rich.											
116.00	117.15	RHYcw	Curdy textured-flow banded (flows, subvolcanics)	grey-green							
116 - 117.15: Locally flow banded, maybe xtl fragments.											
117.15	118.86	RHYva	Coarse grained to ash tuff	grey-green							
117.15 - 118.86: With lapilli.											
<<Struc: 117.6 - 117.61 Weak (Alt) Fault>> Cemented joints.											
118.86	122.00	RHYvl	Lapilli tuff	grey-green							
118.86 - 122: Peperitic texture at lower contact. Angular clasts (fragments?), heterogeneous.											
<<Struc: 120.6 - 120.61 dominant foliation>>											
122.00	124.80	RHYcw	Curdy textured-flow banded (flows, subvolcanics)	grey-green							
122 - 124.8: Curdy texture.											
124.80	131.10	RHYvl	Lapilli tuff	grey-green							
124.8 - 131.1: Angular fragments (or xtl). Brecciated texture.											
131.10	135.52	FBX	Fault Breccia								
131.1 - 135.52: Fault gouge (grey clay) and QZ vein up to 40 cm. Clasts of MAFt (?).											
<<Vein: 131.4 - 134 Quartz>> QZ vein preserved in fault zone.											
<<Struc: 131.1 - 135.52 Strong (Alt) Fault>> Fault gouge, rubble zone.											
135.52	137.51	FBX	Fault Breccia								
135.52 - 137.51: Fault breccia with clasts (1mm to 10 cm). QZ/CA and RHY.											
<<Struc: 135.52 - 137.51 Strong (Alt) Fault>> Fault breccia.											
137.51	139.50	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)	light grey							
137.51 - 139.5: Or MAFt or ashes. Highly fractured.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-300

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
139.50	143.66	FBX									
		Fault Breccia									
		light grey									
139.5 - 143.66: Fault breccia containing QZ vein, PY clasts (vein?), locally silicified (from 142 to 143m). Subangular fragments.											
<<Struc: 139.5 - 143.66 Strong (Alt) Shear>> and fault breccia.											
143.66	148.84	MDS									
		Carbonaceous Mudstone & Tuffaceous Mudstone									
		black									
143.66 - 148.84: Strongly graphitic. CA veinlets, fractured. QZ veins up to 10cm wide).											
<<Min: 143.66 - 200.1 0.5% Min: Pyrite>> Euhedral in highly graphitic zone.											
<<Min: 143.66 - 200.1 0.1% Min: Pyrrhotite>>											
<<Min: 143.66 - 200.1 2% Min: Calcite>>											
148.84	152.23	RHY									
		undifferentiated rhyolite									
		light grey									
148.84 - 152.23: Highly silicified., could be aplitic or ashes. PY veins.											
<<Alt: 149.7 - 157 Strong (Alt) Silicification>>											
<<Struc: 151.6 - 151.61 dominant foliation>>											
152.23	159.84	MDS									
		Carbonaceous Mudstone & Tuffaceous Mudstone									
		black									
152.23 - 159.84: Strongly graphitic. QZ/CA veinlets set. Locally fault gouge. Strong sericite. PY in vein and fracture. QZ vein at lower contact. Strong foliation, shallow angle.											
<<Alt: 157 - 200.1 Moderate (Alt) Muscovite>>											
<<Vein: 159.4 - 159.84 Quartz-Carbonate>> QZ vein in MDS.											
<<Struc: 158 - 158.01 dominant foliation>>											
159.84	172.30	MDS									
		Carbonaceous Mudstone & Tuffaceous Mudstone									
		black									
159.84 - 172.3: Strongly graphitic. Highly graphitic, highly foliated. QZ/CA veinlets set. Foliation along the core axis.											
<<Vein: 163.67 - 164 Quartz-Carbonate>> QZ-CA vein.											
<<Vein: 169 - 177 Calcite>> Strong CA veining.											
<<Struc: 166.95 - 166.96 dominant foliation>>											
<<Struc: 167.75 - 167.76 dominant foliation>>											
172.30	174.08	MAFt									
		Mafic Volcaniclastics									
		light grey									
172.3 - 174.08: Greenish color. Fractured, strong QZ/CA veining.											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-300

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
174.08	200.10	MDS Carbonaceous Mudstone & Tuffaceous Mudstone black									
174.08 - 200.1: Highly foliated dominantly along the core axis, QZ/CA veining, folded. Mightbe apiltic from 191.2 to 191.6 and possiblyMAFt from 196.3to 197.00m											
<<Struc: 179.3 - 179.31 dominant foliation>>											
<<Struc: 188 - 196 Moderate (Alt) Fault>> Fault gouge, highly fracture, folded, locally desaggregated.											
<<Struc: 197.8 - 197.81 dominant foliation>>											
End of Hole @ 200.1											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-301

Prospect:	ABM	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	David Nuttal
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Sean Suttie	Date Logging Start:	18-Oct-15
UTM Easting	415049	Core Size:	NQ3	Azimuth:	180.36	Date Logging Complete:	20-Oct-15
UTM Northing:	6815467	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1385.55	Casing Depth (m):	18	Length (m):	140.1	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	17-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	19-Oct-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

This hole is designed to infill the gap and confirm resource between historic hole K95-088 & K94-013.

The structural hanging wall is composed of a package of RHYc/RHYcw and MDSw/MDSc units. Massive sulphide interception is from 78.1m to 90.9m. Additional sulphide mineralization is present, heavily disseminated within a package of strongly altered (muscovite, chlorite, cordierite) felsic volcanoclastic rocks beneath the main sulphide lens and above the footwall MAFi. The structural foot wall is composed of MAFi truncated by RHYi. Muscovite, chlorite and cordierite intensify in proximity to the massive sulphide ore body. Silicification is present in proximity to the RHYi unit. Heavily disseminated sulphides observed beneath the main sulphide ore body are not present in adjacent historic holes K95-088 and K94-013.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	180.36	0	180.36	APS	Sean Suttie	17-Oct-15		<input checked="" type="checkbox"/>	
26	-60.2	162.8	22.5	185.3	ReflexEVS	Geotech	18-Oct-15	5778	<input checked="" type="checkbox"/>	
53	-60.1	165.6	22.5	188.1	ReflexEVS	Geotech	18-Oct-15	5771	<input checked="" type="checkbox"/>	
77	-59.7	173.7	22.5	196.2	ReflexEVS	Geotech	18-Oct-15	5703	<input checked="" type="checkbox"/>	
101	-59.8	166	22.5	188.5	ReflexEVS	Geotech	18-Oct-15	5614	<input checked="" type="checkbox"/>	
125	-59.7	166.4	22.5	188.9	ReflexEVS	Geotech	19-Oct-15	5686	<input checked="" type="checkbox"/>	
140	-60	166.3	22.5	188.8	ReflexEVS	Geotech	19-Oct-15	5701	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	18.00	CASN Casing									
18.00	47.10	RHYv Rhyolite volcanoclastic									
18 - 47.1: PY/PO mineralized ribbons and clots. Very siliceous.; MEB changed fro RHYc-RHYv											
<<Min: 18 - 47.1 3% Min: Pyrite>>											
<<Min: 18 - 47.1 2% Min: Pyrrhotite>>											
<<Min: 18 - 62.52 1% Min: Calcite>>											
<<Alt: 18 - 56 Weak (Alt) Muscovite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-301

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 23.84 - 24.12 Weak (Alt) Fault>>											
<<Struc: 24.9 - 25.05 Weak (Alt) Fault>>											
<<Struc: 27.75 - 27.8 Weak (Alt) Fault>>											
<<Struc: 31 - 31.2 Weak (Alt) Fault>>											
<<Struc: 37.12 - 38 Weak (Alt) Fault>>											
<<Struc: 38.58 - 38.9 Moderate (Alt) Fault>>											
<<Struc: 42.11 - 42.15 Weak (Alt) Fault>>											
<<Struc: 42.71 - 42.81 Weak (Alt) Fault>>											
<<Struc: 45.52 - 45.62 Weak (Alt) Fault>>											
47.10	60.36	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
<<Min: 47.1 - 64.23 2% Min: Pyrite>>											
<<Min: 47.1 - 75.64 1% Min: Pyrrhotite>>											
<<Alt: 56 - 78.04 Moderate (Alt) Muscovite>>											
60.36	61.23	MDSw Coherent rhyolite flow with carbonaceous content									
<<Struc: 61 - 61.05 Weak (Alt) Fault>>											
61.23	62.52	MDSw Carbonaceous dominant mudstone									
<<Min: 61.23 - 75.64 1% Min: Pyrite>>											
62.52	66.64	RHYc Rhyolite coherant volcanics									
62.52 - 66.64: Contains traces of carbonaceous component.											
<<Min: 62.52 - 78 0.25% Min: Calcite>>											
<<Struc: 64.28 - 64.36 Weak (Alt) Fault>>											
<<Struc: 64.52 - 65.44 Moderate (Alt) Fault>>			Cross cuts foliation								
66.64	76.61	MDSw Coherent rhyolite flow with carbonaceous content	73.61	75.11	1.50	B00269617	0.8	0.01	-0.01	-0.01	0.06
66.64 - 76.61: >10 % carbonaceous component.											
<<Struc: 67.85 - 67.85 dominant foliation>>			75.11	76.61	1.50	B00269618	1.1	0.009	-0.01	0.02	0.02
<<Struc: 70.8 - 70.8 dominant foliation>>											
76.61	78.10	RHYc Rhyolite coherant volcanics	76.61	78.10	1.49	B00269619	3.8	0.081	-0.01	0.03	0.03
<<Min: 78 - 100 3% Min: Calcite>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-301

From (m)	To (m)	Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 78.04 - 78.89 Strong (Alt) Muscovite>>												
<<Alt: 78.04 - 78.89 Moderate (Alt) Chlorite>>												
<<Alt: 78.04 - 78.89 Moderate (Alt) Cordierite>>												
78.10	78.89	OJ	Heavilly disseminated sulphides in proximal altered rock									
78.1 - 78.89: Rhy host												
78.89	81.95	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG								
78.89 - 81.95: PO ~5%												
81.95	82.82	OA	Magnetite bearing sulphides	FMG								
81.95 - 82.82: PO1-3%, MT8-10%												
82.82	90.27	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG								
82.82 - 90.27: Disseminated magnetite at 85m, PO~1-3%												
90.27	90.90	OJ	Heavilly disseminated sulphides in proximal altered rock	MG								
90.27 - 90.9: disseminated magnetite at 91.6m, PO1-3%												
90.90	97.60	RHY	undifferentiated rhyolite									



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-301

From (m) To (m) Rocktype & Description

<<Min: 91.27 - 115.9 1% Min: Sphalerite>>

<<Min: 91.27 - 115.9 2% Min: Pyrite>>

<<Min: 91.27 - 115.9 1% Min: Pyrrhotite>>

<<Min: 91.27 - 115.9 1% Min: Galena>>

<<Alt: 91.27 - 92 Weak (Alt) Chlorite>>

<<Alt: 91.27 - 92 Moderate (Alt) Cordierite>>

<<Alt: 91.27 - 97.6 Moderate (Alt) Muscovite>>

<<Vein: 92.5 - 99.7 5% Quartz>>

<<Struc: 91.27 - 91.33 Weak (Alt) Fault>>

<<Struc: 92.46 - 92.5 Weak (Alt) Fault>>

<<Struc: 94.5 - 94.5 dominant foliation>>

<<Struc: 94.6 - 94.6 Foliation>>

<<Struc: 97.26 - 97.3 Weak (Alt) Fault>>

97.60 100.60 OJ Heavily disseminated sulphides in proximal altered rock

97.6 - 100.6: High spalerite at 99.2m to 100m (~25%), PO3-5%

<<Min: 100 - 113 1% Min: Calcite>>

<<Alt: 97.6 - 100.6 Moderate (Alt) Cordierite>>

<<Alt: 97.6 - 101.8 Strong (Alt) Muscovite>>

<<Alt: 97.6 - 102.57 Weak (Alt) Chlorite>>

100.60 101.80 RHY undifferentiated rhyolite

<<Vein: 101.39 - 101.53 98% Quartz>>

101.80 102.57 OJ Heavily disseminated sulphides in proximal altered rock

<<Alt: 101.8 - 115.9 Moderate (Alt) Muscovite>>

102.57 103.41 RHY undifferentiated rhyolite

103.41 104.80 OJ Heavily disseminated sulphides in proximal altered rock

103.41 - 104.8: High sphalerite ~10%

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
92.40	93.90	1.50	B00269638	0.4	-0.005	-0.01	-0.01	-0.01
93.90	95.40	1.50	B00269639	1.1	0.014	-0.01	-0.01	0.05
95.40	96.90	1.50	B00269641	4.8	0.051	0.04	0.05	0.23
96.90	97.60	0.70	B00269642	2.1	0.026	0.07	0.02	0.03

97.60	98.60	1.00	B00269643	20.5	0.162	0.64	0.18	1.37
-------	-------	------	-----------	------	-------	------	------	------

98.60	99.60	1.00	B00269644	10.5	0.037	0.08	0.3	0.46
99.60	100.60	1.00	B00269645	59.4	0.219	0.19	4.78	5.69

100.60	101.80	1.20	B00269646	5.3	0.601	0.03	0.48	0.73
--------	--------	------	-----------	-----	-------	------	------	------

101.80	102.57	0.77	B00269647	6.6	0.11	0.06	0.56	0.87
--------	--------	------	-----------	-----	------	------	------	------

102.57	103.41	0.84	B00269648	0.3	-0.005	-0.01	0.02	0.04
103.41	104.80	1.39	B00269649	20.3	0.181	0.23	2.61	6.41



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-301

From (m) To (m) Rocktype & Description

<<Alt: 103.41 - 107 Moderate (Alt) Chlorite>>

104.80 110.00 RHY undifferentiated rhyolite

<<Struc: 106.78 - 107 Moderate (Alt) Fault>>

110.00 113.00 OJ Heavily disseminated sulphides in proximal altered rock

110 - 113: Dominantly PY/PO in host Rhyolite

<<Alt: 110 - 115.9 Weak (Alt) Chlorite>>

<<Vein: 110.35 - 112.3 30% Quartz>>

113.00 115.90 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

113 - 115.9: Highly altered, cut by quartz veins

<<Min: 113 - 116 5% Min: Calcite>>

<<Vein: 113.2 - 115.9 80% Quartz>>

115.90 139.58 RHYi Aphanitic Rhyolite (intrusion)

<<Min: 115.9 - 139.6 1% Min: Sphalerite>>

<<Min: 115.9 - 140.1 3% Min: Pyrite>>

<<Min: 116 - 140.1 3% Min: Calcite>>

<<Alt: 115.9 - 140.1 Moderate (Alt) Silicification>>

<<Alt: 115.9 - 140.1 Weak (Alt) Muscovite>>

<<Vein: 117.35 - 117.6 99% Quartz>>

<<Vein: 126.03 - 126.45 100% Quartz>>

<<Vein: 128 - 128.5 98% Quartz>>

<<Struc: 124.7 - 124.7 dominant foliation>>

139.58 140.10 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

<<Alt: 139.58 - 140.1 Trace (Alt) Chlorite>>

End of Hole @ 140.1

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

104.80	106.30	1.50	B00269651	2.5	0.006	0.03	0.02	0.2
106.30	107.80	1.50	B00269652	1.4	0.006	-0.01	0.03	0.12
107.80	109.30	1.50	B00269653	0.8	-0.005	-0.01	-0.01	0.02
109.30	110.00	0.70	B00269654	4.1	0.01	-0.01	0.07	0.25
110.00	111.00	1.00	B00269655	24.1	0.14	0.14	0.37	1.15

111.00	112.00	1.00	B00269656	12.8	0.041	0.04	0.19	0.45
112.00	113.00	1.00	B00269657	29.9	0.052	0.1	0.48	1.29
113.00	114.50	1.50	B00269658	0.4	0.006	0.01	-0.01	0.11

114.50	116.00	1.50	B00269659	-0.3	-0.005	-0.01	-0.01	0.02
--------	--------	------	-----------	------	--------	-------	-------	------

116.00	117.50	1.50	B00269661	0.5	-0.005	-0.01	-0.01	0.02
--------	--------	------	-----------	-----	--------	-------	-------	------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-302

Prospect:	GP4F	Hole Type:	DD	Survey Type:	APS	Logged By:	Murray Jones	
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Murray Jones	Date Logging Start:	18-Oct-15	
UTM Easting	419500	Core Size:	NQ3	Azimuth:	180	Date Logging Complete:	20-Oct-15	
UTM Northing:	6813355	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech	
UTM Elev. (m):	1340	Casing Depth (m):	9	Length (m):	210	Drill Rig:	Hydracore	
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	17-Oct-15	
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	19-Oct-15	
Local Elev. (m):						Purpose:	Resource Definition	
Comments:							Parent Hole:	

Collar location not surveyed by Challenger, spotted after survey completed.

The hole started near the top of the upper felsic sequence, cutting rhyolite lapilli tuff and coherent rhyolite with minor sediment and mafic dykes. The mineralized sequence starts at 135.68 with a quartz eye rhyolite followed by rhyolite tuff from 143.53 to 155.15. The GP4F mineralized zone occurs from 145.61 to 155.15 associated with strong chlorite-biotite-garnet-cordierite alteration. Several small sections of semi-massive pyrrhotite-pyrite-sphalerite are interspersed with stringer and blebby sphalerite-galena-chalcopyrite mineralization. The hole continued into the footwall, with another quartz porphyry lapilli tuff unit and rhyolite tuff. A weaker mineralized zone was encountered from 189 to 195 m, although core recovery in this interval was quite bad. This zone contains only a few percent of sphalerite and chalcopyrite with narrow bands of pyrrhotite and pyrite in biotite-garnet altered tuff.

Overall, a good intersection of GP4F style mineralization was intersected but the lower mineralized zone was much weaker here than in hole K98-196, down dip.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	180	0	180	APS	Murray Jones	17-Oct-15		<input checked="" type="checkbox"/>	
30	-56.9	158.6	22.4	181	ReflexEVS	Geotech	18-Oct-15	5765	<input checked="" type="checkbox"/>	
60	-56	161.7	22.4	184.1	ReflexEVS	Geotech	18-Oct-15	5756	<input checked="" type="checkbox"/>	
90	-55.6	159.1	22.4	181.5	ReflexEVS	Geotech	19-Oct-15	5752	<input checked="" type="checkbox"/>	
120	-54.8	163.8	22.4	186.2	ReflexEVS	Geotech	19-Oct-15	5770	<input checked="" type="checkbox"/>	
150	-54.5	164.1	22.4	186.5	ReflexEVS	Geotech	19-Oct-15	5694	<input checked="" type="checkbox"/>	
180	-55	170.8	22.4	193.2	ReflexEVS	Geotech	19-Oct-15	5748	<input type="checkbox"/>	
210	-53.9	168.3	22.4	190.7	ReflexEVS	Geotech	19-Oct-15	5753	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	8.70	OVBN Overburden									
0 - 8.7: Casing depth? Surficial clasts in box between 6 and 9 m. Rubble to 12 m.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-302

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
8.70	51.36	RHYvx Quartz and/or feldspar crystal tuff									
<p>8.7 - 51.36: massive looking rock, variably weathered so colouring inconsistent, dark grey and lt green patches, faulting?, generally quite fine grained, small QE and possibly FP phenos visible (up to 2 mm), MU in groundmass locally, minor QZ-TO veining at low angle to core, minor TO pblasts below 27m.</p> <p><<Min: 9.35 - 15.7 5% Min: Calcite>> and in veinlets</p> <p><<Min: 21.25 - 27.25 5% Min: Calcite>> fractures, diss'ns</p> <p><<Alt: 9.35 - 15.7 Moderate (Alt) Muscovite>> related to faulting and CA veinlets</p> <p><<Struc: 9.35 - 15.7 Moderate (Alt) Fault>> broken and lost core, includes vein/bx zone sub parallel to Core Axis</p> <p><<Struc: 23.85 - 23.86 Moderate (Alt) Foliation>> in dyke</p> <p><<Struc: 29.5 - 31.5 Moderate (Alt) Fault>> broken, oxidized core, minor gouge</p> <p><<Struc: 32.25 - 32.26 Weak (Alt) Foliation>> relatively massive RHYvx</p> <p><<Struc: 50.95 - 51 Moderate (Alt) Fault>> small gouge zone, small shears in rocks around for 2 metres</p>											
51.36	69.10	RHYc Rhyolite coherant volcanics									
<p>51.36 - 69.1: massive to banded rock, lighter coloured domains, siliceous? Aphanitic to fine grained groundmass, not really much flow banding or curdy texture, just homogeneous, massive appearance. Faulted locally.</p> <p><<Min: 51.36 - 73.15 0.5% Min: Pyrite>> and fine diss'ns</p> <p><<Min: 53.5 - 71.75 1% Min: Calcite>> with CL alt'n</p> <p><<Min: 63 - 71.75 0.5% Min: Pyrrhotite>> and minor fractures</p> <p><<Vein: 57.47 - 57.85 95% Quartz 55 deg. >> QZ vn, CI and PY in fractures, TO?</p> <p><<Struc: 58 - 64 Strong (Alt) Fault>> gouge, broken and lost core, dykes locally</p>											
69.10	73.15	RHYva Coarse grained to ash tuff									
<p>69.1 - 73.15: weakly banded near top -SED?, fine grained homogeneous, takes up alteration -MS?, yellowish green colour.</p> <p><<Min: 71.75 - 73.15 5% Min: Calcite>> to prevasive diss'ns</p> <p><<Alt: 71.75 - 73.15 Moderate (Alt) Muscovite>> marginal to unit below?, looks like MS or possibly EP alt'n</p>											
73.15	80.84	RHYc Rhyolite coherant volcanics									
<p>73.15 - 80.84: Dyke? mottled, patchy lt green to cream colour, variable alteration, seems to be clay and chlorite, although rock is still generally quite hard, QE present, PY diss'd as blebs with reaction rims, dark CL? Specks, weathered out, becomes banded towards bottom, massive cream coloured lenses with CL partings</p> <p><<Min: 73.15 - 79.06 1% Min: Pyrite>> diss'd, with white reaction rims</p> <p><<Min: 79.06 - 82.94 10% Min: Calcite>> fractures, lenses</p> <p><<Min: 79.06 - 87.7 0.01% Min: Pyrite>> diss'd</p> <p><<Alt: 73.15 - 79.06 Strong (Alt) Muscovite>> actually MS and/or CY, late alteration - is this an altered dyke?</p>											

Project:

KZK

Hole Number:

K15-302

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 73.15 - 79.06 Moderate (Alt) Chlorite>> occurs in groundmass in patches, also on fractures											
<<Alt: 79.06 - 82.94 Moderate (Alt) Muscovite>> CY?											
80.84	87.70	RHYvl Lapilli tuff	grey-green	FG							
80.84 - 87.7: quartz eyes appear in lower half, upper half still altered (CY, CL), grey stretch in middle with QE's and lapilli texture, then RHYc (or conc'd lapilli) over last metre?,											
<<Min: 82.94 - 87.7 5% Min: Calcite>> lenses, patches, fractures											
<<Alt: 82.94 - 85.8 Weak (Alt) Chlorite>> minor bands in groundmass, envelopes to fractures											
<<Alt: 85.8 - 87.7 Moderate (Alt) Chlorite>> alters micaceous partings in RHYc rock											
87.70	90.72	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	brown	FG							
87.7 - 90.72: becoming green-brown banded below 89 m.											
<<Min: 87.7 - 90.72 15% Min: Calcite>> pervasive											
90.72	96.22	RHYc Rhyolite coherant volcanics	grey-brown	FG							
90.72 - 96.22: silica lenses and bands in schistose groundmass, lapilli tx locally?, QE possible, Silica envelopes to fractures/veinlets preserved -is this patchy silicification of schist?, MU after BI in groundmass, QE vague, faintly blue to grey											
<<Min: 90.72 - 94.4 3% Min: Calcite>> in MU partings											
<<Min: 90.72 - 105 1% Min: Pyrrhotite>> scattered in volcanic rock, not MAFi											
<<Min: 94.4 - 95.8 10% Min: Calcite>> pervasive											
<<Min: 95.8 - 100.6 3% Min: Calcite>> lenses,											
<<Min: 95.8 - 102 1% Min: Pyrite>> scattered											
<<Alt: 95.8 - 102 Moderate (Alt) Muscovite>> greasy feel on fol'n faces											
96.22	135.68	RHYvl Lapilli tuff	grey-brown	FG							
96.22 - 135.68: schistose, ash layers common, lapilli small,not strongly banded, possible FP phenos locally, micaceous groundmass, MU after BI, patchy colours, bleached around faults, locally siliceous lenses,											
<<Min: 102 - 123 0.5% Min: Pyrite>>											
<<Min: 102 - 123 3% Min: Pyrrhotite>> wisps and bands in shist											
<<Min: 102 - 135.68 0.01% Min: Galena>> in QV's											
<<Min: 102 - 137.94 0.01% Min: Sphalerite>> in QV's											
<<Min: 109 - 116.1 3% Min: Calcite>> up to 10% in MAFi, in fracs, diss'ns in RHY											
<<Min: 123 - 128.14 3% Min: Pyrite>> and bands											
<<Min: 123 - 128.14 0.5% Min: Pyrrhotite>> in bands, small lenses											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-302

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %		
<<Min: 128.14 - 135.68 5% Min: Pyrite>> diss'd in bands, lenses and as fine diss'ns													
<<Min: 128.14 - 135.68 1% Min: Pyrrhotite>> scattered													
<<Alt: 116.1 - 119.23 Strong (Alt) Muscovite>> greasy, pervasive alt'n of schist, not silvery but with PY throughout													
<<Alt: 128.14 - 135.68 Moderate (Alt) Muscovite>> alt'n of tuff, pervasive in groundmass													
<<Struc: 98.5 - 99.3 Strong (Alt) Fault>> gouge, lost core,													
<<Struc: 107.65 - 109 Strong (Alt) Fault>> completely gouge filled, mostly recovered, contact measurement													
135.68	143.53	RHYvl Lapilli tuff	grey-green	MG	136.40	137.90	1.50	B00269378	9.2	0.082	0.47	0.03	0.22
135.68 - 143.53: coarser lapilli tuff, to coherent RHY?, bluish QE prominent, BI in and out, MAFi locally, some split out in Secondary lithology													
<<Min: 135.68 - 139.4 0.01% Min: Pyrrhotite>> with CP			137.90	139.40	1.50	B00269379	11	0.043	0.21	0.36	2.04		
<<Min: 135.68 - 139.4 0.5% Min: Chalcopyrite>> blebs in fractures in host and in veins			139.40	140.74	1.34	B00269381	0.6	-0.005	-0.01	0.07	0.08		
<<Min: 135.68 - 139.4 3% Min: Calcite>> patchy and in fractures			140.74	141.45	0.71	B00269382	-0.3	-0.005	-0.01	-0.01	0.02		
<<Min: 135.68 - 143.53 0.5% Min: Pyrite>> minor in fracs			141.45	142.18	0.73	B00269383	-0.3	-0.005	-0.01	-0.01	0.03		
<<Min: 139.4 - 145.61 0.01% Min: Sphalerite>> with PY, GL?			142.18	143.53	1.35	B00269384	0.8	0.01	0.02	-0.01	0.35		
<<Min: 139.4 - 145.61 1% Min: Pyrite>> and diss'd bands													
<<Min: 139.4 - 145.61 5% Min: Calcite>> patches, fractures, lenses, diss'ns													
<<Alt: 139.4 - 142.16 Weak (Alt) Chlorite>> with sx commonly													
<<Alt: 142.16 - 143.53 Strong (Alt) Chlorite>> in groundmass, massive in fault													
143.53	155.15	RHYva Coarse grained to ash tuff	green-brown	MCG	143.53	144.40	0.87	B00269385	0.5	-0.005	-0.01	0.02	0.04
143.53 - 155.15: highly altered RHY, through mineralized section, small intervals of intensely MU altered schist between intense CL-BI-CI-GA altered mineralized sections, TO common in groundmass of rock													
<<Min: 145.61 - 147.22 3% Min: Galena>> scattered with SP			144.40	145.61	1.21	B00269386	2.6	-0.005	0.04	0.14	0.64		
<<Min: 145.61 - 149.1 3% Min: Chalcopyrite>> stringers, fractures and blebs in CL alt'd rock			145.61	146.61	1.00	B00269387	32.4	0.095	0.21	3.61	6.76		
<<Min: 145.61 - 149.1 5% Min: Pyrrhotite>> small masses, blebs in lenses of sx			146.61	147.22	0.61	B00269388	26.4	0.11	0.16	2.81	2.81		
<<Min: 145.61 - 149.1 5% Min: Pyrite>> blebs, wisps, small masses, in fractures			147.22	148.28	1.06	B00269389	11.2	0.064	0.06	1.42	2.17		
<<Min: 145.61 - 150.59 10% Min: Sphalerite>> semi-mx bands, wisps, stringers, patches of conc'd blebs, some stretches of weak mineralization included			148.28	149.10	0.82	B00269392	6.6	0.031	-0.01	0.72	0.68		
<<Min: 145.61 - 153.71 3% Min: Magnetite>> scattered in sx sections particularly			149.10	149.86	0.76	B00269393	-0.3	-0.005	0.01	-0.01	0.06		
<<Min: 149.1 - 150.1 3% Min: Pyrite>>			149.86	150.59	0.73	B00269394	47.8	0.275	0.18	3.36	4.37		
<<Min: 150.4 - 150.49 10% Min: Pyrrhotite>> with SP			150.59	151.40	0.81	B00269395	-0.3	-0.005	-0.01	-0.01	0.04		
<<Min: 150.4 - 150.59 5% Min: Pyrite>>			151.40	151.92	0.52	B00269396	2.5	0.012	0.03	0.07	0.16		
<<Min: 150.59 - 151.94 1% Min: Pyrite>>			151.92	152.87	0.95	B00269397	142	1.05	0.19	3.81	6.97		
<<Min: 151.94 - 153.71 1% Min: Galena>> stringers, bands, blebs			152.87	153.71	0.84	B00269398	87.6	0.959	0.16	2.46	2.31		

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-302
From (m) To (m) Rocktype & Description

<<Min: 151.94 - 153.71 5% Min: Pyrrhotite>> small masses
 <<Min: 151.94 - 153.71 5% Min: Pyrite>> scattered, wisps
 <<Min: 151.94 - 153.71 15% Min: Sphalerite>> scattered blebs, stringers to massive bands
 <<Min: 151.94 - 153.71 3% Min: Chalcopryite>> in groundmass, fractures too
 <<Min: 153.71 - 154.82 3% Min: Pyrrhotite>> in bands near top and botom
 <<Min: 153.71 - 154.82 0.5% Min: Pyrite>>
 <<Min: 154.25 - 188 0.5% Min: Pyrite>>
 <<Min: 154.82 - 155.25 5% Min: Sphalerite>> in groundmass?, blebs
 <<Min: 154.82 - 155.25 3% Min: Chalcopryite>>
 <<Min: 154.82 - 155.25 30% Min: Pyrrhotite>>
 <<Min: 154.82 - 155.25 15% Min: Pyrite>> diss'd blebs to masses
 <<Alt: 143.53 - 145.61 Weak (Alt) Chlorite>> bands
 <<Alt: 143.9 - 145.61 Intense (Alt) Muscovite>> intense alt'n of tuff, beige colour
 <<Alt: 145.61 - 150.59 Strong (Alt) Biotite>> coarse grained
 <<Alt: 145.61 - 150.59 Strong (Alt) Cordierite>> conc'd bands of pblasts
 <<Alt: 145.61 - 150.59 Intense (Alt) Chlorite>> massive to bands, patches
 <<Alt: 145.61 - 150.59 Strong (Alt) Garnet>> scattered pblasts, brown GA
 <<Alt: 150.4 - 151.92 Strong (Alt) Muscovite>> sed layers?
 <<Alt: 150.59 - 151.92 Moderate (Alt) Chlorite>>
 <<Alt: 150.59 - 151.92 Moderate (Alt) Biotite>>
 <<Alt: 151.92 - 153.71 Strong (Alt) Cordierite>> scattered
 <<Alt: 151.92 - 153.71 Strong (Alt) Chlorite>>
 <<Alt: 151.92 - 153.71 Strong (Alt) Garnet>> fairly conc'd
 <<Alt: 153.71 - 154.29 Moderate (Alt) Chlorite>> schistose layers
 <<Alt: 153.71 - 154.29 Strong (Alt) Muscovite>>
 <<Alt: 154.29 - 155.25 Strong (Alt) Chlorite>>
 <<Alt: 154.29 - 155.25 Strong (Alt) Biotite>>

155.15 182.50 RHYvl Lapilli tuff

grey-brown
MG

155.15 - 182.5: lapilli and massive sections, generally schistose supporting volcanoclastic origin

<<Min: 155.15 - 159.17 5% Min: Calcite>> in felsic unit
 <<Min: 155.25 - 172 0.01% Min: Sphalerite>> rare stringers
 <<Min: 155.25 - 172 0.5% Min: Pyrite>> also as stringers
 <<Min: 172 - 179 1% Min: Sphalerite>> stringers and scattered wisps

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
153.71	154.51	0.80	B00269399	0.9	0.016	0.02	0.01	0.03
154.51	155.15	0.64	B00269401	17	1.35	0.12	5.08	7.02

155.15	156.00	0.85	B00269402	26.8	0.024	-0.01	0.1	0.33
--------	--------	------	-----------	------	-------	-------	-----	------

156.00	157.50	1.50	B00269403	5.4	0.032	0.01	0.24	0.37
157.50	159.00	1.50	B00269404	0.4	-0.005	-0.01	0.01	0.02
173.90	174.90	1.00	B00269405	4.7	-0.005	-0.01	0.11	0.39

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-302

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 172 - 179 0.5% Min: Pyrite>> <<Min: 172 - 179 0.01% Min: Chalcopyrite>> stringers <<Min: 179 - 187.5 1% Min: Pyrite>> in bands <<Alt: 155.25 - 159.17 Moderate (Alt) Muscovite>> <<Alt: 155.25 - 159.17 Moderate (Alt) Chlorite>> small stringer alt'n zones cut porphyry <<Alt: 155.25 - 159.17 Moderate (Alt) Biotite>> around veins, in groundmass, different than host rock BI <<Alt: 172 - 179 Moderate (Alt) Chlorite>> clots, and bands, vein envelopes <<Alt: 179 - 189 Weak (Alt) Garnet>> scattered, metamorphic only, or related to alteration? <<Struc: 161.9 - 164.2 Moderate (Alt) Fault>> in gouge zone <<Struc: 165.3 - 172.5 Moderate (Alt) Fault>> numerous gouge and broken zones,lost core											
182.50	210.00	RHYva Coarse grained to ash tuff grey-green FG	189.00	192.00	3.00	B00269406	22.4	0.087	0.02	0.65	1.32
182.5 - 210: QE persist into ash tuff,minor lapilli locally, Alt'n locally,primarily MU, diss'd PY											
<<Min: 187.5 - 194 5% Min: Pyrite>> blebs, bands, fractures <<Min: 188.98 - 194 3% Min: Sphalerite>> in sx bands, small masses, with PY locally <<Min: 188.98 - 194 0.5% Min: Galena>> scattered <<Min: 192 - 201 1% Min: Pyrrhotite>> in small lenses, fractures, independent of PY-SP? <<Min: 194 - 205.68 5% Min: Pyrite>> frac, diss'ns in bands, along fol'n <<Min: 205.68 - 207.2 0.5% Min: Sphalerite>> scattered, or BI? <<Min: 205.68 - 210 1% Min: Pyrite>> some diss'ns along fol'n <<Alt: 187.5 - 205.68 Strong (Alt) Muscovite>> intense, MU bands locally <<Alt: 189 - 194 Moderate (Alt) Chlorite>> with MU <<Alt: 194 - 195 Strong (Alt) Chlorite>> upper contact is approximate, lost core <<Alt: 194 - 203.75 Weak (Alt) Garnet>> very local <<Alt: 195 - 203.75 Moderate (Alt) Chlorite>> <<Alt: 207.87 - 208.98 Strong (Alt) Muscovite>> overprint?, around fault <<Struc: 195 - 197.9 Strong (Alt) Fault>> gouge, broken core, lost core, measured at margin of gouge zone on core											
End of Hole @ 210											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-303

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Roger Hulstein
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Sean Suttie	Date Logging Start:	20-Oct-15
UTM Easting	415075	Core Size:	HQ3	Azimuth:	89.83	Date Logging Complete:	25-Oct-15
UTM Northing:	6815150	Casing Pulled?:	Yes	Dip:	-75	Drill Company:	Geotech
UTM Elev. (m):	1386.05	Casing Depth (m):	4	Length (m):	247.8	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	19-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	23-Oct-15
Local Elev. (m):						Purpose:	Exploration
Comments:						Parent Hole:	

The purpose of DDH K15-303 was to test for the up-dip extension of the recently discovered Krakatoa sulfide lens hosted in Mafi. DDH K15-303 was succeeded in cutting the lens from 198.0-219.25m (21.75m core width) which consists of mostly OB with several sphalerite rich (20%+) sections and several smaller more discrete Cu rich (OI, OG) sections. In addition, almost continuous massive sulphide lenses were intersected from 134.0 -142.7m (8.7m core width) and two thin MSX horizons between 154.9-158.1m of similar type mineralization. Two smaller horizons of OJ were encountered at 148.7 - 149.8m and 232.30-234.05m, both located between MAFi and RHY contact zones. Nearby DDH K15-304 intersected a similar mineralized stratigraphic sequence. Nearby DDH K15-305 also intersected a similar stratigraphic - mineralized package down to the Krakatoa lens, below it, where the lower OJ horizon would lie (in K15-303), a thicker massive sulphide lens (of OI and OB?) was intersected. This might indicate that mineralization thickens to the SE (at least for the lower lens). Of note, in K15-303, compared to the mineralization and wallrock at the ABM deposit, mineralization and wallrock at the Krakatoa lens is calcite rich. Alteration is mostly subtle, usual muscovite in hanging wall of upper lens and below the lowermost OJ horizon. Prominent chlorite alteration is restricted to OJ horizons and MAFi unit above lowermost OJ horizon. DDH K15-303 succeeded in extending the sulphide lens(s) updip.

A summary of the intersected mineralized stratigraphic package follows.

0-4.5m OVBN

4.5-132.4m RHY volcanic package, minor mafic(?) dykes

132.4-134.0m No Core except for 7cm of OA

134.0-142.7m MSX and minor RHY

142.7-148.7m MAFi

148.7-149.8m OJ

149.8-154.9m RHY

154.9-158.1m MSX and RHY

158.1-198.0m MAFi

198.0-219.25m MSX

219.25-232.3m MAFi

232.3-234.05m OJ

234.05-247.8m RHY

EOH

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-75	89.83	0	89.83	APS	Sean Suttie	20-Oct-15		<input checked="" type="checkbox"/>	
17	-75.9	71.5	22.5	94	ReflexEVS	Geotech	20-Oct-15	5711	<input checked="" type="checkbox"/>	suspect Az reading
20	-76.1	72.7	22.5	95.2	ReflexEVS	Geotech	23-Oct-15	5757	<input checked="" type="checkbox"/>	Retest of previous test at 17m. Driller was aware of possible problem with first test when retest was done.
44	-76.6	76.4	22.5	98.9	ReflexEVS	Geotech	23-Oct-15	5745	<input checked="" type="checkbox"/>	



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-303

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
68	-76.4	81.9	22.5	104.4	ReflexEVS	Geotech	23-Oct-15	5749	<input checked="" type="checkbox"/>	
92	-75.9	80.8	22.5	103.3	ReflexEVS	Geotech	23-Oct-15	5721	<input checked="" type="checkbox"/>	
119	-77	89.9	22.5	112.4	ReflexEVS	Geotech	21-Oct-15	57	<input checked="" type="checkbox"/>	
143	-77.1	90.6	22.5	113.1	ReflexEVS	Geotech	21-Oct-15	5834	<input checked="" type="checkbox"/>	
167	-78.1	92.8	22.5	115.3	ReflexEVS	Geotech	22-Oct-15	5747	<input checked="" type="checkbox"/>	
191	-78.8	94.5	22.5	117	ReflexEVS	Geotech	22-Oct-15	5699	<input checked="" type="checkbox"/>	
217	-79.1	101.4	22.5	123.9	ReflexEVS	Geotech	23-Oct-15	2204	<input checked="" type="checkbox"/>	low mag field
242	-79.9	99.8	22.5	122.3	ReflexEVS	Geotech	23-Oct-15	5784	<input checked="" type="checkbox"/>	
247.8	-80.1	101.8	22.5	124.3	ReflexEVS	Geotech	23-Oct-15	5745	<input checked="" type="checkbox"/>	EOH

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	4.50	OVB									
4.50	8.50	RHYva									
<<Min: 4.5 - 8.5 1% Min: Pyrite>> <<Min: 4.5 - 8.5 5% Min: Calcite>> and disseminated											
8.50	13.00	RHYvi									
8.5 - 13: calcareous lapilli .5-1cm rounded but locally angular and fractured - alt feldspar phenocrysts? Minor dis sphalerite at lower contact where calcite lapilli - phenocrysts are replaced by chlorite. Rare (1) blue qtz phenocryst. <<Min: 8.5 - 13 2% Min: Pyrite>> <<Min: 8.5 - 13 10% Min: Calcite>> <<Min: 12.9 - 13 0.1% Min: Sphalerite>> patchy disseminations <<Alt: 12.7 - 13 Weak (Alt) Chlorite>> chlorite altered 'lapilli' (or clasts or feldspar crystals) - elsewhere in section lapilli are calcareous <<Struc: 8.5 - 11 Strong (Alt) Fault>> approx 80% missing core (might be driller error?), broken core. <10cm sandy gouge or ground core <<Struc: 11 - 13 Moderate (Alt) dominant foliation>>											
13.00	23.40	RHYva									
13 - 23.4: sections up to 1 m long with abundant (<15%) calcite altered lapilli - feldspar crystal, similar to 8.5-13m. <<Min: 13 - 23.4 1% Min: Pyrite>> <<Min: 13 - 23.4 5% Min: Calcite>> <<Vein: 23.1 - 23.15 20% Quartz-Tourmaline>> tourmaline <<Struc: 18.6 - 19 Moderate (Alt) Fault>> broken core											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-303

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 21.8 - 21.9 Strong (Alt) Fault>> sandy micaceous 'gouge'											
<<Struc: 22.9 - 23.2 Moderate (Alt) Fault>> broken core											
23.40	24.10	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	grey-brown								
<<Min: 23.4 - 24.1 1% Min: Pyrrhotite>>											
<<Min: 23.4 - 24.2 20% Min: Calcite>> mafic dyke											
<<Struc: 23.4 - 23.5 Contact>> mafic dyke											
24.10	29.80	RHYva Coarse grained to ash tuff	grey-brown								
24.1 - 29.8: <10% calcite altered strained lapilli											
<<Min: 24.1 - 28 1% Min: Pyrite>> and wispy											
<<Min: 24.2 - 32.1 10% Min: Calcite>>											
<<Min: 28 - 29 3% Min: Pyrrhotite>> and dis											
<<Min: 29 - 32 1% Min: Pyrrhotite>>											
<<Struc: 24.1 - 29 Moderate (Alt) dominant foliation>>											
<<Struc: 27 - 27.2 Strong (Alt) Fault>> sandy, core rubble											
29.80	46.90	RHYvi Lapilli tuff	grey-brown								
29.8 - 46.9: variably silicified, locally unit is predominantly ash tuff. Rare blue qtz phenos.											
<<Min: 31.5 - 36 0.5% Min: Pyrite>>											
<<Min: 32 - 36 3% Min: Pyrrhotite>> dis in poorly developed stringerveinlets											
<<Min: 32 - 36 1% Min: Calcite>>											
<<Min: 36 - 46.9 3% Min: Pyrite>> also dis and minor qtz-py+/- po stringer veinlets											
<<Min: 36 - 46.9 5% Min: Calcite>>											
<<Min: 43 - 44.2 0.5% Min: Pyrrhotite>>											
<<Alt: 32.2 - 35.1 Weak (Alt) Chlorite>>											
<<Alt: 32.27 - 38 Strong (Alt) Silicification>>											
<<Alt: 38 - 46.9 Weak (Alt) Silicification>>											
<<Alt: 38 - 46.9 Weak (Alt) Muscovite>>											
<<Vein: 32.9 - 34.1 10% Quartz>> QTZ veining related to nearby RHYi											
<<Vein: 36.3 - 46.3 3% Quartz-Albite>> irregular qtz veins											
<<Struc: 34 - 35 Moderate (Alt) dominant foliation>>											
<<Struc: 37.9 - 38.4 Strong (Alt) Fault>> sandy gouge, core rubble											
<<Struc: 40.1 - 40.3 Strong (Alt) Fault>> sandy gouge, core rubble											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-303

From (m)		To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 40.9 - 41		Moderate (Alt) Fault>>	broken core, <1cm gouge									
<<Struc: 42 - 43		Moderate (Alt) dominant foliation>>										
<<Struc: 42.8 - 43		Moderate (Alt) Fault>>	broken core, <1cm gouge									
46.90	51.70	RHYi	Aphanitic Rhyolite (intrusion)	grey								
46.9 - 51.7: aphanitic rhyolite, minor sections (10's cm) bleached - silicified possibe ash tuff. Minor late stage clays in fractures.												
<<Min: 46.9 - 52.7		0.5% Min: Pyrite>>										
<<Min: 46.9 - 52.7		3% Min: Calcite>>										
<<Vein: 46.9 - 56.4		12% Quartz>>	irregular qtz veining associated with RHYi									
51.70	53.30	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)	grey-brown								
51.7 - 53.3: Finely banded calcareous, pyritized dyke?												
<<Min: 52.7 - 53.3		2% Min: Pyrite>>										
<<Min: 52.7 - 53.3		3% Min: Pyrrhotite>>										
<<Min: 52.7 - 53.3		15% Min: Calcite>>										
<<Alt: 52.7 - 78.7		Weak (Alt) Muscovite>>										
<<Struc: 52 - 52.4		Moderate (Alt) Fault>>	broken core, sandy 'gouge'									
<<Struc: 52.7 - 53.3		Moderate (Alt) dominant foliation>>										
<<Struc: 52.7 - 53.3		Contact>>	mafic dyke									
53.30	55.90	RHYif	feldspar and quartz porphyry intrusions	grey								
53.3 - 55.9: flow banding over 30cm at lower contact.												
<<Min: 53.3 - 55.9		0.5% Min: Pyrite>>										
<<Min: 53.3 - 55.9		1% Min: Pyrrhotite>>										
<<Min: 53.3 - 55.9		3% Min: Calcite>>										
<<Struc: 55 - 55.8		Contact>>	RHYi flow banded contact									
55.90	58.30	RHY	undifferentiated rhyolite	grey								
55.9 - 58.3: weakly brecciated and disaggregated, jigsaw texture												
<<Min: 55.9 - 60		5% Min: Pyrite>>										
<<Min: 55.9 - 65		5% Min: Calcite>>	and as bands and fracture filling									

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-303

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
58.30	58.70	RHYi Aphanitic Rhyolite (intrusion) grey									
58.3 - 58.7: weakly brecciated, qtz-py fracture filling											
58.70	62.30	RHYvi Lapilli tuff grey									
58.7 - 62.3: locally weakly brecciated, disaggregation textures, siliceous sections and minor RHYi, local 'almost' slic bands,											
<<Min: 60 - 62.3 2% Min: Pyrite>>											
62.30	63.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion) grey-green									
62.3 - 63: Bleached, pyritized, sericite altered, Likely a MAFi											
<<Min: 62.3 - 63 7% Min: Pyrite>>											
<<Struc: 62.3 - 63 Moderate (Alt) dominant foliation>> mafic dyke											
<<Struc: 62.9 - 63 Contact>> mafic dyke											
63.00	65.00	RHYvi Lapilli tuff grey									
63 - 65: white calicte lapilli, rounded to subrounded.											
<<Min: 63 - 65 3% Min: Pyrite>>											
<<Min: 63 - 65 0.5% Min: Pyrrhotite>>											
<<Alt: 63.3 - 65 Weak (Alt) Chlorite>> chlorite rimming clasts											
<<Struc: 64 - 65 Moderate (Alt) dominant foliation>>											
65.00	67.50	RHYi Aphanitic Rhyolite (intrusion) grey-green									
65 - 67.5: 50% qtz vein, 20% RHY											
<<Min: 65 - 66.3 3% Min: Pyrrhotite>>											
<<Min: 65 - 67.5 1% Min: Calcite>>											
<<Min: 66.3 - 72.3 3% Min: Pyrite>> in qtz - cal bands, dis and racture filling											
<<Vein: 65.5 - 67 70% Quartz>>											
67.50	72.30	RHYcw Curdy textured-flow banded (flows, subvolcanics) grey-green									
67.5 - 72.3: Flow banded, strong sericite alteration, unit is soft. Locally RHYvi and RHYa.											
<<Min: 67.5 - 72.3 5% Min: Calcite>> and calcite in this bands - wisps											
<<Struc: 70 - 72 Moderate (Alt) dominant foliation>>											
<<Struc: 72.1 - 72.3 Strong (Alt) Fault>> crushed schist and gouge											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-303

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
72.30	78.60	RHYvl Lapilli tuff									
72.3 - 78.6: minor flow banded rhyolite near upper contact, tuff ash sections,											
<<Min: 72.3 - 75.4 3% Min: Pyrite>> in qtz - cal bands, dis and racture filling											
<<Min: 72.3 - 78.6 8% Min: Calcite>> and calcite in this bands - wisps											
<<Min: 75.4 - 78.6 1% Min: Pyrite>>											
<<Min: 75.4 - 82 1% Min: Pyrrhotite>>											
<<Vein: 73.5 - 75 8% Quartz>>											
<<Struc: 75.1 - 75.4 Moderate (Alt) Fault>> broken core, minor gouge											
78.60	82.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
78.6 - 82: 50% MAFi and 50% RHYvl. Both Bio-chl altered											
<<Min: 78.6 - 82 0.1% Min: Pyrite>>											
<<Min: 78.6 - 82 15% Min: Calcite>> and calcite in this bands - wisps											
<<Struc: 79 - 79.2 Weak (Alt) Fault>> broken core											
82.00	92.90	RHYvl Lapilli tuff									
82 - 92.9: Mottled bio-chl texture to 89.5m. Lapilli and ash tuff.											
<<Min: 82 - 87.5 0.5% Min: Pyrite>>											
<<Min: 82 - 88 1% Min: Pyrrhotite>> po within islands of remnant chl-bio alteration											
<<Min: 82 - 92.9 5% Min: Calcite>>											
<<Min: 87.5 - 95 0.5% Min: Pyrite>>											
<<Min: 88 - 95 0.1% Min: Pyrrhotite>>											
<<Struc: 82 - 82.1 Weak (Alt) Fault>> broken core, trace gouge											
<<Struc: 83 - 86 Moderate (Alt) Fault>> approx 60% missing core, broken core, trace gouge											
<<Struc: 87.9 - 88.3 Moderate (Alt) Fault>> broken core, sandy 'gouge', parallel tp fol											
<<Struc: 90 - 91 Moderate (Alt) dominant foliation>>											
92.90	93.30	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
92.9 - 93.3: fine grained, very calcareous											
<<Min: 92.9 - 93.3 10% Min: Calcite>>											
<<Struc: 92.9 - 93.3 Contact>> mafic dyke											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-303
From (m) **To (m)** **Rocktype & Description**
93.30 132.40 RHYv Rhyolite volcanoclastic grey-green

93.3 - 132.4: Thick unit of with few discernable textures over any distance. Massive featureless RHY to RHYva and RHYvi

<<Min: 93.3 - 128 3% Min: Calcite>> and as fracture filling

<<Min: 95 - 96 1% Min: Pyrite>>

<<Min: 95 - 97 0.5% Min: Pyrrhotite>>

<<Min: 97 - 100.9 1% Min: Pyrrhotite>>

<<Min: 100.9 - 101.8 3% Min: Pyrite>>

<<Min: 101.8 - 103.6 1% Min: Pyrite>>

<<Min: 103.6 - 105 1% Min: Pyrrhotite>>

<<Min: 105 - 107.5 2% Min: Pyrite>>

<<Min: 105 - 117 1% Min: Pyrrhotite>>

<<Min: 107.5 - 117 0.5% Min: Pyrite>>

<<Min: 117 - 122 2% Min: Pyrrhotite>>

<<Min: 122 - 132.4 1% Min: Pyrite>>

<<Min: 122 - 132.4 0.1% Min: Pyrrhotite>>

<<Min: 128 - 130 2% Min: Calcite>>

<<Alt: 107 - 117 Weak (Alt) Muscovite>> Mu intensity increases near minor fault zones.

<<Alt: 117 - 120 Moderate (Alt) Muscovite>>

<<Alt: 120 - 131 Strong (Alt) Muscovite>>

<<Vein: 101.6 - 101.7 Carbonate-Sulphide 65 deg. >> Mostly calcite with 5% dis py and py on margins.

<<Vein: 106.3 - 106.5 55% Quartz>>

<<Vein: 107.8 - 110 10% Quartz>> number of irregular 5 - 10cm qtz veins and qtz flooding

<<Vein: 117.7 - 132.4 8% Quartz 55 deg. >> also veins parallel discordant to foliation in/adjacent to faults.

<<Struc: 94.9 - 95 Weak (Alt) Fault>> broken core, trace gouge

<<Struc: 97.8 - 98 Moderate (Alt) Fault>> broken core, missing core between meter blocks

<<Struc: 101 - 103.6 Strong (Alt) Fault>> broken core, gouge on foliation and within brecciated zones.

<<Struc: 104 - 106 Moderate (Alt) dominant foliation>>

<<Struc: 106.6 - 107.9 Moderate (Alt) Fault>> broken core, several narrow <1cm gouge zones

<<Struc: 108.5 - 109.5 Moderate (Alt) Fault>> several <1cm gouge fracture zones 30-65 deg CA

<<Struc: 110 - 116 Moderate (Alt) dominant foliation>>

<<Struc: 112.9 - 113.4 Moderate (Alt) Fault>> fracture zone

<<Struc: 115.4 - 115.5 Moderate (Alt) Fault>>

<<Struc: 121.7 - 124 Strong (Alt) Fault>> 45-75 deg to CA, approx 30% core rec'y

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
125.00	128.00	3.00	B00269662	0.5	0.005	-0.01	-0.01	-0.01

128.00	130.50	2.50	B00269663	1.3	0.033	0.02	-0.01	0.03
130.50	131.00	0.50	B00269664	0.4	0.009	-0.01	-0.01	-0.01
131.00	132.40	1.40	B00269665	0.4	-0.005	-0.01	-0.01	-0.01

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-303

From (m)	To (m)	Rocktype & Description										From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 125 - 129 Moderate (Alt) dominant foliation>>																				
<<Struc: 125 - 132.4 Strong (Alt) Fault>> poor core rec'y, broken and crushed core, 'fault gravel', minor gouge.																				
132.40	133.10	No Core	No Core																	
133.10	133.20	OA	Magnetite bearing sulphides	MG																
133.1 - 133.2: 7cm recovered core in 1.6m core drilled interval. Too small to sample.																				
133.20	134.00	No Core	No Core																	
134.00	134.80	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG	134.00	134.80	0.80	B00269666	197	2.16	0.64	2.05	7.83							
<<Min: 134 - 134.8 8% Min: Sphalerite>>																				
<<Min: 134 - 134.8 65% Min: Pyrite>>																				
<<Min: 134 - 134.8 0.5% Min: Magnetite>> in one 2cm band at 134.7m																				
<<Min: 134 - 134.8 2% Min: Chalcopyrite>>																				
<<Min: 134 - 134.8 5% Min: Calcite>>																				
134.80	135.40	RHY	undifferentiated rhyolite	green	134.80	135.40	0.60	B00269667	11.2	0.086	0.1	0.02	0.03							
134.8 - 135.4: 70% qtz, 5% flt gouge, 25% chloritized schist with 5% cpy blebs - diss																				
<<Min: 134.8 - 135.4 0.1% Min: Pyrite>>																				
<<Min: 134.8 - 135.4 0.25% Min: Chalcopyrite>> In qtz vein stringers in grey-green schist																				
<<Min: 134.8 - 135.4 2% Min: Calcite>> In schist																				
<<Alt: 134.8 - 135.4 Moderate (Alt) Chlorite>> interval is mostly qtz vein but <10cm pieces of schist are strongly chloritized (talcose?)																				
<<Vein: 134.8 - 135.3 75% Quartz>> white qtz vein, 10 cm chlorite altered schist at lower contact.																				
<<Struc: 134.8 - 135 Moderate (Alt) Fault>> 5 cm crushed altered schist and gouge																				
135.40	136.30	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG	135.40	136.30	0.90	B00269668	136	1.3	0.15	1.54	5.74							
<<Min: 135.4 - 136.3 5% Min: Sphalerite>>																				
<<Min: 135.4 - 136.3 70% Min: Pyrite>>																				
<<Min: 135.4 - 136.3 5% Min: Calcite>>																				
136.30	137.00	RHY	undifferentiated rhyolite		136.30	137.00	0.70	B00269669	9.8	0.086	-0.01	0.15	0.06							
136.3 - 137: soft, strongly fractured, includes 10cm gouge zone,																				
<<Min: 136.3 - 137 2% Min: Pyrite>> In schist																				



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-303

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 136.3 - 137 5% Min: Calcite>> In schist <<Alt: 136.3 - 137 Moderate (Alt) Muscovite>> more sericite than real muscovite <<Vein: 136.3 - 137 25% Quartz-Carbonate-Sericite>> section of fractured sericite altered rhyolite backeted by gouge and crushed qtz-calcite veining. <<Struc: 136.3 - 137 Moderate (Alt) Fault>> fractured zone, brecciated veins, gouge zones.											
137.00	141.40	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	137.00	138.00	1.00	B00269672	90.1	0.886	0.15	1.76	6.97
137 - 141.4: calcite, sphalerite and possible barite content increase downhole. Chlorite after corderite at 138m <<Min: 137 - 141.4 20% Min: Sphalerite>> <<Min: 137 - 141.4 60% Min: Pyrite>> <<Min: 137 - 141.4 5% Min: Calcite>> and patchy <<Min: 139.3 - 140.6 3% Min: Magnetite>> <<Alt: 137.9 - 138 Moderate (Alt) Cordierite>> angular 0.5 cm crystals replaced by dolomite and dark grey chlorite and clays											
141.40	141.80	RHY undifferentiated rhyolite	141.40	141.80	0.40	B00269677	23	0.098	-0.01	0.28	0.54
141.4 - 141.8: NOT RHY! 40cm of banded qtz - calcite within massive sulphide unit <<Min: 141.4 - 141.8 5% Min: Pyrite>> <<Min: 141.4 - 141.8 60% Min: Calcite>> vein or bed <<Vein: 141.4 - 141.8 100% Quartz-Carbonate-Sericite 25 deg. >> folded Laminated and banded clacite-minor qtz-sericite bed or vein											
141.80	142.70	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	141.80	142.70	0.90	B00269678	167	0.931	0.02	2.66	9.98
<<Min: 141.8 - 142.7 25% Min: Sphalerite>> <<Min: 141.8 - 142.7 15% Min: Calcite>> and diss <<Struc: 141.8 - 141.8 Moderate (Alt) Contact>>											
142.70	148.70	MAFi Mafic Intrusions (primarily footwall mafic intrusion) green	142.70	144.00	1.30	B00269679	1.6	0.012	-0.01	0.02	0.06
<<Min: 142.7 - 148.7 20% Min: Calcite>> and diss <<Min: 143.1 - 143.4 0.5% Min: Pyrrhotite>> <<Min: 143.3 - 148.5 1% Min: Pyrrhotite>> <<Alt: 142.8 - 143.1 Moderate (Alt) Chlorite>> blends in with OP chl											
144.00	145.50		144.00	145.50	1.50	B00269681	0.9	0.011	0.01	-0.01	0.01
145.50	147.00		145.50	147.00	1.50	B00269682	0.7	-0.005	-0.01	-0.01	0.01
147.00	148.00		147.00	148.00	1.00	B00269683	1.4	0.005	-0.01	-0.01	0.01
148.00	148.70		148.00	148.70	0.70	B00269684	-0.3	-0.005	-0.01	-0.01	0.03



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-303

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %																																				
<div><<Alt: 143.1 - 148.5 Strong (Alt) Chlorite>> blends in with Chl adjacent to MSx</div> <div><<Alt: 148.5 - 148.7 Moderate (Alt) Chlorite>> blends in with OP chl</div> <div><<Struc: 142.7 - 142.8 Moderate (Alt) Contact>> laminated calcite at contact</div> <div><<Struc: 143 - 144 Moderate (Alt) dominant foliation>></div> <div><<Struc: 146 - 148.7 Moderate (Alt) dominant foliation>></div> <div><div>148.70149.80OJ</div><div>Heavilly disseminated sulphides in proximal altered rock</div><div>dark grey</div></div> <div><<Min: 148.7 - 149.8 10% Min: Sphalerite>></div> <div><<Min: 148.7 - 149.8 8% Min: Pyrite>> coarse grained</div> <div><<Min: 148.7 - 149.8 10% Min: Pyrrhotite>> coarse grained</div> <div><<Min: 148.7 - 149.8 3% Min: Magnetite>></div> <div><<Min: 148.7 - 149.8 15% Min: Chalcopyrite>> coarse grained</div> <div><<Min: 148.7 - 149.8 5% Min: Calcite>> coarse grained</div> <div><<Alt: 148.7 - 149.8 Strong (Alt) Chlorite>></div> <div><<Alt: 148.8 - 154.9 Moderate (Alt) Silicification>></div> <div><<Alt: 148.8 - 154.9 Moderate (Alt) Muscovite>></div> <div><<Struc: 148.7 - 149.8 Moderate (Alt) dominant foliation>></div> <div><div>149.80154.90RHY</div><div>undifferentiated rhyolite</div><div>grey</div></div> <div><<Min: 149.8 - 154.9 0.2% Min: Sphalerite>></div> <div><<Min: 149.8 - 154.9 1% Min: Pyrite>></div> <div><<Min: 149.8 - 154.9 5% Min: Calcite>></div> <div><<Struc: 154 - 154.9 Moderate (Alt) dominant foliation>></div> <div><div>154.90155.30OB</div><div>Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides</div><div></div></div> <div><<Min: 154.9 - 155.9 3% Min: Calcite>></div> <div><div>155.30155.60OA</div><div>Magnetite bearing sulphides</div><div></div></div> <div><div>155.60155.90OB</div><div>Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides</div><div></div></div> <div><div>155.90157.70RHY</div><div>undifferentiated rhyolite</div><div>grey</div></div> <div><<Min: 155.9 - 156.7 2% Min: Pyrite>></div>												<table><tr><td>148.70</td><td>149.80</td><td>1.10</td><td>B00269685</td><td>113</td><td>0.447</td><td>1.02</td><td>0.73</td><td>3.18</td></tr></table>	148.70	149.80	1.10	B00269685	113	0.447	1.02	0.73	3.18																										
148.70	149.80	1.10	B00269685	113	0.447	1.02	0.73	3.18																																							
<table><tr><td>149.80</td><td>151.00</td><td>1.20</td><td>B00269686</td><td>1</td><td>0.008</td><td>-0.01</td><td>-0.01</td><td>0.01</td></tr><tr><td>151.00</td><td>152.50</td><td>1.50</td><td>B00269687</td><td>1.4</td><td>0.018</td><td>-0.01</td><td>0.02</td><td>0.04</td></tr><tr><td>152.50</td><td>154.00</td><td>1.50</td><td>B00269688</td><td>1.1</td><td>0.018</td><td>-0.01</td><td>0.02</td><td>0.03</td></tr><tr><td>154.00</td><td>154.90</td><td>0.90</td><td>B00269689</td><td>1.2</td><td>0.016</td><td>-0.01</td><td>0.01</td><td>0.01</td></tr></table>												149.80	151.00	1.20	B00269686	1	0.008	-0.01	-0.01	0.01	151.00	152.50	1.50	B00269687	1.4	0.018	-0.01	0.02	0.04	152.50	154.00	1.50	B00269688	1.1	0.018	-0.01	0.02	0.03	154.00	154.90	0.90	B00269689	1.2	0.016	-0.01	0.01	0.01
149.80	151.00	1.20	B00269686	1	0.008	-0.01	-0.01	0.01																																							
151.00	152.50	1.50	B00269687	1.4	0.018	-0.01	0.02	0.04																																							
152.50	154.00	1.50	B00269688	1.1	0.018	-0.01	0.02	0.03																																							
154.00	154.90	0.90	B00269689	1.2	0.016	-0.01	0.01	0.01																																							
<table><tr><td>154.90</td><td>155.30</td><td>0.40</td><td>B00269692</td><td>125</td><td>1.87</td><td>0.51</td><td>1.5</td><td>10.6</td></tr></table>												154.90	155.30	0.40	B00269692	125	1.87	0.51	1.5	10.6																											
154.90	155.30	0.40	B00269692	125	1.87	0.51	1.5	10.6																																							
<table><tr><td>155.30</td><td>155.60</td><td>0.30</td><td>B00269693</td><td>233</td><td>1.31</td><td>0.21</td><td>3.1</td><td>8.55</td></tr><tr><td>155.60</td><td>155.90</td><td>0.30</td><td>B00269694</td><td>346</td><td>4.48</td><td>0.43</td><td>2.43</td><td>6.73</td></tr></table>												155.30	155.60	0.30	B00269693	233	1.31	0.21	3.1	8.55	155.60	155.90	0.30	B00269694	346	4.48	0.43	2.43	6.73																		
155.30	155.60	0.30	B00269693	233	1.31	0.21	3.1	8.55																																							
155.60	155.90	0.30	B00269694	346	4.48	0.43	2.43	6.73																																							
<table><tr><td>155.90</td><td>157.00</td><td>1.10</td><td>B00269695</td><td>26.7</td><td>0.286</td><td>0.02</td><td>0.14</td><td>0.58</td></tr><tr><td>157.00</td><td>157.70</td><td>0.70</td><td>B00269696</td><td>3.8</td><td>0.024</td><td>-0.01</td><td>0.02</td><td>0.02</td></tr></table>												155.90	157.00	1.10	B00269695	26.7	0.286	0.02	0.14	0.58	157.00	157.70	0.70	B00269696	3.8	0.024	-0.01	0.02	0.02																		
155.90	157.00	1.10	B00269695	26.7	0.286	0.02	0.14	0.58																																							
157.00	157.70	0.70	B00269696	3.8	0.024	-0.01	0.02	0.02																																							

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-303

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 155.9 - 157.7 1% Min: Calcite>>											
<<Min: 156.7 - 156.8 10% Min: Pyrite>> 3 cm py band											
<<Min: 156.8 - 157.7 1% Min: Pyrite>>											
<<Alt: 155.9 - 157.7 Moderate (Alt) Muscovite>>											
<<Struc: 155.9 - 155.9 Moderate (Alt) Contact>>											
157.70	158.10	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	157.70	158.10	0.40	B00269697	281	2.17	0.1	3.66	6.73
157.7 - 158.1: 10cm pyrrhotite rich section at lower contact.											
<<Min: 157.7 - 158.1 15% Min: Sphalerite>>											
<<Min: 157.7 - 158.1 40% Min: Pyrite>>											
<<Min: 157.7 - 161 10% Min: Calcite>>											
<<Struc: 157.7 - 157.9 Moderate (Alt) Contact>>											
<<Struc: 158 - 158.1 Moderate (Alt) Contact>>											
158.10	198.00	MAFi Mafic Intrusions (primarily green footwall mafic intrusion)	158.10	159.00	0.90	B00269698	7.9	0.023	0.02	0.15	0.21
158.1 - 198: 167.0-173.0: gabbroic textures. 196.1-198.0m bleached and sericite altered, fresh biotite, pseudo leucoxene last 0.5m.											
<<Min: 158.1 - 158.9 1% Min: Pyrrhotite>> & patchy			159.00	160.50	1.50	B00269699	0.9	0.007	-0.01	0.01	0.02
<<Min: 158.1 - 162.4 0.1% Min: Pyrite>>			160.50	162.00	1.50	B00269701	-0.3	-0.005	-0.01	-0.01	0.01
<<Min: 158.9 - 162.4 0.1% Min: Pyrrhotite>>			162.00	163.50	1.50	B00269702	-0.3	-0.005	-0.01	-0.01	0.01
<<Min: 161 - 163.7 5% Min: Calcite>>			193.50	195.00	1.50	B00269703	-0.3	0.005	-0.01	-0.01	-0.01
<<Min: 163.7 - 173.5 2% Min: Calcite>>			195.00	196.50	1.50	B00269704	-0.3	-0.005	0.01	-0.01	0.02
<<Min: 173.5 - 175.4 10% Min: Calcite>>			196.50	198.00	1.50	B00269705	2.6	0.045	0.06	-0.01	0.03
<<Min: 175.4 - 190.3 5% Min: Calcite>> and veinlets											
<<Min: 178.8 - 180 0.1% Min: Pyrite>>											
<<Min: 178.8 - 180 0.1% Min: Pyrrhotite>>											
<<Min: 178.8 - 180 0.1% Min: Chalcopryrite>>											
<<Min: 190.3 - 198 10% Min: Calcite>> and diss											
<<Min: 196.1 - 197.2 2% Min: Pyrrhotite>>											
<<Min: 197 - 198 1% Min: Pyrite>>											
<<Alt: 158.1 - 159 Moderate (Alt) Biotite>>											
<<Alt: 159 - 162 Moderate (Alt) Chlorite>> bands of chlorite = OR verses blebby patches = OP											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-303

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %	
<div><<Alt: 159 - 198 Moderate (Alt) Biotite>></div> <div><<Alt: 162 - 195.5 Moderate (Alt) Chlorite>></div> <div><<Alt: 178 - 180.3 Weak (Alt) Chlorite>> original ?</div> <div><<Alt: 191.5 - 198 Moderate (Alt) Biotite>></div> <div><<Vein: 173.6 - 175.4 20% Quarzt-Chlorite-Carbonate 20 deg. >></div> <div><<Struc: 158.1 - 160 Moderate (Alt) dominant foliation>></div> <div><<Struc: 160 - 162 Moderate (Alt) dominant foliation>></div> <div><<Struc: 162 - 164 Moderate (Alt) dominant foliation>></div> <div><<Struc: 172 - 173.5 Moderate (Alt) dominant foliation>></div> <div><<Struc: 179.5 - 182 Moderate (Alt) dominant foliation>></div> <div><<Struc: 186 - 188 Moderate (Alt) dominant foliation>></div> <div><<Struc: 192.5 - 193.5 Moderate (Alt) dominant foliation>></div> <div><<Struc: 195.4 - 196.3 Weak (Alt) Fault>> Minor (<1cm) gouge on fracture faces approx parallel to dominant foliation</div> <div><<Struc: 197.6 - 197.8 Weak (Alt) Fault>> crushed, minor clay - chlorite gouge</div>												
198.00	199.60	OG Chalcopyrite rich sulphides	FMG	198.00	199.00	1.00	B00269706	294	4.29	2.41	4.3	8.03
198 - 199.6: approx 20% cpy. Minor fine grained pyrrhotite - magnetite												
<div><<Min: 198 - 199.6 15% Min: Sphalerite>></div> <div><<Min: 198 - 199.6 25% Min: Pyrite>> intergrown with CP</div> <div><<Min: 198 - 199.6 12% Min: Chalcopyrite>> Banded and diss</div> <div><<Min: 198 - 199.6 10% Min: Calcite>> and diss</div> <div><<Min: 199.4 - 199.6 3% Min: Magnetite>></div> <div><<Struc: 198 - 198 Moderate (Alt) Contact>> on fracture face</div> <div><<Struc: 198.5 - 199.4 Moderate (Alt) dominant foliation>> sulfide banding</div>												
199.60	200.00	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG	199.60	200.00	0.40	B00269708	285	1.25	0.6	5.29	11.6
199.6 - 200: classic OB, 5%+ galena, minor (weak) fine grained Pyrrhotite												
<div><<Min: 199.6 - 201 12% Min: Chalcopyrite>></div> <div><<Min: 199.6 - 203.2 5% Min: Magnetite>></div> <div><<Min: 199.6 - 205 10% Min: Sphalerite>></div> <div><<Min: 199.6 - 205 20% Min: Pyrite>> Content varies 15-40%, abundant rhy crackle brecciated clasts</div> <div><<Min: 199.6 - 205 12% Min: Calcite>></div>												

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-303

From (m)			To (m)			Rocktype & Description								
200.00	201.40	OI	Heavilly disseminated sulphides in host schist				FMG							
200 - 201.4: Net textured cpy (5-10% total) & minor pyrrhotite cutting altered siliceous crackle brecciated rhyolite (?). Unit includes sections of OB.														
<<Min: 201 - 203 5% Min: Chalcopyrite>>														
201.40	207.80	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides				FMG							
201.4 - 207.8: 201.5-203.0 and 204.6-207.3: <2% diss mag. 20%+ sphalerite (and 3%+ galena) in bands. 202.-206:approx 30-40% <1cm size milled - rounded wallrock (rhyolite?) clasts that are partly replaced by sulfides.														
<<Min: 203 - 205 3% Min: Chalcopyrite>>														
<<Min: 205 - 207 20% Min: Sphalerite>> Banded - laminated														
<<Min: 205 - 207 20% Min: Pyrite>>														
<<Min: 205 - 207 5% Min: Chalcopyrite>>														
<<Min: 205 - 207.8 15% Min: Calcite>>														
<<Min: 207 - 208.2 10% Min: Sphalerite>> Locally banded and laminated														
<<Min: 207 - 208.2 50% Min: Pyrite>> and dis and banded														
<<Min: 207 - 208.2 3% Min: Chalcopyrite>> And rare blebs														
<<Struc: 204 - 208 Moderate (Alt) Foliation>> sulfide laminations														
207.80	208.20	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides				FMG							
207.8 - 208.2: 5% diss mag, getting close to being called OA														
<<Min: 207.8 - 208.2 5% Min: Magnetite>>														
<<Min: 207.8 - 208.2 2% Min: Calcite>>														
208.20	209.75	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides				FMG							
<<Min: 208.2 - 209.75 7% Min: Sphalerite>>														
<<Min: 208.2 - 209.75 60% Min: Pyrite>>														
<<Min: 208.2 - 209.75 2% Min: Chalcopyrite>>														
<<Min: 208.2 - 209.75 15% Min: Calcite>>														

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
200.00	201.00	1.00	B00269709	272	2.8	1.46	4.95	8.34

201.00	201.40	0.40	B00269712	266	2.19	2.5	3.6	11.2
201.40	202.00	0.60	B00269713	368	1.56	0.62	5.3	14.8

202.00	203.00	1.00	B00269714	431	1.93	0.33	6.47	10.7
203.00	204.00	1.00	B00269715	178	3.37	0.33	1.86	7.03
204.00	205.00	1.00	B00269716	135	1.76	0.26	1.01	6.79
205.00	206.00	1.00	B00269717	228	3.89	0.49	2.06	10.8
206.00	207.00	1.00	B00269718	222	1.45	0.14	3.52	11.8
207.00	207.80	0.80	B00269719	142	0.886	0.14	2.3	5.8

207.80	208.20	0.40	B00269721	124	1.89	1.97	1.06	3.96
--------	--------	------	-----------	-----	------	------	------	------

208.20	209.00	0.80	B00269722	203	1.36	0.08	3.79	8.32
--------	--------	------	-----------	-----	------	------	------	------

209.00	209.75	0.75	B00269723	203	1.93	0.39	3.19	8.13
--------	--------	------	-----------	-----	------	------	------	------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-303

From (m)		To (m)		Rocktype & Description									
209.75	210.15	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG	209.75	210.15	0.40	B00269724	263	1.22	1.81	4.07	9.49
209.75 - 210.15: 10 cm section of weak OA, 5% mag overall. Unit includes 5cm wide qtz vein with remobilized, coarse grained, cpy (5%).													
<<Min: 209.75 - 210.25 5% Min: Calcite>>													
<<Min: 209.75 - 211.7 4% Min: Chalcopyrite>>													
<<Min: 209.75 - 213 25% Min: Sphalerite>>													
<<Min: 209.75 - 213 30% Min: Pyrite>> Laminated													
<<Min: 209.75 - 213 5% Min: Galena>>													
210.15	211.70	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG	210.15	211.00	0.85	B00269725	182	0.92	0.42	3.51	12.5
210.15 - 211.7: 210.7-211.7: sphalerite bands and lam - 20% overall, 5% galena, 5% cpy..													
<<Min: 210.25 - 211.7 15% Min: Calcite>>													
<<Struc: 210.15 - 212.5 Moderate (Alt) dominant foliation>> sulfide laminations													
211.70	212.52	OG	Chalcopyrite rich sulphides	FMG	211.70	212.52	0.82	B00269727	366	3.61	4.49	5.68	19.8
211.7 - 212.52: approx 20 % cpy but looks like OG. 15% sphalerite.													
<<Min: 211.7 - 213 10% Min: Chalcopyrite>> And as patchy blebs and wisps and rare bands.													
<<Min: 211.7 - 219.25 5% Min: Calcite>> diss, blebs, wisps													
212.52	214.00	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG	212.52	213.00	0.48	B00269728	350	2.04	1.04	7.95	23.4
212.52 - 214: 15% sphalerite, 5% cpy, 5% galena in bands													
<<Min: 213 - 215.9 15% Min: Sphalerite>>													
<<Min: 213 - 215.9 35% Min: Pyrite>>													
<<Min: 213 - 215.9 5% Min: Pyrrhotite>>													
<<Min: 213 - 215.9 2% Min: Magnetite>>													
<<Min: 213 - 215.9 3% Min: Galena>>													
<<Min: 213 - 215.9 5% Min: Chalcopyrite>>													
					213.00	214.00	1.00	B00269729	275	1.45	0.6	6.29	15.9

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-303

From (m)	To (m)	Rocktype & Description												
214.00	214.40	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG	214.00	214.40	0.40	B00269732	187	2.4	3.39	1.87	11.5	
214 - 214.4: mostly remobilized cpy,sph, with qtz and minor chlorite flanked by OB with minor mag/pyrrhotite.														
214.40	215.90	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG	214.40	215.00	0.60	B00269733	161	2	0.75	2.52	10	
214.4 - 215.9: patches of diss mag (<1% overall).														
<<Struc: 214.4 - 215 Moderate (Alt) dominant foliation>> sulfide laminations														
215.90	216.30	OG	Chalcopyrite rich sulphides	FMG	215.00	215.90	0.90	B00269734	132	2.16	0.42	2.09	10.7	
215.9 - 216.3: core appears mixed up due to possible driller error. 25cm section of good OG, flanked by OB														
<<Min: 215.9 - 216.3 25% Min: Sphalerite>>														
<<Min: 215.9 - 216.3 5% Min: Pyrite>>														
<<Min: 215.9 - 216.3 5% Min: Pyrrhotite>>														
<<Min: 215.9 - 216.3 5% Min: Magnetite>>														
<<Min: 215.9 - 216.3 1% Min: Galena>>														
<<Min: 215.9 - 216.3 25% Min: Chalcopyrite>>														
216.30	217.60	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG	216.30	217.00	0.70	B00269736	225	0.957	0.35	3.77	13.1	
216.3 - 217.6: 20% sph, 5% cpy & 5% galena, inter banded - laminated with fine grained qtz.														
<<Min: 216.3 - 217.6 17% Min: Sphalerite>>														
<<Min: 216.3 - 217.6 20% Min: Pyrite>>														
<<Min: 216.3 - 217.6 0.5% Min: Pyrrhotite>>														
<<Min: 216.3 - 217.6 0.5% Min: Magnetite>>														
<<Min: 216.3 - 217.6 2% Min: Galena>>														
<<Min: 216.3 - 217.6 5% Min: Chalcopyrite>>														
<<Struc: 216.5 - 217 Moderate (Alt) dominant foliation>> sulfide laminations														
217.60	218.20	OI	Heavilly disseminated sulphides in host schist	FMG	217.60	218.20	0.60	B00269738	199	2.62	1.82	1.11	3.98	
217.6 - 218.2: unit includes 20cm of fractured RHY & fault gouge up against 5 cm OG followed by 30cm of OI														



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-303

From (m)			To (m)			Rocktype & Description			From (m)			To (m)			Width			Sample			Ag PPM			Au PPM			Cu %			Pb %			Zn %								
<<Min: 217.6 - 225 10% Min: Sphalerite>>																																									
<<Min: 217.6 - 225 15% Min: Pyrite>>																																									
<<Min: 217.6 - 225 1% Min: Pyrrhotite>>																																									
<<Min: 217.6 - 225 1% Min: Magnetite>>																																									
<<Min: 217.6 - 225 2% Min: Galena>>																																									
<<Min: 217.6 - 225 3% Min: Chalcopyrite>>																																									
<<Struc: 217.6 - 217.8 Strong (Alt) Fault>> gouge																																									
218.20			218.60			OB			Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides			FMG			218.20			218.60			0.40			B00269739			108			1.38			0.48			1.21			9.6		
218.2 - 218.6: includes 10cm of RHY with diss sulfides																																									
218.60			219.25			OB			Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides			FMG			218.60			219.25			0.65			B00269741			180			0.991			0.33			2.54			8.01		
218.6 - 219.25: includes 10cm of RHY with diss sulfides, 10% lam - banded and dis sph.																																									
<<Struc: 218.6 - 219 Moderate (Alt) dominant foliation>> sulfide laminations																																									
219.25			232.30			MAFi			Mafic Intrusions (primarily footwall mafic intrusion)			green			219.25			220.50			1.25			B00269742			6			0.039			0.03			0.08			0.31		
<<Min: 219.3 - 224 20% Min: Calcite>>																																									
<<Min: 224 - 228.2 10% Min: Calcite>>																																									
<<Min: 228.2 - 232.3 20% Min: Calcite>>																																									
<<Min: 232.2 - 234.05 5% Min: Calcite>>																																									
<<Min: 232.2 - 234.5 5% Min: Sphalerite>>																																									
<<Min: 232.2 - 234.5 5% Min: Pyrite>> CP-PO bands																																									
<<Min: 232.2 - 234.5 15% Min: Pyrrhotite>>																																									
<<Min: 232.2 - 234.5 2% Min: Galena>>																																									
<<Min: 232.2 - 234.5 15% Min: Chalcopyrite>>																																									
<<Alt: 219.25 - 226.25 Moderate (Alt) Biotite>> intensity decreases downhole																																									
<<Alt: 222 - 226.25 Weak (Alt) Chlorite>> intensity increases downhole.																																									
<<Alt: 226.25 - 232.3 Moderate (Alt) Chlorite>> Diss but forms bands similar to chl bands in OJ. Intensity increases downhole																																									
<<Struc: 219.25 - 219.25 Moderate (Alt) Contact>> fracture face and parallel chlorite bands mark contact																																									
<<Struc: 222 - 224 Moderate (Alt) dominant foliation>>																																									



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-303

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 225 - 227 Moderate (Alt) dominant foliation>>											
<<Struc: 229 - 231 Moderate (Alt) dominant foliation>>											
<<Struc: 231 - 232 Moderate (Alt) dominant foliation>>											
232.30	234.05	OJ Heavily disseminated sulphides in proximal altered rock	232.30	233.00	0.70	B00269748	174	2.23	4.67	1.24	4.53
232.3 - 234.05: includes 15cm OB at upper contact											
<<Min: 232.3 - 234.05 5% Min: Chalcopyrite>> patchy, crude bands and blebs											
<<Alt: 232.3 - 234.05 Strong (Alt) Chlorite>>											
<<Alt: 232.5 - 234.1 Moderate (Alt) Cordierite>>											
<<Struc: 232.3 - 232.3 Moderate (Alt) Contact>>											
<<Struc: 233 - 234 Moderate (Alt) dominant foliation>>											
234.05	237.00	RHYc Rhyolite coherent volcanics	234.05	235.50	1.45	B00269752	2.6	0.012	0.02	0.03	0.08
234.05 - 237: silic bands, weak-poor curdy texture											
<<Min: 234.05 - 237 0.1% Min: Sphalerite>> concentrated in sulphide bands.											
<<Min: 234.05 - 237 2% Min: Pyrite>> and concentrated in bands											
<<Alt: 234.2 - 240 Strong (Alt) Muscovite>> strongest on fracture faces											
<<Struc: 234.05 - 234.05 Moderate (Alt) Contact>>											
<<Struc: 234.2 - 235.8 Moderate (Alt) dominant foliation>>											
<<Struc: 236 - 237 Fault>> multiple thin, <1-10cm zones with crushed schist, minor gouge - clay.											
237.00	247.80	RHY undifferentiated rhyolite	237.00	238.50	1.50	B00269754	-0.3	0.006	-0.01	-0.01	-0.01
<<Min: 237 - 240.7 0.1% Min: Pyrite>>											
<<Min: 237 - 240.7 1% Min: Pyrrhotite>>											
<<Min: 240 - 243 3% Min: Calcite>>											
<<Min: 240.7 - 247.3 0.5% Min: Pyrite>> py rimmed (being replaced) by po.											
<<Min: 240.7 - 247.3 3% Min: Pyrrhotite>>											
<<Min: 244.5 - 244.6 0.1% Min: Chalcopyrite>>											
<<Alt: 240 - 247 Weak (Alt) Muscovite>>											
<<Vein: 243.4 - 246 5% Quartz-Tourmaline 30 deg. >> numerous <1cm qtz tour veins, +/- calcite, with tourmaline envelope											
<<Struc: 237.9 - 239.6 Weak (Alt) Fault>> numerous small gouge - clay zones, mostly parallel to foliation											
<<Struc: 238.15 - 240 Moderate (Alt) dominant foliation>>											
<<Struc: 239.7 - 239.8 Weak (Alt) Fault>> 0.5cm wide cross cutting fracture with clay.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-303

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 241 - 243 Moderate (Alt) dominant foliation>>											
<<Struc: 245 - 247 Moderate (Alt) dominant foliation>>											
<<Struc: 247.3 - 247.8 Moderate (Alt) Fault>> 247.30-247.80m: 0.45m missing core, core rubble, minor clay											
<<Struc: 247.3 - 247.8 Moderate (Alt) dominant foliation>> not parrallel to foliation.											
End of Hole @ 247.8											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-304

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Sean Suttie	Date Logging Start:	21-Oct-15
UTM Easting	415149	Core Size:	HQ3	Azimuth:	234.72	Date Logging Complete:	24-Oct-15
UTM Northing:	6815074	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1406.33	Casing Depth (m):	6	Length (m):	254	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	20-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	23-Oct-15
Local Elev. (m):						Purpose:	Exploration
Comments:						Parent Hole:	

K15-304 was drilled as an exploration hole to test the continuity of the down-dropped and mafic hosted/associated massive sulphide lenses (Krakatoa lens). The hanging wall package (4.9-125 m) consisted of mixed rhyolite, RHYi, BI+CA schists (dykes?), and a minor mudstone horizon. MU-alteration becomes apparent at 85.5 m and increases in intensity toward the upper massive sulphide lens at 125 m. The upper lens (125-127.8 m) consists of OA ore type. Below this lens MU-altered rhyolite continues to a depth of 130.6 m. From 130.6-161.8 m a CL+BI+/-CA schist (MAFi) occurs, with no apparent alteration near either contact. Below the mafic unit, MSXS occurs from 161.8-171.6 m, consisting of OA and OB ore types. The footwall of this lens consists of strongly MU-altered rhyolite cross-cut by RHYi. From 203-206.25 m, there is another CL+BI+CA schist, with ~.5 m of OJ mineralization below (Lowest lens). The footwall of this lowest lens consists of MU-altered rhyolites to the end of the hole (254 m).

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	234.72	0	234.72	APS	Sean Suttie	20-Oct-15		<input checked="" type="checkbox"/>	
5	-59.7	216.2	22.5	238.7	ReflexEVS	Geotech	20-Oct-15	5800	<input checked="" type="checkbox"/>	
26	-60	215.6	22.5	238.1	ReflexEVS	Geotech	20-Oct-15	5787	<input checked="" type="checkbox"/>	
77	-60.1	217.5	22.5	240	ReflexEVS	Geotech	21-Oct-15	5797	<input checked="" type="checkbox"/>	
101	-60.5	216.2	22.5	238.7	ReflexEVS	Geotech	21-Oct-15	5816	<input checked="" type="checkbox"/>	
125	-60.7	215.9	22.5	238.4	ReflexEVS	Geotech	21-Oct-15	5570	<input checked="" type="checkbox"/>	
152	-60.9	215.4	22.5	237.9	ReflexEVS	Geotech	21-Oct-15	5794	<input checked="" type="checkbox"/>	
175	-61.1	212.2	22.5	234.7	ReflexEVS	Geotech	22-Oct-15	5806	<input checked="" type="checkbox"/>	
200	-61.5	214.8	22.5	237.3	ReflexEVS	Geotech	22-Oct-15	5820	<input checked="" type="checkbox"/>	
227	-61.8	216	22.5	238.5	ReflexEVS	Geotech	22-Oct-15	5840	<input checked="" type="checkbox"/>	
250	-62.4	213.4	22.5	235.9	ReflexEVS	Geotech	23-Oct-15	5805	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	6.00	OVBN Overburden									
<<Min: 4.9 - 10.4 5% Min: Calcite>>											
<<Min: 4.9 - 12 0.5% Min: Pyrrhotite>>											



Project:
KZK
Hole Number:
K15-304

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
6.00	10.40	RHYva Coarse grained to ash tuff									
6 - 10.4: Medium grey, fine grained ash tuff with ~5% felsic lpl and ~5% disseminated euhedral BI.											
10.40	11.40	RHYvi Lapilli tuff									
10.4 - 11.4: rhyolitic lpl with medium grey groundmass. Grades from ~10% lpl to ~flow banded texture.											
<<Min: 10.4 - 11.4 10% Min: Calcite>>											
11.40	12.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
11.4 - 12: BI+CA schist. Mafic dyke?											
<<Min: 11.4 - 12 20% Min: Calcite>>											
12.00	27.90	RHYi Aphanitic Rhyolite (intrusion)									
12 - 27.9: Light grey aphanitic rhyolite intrusion with abundant healed fractures. Contacts appear to grade from fine grained to flow banded texture to typical aphanitic RHYi over ~1 m.											
<<Min: 12 - 27.9 2% Min: Pyrite>>											
<<Min: 12 - 27.9 2% Min: Calcite>>											
<<Vein: 14.4 - 14.8 40% Quartz>> 2 massive QZ+/-CA veins											
<<Vein: 18.2 - 18.3 95% Quartz>> Massive QZ+CA vein											
27.90	31.40	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
27.9 - 31.4: BI+CA schist. Mafic dyke with ~.4 m of flow banded rhyolite from 29-29.4 m.											
<<Min: 27.9 - 31.4 2% Min: Pyrite>>											
<<Min: 27.9 - 31.4 20% Min: Calcite>>											
31.40	56.80	RHYi Aphanitic Rhyolite (intrusion)									
31.4 - 56.8: Pinkish-grey aphanitic siliceous dyke. High density of healed fractures. Contacts appear to grade from fine grained to flow banded texture to typical aphanitic RHYi over ~1 m.											
<<Min: 31.4 - 56.8 2% Min: Pyrite>>											
<<Min: 31.4 - 56.8 2% Min: Calcite>>											
<<Struc: 31.44 - 31.45 dominant foliation>> Discontinuous foliation defined by siliceous blebs											
<<Struc: 33.4 - 33.41 dominant foliation>> Spaced MU cleavage											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-304

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
56.80	59.10	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
56.8 - 59.1: BI+CA+/-CL schist											
<<Min: 56.8 - 59.1 2% Min: Pyrite>>											
<<Min: 56.8 - 59.1 0.5% Min: Pyrrhotite>>											
<<Min: 56.8 - 59.1 20% Min: Calcite>>											
59.10	61.40	RHYc	Rhyolite coherant volcanics								
59.1 - 61.4: Siliceous banding with MU+CL cleavages. Maybe more sheared RHYi?											
<<Min: 59.1 - 61.4 5% Min: Calcite>>											
<<Struc: 59.4 - 59.85 Weak (Alt) Fault>> Faulted and fractured zone with local fault gouge											
61.40	62.30	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
61.4 - 62.3: BI+CL+CA schist											
<<Min: 61.4 - 62.3 2% Min: Pyrite>>											
<<Min: 61.4 - 62.3 0.5% Min: Pyrrhotite>>											
<<Min: 61.4 - 62.3 20% Min: Calcite>>											
62.30	63.30	RHYi	Aphanitic Rhyolite (intrusion)								
62.3 - 63.3: Highly fractured aphanitic rhyolite											
<<Min: 62.3 - 64.4 0.5% Min: Pyrite>>											
<<Min: 62.3 - 64.4 10% Min: Calcite>>											
63.30	64.40	RHYvl	Lapilli tuff								
63.3 - 64.4: felsic lpl within a MU groundmass											
64.40	66.80	RHYva	Coarse grained to ash tuff								
64.4 - 66.8: Medium grey fine grained ash tuff											
<<Min: 64.4 - 88.2 1% Min: Pyrite>>											
<<Min: 64.4 - 88.2 1% Min: Pyrrhotite>>											
<<Min: 64.4 - 98.1 5% Min: Calcite>>											
<<Struc: 64.8 - 64.85 Weak (Alt) Fault>> Fault gouge zone											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
66.80	69.50	RHYvl Lapilli tuff									
66.8 - 69.5: Medium grey CL+BI+MU+QZ schist. Lpl are composed of CL+BI+/-CA within a MU+QZ ash groundmass											
69.50	71.80	RHYvl Lapilli tuff									
69.5 - 71.8: Felsic clasts/lpl within a medium grey MU+QZ groundmass											
<<Struc: 69.8 - 70.2 Weak (Alt) Fault>> Fractured and faulted zone with local fault gouge											
71.80	76.20	RHYvl Lapilli tuff									
71.8 - 76.2: Medium grey CL+BI+MU+QZ schist. Lpl are composed of CL+BI+/-CA within a MU+QZ ash groundmass											
<<Struc: 75.7 - 76.4 Weak-Moderate (Alt) Fault>> Fractured and faulted zone with local fault gouge											
76.20	77.20	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
76.2 - 77.2: Siliceous banding in MU+QZ groundmass											
77.20	88.20	RHYva Coarse grained to ash tuff									
77.2 - 88.2: Medium grey fine grained ash tuff with local lpl											
<<Alt: 85.5 - 102.4 Weak (Alt) Muscovite>>											
<<Vein: 82.05 - 82.1 90% Quartz>> Massive QZ vein											
<<Vein: 86.2 - 86.3 40% Quartz>> Deformed QZ vein											
<<Struc: 81.2 - 81.35 Weak (Alt) Fault>> Fractured and faulted zone with local fault gouge											
<<Struc: 83.2 - 83.8 Weak (Alt) Fault>> Fractured and faulted zone with local fault gouge											
<<Struc: 86 - 86.3 Weak (Alt) Fault>> Fractured and faulted zone with local fault gouge											
88.20	91.70	RHYv Rhyolite volcanoclastic									
88.2 - 91.7: MU+QZ schist with some ~5% sulphide lpl											
<<Min: 88.2 - 98.1 1% Min: Pyrite>>											
<<Min: 88.2 - 98.1 3% Min: Pyrrhotite>>											
<<Vein: 89.1 - 89.5 10% Quartz>> Zone with a few ~2 cm massive QZ veins											
<<Struc: 89 - 89.7 Weak (Alt) Fault>> Fractured and faulted zone with local fault gouge											
91.70	95.80	RHYva Coarse grained to ash tuff									
91.7 - 95.8: Medium grey fine grained ash tuff with local lpl											
<<Struc: 91.7 - 92 Weak (Alt) Fault>> Fractured and faulted zone with local fault gouge											
<<Struc: 94.3 - 94.5 Weak (Alt) Fault>> Fractured and faulted zone with local fault gouge											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-304

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 125 - 127.8 10% Min: Magnetite>>											
<<Min: 125 - 127.8 10% Min: Calcite>>											
<<Min: 126 - 127 3% Min: Sphalerite>>											
<<Min: 126 - 127 25% Min: Pyrite>>											
<<Min: 126 - 127 2% Min: Chalcopyrite>>											
<<Min: 127 - 127.8 10% Min: Pyrite>>											
<<Min: 127 - 127.8 5% Min: Chalcopyrite>>											
<<Alt: 125 - 127.8 Moderate-Strong (Alt) Chlorite>> CL-altered BI and CI? porphyroblasts with in MSXS, as well as CL-groundmass											
<<Struc: 125.15 - 125.16 dominant foliation>> sulphide lamination											
<<Struc: 126.32 - 126.33 dominant foliation>> sulphide lamination											
<<Struc: 127.2 - 127.21 dominant foliation>> sulphide lamination											
127.80	130.60	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	127.80	129.30	1.50	B00268495	0.3	0.005	-0.01	0.01	0.07
127.8 - 130.6: BI+CA+CL schist											
<<Min: 127.8 - 130.6 20% Min: Calcite>>											
<<Alt: 127.8 - 130.4 Strong (Alt) Biotite>> Overprint or original?											
<<Alt: 130.4 - 143.1 Strong (Alt) Muscovite>>											
<<Struc: 129 - 129.3 Weak-Moderate (Alt) Fault>> Fractured and faulted zone with local fault gouge											
<<Struc: 130.4 - 130.75 Weak-Moderate (Alt) Fault>> Fractured and faulted zone with local fault gouge											
130.60	143.10	RHYv Rhyolite volcaniclastic	130.60	132.10	1.50	B00268497	0.3	0.016	0.01	-0.01	0.02
130.6 - 143.1: MU+QZ schist with elongated CA clasts (lpl?)											
<<Min: 130.6 - 132.1 5% Min: Pyrite>>											
<<Min: 130.6 - 132.1 1% Min: Pyrrhotite>>											
<<Min: 130.6 - 132.1 15% Min: Calcite>>											
<<Min: 132.1 - 143.1 2% Min: Pyrite>>											
<<Min: 132.1 - 143.1 5% Min: Calcite>>											
<<Vein: 130.75 - 130.95 60% Quartz>> 2 massive QZ+CA veins											
<<Vein: 131.8 - 132.3 50% Calcite>> Zone with massive CA+QZ veining											
<<Struc: 132.9 - 133.1 Weak (Alt) Fault>> Fractured and faulted zone with local fault gouge											
<<Struc: 136.2 - 138 Moderate (Alt) Fault>> Fractured and faulted zone with local fault gouge											
<<Struc: 140.4 - 143.1 Moderate (Alt) Fault>> Fractured and faulted zone with local fault gouge											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-304

From (m) To (m) Rocktype & Description

143.10 161.80 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

143.1 - 161.8: From 143.1-158.15 m, the unit is a mottled CL+BI schist with minor CA blebs and fractures. From 158.15-161.8 m, the unit is a CL+BI+CA schist, with a discontinuous foliation defined by CA+BI.

<<Min: 143.1 - 158.15 2% Min: Calcite>>

<<Min: 143.1 - 161.8 0.5% Min: Pyrite>>

<<Min: 158.15 - 160.1 8% Min: Calcite>>

<<Min: 160.1 - 161.8 20% Min: Calcite>>

<<Alt: 143.1 - 161.4 Moderate (Alt) Biotite>>

<<Alt: 143.1 - 161.8 Strong (Alt) Chlorite>>

<<Alt: 161.4 - 161.8 Strong (Alt) Biotite>>

<<Vein: 152 - 152.3 90% Calcite>> Massive CA+QZ vein

<<Struc: 154.85 - 154.86 dominant foliation>> Discontinuous BI foliation

<<Struc: 158.56 - 158.57 dominant foliation>> Discontinuous BI foliation

<<Struc: 160.7 - 161 Weak (Alt) Fault>> Fractured and faulted zone with local fault gouge

161.80 162.70 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

161.8 - 162.7: Laminated massive PY+SP+GL

<<Min: 161.8 - 162.7 1% Min: Calcite>>

<<Min: 161.8 - 172.7 7% Min: Sphalerite>>

<<Min: 161.8 - 172.7 60% Min: Pyrite>>

<<Min: 161.8 - 172.7 2% Min: Galena>>

162.70 163.30 OA Magnetite bearing sulphides

162.7 - 163.3: laminated massive PY+PO+SP+GL with heavily disseminated MG

<<Min: 162.7 - 163.3 3% Min: Sphalerite>>

<<Min: 162.7 - 163.3 25% Min: Pyrite>>

<<Min: 162.7 - 163.3 10% Min: Pyrrhotite>>

<<Min: 162.7 - 163.3 10% Min: Magnetite>>

<<Min: 162.7 - 163.3 2% Min: Galena>>

<<Min: 162.7 - 163.3 10% Min: Chalcopyrite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
157.30	158.80	1.50	B00268498	0.5	0.007	-0.01	0.01	0.02

158.80	160.30	1.50	B00268499	-0.3	0.009	-0.01	-0.01	0.02
160.30	161.80	1.50	B00233101	-0.3	0.009	-0.01	-0.01	0.02

MG

161.80	162.70	0.90	B00233102	128	0.753	0.07	5.75	8.45
--------	--------	------	-----------	-----	-------	------	------	------

MCG

162.70	163.30	0.60	B00233103	146	1.25	0.73	6.94	9.31
--------	--------	------	-----------	-----	------	------	------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-304

From (m) To (m) Rocktype & Description

163.30 171.60 OB

**Wispy laminate, fine
buckshot textured, non-
magnetite bearing sulphides**

MCG

163.3 - 171.6: Laminated massive PY+SP+CP+GL with blebby and disseminated CA. Disseminated tetrahedrite(?) near the bottom of the unit.

<<Min: 163.3 - 165 10% Min: Sphalerite>>

<<Min: 163.3 - 165 40% Min: Pyrite>>

<<Min: 163.3 - 165 3% Min: Galena>>

<<Min: 163.3 - 165 1% Min: Chalcopryite>> and as diss

<<Min: 163.3 - 171.6 15% Min: Calcite>> Blebs of CA, as well as, finely disseminated CA in the matrix

<<Min: 165 - 171.6 12% Min: Sphalerite>>

<<Min: 165 - 171.6 40% Min: Pyrite>>

<<Min: 165 - 171.6 4% Min: Galena>>

<<Min: 165 - 171.6 3% Min: Chalcopryite>> And as diss

<<Min: 165.6 - 171.6 2% Min: Chalcopryite>> Associated with CA blebs and tetrahedrite(?)

171.60 176.00 RHY

undifferentiated rhyolite

171.6 - 176: MU+CA+QZ schist with blebby CA texture that resembles MAFi.

<<Min: 171.6 - 176 1% Min: Pyrite>>

<<Min: 171.6 - 176 20% Min: Calcite>>

<<Min: 171.7 - 171.8 5% Min: Tetrahedrite>> Tetrahedrite band in QZ vein

<<Alt: 171.6 - 176 Strong (Alt) Muscovite>> Original from MSXS or overprint from RHYi?

<<Vein: 171.6 - 172.2 90% Quartz>> Massive QZ vein with a band of tetrahedrite+CP

<<Struc: 174.75 - 175 Weak-Moderate (Alt) Fault>> Fractured and faulted zone with local fault gouge

<<Struc: 175.7 - 175.71 dominant foliation>> Discontinuous QZ foliation

176.00 177.10 RHYi

Aphanitic Rhyolite (intrusion)

176 - 177.1: Dark grey glassy aphanitic rhyolite

<<Min: 176 - 177.1 1% Min: Pyrite>>

<<Min: 176 - 177.1 1% Min: Pyrrhotite>>

<<Min: 176 - 177.1 5% Min: Calcite>>

177.10 177.85 RHY

undifferentiated rhyolite

177.1 - 177.85: MU+CA+QZ schist

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
163.30	164.00	0.70	B00233104	134	1.93	0.21	4.99	6.78

164.00	165.00	1.00	B00233105	123	2.95	0.28	4.16	5.9
165.00	166.00	1.00	B00233106	133	4.03	0.31	4.71	6.24
166.00	167.00	1.00	B00233107	147	2.68	0.89	4.88	7.04
167.00	168.00	1.00	B00233108	143	2.15	0.46	4.68	7.96
168.00	168.90	0.90	B00233109	120	1.89	0.11	3.67	5.84
168.90	169.80	0.90	B00233112	138	2.22	0.39	3.67	6.17
169.80	170.70	0.90	B00233113	142	1.53	0.11	4.31	6.3
170.70	171.60	0.90	B00233114	273	3.54	0.68	4.46	6.04

171.60	172.20	0.60	B00233115	136	2.78	0.6	0.15	0.23
--------	--------	------	-----------	-----	------	-----	------	------

172.20	173.70	1.50	B00233116	0.5	0.014	-0.01	-0.01	-0.01
173.70	175.20	1.50	B00233117	0.8	0.008	-0.01	-0.01	-0.01
175.20	176.00	0.80	B00233118	0.5	0.007	-0.01	-0.01	-0.01

176.00	177.10	1.10	B00233119	0.8	0.011	-0.01	-0.01	-0.01
--------	--------	------	-----------	-----	-------	-------	-------	-------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-304

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 177.1 - 177.85 2% Min: Pyrite>>											
<<Min: 177.1 - 177.85 5% Min: Calcite>>											
<<Alt: 177.1 - 177.85 Strong (Alt) Muscovite>> Original from MSXS or overprint from RHYi?											
177.85	197.30	RHYi Aphanitic Rhyolite (intrusion)									
177.85 - 197.3: Dark grey glassy aphanitic rhyolite											
<<Min: 177.85 - 197.3 2% Min: Pyrite>>											
<<Min: 177.9 - 197.3 5% Min: Calcite>>											
197.30	203.00	RHY undifferentiated rhyolite									
197.3 - 203: yellow-green MU+QZ+CA schist with continuous MU foliation and disaggregated QZ+CA blebs											
<<Min: 197.3 - 203 2% Min: Pyrite>>											
<<Min: 197.3 - 203 5% Min: Calcite>>											
<<Alt: 197.3 - 203 Strong (Alt) Muscovite>> Original form MSXS or overprint from RHYi?											
<<Vein: 202.8 - 203 90% Quartz>> Massive QZ vein											
<<Struc: 201.5 - 201.7 Weak (Alt) Fault>> Fractured and faulted zone with local fault gouge											
<<Struc: 202.7 - 202.9 Weak (Alt) Fault>> Fractured and faulted zone with local fault gouge											
203.00	206.25	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	203.30	204.80	1.50	B00233121	0.9	0.008	-0.01	0.01	0.03
203 - 206.25: Green CL+BI+CA schist, with discontinuous BI and CA foliation. 2 distinct colours of chlorite (dark forest green and brighter forest green), with the brighter colour possibly related to original hydrothermal alteration.											
<<Min: 203 - 206.25 20% Min: Calcite>>			204.80	206.25	1.45	B00233122	6.8	0.014	0.01	0.16	0.04
<<Alt: 203 - 206.25 Weak (Alt) Chlorite>> Two distinct colour of CL (dark forest green and brighter forest green), with the brighter of the two representing hydrothermal alteration and the darker one metamorphic chlorite.											
<<Alt: 203 - 206.25 Strong (Alt) Biotite>>											
206.25	206.80	OJ Heavilly disseminated sulphides in proximal altered rock	206.25	206.80	0.55	B00233123	20	0.075	0.21	0.5	2.38
206.25 - 206.8: Disseminated to heavily disseminated PO+PY+/-SP within strongly chloritized RHYc (lower unit)											
<<Min: 206.25 - 206.8 5% Min: Pyrite>>											
<<Min: 206.25 - 206.8 10% Min: Pyrrhotite>>											
<<Min: 206.25 - 206.8 5% Min: Calcite>>											
<<Alt: 206.25 - 206.8 Strong (Alt) Chlorite>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-304
From (m) To (m) Rocktype & Description

206.80 212.60 RHYc Rhyolite coherant volcanics

206.8 - 212.6: Wavy siliceous banding with MU cleavage

<<Min: 206.8 - 212.6 1% Min: Pyrite>>

<<Min: 206.8 - 212.6 2% Min: Pyrrhotite>>

<<Alt: 206.8 - 216.4 Moderate (Alt) Muscovite>>

<<Struc: 208.7 - 209.4 Weak (Alt) Fault>> Fractured and faulted zone with local fault gouge

<<Struc: 211.5 - 211.51 dominant foliation>> Spaced MU cleavage

212.60 215.40 RHYc Rhyolite coherant volcanics

212.6 - 215.4: Wavy siliceous banding with MU or carbonaceous cleavage

<<Min: 212.6 - 215.4 1% Min: Pyrite>>

<<Min: 212.6 - 215.4 5% Min: Pyrrhotite>>

<<Min: 212.6 - 215.4 1% Min: Calcite>>

<<Min: 212.6 - 215.4 0.5% Min: Arsenopyrite>>

215.40 219.10 RHYc Rhyolite coherant volcanics

215.4 - 219.1: Wavy siliceous banding with MU cleavage

<<Min: 215.4 - 219.1 1% Min: Pyrite>>

<<Min: 215.4 - 219.1 2% Min: Pyrrhotite>>

<<Min: 215.4 - 219.1 5% Min: Calcite>>

<<Alt: 216.4 - 236 Weak (Alt) Muscovite>>

219.10 254.00 RHYvl Lapilli tuff

219.1 - 254: BI+CL and sulphide lpl within MU+QZ groundmass with continuous foliation

<<Min: 219.1 - 254 2% Min: Pyrite>>

<<Min: 219.1 - 254 3% Min: Pyrrhotite>>

<<Min: 219.1 - 254 2% Min: Calcite>>

<<Vein: 230.85 - 231.1 10% Tourmaline>> Hairline tourmaline vein with radiating tourmaline envelope perpendicular to the vein

<<Vein: 234 - 234.2 80% Quartz>> Quartz-tourmaline-calcite veining

<<Vein: 239.7 - 241 5% Tourmaline>> Zone of hairline tourmaline veining with radiating tourmaline envelopes perpendicular to the veins

<<Vein: 245.15 - 246.8 5% Tourmaline>> Zone of hairline tourmaline veining with radiating tourmaline envelopes perpendicular to the veins

<<Struc: 219.1 - 219.2 Weak (Alt) Fault>> Fractured and faulted zone with local fault gouge

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
206.80	208.30	1.50	B00233124	1.8	0.008	0.03	0.02	0.02
208.30	209.80	1.50	B00233125	0.7	0.006	-0.01	0.01	-0.01

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-304

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 222 - 223.8 Moderate (Alt) Fault>> Fractured and faulted zone with local fault gouge											
<<Struc: 226.2 - 226.4 Moderate (Alt) Fault>> Fractured and faulted zone with local fault gouge											
<<Struc: 232.05 - 232.06 dominant foliation>> Continuous MU foliation											
<<Struc: 232.8 - 232.81 dominant foliation>> Continuous MU foliation											
<<Struc: 233.55 - 233.6 Weak (Alt) Fault>> Fractured and faulted zone with local fault gouge											
<<Struc: 251.2 - 251.6 Moderate (Alt) Fault>> Wrapped foliation with local fault gouge											
<<Struc: 252.6 - 252.75 Moderate (Alt) Fault>> Wrapped foliation with local fault gouge											
End of Hole @ 254											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-305

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Sean Suttie	Date Logging Start:	21-Oct-15
UTM Easting	415157	Core Size:	HQ3	Azimuth:	234.82	Date Logging Complete:	25-Oct-15
UTM Northing:	6815159	Casing Pulled?:	Yes	Dip:	-45	Drill Company:	Geotech
UTM Elev. (m):	1411.855	Casing Depth (m):	18	Length (m):	300	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	20-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	25-Oct-15
Local Elev. (m):						Purpose:	Exploration
Comments:						Parent Hole:	

K15-305 is an exploration hole drilled in order to intersect two massive sulfide lenses, including the Krakatoa ore body. The upper units are made up of volcanoclastic rhyolite crosscut by mafic and intermediate dykes. The hole intercepts two major structures marked by fault breccia and shear zones from 78.00m to 102.00m and 138.00m to 146.00m. The first mineralized zone is intersected from 182.65m to 197.30m, containing OB domains (PY-SP-GL-CP and MG locally) followed by a rhyolitic unit and a narrow massive sulfide lens (0.63 metre) at contact with the mafic sill unit. The hanging wall shows a strong pervasive muscovite alteration. A second lens is intersected from 228.80m to 246.98m containing PY-SP-GL-CP-MG (OB, OA, OI, and OD). Note that even though classified as OI, this classification does not really match with the observations. It contains about 25 percent of laminated sulfide and a dominant matrix probably BA rich (to be confirmed by the assay results) and magnetite. The host rock has not yet been determined. Below this unit, a minor fault zone is observed showing strongly altered rhyolite (possibly green-grey alteration), massive QZ vein and aphanitic rhyolite. A third lens mineralized PY-SP-GL-CP-MG-PO is intersected from 258.50m to 264.50m (OA, OB, OI, OG domains) followed by felsic units. The hole ends at 300.00m.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-45	234.82	0	234.82	APS	Sean Suttie	20-Oct-15		<input type="checkbox"/>	
24	-44.7	216.8	22.5	239.3	ReflexEVS	Geotech	21-Oct-15	5779	<input checked="" type="checkbox"/>	
60	-46.2	214.4	22.5	236.9	ReflexEVS	Geotech	21-Oct-15	5756	<input checked="" type="checkbox"/>	
84	-47.2	213.1	22.5	235.6	ReflexEVS	Geotech	21-Oct-15	5766	<input checked="" type="checkbox"/>	
114	-48.4	214	22.5	236.5	ReflexEVS	Geotech	22-Oct-15	5766	<input checked="" type="checkbox"/>	
144	-49.8	211.5	22.5	234	ReflexEVS	Geotech	22-Oct-15	5775	<input checked="" type="checkbox"/>	
174	-50.5	205.2	22.5	227.7	ReflexEVS	Geotech	23-Oct-15	5736	<input checked="" type="checkbox"/>	
204	-51.6	204.7	22.5	227.2	ReflexEVS	Geotech	23-Oct-15	5771	<input checked="" type="checkbox"/>	
234	-52.1	205.4	22.5	227.9	ReflexEVS	Geotech	23-Oct-15	5807	<input checked="" type="checkbox"/>	
264	-52.5	201.8	22.5	224.3	ReflexEVS	Geotech	23-Oct-15	5976	<input checked="" type="checkbox"/>	
294	-53.4	203	22.5	225.5	ReflexEVS	Geotech	24-Oct-15	5785	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	7.50	CASN									
		Casino									



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-305

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
7.50	20.50	RHY undifferentiated rhyolite									
7.5 - 20.5: Gouge in fracture, fault breccia and cemented fractures in RHY.											
<<Struc: 9 - 20.5 Weak (Alt) Fault>> Subsurface cimented fractures.											
20.50	48.00	RHYva Coarse grained to ash tuff									
20.5 - 48: Lapilli CA replacement. From 44.7 to xxx, cemented fractures and QZ veins.											
<<Min: 32 - 66.45 3% Min: Calcite>> Lapilli replacement.											
<<Min: 32 - 102.6 0.1% Min: Pyrrhotite>>											
<<Min: 32 - 103.6 0.1% Min: Pyrite>> and rare veinlets.											
<<Vein: 44.3 - 47.7 Quartz-Carbonate>> QZ-CA vein, brecciated, cimented in muscovite altered ash matrix.											
48.00	51.70	RHYvl Lapilli tuff									
48 - 51.7: Locally flow banded with crenulations.											
51.70	52.81	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
51.7 - 52.81: Could be clastic. CA.											
52.81	58.80	RHYvl Lapilli tuff									
52.81 - 58.8: With ashes.											
<<Struc: 53.95 - 53.96 dominant foliation>>											
58.80	61.50	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
58.8 - 61.5: BI, CA. Faulted lower contact.											
61.50	66.45	RHYva Coarse grained to ash tuff									
61.5 - 66.45: and some lapilli.											
66.45	77.00	RHY undifferentiated rhyolite									
66.45 - 77: QZ vein at upper contact. Faulted RHY, fault gouge, probably mafic dyke interbedded.											
<<Min: 66.45 - 182.65 1% Min: Calcite>> Locally patchy in MAFi clasts.											
<<Vein: 66.45 - 66.95 Quartz 30 deg. >> Cimenetd QZ vein at upper contact with fault zone.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-305

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
77.00	102.60	FBX									
		Fault Breccia									
		beige									
77 - 102.6: Fault breccia and sheared RHY, few PY veinlets. Sericitic. Average foliation about 40 degrees. PY clasts or vein relics. CA composition in fault clay fault gouge. Folded/crenulated RHY at lower contact.											
<<Alt: 78 - 141.2 Weak (Alt) Muscovite>> In fault zone.											
<<Struc: 78 - 102 Strong (Alt) Fault>> Alpha angle estimated from upper QZ vein contact. Containing fault breccia and fault gouge.as well as sheared zone of RHY. MDS at lower contact.											
102.60	105.79	MDS									
		Carbonaceous Mudstone & Tuffaceous Mudstone									
		black									
102.6 - 105.79: With clasts.											
<<Min: 102.6 - 105.79 2% Min: Pyrite>> or stringers.											
<<Min: 102.6 - 105.79 0.1% Min: Pyrrhotite>> Associated with PY											
<<Struc: 102.6 - 102.61 Contact>>											
105.79	130.06	RHY									
		undifferentiated rhyolite									
		grey-green									
105.79 - 130.06: Shear zone. No strong evidence to argue between volcanoclastic or coherent rhyolite. Mafic dykes crosscutting the units tend to confirm that it is the felsic sequence.											
<<Min: 105.79 - 144 0.5% Min: Pyrite>>											
<<Min: 105.79 - 182.65 0.5% Min: Pyrrhotite>> and associated with MAFi.											
<<Struc: 122.48 - 123.85 Moderate (Alt) Shear>> Alpha angle drifting from 42 to 25 degrees,and back to 54.											
<<Struc: 124.7 - 124.71 dominant foliation>>											
<<Struc: 125.5 - 125.51 dominant foliation>> Fold nose in between those 124.5m to 126m measurements.											
<<Struc: 125.9 - 125.91 dominant foliation>>											
130.06	133.53	RHYi									
		Aphanitic Rhyolite (intrusion)									
		beige									
130.06 - 133.53: Aphanitic texture, mixed with schist and late QZ vein.											
<<Struc: 132.5 - 133.53 Strong (Alt) Crenulation cleavage>> QZ vein, PY-TML veinlets,											
133.53	134.48	MAFi									
		Mafic Intrusions (primarily footwall mafic intrusion)									
134.48	138.41	RHY									
		undifferentiated rhyolite									
		grey-green									
134.48 - 138.41: Sheared, locally fault gouge. Sheared,											
<<Struc: 136 - 138.21 Strong (Alt) Shear>> Sheared with locally fault gouge.											
<<Struc: 138.21 - 140.8 Strong (Alt) Shear>> Shear zone including MAFi dyke sheared alog the core axis. QZ veinsand chorite aletration, brittle locally.											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-305

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
138.41	139.79	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<<Alt: 139 - 150 Weak (Alt) Chlorite>> Associated with QZ.											
139.79	142.90	RHY undifferentiated rhyolite									
139.79 - 142.9: Sheared, green MU.QZ veins.											
<<Alt: 141.2 - 142.91 Moderate (Alt) Muscovite>> Green muscovite											
142.90	143.15	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<<Alt: 142.91 - 152.5 Weak (Alt) Muscovite>>											
143.15	165.00	RHY undifferentiated rhyolite									
143.15 - 165: Sheared, MU altered. Folded PY stringers.											
<<Min: 144 - 182.65 1% Min: Pyrite>> and disseminataed.Associated with QZ-CA veinlets.											
<<Alt: 152.5 - 174 Strong (Alt) Muscovite>>											
<<Vein: 143.5 - 144 Quartz-Tourmaline 15 deg. >> QZ-TML, shallow angle vein											
<<Struc: 144.64 - 148 Strong (Alt) Shear>> Ductile deformation. Fold nose. Axis about perpendicular to the core axis.											
<<Struc: 153 - 153.1 Moderate (Alt) Crenulation cleavage>>											
<<Struc: 154.5 - 156 Vein>> Folded PY veinlets or stringers.											
<<Struc: 161.8 - 161.81 dominant foliation>>											
165.00	168.38	MDSt Rhyolite tuff dominant mudstone									
165 - 168.38: Or MDSw, with PY stringers.											
<<Struc: 167.7 - 167.71 dominant foliation>>											
168.38	174.30	RHYc Rhyolite coherant volcanics									
168.38 - 174.3: Strong MU alteration.											
<<Alt: 174 - 182.65 Intense (Alt) Muscovite>>											
174.30	182.65	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
174.3 - 182.65: Intense MU alteration.											
			178.15	179.65	1.50	B00265202	5.3	0.077	0.02	-0.01	-0.01
			179.65	181.15	1.50	B00265203	3.9	0.084	0.02	-0.01	-0.01
			181.15	182.65	1.50	B00265204	1.2	0.018	-0.01	-0.01	0.03



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-305

From (m) To (m) Rocktype & Description

182.65 183.77 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

182.65 - 183.77: Or Ol. RHY hosted. Probably BA in matrix.

<<Min: 182.65 - 183.2 3% Min: Sphalerite>>
<<Min: 182.65 - 183.2 25% Min: Pyrite>>
<<Min: 182.65 - 183.2 2% Min: Pyrrhotite>>
<<Min: 182.65 - 183.2 5% Min: Magnetite>>
<<Min: 182.65 - 183.2 0.5% Min: Galena>>
<<Min: 182.65 - 183.2 8% Min: Chalcopryite>>
<<Min: 182.65 - 183.2 3% Min: Calcite>>
<<Min: 183.2 - 183.77 8% Min: Sphalerite>>
<<Min: 183.2 - 183.77 25% Min: Pyrite>>
<<Min: 183.2 - 183.77 0.5% Min: Galena>>
<<Min: 183.2 - 183.77 5% Min: Chalcopryite>>
<<Min: 183.2 - 183.77 3% Min: Calcite>>

183.77 186.07 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Min: 183.77 - 184.74 12% Min: Sphalerite>>
<<Min: 183.77 - 184.74 50% Min: Pyrite>>
<<Min: 183.77 - 184.74 0.25% Min: Magnetite>>
<<Min: 183.77 - 184.74 1% Min: Galena>>
<<Min: 183.77 - 184.74 2% Min: Chalcopryite>>
<<Min: 184.74 - 185.36 10% Min: Sphalerite>>
<<Min: 184.74 - 185.36 50% Min: Pyrite>>
<<Min: 184.74 - 185.36 1% Min: Galena>>
<<Min: 184.74 - 185.36 3% Min: Chalcopryite>>
<<Min: 185.36 - 186.07 15% Min: Sphalerite>>
<<Min: 185.36 - 186.07 60% Min: Pyrite>>
<<Min: 185.36 - 186.07 0.5% Min: Galena>>
<<Min: 185.36 - 186.07 4% Min: Chalcopryite>>

FMG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
182.65	183.20	0.55	B00265205	149	0.693	0.95	1.77	3.56

183.20	183.77	0.57	B00265206	135	1.7	0.34	1.27	3.51
--------	--------	------	-----------	-----	-----	------	------	------

FG

183.77	184.74	0.97	B00265207	249	2.17	0.52	2.22	6.74
--------	--------	------	-----------	-----	------	------	------	------

184.74	185.36	0.62	B00265208	222	1.76	0.27	2.43	8.1
185.36	186.07	0.71	B00265209	141	1.29	0.38	2.09	5.83



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-305

From (m) To (m) Rocktype & Description

186.07 187.52 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

186.07 - 187.52: Or OI. RHY hosted.

<<Min: 186.07 - 186.78 7% Min: Sphalerite>>
<<Min: 186.07 - 186.78 30% Min: Pyrite>>
<<Min: 186.07 - 186.78 5% Min: Pyrrhotite>>
<<Min: 186.07 - 186.78 0.5% Min: Galena>>
<<Min: 186.07 - 186.78 10% Min: Chalcopryrite>>
<<Min: 186.07 - 186.78 5% Min: Calcite>>
<<Min: 186.07 - 186.78 0.2% Min: Arsenopyrite>>
<<Min: 186.78 - 187.52 8% Min: Sphalerite>>
<<Min: 186.78 - 187.52 25% Min: Pyrite>>
<<Min: 186.78 - 187.52 10% Min: Pyrrhotite>>
<<Min: 186.78 - 187.52 5% Min: Magnetite>> DISS
<<Min: 186.78 - 187.52 2% Min: Galena>>
<<Min: 186.78 - 187.52 8% Min: Chalcopryrite>>
<<Min: 186.78 - 187.52 5% Min: Calcite>>
<<Alt: 186.07 - 187.42 Strong (Alt) Chlorite>>

187.52 188.43 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Min: 187.52 - 188.43 4% Min: Sphalerite>>
<<Min: 187.52 - 188.43 40% Min: Pyrite>>
<<Min: 187.52 - 188.43 2% Min: Galena>>
<<Min: 187.52 - 188.43 2% Min: Chalcopryrite>>
<<Min: 187.52 - 188.43 2% Min: Calcite>>

188.43 190.65 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Min: 188.43 - 189 8% Min: Sphalerite>>
<<Min: 188.43 - 189 60% Min: Pyrite>>
<<Min: 188.43 - 189 1% Min: Galena>>

FMG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
186.07	186.78	0.71	B00265211	222	1.77	2.49	2.64	4.38

186.78	187.52	0.74	B00265212	169	2.56	0.91	2.54	5.97
--------	--------	------	-----------	-----	------	------	------	------

FG

187.52	188.43	0.91	B00265213	281	2.71	0.97	2.44	8.85
--------	--------	------	-----------	-----	------	------	------	------

FMG

188.43	189.00	0.57	B00265214	201	1.75	0.34	2.72	11.3
--------	--------	------	-----------	-----	------	------	------	------

189.00	190.00	1.00	B00265215	343	3.02	0.84	2.21	8.89
190.00	190.65	0.65	B00265216	318	2.36	0.57	2.94	9.11



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-305

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 188.43 - 189 1% Min: Chalcopryrite>>											
<<Min: 188.43 - 189 1% Min: Calcite>>											
<<Min: 189 - 190 10% Min: Sphalerite>>											
<<Min: 189 - 190 65% Min: Pyrite>>											
<<Min: 189 - 190 1% Min: Galena>>											
<<Min: 189 - 190 3% Min: Chalcopryrite>>											
<<Min: 190 - 190.65 15% Min: Sphalerite>>											
<<Min: 190 - 190.65 50% Min: Pyrite>>											
<<Min: 190 - 190.65 2% Min: Galena>>											
<<Min: 190 - 190.65 1% Min: Chalcopryrite>>											
<<Alt: 188.75 - 197.3 Moderate (Alt) Cordierite>> Probably replaced Cl.											
190.65	191.86	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FG	190.65	191.28	0.63	B00265217	418	2.76	0.79 2.35 7.24
<<Min: 190.65 - 191.28 10% Min: Sphalerite>>											
<<Min: 190.65 - 191.28 50% Min: Pyrite>>											
<<Min: 190.65 - 191.28 1% Min: Chalcopryrite>>											
<<Min: 191.28 - 193.86 12% Min: Sphalerite>>											
<<Min: 191.28 - 193.86 40% Min: Pyrite>>											
<<Min: 191.28 - 193.86 3% Min: Galena>>											
<<Min: 191.28 - 193.86 2% Min: Chalcopryrite>>											
<<Min: 191.28 - 193.86 3% Min: Calcite>>											
191.86	193.20	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG	191.86	192.48	0.62	B00265219	240	2.85	0.49 2.14 7.17
<<Min: 191.86 - 193.20 10% Min: Sphalerite>>											
<<Min: 191.86 - 193.20 50% Min: Pyrite>>											
<<Min: 191.86 - 193.20 1% Min: Chalcopryrite>>											
<<Min: 193.20 - 195.78 10% Min: Sphalerite>>											
<<Min: 193.20 - 195.78 50% Min: Pyrite>>											
<<Min: 193.20 - 195.78 1% Min: Chalcopryrite>>											
193.20	195.78	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FG	193.20	193.86	0.66	B00265222	296	1.7	0.28 7.01 16.9
<<Min: 193.20 - 195.78 10% Min: Sphalerite>>											
<<Min: 193.20 - 195.78 50% Min: Pyrite>>											
<<Min: 193.20 - 195.78 1% Min: Chalcopryrite>>											
<<Min: 193.86 - 194.86 20% Min: Sphalerite>>											
<<Min: 193.86 - 194.86 35% Min: Pyrite>>											
<<Min: 193.86 - 194.86 5% Min: Galena>>											
<<Min: 193.86 - 194.86 3% Min: Chalcopryrite>>											
<<Min: 193.86 - 194.86 1% Min: Chalcopryrite>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-305

From (m)			To (m)			Rocktype & Description			From (m)			To (m)			Width			Sample			Ag PPM			Au PPM			Cu %			Pb %			Zn %		
<<Min: 193.86 - 194.86 2% Min: Calcite>>																																			
<<Min: 194.86 - 197.3 15% Min: Sphalerite>>																																			
<<Min: 194.86 - 197.3 50% Min: Pyrite>>																																			
<<Min: 194.86 - 197.3 1% Min: Galena>>																																			
<<Min: 194.86 - 197.3 1% Min: Chalcopyrite>>																																			
<<Min: 194.86 - 197.3 20% Min: Calcite>>																																			
195.78 197.30 OB										Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides										FG															
<<Struc: 195.98 - 195.99 Foliation>> SP lamination in MxSx																																			
197.30 205.15 RHY										undifferentiated rhyolite																									
197.3 - 205.15: Silicic bands																																			
<<Min: 197.3 - 205.15 5% Min: Pyrite>>																																			
<<Alt: 197.3 - 205.15 Strong (Alt) Muscovite>>																																			
205.15 205.78 OB										Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides										FMG															
205.15 - 205.78: Sharp contact. QZ vein at upper contact and RHY folded. Replacement style mineralisation in MAFi.																																			
<<Min: 205.15 - 205.78 10% Min: Sphalerite>>																																			
<<Min: 205.15 - 205.78 10% Min: Magnetite>>																																			
<<Min: 205.15 - 205.78 0.5% Min: Galena>>																																			
<<Min: 205.15 - 205.78 5% Min: Calcite>>																																			
<<Vein: 205.45 - 205.65 Quartz>> QZ																																			
<<Struc: 205.15 - 205.16 Contact>> upper contact RHY/MxSx																																			
205.78 228.80 MAFi										Mafic Intrusions (primarily green footwall mafic intrusion)																									
205.78 - 228.8: CA at contact upper and lower contact with MxSx but mainly low to very low CA.																																			
<<Min: 205.78 - 207.28 1% Min: Pyrite>>																																			
<<Min: 205.78 - 228.8 1% Min: Calcite>>																																			

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-305

From (m) To (m) Rocktype & Description

<<Alt: 205.78 - 210.81 Strong (Alt) Biotite>>

<<Alt: 205.78 - 228.8 Strong (Alt) Chlorite>> Bleached at contact with MxSx.

<<Struc: 205.78 - 205.79 Contact>> lower contact MxSx/MAFi

<<Struc: 213.08 - 213.09 dominant foliation>>

<<Struc: 221.69 - 221.7 dominant foliation>>

<<Struc: 222 - 222.01 dominant foliation>>

<<Struc: 225.15 - 225.16 dominant foliation>>

228.80 229.40 OD Brecciated sulphides

<<Min: 228.8 - 229.4 15% Min: Sphalerite>>

<<Min: 228.8 - 229.4 40% Min: Pyrite>>

<<Min: 228.8 - 229.4 3% Min: Galena>>

<<Min: 228.8 - 229.4 1% Min: Chalcopyrite>>

<<Min: 228.8 - 229.4 15% Min: Calcite>> and on FRA

<<Struc: 228.8 - 228.81 Contact>> Upper contact MAFi/MxSx

229.40 231.21 OA Magnetite bearing sulphides

<<Min: 229.4 - 231.21 12% Min: Sphalerite>>

<<Min: 229.4 - 231.21 60% Min: Pyrite>>

<<Min: 229.4 - 231.21 15% Min: Magnetite>> and as diss

<<Min: 229.4 - 231.21 3% Min: Galena>>

231.21 232.65 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Min: 231.21 - 233.5 10% Min: Sphalerite>>

<<Min: 231.21 - 233.5 60% Min: Pyrite>>

<<Min: 231.21 - 233.5 3% Min: Magnetite>>

<<Min: 231.21 - 233.5 1% Min: Galena>>

<<Min: 231.21 - 233.5 1% Min: Chalcopyrite>>

<<Min: 231.21 - 233.5 1% Min: Calcite>>

232.65 233.50 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

FMG

FMG

FG

FMG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
224.30	225.80	1.50	B00265238	0.4	0.007	-0.01	-0.01	0.01
225.80	227.30	1.50	B00265239	0.6	0.007	-0.01	-0.01	0.01
227.30	228.80	1.50	B00265241	2.1	0.02	0.03	0.03	0.03

228.80	229.40	0.60	B00265242	137	0.641	0.04	4.89	9.29
--------	--------	------	-----------	-----	-------	------	------	------

229.40	230.44	1.04	B00265243	135	1.08	0.44	6.21	9.79
230.44	231.21	0.77	B00265244	179	0.9	0.42	6.42	10

231.21	232.00	0.79	B00265245	158	0.698	0.16	5.09	7.87
--------	--------	------	-----------	-----	-------	------	------	------

232.00	232.65	0.65	B00265246	228	1.06	0.21	5.34	9.42
--------	--------	------	-----------	-----	------	------	------	------

232.65	233.50	0.85	B00265247	254	1.37	0.12	5.11	10.8
--------	--------	------	-----------	-----	------	------	------	------

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-305

From (m) To (m) Rocktype & Description

233.50 240.08 OI Heavily disseminated sulphides in host schist

FG

233.5 - 240.08: Semi-massive. No domain really match with. No more than 30 percent of sulfide. Matrix probably BA.

<<Min: 233.5 - 240.08 3% Min: Sphalerite>>

<<Min: 233.5 - 240.08 20% Min: Pyrite>>

<<Min: 233.5 - 240.08 8% Min: Magnetite>>

<<Min: 233.5 - 240.08 2% Min: Galena>>

<<Min: 233.5 - 240.08 3% Min: Chalcopryrite>>

<<Struc: 234.01 - 234.02 Foliation>> SP lamination.

240.08 241.88 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

FMG

<<Min: 240.08 - 241.88 12% Min: Sphalerite>>

<<Min: 240.08 - 241.88 40% Min: Pyrite>>

<<Min: 240.08 - 241.88 3% Min: Magnetite>>

<<Min: 240.08 - 241.88 6% Min: Galena>>

<<Min: 240.08 - 241.88 2% Min: Chalcopryrite>> and as diss

<<Struc: 240.1 - 240.11 Foliation>> SP lamination.

241.88 243.78 OD Brecciated sulphides

FMG

241.88 - 243.78: QZ-CA pods, GL-SP remobilized (large crystals)

<<Min: 241.88 - 246.98 10% Min: Sphalerite>>

<<Min: 241.88 - 246.98 30% Min: Pyrite>>

<<Min: 241.88 - 246.98 3% Min: Galena>>

<<Min: 241.88 - 246.98 2% Min: Chalcopryrite>>

<<Min: 241.88 - 246.98 15% Min: Calcite>>

<<Struc: 241.88 - 243.78 Shear>> Brecciated and fractured MxSx.

243.78 246.98 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

FG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
233.50	234.00	0.50	B00265248	303	2.19	0.34	3.44	4.72

234.00	235.07	1.07	B00265249	396	2.32	0.15	3.1	3.93
235.07	236.00	0.93	B00265251	387	1.82	0.13	2.74	3.69
236.00	237.00	1.00	B00265252	414	2.4	0.25	2.88	4.19
237.00	238.00	1.00	B00265253	372	2.22	0.22	2.42	3.26
238.00	239.00	1.00	B00265254	425	2.82	0.28	3.38	4.69
239.00	240.08	1.08	B00265255	335	2.32	0.27	3.85	5.5
240.08	241.00	0.92	B00265256	472	5.86	0.47	4.81	5.93

241.00	241.88	0.88	B00265257	380	2.59	0.2	5.47	10.9
--------	--------	------	-----------	-----	------	-----	------	------

241.88	242.70	0.82	B00265258	265	3.75	0.25	2.35	6.79
--------	--------	------	-----------	-----	------	------	------	------

242.70	243.78	1.08	B00265259	418	4.48	0.46	3.16	7.36
--------	--------	------	-----------	-----	------	------	------	------

243.78	244.60	0.82	B00265261	221	1.6	0.04	2.91	5.05
--------	--------	------	-----------	-----	-----	------	------	------

244.60	245.80	1.20	B00265262	243	4.42	0.31	2.2	5.17
245.80	246.98	1.18	B00265263	262	1.64	0.1	3.06	5.27



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-305

From (m) To (m) Rocktype & Description

246.98 250.50 RHY undifferentiated rhyolite light grey

246.98 - 250.5: Faulted. No strong evidence of felsic composition but good assumption.

<<Min: 246.98 - 258.5 1% Min: Pyrite>>

<<Alt: 246.98 - 254.5 Strong (Alt) Muscovite>> Possibly green-grey alteration associated with RHYi.

<<Struc: 246.98 - 254.5 Moderate (Alt) Fault>> Core loss, fault gouge, strong MU alteration, fractured.

250.50 254.00 RHYi Aphanitic Rhyolite (intrusion)

250.5 - 254: Intruded by late massive QZ vein.

<<Vein: 252 - 255 Quartz>> Multiple fractured massive QZ veins, usually encountered in RHY very rare in mafic unit.

254.00 258.50 RHY undifferentiated rhyolite

254 - 258.5: Strongly altered.

258.50 260.83 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

258.5 - 260.83: BA in matrix.

<<Min: 258.5 - 260 30% Min: Pyrite>>

<<Min: 258.5 - 260 10% Min: Pyrrhotite>>

<<Min: 258.5 - 260 1% Min: Magnetite>>

<<Min: 258.5 - 260 1% Min: Chalcopyrite>>

<<Min: 258.5 - 260.83 30% Min: Sphalerite>>

<<Min: 258.5 - 260.83 3% Min: Galena>>

<<Min: 260 - 260.8 15% Min: Pyrite>>

<<Min: 260 - 260.8 2% Min: Magnetite>>

<<Min: 260 - 260.8 2% Min: Chalcopyrite>> And as blebs

<<Min: 260 - 260.8 30% Min: Calcite>>

<<Min: 260.8 - 263.79 8% Min: Calcite>>

<<Struc: 260 - 260.01 Foliation>> Sulphide lamination.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
246.98	248.00	1.02	B00265264	119	0.914	0.17	0.07	0.11

248.00	249.00	1.00	B00265265	0.4	-0.005	-0.01	-0.01	0.02
249.00	250.50	1.50	B00265266	3	0.014	-0.01	0.03	0.04

250.50	252.00	1.50	B00265267	1.1	0.007	-0.01	-0.01	-0.01
--------	--------	------	-----------	-----	-------	-------	-------	-------

252.00	254.00	2.00	B00265268	0.4	-0.005	-0.01	-0.01	-0.01
254.00	255.50	1.50	B00265269	2.8	0.02	-0.01	0.02	0.02

255.50	257.00	1.50	B00265271	3347	26.86	5.57	0.48	0.66
257.00	258.50	1.50	B00265272	33.5	0.253	0.02	0.24	0.44
258.50	259.41	0.91	B00265273	611	3.01	0.25	7.27	10.9

259.41	260.20	0.79	B00265274	448	2.08	0.11	6.78	10.1
260.20	260.83	0.63	B00265275	461	2.99	0.06	6.64	11.8

MG



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-305

From (m) To (m) Rocktype & Description

260.83 262.00 OI Heavily disseminated sulphides in host schist

FG

260.83 - 262: Semi massive, containing MG but can not be considered as OA domain. .

<<Min: 260.83 - 262 10% Min: Sphalerite>>

<<Min: 260.83 - 262 10% Min: Magnetite>>

<<Min: 260.83 - 262 3% Min: Galena>>

<<Min: 260.83 - 263.79 0.1% Min: Chalcopryrite>>

262.00 263.79 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

MG

262 - 263.79: Maybe AS.

<<Min: 262 - 263.79 10% Min: Sphalerite>>

<<Min: 262 - 263.79 0.5% Min: Galena>>

263.79 264.50 OG Chalcopryrite rich sulphides

FG

263.79 - 264.5: CP/MG/PO

<<Min: 263.79 - 264.5 3% Min: Sphalerite>>

<<Min: 263.79 - 264.5 15% Min: Pyrrhotite>>

<<Min: 263.79 - 264.5 10% Min: Magnetite>>

<<Min: 263.79 - 264.5 50% Min: Chalcopryrite>>

264.50 270.10 RHY undifferentiated rhyolite

264.5 - 270.1: Containing PO and PY. At 267, fault gouge followed by 15 cm of MDSc. Speck of tourmaline.

<<Min: 264.5 - 300 1% Min: Pyrite>>

<<Min: 264.5 - 300 1% Min: Pyrrhotite>> Elongated in the foliation.

<<Min: 264.5 - 300 0.5% Min: Calcite>>

<<Alt: 264.5 - 270 Moderate (Alt) Muscovite>> Locally strong.

<<Alt: 270 - 300 Moderate (Alt) Muscovite>>

<<Alt: 270 - 300 Moderate (Alt) Chlorite>> and replacement.

270.10 271.46 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

270.1 - 271.46: Intermediate composition, altered CL, PO. CA in matrix.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
260.83	262.00	1.17	B00265276	380	1.96	0.43	5.97	6.5

262.00	263.20	1.20	B00265277	306	1.3	0.02	4.68	9.13
--------	--------	------	-----------	-----	-----	------	------	------

263.20	263.79	0.59	B00265278	203	0.757	0.1	2.32	6.78
--------	--------	------	-----------	-----	-------	-----	------	------

263.79	264.50	0.71	B00265279	133	2.72	5.43	0.12	8.6
--------	--------	------	-----------	-----	------	------	------	-----

264.50	266.00	1.50	B00265281	1.3	0.027	0.03	-0.01	0.02
--------	--------	------	-----------	-----	-------	------	-------	------

266.00	267.50	1.50	B00265282	0.6	-0.005	-0.01	-0.01	0.02
--------	--------	------	-----------	-----	--------	-------	-------	------

267.50	269.00	1.50	B00265283	0.6	-0.005	-0.01	-0.01	0.03
--------	--------	------	-----------	-----	--------	-------	-------	------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-305

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
271.46	300.00	RHY undifferentiated rhyolite									
271.46 - 300: No strong evidence but probably mostly volcanoclastic, zebra texture could be related to highly strained lapilli. E.O.H.											
<<Struc: 272.95 - 272.96 dominant foliation>>											
<<Struc: 282.2 - 282.21 dominant foliation>>											
<<Struc: 285 - 285.01 dominant foliation>>											
<<Struc: 293.65 - 293.66 dominant foliation>>											
<<Struc: 299.8 - 299.81 dominant foliation>>											
End of Hole @ 300											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-306

Prospect:	GP4F	Hole Type:	DD	Survey Type:	APS	Logged By:	Murray Jones
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Murray Jones	Date Logging Start:	21-Oct-15
UTM Easting	419500	Core Size:	NQ3	Azimuth:	180	Date Logging Complete:	23-Oct-15
UTM Northing:	6813355	Casing Pulled?:	Yes	Dip:	-85	Drill Company:	Geotech
UTM Elev. (m):	1339.5	Casing Depth (m):	8.75	Length (m):	246	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	20-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	23-Oct-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

Note: elevation taken from hand drawn section

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-85	180	0	180	APS	Murray Jones	20-Oct-15		<input checked="" type="checkbox"/>	Rig initially set up for K15-302, verified for 306
7	-78.1	154.9	22.5	177.4	ReflexEVS	Geotech	22-Oct-15	4854	<input checked="" type="checkbox"/>	
15	-83.1	157.6	22.5	180.1	ReflexEVS	Geotech	20-Oct-15	5859	<input checked="" type="checkbox"/>	
45	-82.7	160.6	22.5	183.1	ReflexEVS	Geotech	20-Oct-15	5760	<input checked="" type="checkbox"/>	
180	-79.5	151.5	22.5	174	ReflexEVS	Geotech	22-Oct-15	5728	<input checked="" type="checkbox"/>	
243	-77.6	159	22.5	181.5	ReflexEVS	Geotech	23-Oct-15	5789	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	8.75	OVB									
0 - 8.75: Mixed lithologies to 8.75, start of consistent core pieces, fit together											
8.75	59.70	RHYva									
8.75 - 59.7: relatively massive, variable and mottled colouring, RHYv, ash primarily, or flow banded, crystals not readily apparent as in updip hole, TO pblast present, QZ-TO veinlets, MAFi usually in faulted ground, bleaching occurs around faults as well, with MU(?), CA, CA veining, sporadic QZ veining in host is quite planar, not strongly schistose,											
<<Min: 8.75 - 19.35 5% Min: Calcite>> pervasive, diss'ns, fractures											
<<Min: 8.75 - 51.9 0.01% Min: Pyrite>> minor in fractures, QV's											
<<Min: 11.71 - 127.3 3% Min: Pyrrhotite>> diss'd bands, lenses common, also scattered in groundmass											
<<Min: 19.35 - 28.3 1% Min: Calcite>>											
<<Min: 28.3 - 38.5 5% Min: Calcite>> pervasive, fractures											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-306

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 51.9 - 81 1% Min: Pyrite>> small masses locally <<Min: 57 - 63.75 1% Min: Calcite>> <<Struc: 27.25 - 27.35 Weak (Alt) Vein>> QZ-TO veinlet, bleaching associated <<Struc: 28.5 - 28.51 Moderate (Alt) Contact>> contact of MAFi dykelet <<Struc: 33 - 34.6 Weak (Alt) Fault>> hosts dyke <<Struc: 38.5 - 40.2 Weak (Alt) Fault>> broken core, minimal gouge <<Struc: 54.8 - 56.7 Moderate (Alt) Fault>> broken, gouge, lost core 59.70 81.00 RHYc Rhyolite coherent volcanics grey-green VFG 59.7 - 81: massive, aphanitic, RHYc, aphyric?, fractures marked by CL, alt'n zone dominates. Focused on CY alt'n zone frm 81m. Locally, this rock is glassy, looks like RHYi, and the alteration is simialr to grey-green alteration possibly. <<Min: 61.4 - 81 0.5% Min: Pyrrhotite>> wisps and fine diss'ns throughout <<Alt: 61.4 - 81 Moderate (Alt) Muscovite>> core is bleached, irregularly, increasing slightly in intensity downhole, <<Alt: 70.05 - 81 Moderate (Alt) Chlorite>> conc'd in fractures, patches/clots associated with QZ-CB veins, seems to be hand-in-hand with MU <<Vein: 64 - 64.6 95% Quartz>> QZ vn, CL-TO-PY in fracs, <<Struc: 79.5 - 81 Strong (Alt) Fault>> mostly broken, lost core, gouge locally, contact between alt'n zones, 81.00 92.42 RHYc Rhyolite coherent volcanics cream FG 81 - 92.42: dyke?, looks very CY altered, tiny QE's (<1 mm) in groundmass. CL on fractures, diss'd PY, altered margins <<Min: 81 - 91.67 3% Min: Pyrite>> small masses, in fractures <<Min: 81 - 92.75 3% Min: Calcite>> patches and fractures <<Alt: 81 - 92.75 Moderate (Alt) Muscovite>> CY after MU?, bleached white, still hard, 1 mm QZ eyes scattered in groundmass <<Alt: 81 - 92.75 Weak (Alt) Chlorite>> fractures 92.42 111.71 RHYvi Lapilli tuff grey-brown FMG 92.42 - 111.71: heterogeneous unit, widely scattered QE's, local ash layers?, lapilli generally rounded, scattered, locally conc'd, cut by numerous MAFi dykes, local bleaching, gradational lower contact to ash tuff. <<Min: 92.75 - 96 3% Min: Calcite>> minor lenses <<Min: 96 - 101.8 10% Min: Calcite>> pervasive in dykes, fractures, lenses elsewhere <<Min: 101.8 - 111.71 1% Min: Pyrrhotite>> minor lenses, bands <<Min: 105.65 - 107.55 10% Min: Calcite>> in groundmass, CA veins <<Alt: 92.75 - 96 Moderate (Alt) Chlorite>> <<Alt: 96.3 - 199 Moderate (Alt) Garnet>> in bands with BI <<Alt: 96.3 - 199 Moderate (Alt) Biotite>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-306

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 93 - 98.14 Strong (Alt) Fault>> gouge, broken and lost core, especially between 93 and 96, dykes											
111.71	127.30	RHYva Coarse grained to ash tuff grey-brown FG									
111.71 - 127.3: minor lapilli locally, QE scattered, BI rich locally, more than RHYvl above, MAFi included											
<<Min: 111.71 - 127.3 0.5% Min: Pyrite>> diss'd blebs											
<<Min: 111.71 - 127.3 3% Min: Pyrrhotite>> lenses, bands,											
<<Min: 111.71 - 127.3 1% Min: Calcite>> diss'ns											
<<Alt: 126.98 - 131.81 Moderate (Alt) Muscovite>>											
<<Struc: 115.7 - 117.5 Strong (Alt) Fault>> mostly gouge, breccia											
127.30	148.67	RHYva Coarse grained to ash tuff grey-green FG	130.00	131.50	1.50	B00269411	1.5	-0.005	-0.01	0.03	0.2
127.3 - 148.67: lapilli in and out, scattered, flattened more in ths unit?											
<<Min: 127.3 - 131.81 3% Min: Pyrite>> in bands, fractures											
<<Min: 127.3 - 152.5 0.5% Min: Calcite>>											
<<Min: 130 - 131.81 1% Min: Sphalerite>> stringers, veinlets, wisps, diss'ns, scattered											
<<Min: 131.81 - 143.7 3% Min: Pyrite>> scattered blebs, diss'ns, fractures											
<<Min: 131.81 - 143.7 0.5% Min: Pyrrhotite>> scattered											
<<Min: 143.7 - 148.67 3% Min: Pyrrhotite>> in groundmass, blebs, in veins											
<<Alt: 137.98 - 143.7 Moderate (Alt) Muscovite>> pervasive but also in conc'd bands, soft, weathered?											
<<Struc: 127.3 - 130 Moderate (Alt) Fault>> gouge, broken											
<<Struc: 144.2 - 145.2 Moderate (Alt) Fault>> gouge parallel fol'n											
<<Struc: 145.86 - 145.87 Moderate (Alt) Foliation>> BI band											
148.67	157.56	RHYvl Lapilli tuff grey-brown FCG	148.67	149.67	1.00	B00269412	1	0.017	0.04	-0.01	0.05
148.67 - 157.56: abundant QE's in this unit, locally >10%, sharp contacts with fine grained RHYv at top and bottom with no mixing of QE's, lapilli coarsen and get more conc'd downhole, to being mixed with RHYc below154m,weak MU locally.											
Is this unit a sill? Weak alteration within it only means it came before the mineralization.											
<<Min: 148.67 - 152.7 1% Min: Sphalerite>> stringers, with PY											
<<Min: 148.67 - 152.7 1% Min: Chalcopyrite>> scattered in fractures, weak CL zones											
<<Min: 148.67 - 157.56 0.5% Min: Pyrite>>											
<<Min: 148.67 - 157.56 1% Min: Pyrrhotite>> in lenses, bands,											
<<Min: 152.5 - 157.56 3% Min: Calcite>> and fracture											
<<Alt: 148.67 - 151.5 Moderate (Alt) Chlorite>> original?, dyke at upper contact, seems to be darkening of core associated with dyke in general											
<<Alt: 156.91 - 158.2 Moderate (Alt) Chlorite>> locally pervasive near contact, related to stringer of proximal alt'n?											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-306

From (m) To (m) Rocktype & Description

157.56 170.00 RHYva Coarse grained to ash tuff grey-brown FG

157.56 - 170: possibly SED component, lot of BI in bands, dykes?, BI increasing toward mineralized zone, local deformation with PO/PY conc'ns, siliceous sections bx'd with sx stringers, TO common in groundmass in alteration zone

<<Min: 157.56 - 162.05 0.5% Min: Pyrite>> in fracs, bands
 <<Min: 157.56 - 162.05 5% Min: Pyrrhotite>> diss'd lenses, bands
 <<Min: 162.05 - 164.07 3% Min: Sphalerite>> wisps?
 <<Min: 162.05 - 164.7 10% Min: Pyrrhotite>> small masses, bands, interstices
 <<Min: 162.05 - 167 0.5% Min: Galena>>
 <<Min: 162.05 - 168.3 5% Min: Pyrite>> fractures, small blebs
 <<Min: 162.05 - 168.3 1% Min: Chalcopryite>> wisps along fol'n, in frac, with PO
 <<Min: 164.07 - 168.3 20% Min: Sphalerite>> and blebs along fol'n, stringers, fractures
 <<Min: 164.7 - 168.3 1% Min: Galena>> scattered blebs, diss'ns
 <<Min: 167.27 - 168.58 10% Min: Pyrrhotite>> small masses in groundmass
 <<Min: 168.3 - 168.58 20% Min: Sphalerite>> OB mxsx
 <<Min: 168.3 - 168.58 50% Min: Pyrite>> OB buckshot tx
 <<Min: 169.86 - 170.76 1% Min: Pyrite>>
 <<Min: 169.86 - 170.76 5% Min: Pyrrhotite>> frac
 <<Min: 169.86 - 170.76 3% Min: Chalcopryite>>
 <<Alt: 158.2 - 162.05 Moderate (Alt) Biotite>> conc'd bands, speckle in schist
 <<Alt: 162.05 - 164.7 Strong (Alt) Garnet>> scattered pblasts
 <<Alt: 162.05 - 164.7 Intense (Alt) Chlorite>>
 <<Alt: 162.05 - 164.7 Strong (Alt) Biotite>>
 <<Alt: 164.7 - 167.27 Strong (Alt) Muscovite>> in host where it shows up
 <<Alt: 164.7 - 170 Strong (Alt) Chlorite>> fracture controlled
 <<Alt: 164.7 - 170 Strong (Alt) Cordierite>> conc'd in bands or zones
 <<Alt: 164.7 - 170 Moderate (Alt) Biotite>>
 <<Alt: 168.58 - 171.5 Moderate (Alt) Muscovite>>
 <<Struc: 158.7 - 158.71 Moderate (Alt) Foliation>>
 <<Struc: 163.2 - 163.9 Moderate (Alt) Fault>> some gouge recovered but about 40 cm of core was lost
 <<Struc: 168.58 - 169.86 Moderate (Alt) Fault>> lost core

170.00 171.50 RHY undifferentiated rhyolite grey-brown FG

170 - 171.5: strongly altered, includes sx section

<<Min: 170.76 - 171 10% Min: Sphalerite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
158.41	159.91	1.50	B00269415	4.2	0.006	0.01	0.02	0.31

159.91	160.91	1.00	B00269416	15.4	0.015	0.05	0.25	2.11
160.91	162.05	1.14	B00269417	0.6	0.007	0.01	-0.01	0.06
162.05	163.10	1.05	B00269418	13.9	0.026	0.07	0.91	2.39
163.10	163.93	0.83	B00269419	10.5	0.101	0.07	0.78	1.77
163.93	164.70	0.77	B00269421	51.1	0.662	0.16	3.22	6
164.70	166.03	1.33	B00269422	34.9	0.224	0.13	0.85	6.31
166.03	167.22	1.19	B00269423	94.1	0.899	0.17	2.48	8.52
167.22	168.02	0.80	B00269424	230	1.68	0.21	4.96	8.77
168.02	168.58	0.56	B00269425	336	2.85	0.09	4.72	7.8
169.86	170.50	0.64	B00269426	13.9	0.121	0.03	0.19	0.18

170.50	171.00	0.50	B00269427	417	0.377	0.42	4.71	7.32
--------	--------	------	-----------	-----	-------	------	------	------

171.00	173.53	2.53	B00269428	3	1.97	0.02	0.02	0.04
--------	--------	------	-----------	---	------	------	------	------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-306

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 170.76 - 171 60% Min: Pyrrhotite>> CP fringing, Sp in stringers? <<Min: 170.76 - 171 3% Min: Galena>> <<Min: 170.76 - 171 5% Min: Chalcopyrite>> net texture? <<Min: 171 - 173.53 3% Min: Pyrite>> fracture controlled <<Alt: 170 - 171.5 Moderate (Alt) Chlorite>> <<Alt: 170 - 171.5 Strong (Alt) Biotite>> in tuff and porphyry <<Struc: 171 - 173.53 Strong (Alt) Fault>> heavy gouge, broken core, lost core 171.50 173.53 MAFi Mafic Intrusions (primarily brown footwall mafic intrusion) 171.5 - 173.53: strong fault, hosts MAKi dyke, completely rotted an broken, transition from altered and mineralized tuff to QE porphyry unit below.											
173.53	201.90	RHYvl Lapilli tuff	grey-brown	MG	173.53	174.60	1.07	B00269429	2.5	0.006	0.02 0.02 0.08
173.53 - 201.9: conc'n of lapilli varies, they are white, rounded and flattened into fol'n, small intervals of flow banded rock apparent, QZ eyes are prominent, FP present?, narrow, sporadic, BI-GA-weak CL bands with PO-PY and trace CP cut unit, stringer alteration related to mineralization? At btm cnt 201.9-202.9 90% core loss											
<<Min: 173.53 - 187.98 1% Min: Pyrite>> <<Min: 173.53 - 187.98 3% Min: Pyrrhotite>> in bands with BI-GA alt'n <<Min: 173.53 - 187.98 1% Min: Calcite>> and in bands with BI-GA <<Min: 187.98 - 192 3% Min: Calcite>> in fractures and veins <<Min: 187.98 - 199 1% Min: Pyrite>> diss'd in groundmass, Minor fractures, in bands with BI-GA <<Min: 192 - 199 1% Min: Calcite>> <<Alt: 173.53 - 187.98 Moderate (Alt) Muscovite>> grey, massive <<Alt: 173.53 - 187.98 Weak (Alt) Garnet>> in bands with BI, SX <<Alt: 173.53 - 187.98 Moderate (Alt) Biotite>> in bands with GA, sx <<Alt: 187.88 - 192 Moderate (Alt) Biotite>> <<Alt: 187.98 - 192 Moderate (Alt) Chlorite>> strong CL core to zone, associated with fault <<Alt: 196.3 - 199 Weak (Alt) Garnet>> scattered pblasts in BI bnads <<Alt: 196.3 - 199 Moderate (Alt) Biotite>> stringer zones? <<Struc: 189 - 194 Moderate (Alt) Fault>> mostly broken and lost core, alt'n associated <<Struc: 198 - 199.7 Moderate (Alt) Fault>> broken core and lost core <<Struc: 201.8 - 202.9 Strong (Alt) Fault>> gouge, broken core, core loss											
198.00	201.00	3.00	B00269431	1.5	-0.005	-0.01	0.04	0.12			
201.00	202.90	1.90	B00269432	6.8	0.015	-0.01	0.27	0.51			



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-306
From (m) To (m) Rocktype & Description
201.90 228.60 RHYva Coarse grained to ash tuff green FG

201.9 - 228.6: Minz interval CL BI alt oblit most of primary text, where less alt fg massive QZ-MS groundmass with disseminated PO after dissem mineral grains. Could fine grained tuff or perhaps RHYc, Alt often totally replaces primary rk type

<<Min: 202.9 - 204 5% Min: Pyrrhotite>>

<<Min: 202.9 - 204 2% Min: Pyrite>>

<<Min: 202.9 - 204 5% Min: Sphalerite>>

<<Min: 202.9 - 204 3% Min: Galena>>

<<Min: 204 - 205.9 4% Min: Pyrrhotite>>

<<Min: 204 - 205.9 2% Min: Pyrite>>

<<Min: 204 - 205.9 0.5% Min: Sphalerite>>

<<Min: 205.9 - 211.8 5% Min: Pyrrhotite>>

<<Min: 205.9 - 212.4 2% Min: Chalcopyrite>>

<<Min: 205.9 - 212.4 1% Min: Galena>>

<<Min: 205.9 - 212.4 1% Min: Pyrite>>

<<Min: 205.9 - 212.4 7% Min: Sphalerite>>

<<Min: 211.8 - 214.9 10% Min: Sphalerite>>

<<Min: 211.8 - 214.9 2% Min: Galena>>

<<Min: 211.8 - 214.9 10% Min: Pyrite>>

<<Min: 211.8 - 214.9 1% Min: Pyrrhotite>>

<<Min: 214.9 - 217.2 0.5% Min: Chalcopyrite>>

<<Min: 214.9 - 217.2 2% Min: Pyrrhotite>>

<<Min: 214.9 - 217.2 2% Min: Pyrite>>

<<Min: 214.9 - 217.2 5% Min: Sphalerite>>

<<Min: 217.2 - 218.7 5% Min: Pyrite>>

<<Min: 218.7 - 223.8 1% Min: Chalcopyrite>>

<<Min: 218.7 - 223.8 3% Min: Galena>>

<<Min: 218.7 - 223.8 5% Min: Pyrite>>

<<Min: 218.7 - 223.8 10% Min: Sphalerite>>

<<Min: 223.8 - 227.1 0.5% Min: Chalcopyrite>>

<<Min: 223.8 - 227.1 0.5% Min: Galena>>

<<Min: 223.8 - 227.1 5% Min: Pyrrhotite>>

<<Min: 223.8 - 227.1 3% Min: Sphalerite>>

<<Min: 227.1 - 228.6 4% Min: Pyrrhotite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
202.90	204.00	1.10	B00269433	18.4	0.022	0.07	1.12	1.48

204.00	205.00	1.00	B00269434	4.6	0.019	0.01	0.16	0.24
205.00	207.40	2.40	B00269435	18.7	0.031	0.06	0.69	2.02
207.40	208.90	1.50	B00269436	19	-0.005	0.09	0.88	2.69
208.90	210.40	1.50	B00269437	7.6	0.014	0.12	0.45	2.96
210.40	211.80	1.40	B00269438	6.6	-0.005	0.1	0.34	2.95
211.80	213.30	1.50	B00269439	7.5	0.02	0.2	0.3	4.08
213.30	214.90	1.60	B00269441	6.3	0.031	0.24	0.15	3.25
214.90	216.40	1.50	B00269442	5.5	0.047	0.27	0.06	2.48
216.40	217.20	0.80	B00269443	2.7	0.006	0.13	0.04	2.5
217.20	218.70	1.50	B00269444	1.1	-0.005	0.03	0.03	0.05
218.70	220.20	1.50	B00269445	16.7	0.043	0.29	1.02	4.03
220.20	221.70	1.50	B00269446	13.2	-0.005	0.1	1	5.28
221.70	222.70	1.00	B00269447	10.6	0.014	0.1	0.27	9.25
222.70	223.80	1.10	B00269448	36.2	0.031	0.12	1.77	7.89
223.80	225.30	1.50	B00269449	5.7	-0.005	0.07	0.28	2.45
225.30	226.80	1.50	B00269451	2.8	-0.005	0.03	0.06	0.83
226.80	228.30	1.50	B00269452	1.7	-0.005	-0.01	0.08	0.85

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-306

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
		<<Alt: 202.9 - 205.9 Weak (Alt) Muscovite>>									
		<<Alt: 202.9 - 205.9 Moderate (Alt) Chlorite>>									
		<<Alt: 202.9 - 205.9 Moderate (Alt) Biotite>>									
		<<Alt: 204 - 215 Weak (Alt) Garnet>>									
		<<Alt: 205.9 - 215.2 Intense (Alt) Chlorite>>									
		<<Alt: 205.9 - 215.2 Strong (Alt) Biotite>>									
		<<Alt: 208.9 - 209.2 Moderate (Alt) Cordierite>>									
		<<Alt: 215 - 220.5 Moderate (Alt) Garnet>>									
		<<Alt: 215.2 - 223.8 Strong (Alt) Chlorite>>									
		<<Alt: 215.2 - 223.8 Moderate (Alt) Biotite>>									
		<<Alt: 219.5 - 221.3 Strong (Alt) Cordierite>>									
		<<Alt: 222 - 228.6 Weak (Alt) Muscovite>>									
		<<Alt: 223.8 - 227.1 Weak (Alt) Chlorite>>									
		<<Alt: 223.8 - 227.1 Weak (Alt) Biotite>>									
		<<Struc: 214.5 - 218.5 Moderate (Alt) Fault>> gouge, broken core, core loss									
228.60	236.20	RHYvl Lapilli tuff			grey-brown						
228.6 - 236.2: variable text ranges from fine grained massive QZ-BI schist to lapilli/porphyry-like texture with 30-40% white-light green felsic lapilli (feldspars?) with diffuse boundaries (fuzzy). Potentially a feldspar porphyry. Variable strain causes flattening and streaking of the lapilli texture to create a more massive and featureless schist											
236.20	237.30	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
237.30	243.10	RHYvl Lapilli tuff			grey-brown						
237.3 - 243.1: same unit as above dyke											
243.10	246.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
End of Hole @ 246											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-307

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Roger Hulstein
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Roger Hulstein	Date Logging Start:	25-Oct-15
UTM Easting	415080.4	Core Size:	HQ3	Azimuth:	210	Date Logging Complete:	30-Oct-15
UTM Northing:	6815123.2	Casing Pulled?:	Yes	Dip:	-85	Drill Company:	Geotech
UTM Elev. (m):	1385	Casing Depth (m):	7.5	Length (m):	277	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	24-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	29-Oct-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

APS unit used for UTM N & E. LiDAR DEM used for elevation. Handheld UTM coordinates standing within 1m of collar are:415081E/6815122N.

DDH K15-307 was successful in intersecting the Krakatoa sulfide lens. The stratigraphic section above the Krakatoa is similar to that intersected by other nearby drill holes. The hanging wall to the Krakatoa lens consists of a felsic volcanogenic package with two thin mudstone units and two OB sulfide horizons (at 131.3 - 133.28m and 136.45 - 138.80m) which are overlain and separated by RHYcw. The Krakatoa lens at 182.75 - 203.0 (20.25m) is overlain by 36.25m of MAFi and has a footwall of FBX and sheared RHY from 203.0m to 212.05m followed by a thin unit of OB and minor internal rhyolite (212.05 - 214.05). The Krakatoa lens consists of OB from 182.75-193.0m with 5-15% sphalerite, minor galena and chalcopyrite (<5%) followed by OA to 189.9 with <5% sphalerite, up to 5% galena - possible sulphosalts. The OA is followed by OB from 189.9 - 203.0m. The remainder of the hole consists of felsic rocks with RHYc from 214.05 to 217.2m and RHY and RHYvl to EOH. In the upper part of the DDH significant faulting was encountered at 37.0-46.5m and 66.4-93.25m. Drill Hole lithology summary:

0 – 7.5m Casing

7.5 – 37.0m RHY/MAFi dykes

37.0m – 46.5m FBX, RHY and lesser Mafi clasts

46.5 – 49.4m RHY

49.4 – 53.0m MDSt & MDSc

53.0 – 66.4m RHY

66.4 – 93.25m FBX (composed of mostly RHY and gouge) & lesser sections of more competent RHY

93.25 – 115.0m RHY

115.0 – 116.78m MDSt and MDSc

116.78 – 127.5m RH

127.5 – 131.3m RHYcw

131.3 – 133.28m OB, 10-20% sphalerite

133.28 – 136.45m RHYcw

136.45 – 138.80m OB locally 10-20 sphalerite and minor disseminated magnetite

138.8 – 146.5m RHY with moderate chlorite alteration and minor disseminated sulfides.

146.5 - 193m OB 10-15+% sphalerite

199 - 203.2m OA galena bearing

203.2 - 212.1m FBX (mainly sheared RHY and some MAFi clasts)

212.1 - 214.05m OB, includes some minor massive Pyrrhotite sections

214.05 - 217.2m RHYc

217.2 - 246.0m RHY likely is RHYva

246.0 – 269.4m RHYvl

269.4 – 273.45m RHYvl (Bi-Chl alt)

273.45 – 276.75m MAFi and lesser RHYvl

276.75 – 277.0m RHYvl

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
-----------	-----	---------------------	----------------------	----------------------	-------------	-----------	-------------	-----------	-------------------	----------

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-307

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-85	209.84	0	209.84	APS	Roger Hulstein	24-Oct-15		<input checked="" type="checkbox"/>	measured approx +4 m elev.
19	-84.1	178.5	22.5	201	ReflexEVS	Geotech	25-Oct-15	5758	<input checked="" type="checkbox"/>	
46	-84.1	173.9	22.5	196.4	ReflexEVS	Geotech	25-Oct-15	5758	<input checked="" type="checkbox"/>	
70	-83.2	166.5	22.5	189	ReflexEVS	Geotech	25-Oct-15	5758	<input checked="" type="checkbox"/>	
94	-83.5	173.8	22.5	196.3	ReflexEVS	Geotech	25-Oct-15	5754	<input checked="" type="checkbox"/>	
119	-83.2	171.9	22.5	194.4	ReflexEVS	Geotech	25-Oct-15	5762	<input checked="" type="checkbox"/>	
148	-82.2	168	22.5	190.5	ReflexEVS	Geotech	25-Oct-15	5691	<input checked="" type="checkbox"/>	
169	-82.1	162.4	22.5	184.9	ReflexEVS	Geotech	25-Oct-15	5692	<input checked="" type="checkbox"/>	
194	-82.4	158.8	22.5	181.3	ReflexEVS	Geotech	25-Oct-15	5661	<input checked="" type="checkbox"/>	
220	-82.2	164.5	22.5	187	ReflexEVS	Geotech	25-Oct-15	5846	<input checked="" type="checkbox"/>	
250	-79	172.5	22.5	195	ReflexEVS	Geotech	25-Oct-15	5799	<input checked="" type="checkbox"/>	
277	-77.3	174.9	22.5	197.4	ReflexEVS	Geotech	25-Oct-15	5818	<input checked="" type="checkbox"/>	E.O.H. at 277m

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	7.50	CASN Casing									
7.50	9.80	RHYva Coarse grained to ash tuff									
<<Min: 7.5 - 9.8 3% Min: Calcite>>											
<<Alt: 7.5 - 9.8 Weak (Alt) Biotite>>											
9.80	10.40	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<<Min: 9.8 - 10.4 15% Min: Calcite>> mafic dyke											
<<Alt: 9.8 - 10.4 Moderate (Alt) Biotite>> mafic dyke											
10.40	24.62	RHYva Coarse grained to ash tuff									
<<Min: 10.4 - 20.6 5% Min: Calcite>>											
<<Min: 10.4 - 24.68 0.1% Min: Pyrite>>											
<<Min: 13 - 24.68 0.1% Min: Pyrrhotite>>											
<<Min: 20.6 - 22.4 10% Min: Calcite>>											
<<Min: 22.4 - 28.15 5% Min: Calcite>> dis and											
<<Vein: 21.3 - 24.65 5% Quartz-Tourmaline 20 deg. >>											
<<Struc: 10.6 - 10.8 Moderate (Alt) Fault>> gouge and brx on foliation											
<<Struc: 12.9 - 13 Moderate (Alt) Fault>>											
<<Struc: 16 - 16.6 Moderate (Alt) Fault>> broken core, minor gouge											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-307

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 19.7 - 20.7 Moderate (Alt) Fault>> broken core, minor gouge, lower fault contact with parallel 20cm mafic dyke <<Struc: 21.1 - 21.25 Moderate (Alt) dominant foliation>> poorly developed foliation <<Struc: 21.25 - 21.65 Moderate (Alt) Vein>> 1-2 cm wide qtz tour vein <<Struc: 21.25 - 21.65 Moderate (Alt) dominant foliation>> <<Struc: 21.65 - 22 Moderate (Alt) dominant foliation>> <<Struc: 22.4 - 23 Moderate (Alt) Fault>> broken core, minor gouge, along foliation											
24.62	28.15	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
24.62 - 28.15: sericite altered, flow banded, 'peperite' like textures											
<<Min: 24.67 - 28.18 1% Min: Pyrrhotite>> <<Min: 24.68 - 28.18 1% Min: Pyrite>>											
28.15	29.70	RHYva Coarse grained to ash tuff									
<<Min: 28.15 - 29 5% Min: Calcite>> <<Min: 28.18 - 29.7 3% Min: Pyrite>> and dis <<Min: 28.18 - 29.7 2% Min: Pyrrhotite>> and dis <<Min: 29 - 34 0.5% Min: Pyrrhotite>> <<Min: 29 - 34 20% Min: Calcite>> mafic dyke <<Alt: 29.6 - 34 Moderate (Alt) Biotite>> mafic dyke <<Struc: 29 - 30 Moderate (Alt) dominant foliation>>											
29.70	34.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
29.7 - 34: calcareous - 20%?											
<<Struc: 29.7 - 29.7 Moderate (Alt) Contact>> <<Struc: 33.7 - 37 Moderate (Alt) Fault>> broken core, minor gouge on both low and high angle fractures											
34.00	37.00	RHY undifferentiated rhyolite									
34 - 37: Sheeared and broken, sections with silic bands - could have been a RHYc or RHYcw.											
<<Min: 34 - 40.5 0.25% Min: Pyrrhotite>> patchy diss <<Min: 34 - 41.5 10% Min: Calcite>> most calcite in mafic clasts in fault zone <<Min: 34 - 46.5 0.25% Min: Pyrite>> patchy diss <<Alt: 34 - 53 Weak (Alt) Muscovite>> sericite											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-307

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
37.00	46.50	FBX Fault Breccia									
37 - 46.5: Fault Zone; brecciated and sheared at low angles to CA. RHY and MAFi clasts. Strong sericite alteration and clay on fractures shears nand in matrix.											
<<Min: 41.5 - 46.5 3% Min: Calcite>>											
<<Struc: 37 - 46 Strong (Alt) Fault>> gouge zones and shear planes at low angles (00-30 deg) to CA											
<<Struc: 40 - 40.1 Weak (Alt) Fault>> approximates MAFi dyke 'clast' contact as well											
<<Struc: 46 - 49 Moderate (Alt) dominant foliation>> low angle fracture -shear planes with clay and sericite cosscutting foliation											
46.50	49.40	RHY undifferentiated rhyolite									
46.5 - 49.4: uncertain protolith, cut by <20cm mafic dyke.											
<<Min: 46.5 - 49 5% Min: Calcite>>											
<<Min: 46.5 - 51.7 0.5% Min: Pyrite>>											
<<Min: 49 - 54.6 3% Min: Calcite>>											
<<Struc: 49 - 50 Moderate (Alt) Fault>>											
49.40	51.70	MDSt Rhyolite tuff dominant mudstone									
49.4 - 51.7: original protolith uncertain - could have been MDSw											
<<Struc: 50 - 60 Moderate (Alt) dominant foliation>> Foliation with parallel spaced (0.5-1cm) fractures with clay - sericite coatings. Cross cut by low angle fractures and shears.											
<<Struc: 50 - 66 Weak (Alt) Shear>> fracture - shear planes with clay - sericite - gouge cross cutting foliation at low angles (00 - <45 deg to CA).											
51.70	53.00	MDSc Carbonaceous dominant mudstone									
51.7 - 53: missing core so exact contacts uncertain, lower 30cm is MDSt.											
<<Min: 51.7 - 53 2% Min: Pyrite>> and blebs											
53.00	66.40	RHY undifferentiated rhyolite									
53 - 66.4: dominantly foliated at ~60 deg with parallel shear - gouge planes, locally crosscut by low angle 15-30 degree shear - gouge planes.											
<<Min: 53 - 54 1% Min: Pyrite>>											
<<Min: 53 - 61 1% Min: Pyrrhotite>>											
<<Min: 54.6 - 70 5% Min: Calcite>>											
<<Min: 61 - 69.2 1% Min: Pyrite>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-307

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<div><<Alt: 53 - 73 Moderate (Alt) Muscovite>> sericite associated with faulting</div> <div><<Vein: 53.5 - 53.7 50% Quartz-Tourmaline>></div> <div><<Vein: 57.1 - 57.5 20% Quartz-Tourmaline 20 deg. >></div> <div><<Struc: 66 - 93.25 Strong (Alt) Fault>> Broad fault zone, numerous gouge zones, sections less faulted but still strongly fractured, sheared and or brecciated.</div>											
66.40	72.00	FBX Fault Breccia grey-green	69.20	70.70	1.50	B00269755	-0.3	-0.005	-0.01	-0.01	-0.01
66.4 - 72: Fault zone, brecciated strongly sheared at low angles to CA with clay gouge and strong green sericite alteration. 69.2-72.6 Pyritic clasts and pyritic grey clay gouge											
<div><<Min: 69.2 - 73.8 5% Min: Pyrite>> pyritic gouge bands, pyrite stringers and pyritic clasts (OB?)</div> <div><<Min: 70 - 74 1% Min: Calcite>></div>											
72.00	76.60	RHY undifferentiated rhyolite grey-green	70.70	72.00	1.30	B00269756	0.5	-0.005	-0.01	-0.01	-0.01
72 - 76.6: sheared (approx 45-60 degree to CA) strong sericite alteration.											
<div><<Min: 73.8 - 89.5 1% Min: Pyrite>> rare pyritic rhyolite clasts, trace diss fine grained pyrite.</div> <div><<Min: 74 - 89.5 5% Min: Calcite>> and diss</div> <div><<Alt: 73 - 93.25 Moderate (Alt) Muscovite>> sericite associated with faulting</div>											
76.60	89.50	FBX Fault Breccia grey-green	72.00	72.60	0.60	B00269757	1.3	-0.005	0.02	-0.01	-0.01
76.6 - 89.5: Brecciated and sheared MAFi dyke 80.27-80.5m. Almost all gouge zones 80-88m. Poor recovery throughout.											
89.50	90.20	FBX Fault Breccia dark grey	89.50	90.20	0.70	B00269759	1.3	0.033	-0.01	0.01	0.03
89.5 - 90.2: Brecciated pyritic (10% fine gr diss py) sericite altered rhyolite(?). Jigsaw type brx with sericite clay on shear partings and fractures. Looks like a sheared crackle breccia....											
<div><<Min: 89.5 - 90.2 10% Min: Pyrite>> approaching appearance of weak Ol.</div> <div><<Min: 89.5 - 90.2 0.5% Min: Calcite>></div>											
90.20	93.25	FBX Fault Breccia grey-green									
90.2 - 93.25: Sheared (10-15 deg to CA) clay gouge and crushed schist.											
<div><<Min: 90.2 - 93.25 1% Min: Pyrite>></div> <div><<Min: 90.2 - 93.25 3% Min: Calcite>></div>											
93.25	115.00	RHY undifferentiated rhyolite grey-green									
93.25 - 115: 100.5-102.5: silic bands. Unit strongly sheared along foliation (approx 55 deg) and cross cutting shear planes - faults (avg 45 deg). Lowermost 20cm has weak MDS. Lower contact is a 10cm gougry fault zone. Fuchsite (teal colored) altered clasts.											
<<Min: 93.25 - 96.08 2% Min: Pyrite>> diss in patches and bands											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-307

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 96.08 - 101 1% Min: Pyrite>> and FD <<Min: 101 - 104 0.5% Min: Pyrite>> <<Min: 101 - 104 0.5% Min: Pyrrhotite>> <<Min: 104 - 105 5% Min: Pyrite>> dis in patches and bands. <<Min: 104 - 105.5 2% Min: Pyrite>> diss in patches <<Min: 105.5 - 107 1% Min: Pyrrhotite>> <<Min: 106 - 110.62 3% Min: Calcite>> <<Min: 107 - 115 1% Min: Pyrrhotite>> <<Min: 110.62 - 114.5 5% Min: Calcite>> <<Alt: 93.25 - 118 Weak (Alt) Muscovite>> sericite <<Vein: 98 - 98.12 100% Quartz 70 deg. >> crushed qtz with shear contacts at approx 60 deg <<Vein: 100.8 - 101.6 30% Quartz>> <<Struc: 93.25 - 98.65 Weak (Alt) Fault>> Intensity varies 2-4, narrow zones of clay gouge (6). Most shearing parallel to foliation at approx 45 deg but curvilinear and shears at 00 - 25 deg to CA also abundant. <<Struc: 99 - 102 Moderate (Alt) dominant foliation>> <<Struc: 102 - 103 Weak (Alt) Fault>> broken core, missing core <<Struc: 104 - 104.68 Weak (Alt) Fault>> broken core. Missing core <<Struc: 105.9 - 107.5 Weak (Alt) dominant foliation>> <<Struc: 114.8 - 115.5 Weak (Alt) Fault>> gouge along foliation, broken core											
115.00	116.15	MDSt Rhyolite tuff dominant mudstone									
115 - 116.15: good MDSt											
<<Min: 115 - 118 5% Min: Pyrrhotite>> diss, diss in bands <<Struc: 115 - 121 Moderate (Alt) dominant foliation>>											
116.15	116.30	MDS Sc Carbonaceous dominant mudstone									
116.30	116.78	MDSt Rhyolite tuff dominant mudstone									
116.3 - 116.78: good MDSt											
116.78	127.50	RHY undifferentiated rhyolite									
116.78 - 127.5: 124.0-126.6m: silic bands											
<<Min: 118 - 131.5 2% Min: Pyrite>>											
			126.00	127.50	1.50	B00269797	0.4	-0.005	-0.01	-0.01	-0.01



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-307

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 122 - 125 5% Min: Calcite>>											
<<Min: 125 - 130.5 3% Min: Calcite>>											
<<Alt: 118 - 126 Moderate (Alt) Muscovite>>											
<<Alt: 126 - 131.3 Weak (Alt) Muscovite>>											
<<Vein: 117.3 - 118.2 50% Quartz>>											
<<Struc: 117 - 121.9 Moderate (Alt) Fault>>			numerous zone of missing core, broken core, gouge along foliation,								
<<Struc: 121 - 126 Moderate (Alt) dominant foliation>>											
<<Struc: 123.9 - 124 Moderate (Alt) dominant foliation>>			narrow (<1cm) gouge zones on fol								
127.50	131.30	RHYcw Curdy textured-flow banded grey-green (flows, subvolcanics)	127.50	128.50	1.00	B00269778	1	0.022	0.01	-0.01	-0.01
<<Min: 131.2 - 132.3 5% Min: Calcite>>			patchy, in laminations								
<<Struc: 128.6 - 128.9 Moderate (Alt) dominant foliation>>			gouge - crush zone								
<<Struc: 130 - 131 Moderate (Alt) >>			spaced cleavage crenulating banded RHY, APC likely parallel to DFOL								
131.30	133.28	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides CG	131.30	132.30	1.00	B00269782	125	0.467	0.41	3.05	9.12
131.3 - 133.28: 131.3-132.3m: up to 30+% Sp, averages 20%?, approx 5% dis galena. 132.3-133.0m: 5-15% sphalerite, 1-3% gn, up to 1% chalcopryrite. 133-133.28m: OI, heavy diss py along DFOL, minor sp&gl. 132.9-133.0m approx 20% cpy, 1-5% po.											
<<Min: 131.3 - 132.3 20% Min: Sphalerite>>			132.30	133.28	0.98	B00269783	130	1.17	0.85	3.02	8.66
<<Min: 131.3 - 132.3 40% Min: Pyrite>>											
<<Min: 131.3 - 132.3 5% Min: Galena>>											
<<Min: 132.2 - 133.28 5% Min: Chalcopryrite>>			blebs and dis								
<<Min: 132.3 - 133.28 15% Min: Sphalerite>>											
<<Min: 132.3 - 133.28 50% Min: Pyrite>>											
<<Min: 132.3 - 133.3 3% Min: Galena>>											
<<Struc: 133 - 133.28 Moderate (Alt) dominant foliation>>			lamin sulfides								
133.28	136.45	RHYcw Curdy textured-flow banded grey-green (flows, subvolcanics)	133.28	134.50	1.22	B00269784	6.2	0.032	0.02	0.1	0.44
<<Min: 133.28 - 133.9 5% Min: Pyrite>>			134.50	136.00	1.50	B00269785	0.6	0.005	-0.01	-0.01	0.01
<<Min: 133.7 - 136.3 5% Min: Calcite>>			136.00	136.45	0.45	B00269786	2	0.015	-0.01	0.05	0.06
<<Min: 133.9 - 136.45 2% Min: Pyrite>>											
<<Alt: 133.28 - 136.45 Weak (Alt) Muscovite>>											
<<Struc: 133.28 - 133.28 Strong (Alt) Contact>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-307

From (m)			To (m)			Rocktype & Description			From (m)			To (m)			Width			Sample			Ag PPM			Au PPM			Cu %			Pb %			Zn %		
<<Struc: 133.28 - 133.5 Moderate (Alt) dominant foliation>> banded rhyolite																																			
<<Struc: 133.6 - 133.65 Weak (Alt) Fault>> minor gouge on shear plane																																			
<<Struc: 134 - 136 Moderate (Alt) dominant foliation>>																																			
136.45 138.80 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides FMG																																			
136.45 - 138.8: 137.2-137.8: two 15-20cm sections with diss magnetite. 136.45-138.8: Unit averages 15% dis sph.																																			
<<Min: 136.45 - 137.2 1% Min: Calcite>>																																			
<<Min: 136.45 - 138.8 20% Min: Sphalerite>>																																			
<<Min: 136.45 - 138.8 55% Min: Pyrite>>																																			
<<Min: 136.45 - 138.8 3% Min: Galena>>																																			
<<Min: 136.45 - 138.8 1% Min: Chalcopryite>> and as blebs																																			
<<Min: 137 - 137.8 8% Min: Magnetite>>																																			
<<Min: 137.2 - 138.8 5% Min: Calcite>> and as blebs																																			
138.80 145.30 RHY undifferentiated rhyolite grey-green																																			
138.8 - 145.3: Highly strained.																																			
<<Min: 138.8 - 142 3% Min: Calcite>>																																			
<<Min: 138.8 - 145.3 2% Min: Pyrite>>																																			
<<Min: 142.7 - 142.75 1% Min: Sphalerite>> 1-2 qtz - calcite vein with diss sp, gl and py																																			
<<Alt: 138.8 - 142.25 Weak (Alt) Muscovite>>																																			
<<Vein: 143.55 - 145.6 40% Quartz>> Trace diss coarse grained sphalerite.																																			
<<Struc: 140 - 143 Moderate (Alt) dominant foliation>>																																			
<<Struc: 144.9 - 145 Moderate (Alt) Foliation>> parallel to foliaform qtz vein																																			
<<Struc: 145.15 - 145.25 Moderate (Alt) Foliation>>																																			
145.30 181.75 MAFi Mafic Intrusions (primarily footwall mafic intrusion) green																																			
145.3 - 181.75: Locally more coarse grained gabbroic textures, ie. 159.7-166m.																																			
<<Min: 145.3 - 146.6 5% Min: Pyrite>> heavy diss bands																																			
<<Min: 145.3 - 146.6 0.2% Min: Chalcopryite>> In qtz veinlets																																			
<<Min: 146.5 - 152.75 10% Min: Calcite>> and veinlets																																			
<<Min: 150 - 155.25 0.1% Min: Pyrite>>																																			
<<Min: 152.75 - 155.25 2% Min: Calcite>>																																			

136.45	137.20	0.75	B00269787	220	1.26	0.17	3.68	10.2
--------	--------	------	-----------	-----	------	------	------	------

137.20	138.80	1.60	B00269788	171	1.17	0.12	4.12	12.7
--------	--------	------	-----------	-----	------	------	------	------

138.80	140.00	1.20	B00269789	1	0.037	-0.01	-0.01	0.03
--------	--------	------	-----------	---	-------	-------	-------	------

140.00	141.50	1.50	B00269791	2	0.014	-0.01	0.03	0.08
141.50	142.00	0.50	B00269792	0.5	0.005	-0.01	-0.01	0.01
142.00	144.00	2.00	B00269793	2.4	0.007	-0.01	0.02	0.06
144.00	145.30	1.30	B00269794	0.7	-0.005	-0.01	-0.01	0.02

145.30	146.50	1.20	B00269795	16	0.114	0.1	0.15	1.05
--------	--------	------	-----------	----	-------	-----	------	------

146.50	148.00	1.50	B00269796	3.1	0.01	-0.01	0.04	0.03
176.50	178.00	1.50	B00269798	1	-0.005	-0.01	-0.01	0.03
178.00	179.84	1.84	B00269799	1.1	0.007	-0.01	0.02	0.02
179.84	181.00	1.16	B00269801	9.5	0.034	-0.01	0.18	0.02
181.00	181.75	0.75	B00269802	12.9	0.047	0.01	0.19	0.04

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-307

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
		<<Min: 155.25 - 159.7 5% Min: Calcite>> plus diss and filling									
		<<Min: 156.5 - 159.7 2% Min: Pyrrhotite>> 0.2-1cm blebs po< locally replacina cubic pyrite. Po restricted to chl-epidote altered zone									
		<<Min: 159.7 - 163.8 2% Min: Calcite>>									
		<<Min: 163.8 - 167.15 5% Min: Calcite>> plus diss and filling									
		<<Min: 167.15 - 168.9 2% Min: Calcite>>									
		<<Min: 168.9 - 173 5% Min: Calcite>> plus as veinlets and fracture filling									
		<<Min: 173 - 181.75 15% Min: Calcite>> plus as blebs, veinlets and fracture filling									
		<<Min: 181.25 - 184 10% Min: Barite>> and as matrix to sulphides, mixed with qtz									
		<<Alt: 145.3 - 146.5 Moderate (Alt) Chlorite>> and diss, altered contact with Mafi									
		<<Alt: 145.3 - 146.5 Moderate (Alt) Biotite>>									
		<<Alt: 146.5 - 150.75 Moderate (Alt) Biotite>>									
		<<Alt: 146.5 - 150.75 Moderate (Alt) Chlorite>>									
		<<Alt: 150.75 - 152.75 Moderate (Alt) Chlorite>>									
		<<Alt: 150.75 - 152.75 Weak (Alt) Muscovite>> sericite-clay alt with late qtz-calcite veining and fracturing									
		<<Alt: 152.75 - 155.25 Moderate (Alt) Biotite>>									
		<<Alt: 152.75 - 155.25 Moderate (Alt) Chlorite>>									
		<<Alt: 155.25 - 159.7 Moderate (Alt) Silicification>>									
		<<Alt: 155.25 - 159.7 Moderate (Alt) Epidote>>									
		<<Alt: 155.25 - 159.7 Weak (Alt) Talc-serpentine>> with qtz									
		<<Alt: 155.25 - 159.7 Moderate (Alt) Chlorite>> not strained, with epidote									
		<<Alt: 159.7 - 167.15 Moderate (Alt) Biotite>>									
		<<Alt: 159.7 - 167.15 Moderate (Alt) Chlorite>>									
		<<Alt: 167.15 - 168.55 Weak (Alt) Biotite>>									
		<<Alt: 167.15 - 168.55 Moderate (Alt) Chlorite>> not strained, with epidote and minor actinolite									
		<<Alt: 167.15 - 168.55 Moderate (Alt) Epidote>>									
		<<Alt: 168.55 - 178.5 Weak (Alt) Biotite>>									
		<<Alt: 168.55 - 181.75 Moderate (Alt) Chlorite>>									
		<<Vein: 150.75 - 152.75 10% Calcite>> brecciated, calcite-qtz filling fractures.									
		<<Vein: 154.1 - 154.12 100% Carbonate-Biotite 65 deg. >> banded calcite-chlorite?-biotite? Veinlet									
		<<Vein: 155.25 - 159.7 10% Quartz-Chlorite 70 deg. >> irregular qtz-chl-talc? Vein-flooding - not strained									
		<<Vein: 167.15 - 168.55 3% Quartz>> minor qtz stringers with Chl-epidote alteration									
		<<Vein: 169 - 181.75 5% Quartz>> irregular calcite (minor qtz) stringers and infilling									
		<<Struc: 154 - 154.12 Moderate (Alt) Vein>> finely banded calcite-biotite?-chlorite? Vein									

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-307

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 155 - 155.25 Weak (Alt) Foliation>> <<Struc: 155.25 - 155.25 Moderate (Alt) Contact>> contact between strained and unstrained Mafi <<Struc: 159.3 - 159.35 Moderate (Alt) Vein>> <<Struc: 164.6 - 164.65 Weak (Alt) Vein>> qtz chl vein <<Struc: 170.6 - 170.7 Moderate (Alt) Fault>> 1cm wide gouge <<Struc: 173.6 - 175 Weak (Alt) Foliation>> <<Struc: 176.2 - 180.5 Weak (Alt) Fault>> numerous fracture and narrow gouge zones with variable orientations, 10-65 deg											
181.75	193.00	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	181.75	182.20	0.45	B00269803	148	2.15	0.2	2.36	8.99
181.75 - 193: Variable % (30-70%) fine to medium grained pyrite with variable % diss sphalerite and minor galena. 181.75-187.6; approx. average 10-15% diss and diss bands of sphalerite, and 2+(?) diss galena, rare chalcopryrite. 187.6 - 191.5m stronger bands of diss sphalerite and galena, overall 15-20% and 5% respectively, diss chalcopryrite more common. Gangue of silica (altered rhy and suspected barite. Suspected barite forms light grey wisps and irregular bands <1 - 2 cm throughout and as almost massive qtz - barite(?) at: 188.3-188.5m and 189.05-189.3m. Qtz- barite(?) locally contains coarse grained galena and visible medium grained chalcopryrite (both likely remobilized with soupy looking qtz-barite(?) veins - and filling. 181.75-189.3m; < or = 40% total sulphides, gangue of silica-rhy-clacite-barite. 86.8-187.6m; 40% Rounded stretched lithic clasts (RHY?) - approaching OI.											
<<Min: 181.75 - 187.6 10% Min: Sphalerite>> <<Min: 181.75 - 187.6 30% Min: Pyrite>> <<Min: 181.75 - 187.6 2% Min: Galena>> <<Min: 181.75 - 191.75 5% Min: Calcite>> <<Min: 184 - 189.3 20% Min: Barite>> light grey, hardness similar to calcite but no efferese, mixed with quartz? <<Min: 187.6 - 193 15% Min: Sphalerite>> <<Min: 187.6 - 193 30% Min: Pyrite>> <<Min: 187.6 - 193 5% Min: Galena>> <<Min: 187.6 - 193 3% Min: Chalcopryrite>> questionable percentage estimate! <<Min: 191.75 - 193 5% Min: Calcite>> <<Alt: 189 - 200.5 Weak (Alt) Chlorite>> chl blebs - likley replacing scattered cordierite <<Struc: 183.3 - 184 Moderate (Alt) dominant foliation>> banded sulphides <<Struc: 187 - 187.6 Moderate (Alt) dominant foliation>> banded sulphides <<Struc: 189.5 - 189.8 Weak (Alt) dominant foliation>> banded sulphides											
	182.20	183.00	0.80	B00269804	180	1.96	0.24	2.51	8.16		
	183.00	184.00	1.00	B00269805	142	2.15	0.27	2.44	8.21		
	184.00	185.00	1.00	B00269806	140	1.94	0.14	2.96	6.82		
	185.00	186.00	1.00	B00269807	208	2.08	0.12	4.16	8.19		
	186.00	187.00	1.00	B00269808	185	6.1	0.15	2.23	6.2		
	187.00	187.60	0.60	B00269809	244	3.93	0.36	2.1	5.04		
	187.60	188.60	1.00	B00269812	530	4.97	0.37	5.45	7.74		
	188.60	189.60	1.00	B00269813	373	3.91	0.29	4.98	6.29		
	189.60	190.15	0.55	B00269814	305	4.82	0.29	4.03	5.95		
	190.15	191.00	0.85	B00269815	457	2.2	0.25	9.44	12.4		
	191.00	192.00	1.00	B00269816	197	0.916	0.09	5.68	10.8		
	192.00	193.00	1.00	B00269817	221	1.28	0.33	4.53	7.33		



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-307
From (m) **To (m)** **Rocktype & Description**
193.00 195.58 OA Magnetite bearing sulphides FMG

193 - 195.58: 193-195.58: OA and DMG instead of all banded magnetite OA. Approx 10% diss magnetite, average 10% pyrrhotite (greater % at upper contact).

<<Min: 193 - 195.58 5% Min: Sphalerite>>

<<Min: 193 - 195.58 30% Min: Pyrite>>

<<Min: 193 - 195.58 10% Min: Pyrrhotite>>

<<Min: 193 - 195.58 10% Min: Magnetite>>

<<Min: 193 - 195.58 5% Min: Chalcopryrite>> and as blebs

<<Min: 193 - 198.9 2% Min: Calcite>>

195.58 195.94 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides FMG

195.58 - 195.94: massive py with 1cm bands of higher grade sphalerite and minor galena. <5% dis blebs nof chlorite. Siliceous gangue.

<<Min: 195.58 - 195.94 15% Min: Sphalerite>>

<<Min: 195.58 - 195.94 50% Min: Pyrite>>

<<Min: 195.58 - 195.94 5% Min: Galena>>

195.94 198.90 OA Magnetite bearing sulphides FMG

195.94 - 198.9: Approx. 70% banded py-mag-silica gangue, 15% po, 5% galena, 5% chalcopryrite, no visible sphalerite...

<<Min: 195.94 - 198.9 50% Min: Pyrite>>

<<Min: 195.94 - 198.9 15% Min: Pyrrhotite>>

<<Min: 195.94 - 198.9 10% Min: Magnetite>>

<<Min: 195.94 - 198.9 5% Min: Galena>>

<<Min: 195.94 - 198.9 5% Min: Chalcopryrite>>

<<Struc: 196.1 - 196.3 Moderate (Alt) dominant foliation>> banded sulfides

<<Struc: 196.5 - 198.9 Moderate (Alt) dominant foliation>> banded sulphides

198.90 200.20 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides FMG

198.9 - 200.2: 20% dis py, 5% cp blebs and dis, 5% mag, 5-10% dis po, 5% sp % 1% galena in silica gangue. Local qtz-clacite zones with rmobilized coarse grained sulfides - cp & po.

<<Min: 198.9 - 200.2 5% Min: Sphalerite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
193.00	194.00	1.00	B00269818	81.9	0.739	0.33	1.41	8.43

194.00	195.00	1.00	B00269819	112	1.17	0.82	1.85	8.39
195.00	195.58	0.58	B00269821	129	0.866	0.84	2.55	8.71

195.58	195.94	0.36	B00269822	154	0.795	0.24	3.21	8.59
--------	--------	------	-----------	-----	-------	------	------	------

195.94	197.00	1.06	B00269823	69.8	0.37	0.29	1.22	9.3
--------	--------	------	-----------	------	------	------	------	-----

197.00	198.00	1.00	B00269824	86	0.534	0.57	1.34	6.25
198.00	198.90	0.90	B00269825	88.2	0.514	0.52	1.34	6.21

198.90	199.50	0.60	B00269826	72.7	0.549	0.6	1.37	5.26
--------	--------	------	-----------	------	-------	-----	------	------

199.50	200.20	0.70	B00269827	118	0.925	1.51	1.96	4.83
--------	--------	------	-----------	-----	-------	------	------	------

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-307

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %	
<<Min: 198.9 - 200.2 20% Min: Pyrite>> locally semi massive												
<<Min: 198.9 - 200.2 10% Min: Pyrrhotite>>												
<<Min: 198.9 - 200.2 5% Min: Magnetite>>												
<<Min: 198.9 - 200.2 1% Min: Galena>>												
<<Min: 198.9 - 200.2 5% Min: Chalcopyrite>>												
<<Min: 198.9 - 201.8 2% Min: Calcite>>												
200.20	203.00	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG	200.20	201.20	1.00	B00269828	88.2	0.863	0.07	1.55	4.93
200.2 - 203: Massive and diss py and other sulfides in silica - calcite gangue. Blebs cp with qtz-calcite vein and fracture filling.												
<<Min: 200.2 - 203 10% Min: Sphalerite>>												
<<Min: 200.2 - 203 50% Min: Pyrite>>												
<<Min: 200.2 - 203 2% Min: Chalcopyrite>> and as dis												
<<Min: 201.8 - 203 5% Min: Calcite>>												
203.00	205.35	FBX Fault Breccia		203.00	204.00	1.00	B00269833	20	0.105	0.04	0.17	1.24
203 - 205.35: sheared at 25-55 deg to CA with gouge on lower angle shear. 203.0-203.4; chloritic and silicified FBX with minor py and cpy - cpy is qtz vein -n qtz filling. 203.4-205.35; mostly ground up RHY and gouge.												
<<Min: 203 - 203.4 5% Min: Pyrite>> and as blebs												
<<Min: 203 - 208 2% Min: Calcite>>												
<<Min: 203.4 - 205.35 2% Min: Pyrite>>												
<<Alt: 203 - 203.4 Weak (Alt) Silicification>>												
<<Alt: 203 - 203.4 Weak (Alt) Chlorite>>												
<<Alt: 203.4 - 211.7 Moderate (Alt) Muscovite>> sericite in fault zone												
<<Struc: 203 - 203 Moderate (Alt) Contact>> banded sulphide and contact with healed FBX												
<<Struc: 203 - 211.9 Intense (Alt) Shear>> Shear - gouge bands average between 25-50 deg.												
205.35	207.90	RHY undifferentiated rhyolite		205.35	206.92	1.57	B00269835	-0.3	-0.005	-0.01	-0.01	0.01
205.35 - 207.9: strongly sheared RHY and minor gouge on lower angle (15-25 deg) shears. Upper and lower contacts gradational and all part of the same fault zone from 203.5 - 212.05m.												
<<Min: 205.35 - 207.9 2% Min: Pyrite>> and as blebs												



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-307

From (m) To (m) Rocktype & Description

207.90 212.05 FBX Fault Breccia

207.9 - 212.05: Similar to above units from 203 - 207.88m. Mostly strongly sheared (at low angles 20-45%) RHY, brecciated rhy, often weakly chlorite altered, bands of clay gouge. 211.75-212.05; Sheared MAFi clast with pseudo leucoxene for last 10cm.

<<Min: 207.9 - 210.2 2% Min: Pyrite>>

<<Min: 208 - 211.75 5% Min: Calcite>>

<<Min: 210.2 - 211.6 5% Min: Pyrrhotite>> and as blebs

<<Min: 211.6 - 212.05 1% Min: Pyrite>>

<<Alt: 211.7 - 212.05 Moderate (Alt) Chlorite>>

<<Struc: 212 - 212 Strong (Alt) Shear>> shear contact

212.05 212.45 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

212.05 - 212.45: Massive pyrite, calcite gangue, 15% dis sp, 2% diss cp, 50% diss py

<<Min: 212.05 - 213.6 2% Min: Calcite>>

<<Min: 212.05 - 217.4 1% Min: Pyrite>>

<<Alt: 212.05 - 213.4 Weak (Alt) Chlorite>> Chl likely replacing cordierite.

<<Alt: 212.1 - 213.6 Weak (Alt) Cordierite>> chlorite replacing Cord.

<<Struc: 212.05 - 212.05 Moderate (Alt) Contact>> qtz sulphide contact

212.45 213.60 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

212.45 - 213.6: Massive pyrite, similar to previous unit but contains approx 10% po and 10% mg, locally weakly banded - approaching OA. Approx 5% chlorite blebs (chl after cordierite?). Lower contact over 10cm consists of banded pyrrhotite, muscovite - qtz and chlorite. Not an abrupt fault contact!

<<Alt: 213.4 - 213.9 Moderate (Alt) Muscovite>>

213.60 213.90 RHYc Rhyolite coherent volcanics

213.6 - 213.9: Silica bands with clay - sericite partings, sharp lower contact with 0.5cm bleached rhyolite.

<<Struc: 213.6 - 213.9 Moderate (Alt) dominant foliation>> sericite - clay partings in RHYc

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
207.90	209.00	1.10	B00269837	0.9	0.007	-0.01	-0.01	0.03

209.00	210.50	1.50	B00269838	1.7	0.017	-0.01	0.01	0.05
210.50	211.50	1.00	B00269839	-0.3	-0.005	-0.01	-0.01	0.02
211.50	212.05	0.55	B00269841	2.9	0.019	0.01	0.04	0.11

212.05	212.45	0.40	B00269842	122	0.43	0.39	2.76	9.27
--------	--------	------	-----------	-----	------	------	------	------

212.45	213.00	0.55	B00269843	65.9	0.353	0.5	1.63	10.6
--------	--------	------	-----------	------	-------	-----	------	------

213.00	213.60	0.60	B00269844	70.6	0.134	0.46	1.64	10.3
213.60	214.05	0.45	B00269845	21.7	0.014	0.18	0.33	5.5



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-307

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
213.90	214.05	OB									
		Wispy laminate, fine buckshot textured, non- magnetite bearing sulphides									
		dark grey									
		FMG									
213.9 - 214.05: Massive fine grained py - po with calcite gangue. Pyrite partly replacing 2cm size chloritized cordierite. Sharp contact at 50 deg with gougy FBX.											
<<Struc: 213.9 - 213.9 Moderate (Alt) Contact>> RHYc - OB contact											
<<Struc: 213.9 - 217.2 Moderate (Alt) dominant foliation>> sericite partings in RHYc											
214.05	217.20	RHYc									
		Rhyolite coherant volcanics									
214.05 - 217.2: silic bands with clay-sericite partings.											
<<Alt: 215 - 222 Moderate (Alt) Muscovite>> should be intensity five!											
217.20	246.00	RHY									
		undifferentiated rhyolite									
217.2 - 246: likely RHYva with minor sections of RHYvl. 233.6-240.0m diss tourmaline and minor cross cutting qtz-tourmaline veinlets.											
<<Min: 217.4 - 229 4% Min: Pyrrhotite>>											
<<Min: 220 - 233 2% Min: Calcite>> and fracture fill											
<<Min: 229 - 231.5 1% Min: Pyrite>>											
<<Min: 231.5 - 246 1% Min: Pyrrhotite>>											
<<Min: 233 - 235 5% Min: Calcite>>											
<<Min: 235 - 241.3 3% Min: Calcite>>											
<<Min: 241.3 - 257 5% Min: Calcite>>											
<<Alt: 222 - 231 Weak (Alt) Muscovite>>											
<<Alt: 223 - 231 Weak (Alt) Chlorite>> Original ?											
<<Alt: 223 - 231 Weak (Alt) Biotite>> Original?											
<<Alt: 231 - 253 Weak (Alt) Muscovite>>											
<<Vein: 233.6 - 233.8 50% Quartz-Tourmaline 28 deg. >> crosscutting qtz - tourmaline vein											
<<Vein: 237.6 - 241.2 3% Quartz-Tourmaline 40 deg. >> irregular crosscutting qtz - tour veinlets											
<<Vein: 239.2 - 239.25 75% Quartz-Pyrite 20 deg. >>											
<<Struc: 217.2 - 223 Moderate (Alt) dominant foliation>>											
<<Struc: 225 - 226 Moderate (Alt) dominant foliation>>											
<<Struc: 236.1 - 237.6 Moderate (Alt) Fault>> broken core, crush zones, minor gouge											
<<Struc: 239.9 - 241.1 Weak (Alt) Fault>> broken core, minor gouge											

214.05	215.57	1.52	B00269846	6.9	0.006	0.04	0.1	1.12
--------	--------	------	-----------	-----	-------	------	-----	------

215.57	216.50	0.93	B00269847	0.4	-0.005	-0.01	-0.01	0.02
216.50	217.20	0.70	B00269848	0.4	-0.005	-0.01	-0.01	0.02
217.20	218.50	1.30	B00269849	-0.3	-0.005	-0.01	-0.01	0.02

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-307

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 243.1 - 243.2 Weak (Alt) Fault>> broken core, minor gouge, parallel to foliation.											
246.00 269.40 RHYvl Lapilli tuff											
246 - 269.4: rare blue qtz phenocrysts											
<<Min: 246 - 261.5 3% Min: Pyrrhotite>>											
<<Min: 252 - 269.4 3% Min: Pyrite>> diss and diss in bands											
<<Min: 257 - 263 3% Min: Calcite>>											
<<Min: 261.3 - 273.45 0.5% Min: Pyrrhotite>> patches of diss											
<<Min: 269 - 273.45 5% Min: Calcite>>											
<<Alt: 253 - 273.45 Weak (Alt) Muscovite>> intensity should be a three and muscovite looks more like original than Metamorphic type.											
<<Struc: 250 - 260 Moderate (Alt) dominant foliation>>											
<<Struc: 254 - 260 Moderate (Alt) dominant foliation>>											
269.40 273.45 RHYvl Lapilli tuff											
269.4 - 273.45: Still dominently Qtz-mucs shist, but contains more mafic(?) clasts (gradational contact with above RHYvl), calcite blebs rimmed by chlorite and biotite are likely altered lapilli. Unit has a mottled grey- green - maroon hue.											
<<Alt: 269.6 - 273.45 Weak (Alt) Chlorite>> replacing clasts											
<<Alt: 269.6 - 273.45 Weak (Alt) Biotite>>											
<<Struc: 270.7 - 271.6 Moderate (Alt) dominant foliation>>											
273.45 276.75 MAFi Mafic Intrusions (primarily footwall mafic intrusion)											
273.45 - 276.75: 4 narrow mafic dykes with intervening RHYvl											
<<Min: 273.45 - 277 3% Min: Pyrrhotite>>											
<<Min: 273.5 - 277 20% Min: Calcite>>											
<<Alt: 273.45 - 277 Weak (Alt) Chlorite>>											
<<Alt: 273.45 - 277 Weak (Alt) Biotite>>											
<<Struc: 273.9 - 273.9 Moderate (Alt) Contact>> contact parallel to dominant foliation											
<<Struc: 273.9 - 274 Moderate (Alt) dominant foliation>>											
276.75 277.00 RHYvl Lapilli tuff											
276.75 - 277: Qtz-musc-biotite											
End of Hole @ 277											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-308

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Dillon Hume	Date Logging Start:	24-Oct-15
UTM Easting	415158.8	Core Size:	HQ	Azimuth:	210.22	Date Logging Complete:	27-Oct-15
UTM Northing:	6815053.6	Casing Pulled?:	Yes	Dip:	-79	Drill Company:	Geotech
UTM Elev. (m):	1407.012	Casing Depth (m):	6	Length (m):	194	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	23-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	26-Oct-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

K15-308 was drilled to test the up-dip extension of the Krakatoa lenses. Rods became stuck at ~194 m. ~60 m of the drill string was left down the hole, including the core barrel.
K15-308 drilled into a felsic hanging wall sequence, consisting of rhyolitic volcanoclastics, with minor ~1-5 m BI+CA schist layers, an apahanitic rhyolite intrusion, and a mudstone horizon from 88.9-90.5 m. Weak muscovite alteration became apparent at ~80 m. At ~94.7 m there was a major fault structure encountered that persisted to the end of the hole (194 m), with clasts and blocks of rhyolite, MAFi, and RHYi.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-79	210.22	0	210.22	APS	Geotech	23-Oct-15		<input checked="" type="checkbox"/>	
26	-79.7	188.1	22.5	210.6	ReflexEVS	Geotech	23-Oct-15	5827	<input checked="" type="checkbox"/>	
53	-76.6	191.6	22.5	214.1	ReflexEVS	Geotech	24-Oct-15	5880	<input checked="" type="checkbox"/>	
101	-76.4	184.1	22.5	206.6	ReflexEVS	Geotech	24-Oct-15	5810	<input checked="" type="checkbox"/>	
128	-75.6	189.4	22.5	211.9	ReflexEVS	Geotech	25-Oct-15	5817	<input checked="" type="checkbox"/>	
176	-74.8	186.1	22.5	208.6	ReflexEVS	Geotech	26-Oct-15	5813	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	6.00	CASN Casing									
6.00	8.30	RHYva Coarse grained to ash tuff									
6 - 8.3: Medium grey fine grained ash tuff with local CA lpl and disseminated BI											
<<Min: 6 - 8.3 5% Min: Calcite>>											
8.30	9.10	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
8.3 - 9.1: BI+CA schist. Either a meta-pelite or a lamprophyre. Minor BI cleavages in the wallrock on either side.											
<<Min: 8.3 - 9.1 15% Min: Calcite>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-308

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
9.10 11.80 RHYva Coarse grained to ash tuff 9.1 - 11.8: Medium grey fine grained ash tuff with local CA lpl and disseminated euhedral BI <<Min: 9.1 - 11.8 5% Min: Calcite>> <<Min: 9.1 - 15.5 0.5% Min: Pyrite>> <<Min: 9.1 - 15.5 3% Min: Pyrrhotite>>											
11.80 15.50 RHYvl Lapilli tuff 11.8 - 15.5: Light grey MS+CA+QZ schist, with CA+QZ lpl. <<Min: 11.8 - 15.5 10% Min: Calcite>>											
15.50 19.50 RHYc Rhyolite coherant volcanics 15.5 - 19.5: Light grey aphanitic rhyolite with pepperitic texture <<Min: 15.5 - 21.8 2% Min: Calcite>> <<Min: 15.5 - 22.3 1% Min: Pyrite>> <<Vein: 18.7 - 19.4 40% Quartz>> Massive QZ+CA veining											
19.50 21.80 RHYc Rhyolite coherant volcanics 19.5 - 21.8: Light grey banded siliceous QZ+MU schist											
21.80 22.30 RHYva Coarse grained to ash tuff 21.8 - 22.3: Medium grey fine grained ash tuff with local CA lpl <<Min: 21.8 - 22.3 5% Min: Calcite>>											
22.30 24.90 MAFi Mafic Intrusions (primarily footwall mafic intrusion) 22.3 - 24.9: BI+CA schist with ~90% BI. Either a metapelite or a lamprophyre. Sharp upper contact and a gradational lower contact, with BI-cleavages in wallrock. <<Min: 22.3 - 24.9 4% Min: Pyrite>> <<Min: 22.3 - 24.9 1% Min: Pyrrhotite>> <<Min: 22.3 - 24.9 5% Min: Calcite>> <<Struc: 23 - 23.3 Weak (Alt) Fault>> Highly fractured rock											
24.90 32.40 RHYva Coarse grained to ash tuff 24.9 - 32.4: Medium grey fine grained ash tuff with local CA lpl and disseminated euhedral BI <<Min: 24.9 - 32.1 3% Min: Pyrite>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-308

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 24.9 - 32.4 5% Min: Calcite>>											
<<Min: 32.1 - 34.1 1% Min: Pyrite>>											
32.40	34.10	RHYcw	Curdy textured-flow banded (flows, subvolcanics)								
32.4 - 34.1: Medium grey QZ+MU+CA schist. Locally silica banded. Locally lpl tuff texture.											
<<Min: 32.4 - 34.1 10% Min: Calcite>>											
34.10	50.70	RHYi	Aphanitic Rhyolite (intrusion)								
34.1 - 50.7: Pink to grey aphanitic rhyolite with abundant healed fractures. Lower contact grades from aphanitic rhyolite to silica banded rhyolite to fine grained matrix with local clasts of QZ+CA (Grading occurs from ~50-50.7 m).											
<<Min: 34.1 - 50.7 3% Min: Pyrite>>											
<<Min: 34.1 - 50.7 2% Min: Calcite>>											
<<Vein: 34.9 - 35.4 80% Quartz>> Massive QZ vein with disseminated blebs of CA											
<<Vein: 40.8 - 41.7 60% Quartz>> Massive QZ veins with disseminated blebs of MS, CA, PY, and GL.											
<<Struc: 34.1 - 34.8 Weak (Alt) Fault>> Highly fractured rock with local fault gouge											
<<Struc: 40.3 - 40.6 Weak (Alt) Fault>> Highly fractured rock with local fault gouge											
50.70	55.60	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
50.7 - 55.6: BI+QZ+CA schist. Fairly sharp contacts. Two layers of RHY from 51.3-51.65 m and 53.8-54.4 m.											
<<Min: 50.7 - 51.3 15% Min: Calcite>>											
<<Min: 50.7 - 71.3 0.5% Min: Pyrite>>											
<<Min: 51.3 - 51.65 5% Min: Calcite>>											
<<Min: 51.65 - 53.8 15% Min: Calcite>>											
<<Min: 53.8 - 54.4 5% Min: Calcite>>											
<<Min: 54.4 - 55.6 15% Min: Calcite>>											
<<Struc: 50.7 - 50.8 Weak (Alt) Fault>> Fault gouge											
<<Struc: 53.75 - 53.8 Weak (Alt) Fault>> Fault gouge											
55.60	57.20	RHYc	Rhyolite coherant volcanics								
55.6 - 57.2: Silica banding to lpl within greenish-grey QZ+MU groundmass											
<<Min: 55.6 - 71.3 3% Min: Calcite>>											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
57.20	71.30	RHYv Rhyolite volcanoclastic									
57.2 - 71.3: Medium-dark grey tuffaceous rhyolite. Locally defined as ash tuff and locally as lpl tuff, with either felsic clasts or BI+CL+QZ clasts.											
<<Struc: 59 - 60.5 Moderate (Alt) Fault>> Fault gouge breccia											
71.30	72.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
71.3 - 72: BI+CA+/-CL schist											
<<Min: 71.3 - 72 2% Min: Pyrrhotite>>											
<<Min: 71.3 - 72 15% Min: Calcite>>											
72.00	88.90	RHYv Rhyolite volcanoclastic									
72 - 88.9: Medium-dark grey tuffaceous rhyolite. Locally defined as ash tuff and locally as lpl tuff, with either felsic clasts or BI+CL+QZ clasts. Local BI+CA schist from 74.1-74.3 m.											
<<Min: 72 - 83.7 1% Min: Pyrrhotite>>											
<<Min: 72 - 88.9 3% Min: Calcite>>											
<<Min: 83.7 - 88.9 5% Min: Pyrrhotite>>											
<<Alt: 80 - 94.7 Weak (Alt) Muscovite>>											
<<Struc: 75.1 - 77 Weak (Alt) Fault>> Highly fractured rock with local fault gouge											
<<Struc: 80 - 83 Weak (Alt) Fault>> Highly fractured rock with local fault gouge											
<<Struc: 85.3 - 85.6 Weak (Alt) Fault>> Highly fractured rock with local fault gouge											
88.90	90.50	MDSr Rhyolite tuff dominant mudstone									
88.9 - 90.5: Dark grey graphitic schist. Poor core recovery.											
<<Min: 88.9 - 90.5 2% Min: Pyrite>> Highly fractured core makes it difficult to determine form											
<<Min: 88.9 - 90.5 1% Min: Calcite>>											
90.50	136.20	RHY undifferentiated rhyolite									
90.5 - 136.2: From 90.5-94.7 m, the unit is defined as a QZ+MU schist, with a spaced MU cleavage and strongly fractured. From 94.7-136.2 m, the unit is a strongly faulted QZ+MU schist with some cataclastic fabrics and highly variable foliation. Locally, there are fault											
<<Min: 90.5 - 94.7 3% Min: Pyrite>>											
<<Min: 90.5 - 94.7 3% Min: Calcite>>											
<<Min: 94.7 - 136.2 5% Min: Calcite>>											
<<Min: 94.7 - 188.6 0.5% Min: Pyrite>>											



Project:
KZK
Hole Number:
K15-308

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %									
<<Alt: 94.7 - 136.2 Strong (Alt) Muscovite>>																				
<<Vein: 115.8 - 115.9 20% Quartz>> Clast of massive QZ vein within fault zone																				
<<Vein: 116.3 - 117.3 20% Quartz>> Clasts of massive QZ+/-CA veins within fault zone																				
<<Vein: 118.5 - 118.6 30% Quartz>> Clast of massive QZ vein within fault zone																				
<<Struc: 92 - 94.7 Weak-Moderate (Alt) Fault>> Highly fractured rock with local fault gouge																				
<<Struc: 94.7 - 194 Strong (Alt) Fault>> Large fault/shear zone. Locally there are ductile and brittle textures.																				
<<Struc: 106.5 - 106.51 Foliation>> Foliation developed from brittle-ductile deformation																				
<<Struc: 112.8 - 112.81 Foliation>> Foliation developed from brittle-ductile deformation																				
<<Struc: 121 - 121.11 Foliation>> Foliation developed from brittle-ductile deformation																				
<<Struc: 125.1 - 125.11 Foliation>> Foliation developed from brittle-ductile deformation																				
<<Struc: 130.6 - 130.61 Foliation>> Foliation developed from brittle-ductile deformation																				
136.20	137.60	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)																	
136.2 - 137.6: Strongly faulted/sheared CL+BI+CA schist. A block within the larger fault zone. The upper and lower contacts show strong brittle/ductile fabrics, with a less sheared center.																				
<<Min: 136.2 - 137.6 15% Min: Calcite>>																				
<<Alt: 136.2 - 137.6 Strong (Alt) Chlorite>>																				
137.60	139.60	RHY	undifferentiated rhyolite																	
137.6 - 139.6: Strongly faulted rhyolite, with local clasts of MAFi. Variable foliation.																				
<<Min: 137.6 - 188.6 5% Min: Calcite>>																				
<<Alt: 137.6 - 188.6 Strong (Alt) Muscovite>>																				
139.60	141.20	RHYi	Aphanitic Rhyolite (intrusion)																	
139.6 - 141.2: Medium grey aphanitic block within larger fault structure. Strongly faulted unit.																				
141.20	155.60	RHY	undifferentiated rhyolite																	
141.2 - 155.6: Strongly faulted unit dominated by MU matrix supported and felsic clasts, with local chloritic matrix.																				
<<Struc: 141.8 - 141.81 Foliation>> Foliation developed from brittle-ductile deformation																				
<<Struc: 146.1 - 146.11 Foliation>> Foliation developed from brittle-ductile deformation																				
<<Struc: 149.4 - 149.41 Foliation>> Foliation developed from brittle-ductile deformation																				
<<Struc: 155.45 - 155.46 Foliation>> Foliation developed from brittle-ductile deformation																				
155.60	165.50	RHYi	Aphanitic Rhyolite (intrusion)																	
155.6 - 165.5: Strongly faulted RHYi																				

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-308

From (m)		To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Vein: 156.3 - 156.5		80% Quartz>>	Clast of massive QZ vein within fault zone									
<<Vein: 160.9 - 161		60% Calcite>>	Clast of massive CA vein within fault zone									
165.50	188.60	RHY	undifferentiated rhyolite									
165.5 - 188.6: Strongly faulted with rhyolitic clasts in matrix supported green MU												
<<Vein: 173.3 - 175.2		20% Quartz>>	Clasts of massive QZ vein within fault zone									
<<Struc: 170.8 - 170.81		Foliation>>	Foliation developed from brittle-ductile deformation									
<<Struc: 178.6 - 178.61		Foliation>>	Foliation developed from brittle-ductile deformation									
<<Struc: 178.8 - 178.81		Foliation>>	Foliation developed from brittle-ductile deformation									
<<Struc: 185.5 - 185.51		Foliation>>	Foliation developed from brittle-ductile deformation									
188.60	194.00	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)									
188.6 - 194: Strongly faulted/sheared CL+K-Spar+CA schist												
<<Min: 188.6 - 194		15% Min: Calcite>>										
<<Alt: 188.6 - 194		Strong (Alt) Chlorite>>										
<<Struc: 190.95 - 190.96		Foliation>>	Foliation developed from brittle-ductile deformation									
End of Hole @ 194												

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-309

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Florent Pons
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Sean Suttie	Date Logging Start:	26-Oct-15
UTM Easting	415154	Core Size:	HQ3	Azimuth:	210.08	Date Logging Complete:	01-Nov-15
UTM Northing:	6815159	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1410.5	Casing Depth (m):	9	Length (m):	306	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	25-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	31-Oct-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

This hole was drilled to test up dip continuity of Krakatoa lens from K15-292. Drilling successfully intersected upper lens (DT block) and lower krakatoa lens hosted with the mafic sill. Total mineralized width is ~17.6m. Unusual upper and lower contact wall rocks look similar to fine grained RHY, although intensely altered and hard to discern. Massive sulphide is dominated by OB, with abundant gangue throughout, including calcite, quartz, chlorite, dolomite and quartz +/- barite, +/- albite. Sulphide modal percentages are estimated within both lenses. Hole kept going because of extensive mafic sill in footwall, and patchy, uneconomic disseminated sulphides. Quartz eye bearing RHY in the footwall is consistent with other Krak holes and could be considered a lower marker horizon. Hangingwall succession is consistent with that of ABM with MAFI interbedded with RHYv+RHYc, with a gradation into more flow (RHYcw) dominated subunits downhole within proximity to the host MAFI.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	210.08	0	210.08	APS	Sean Suttie	25-Oct-15		<input checked="" type="checkbox"/>	
24	-61.2	189.9	22.5	212.4	ReflexEVS	Geotech	25-Oct-15		<input checked="" type="checkbox"/>	
54	-62.2	190.3	22.5	212.8	ReflexEVS	Geotech	28-Oct-15	5763	<input checked="" type="checkbox"/>	
84	-62.8	188.8	22.5	211.3	ReflexEVS	Geotech	28-Oct-15	5765	<input checked="" type="checkbox"/>	
114	-62.5	187.8	22.5	210.3	ReflexEVS	Geotech	29-Oct-15	5771	<input checked="" type="checkbox"/>	
144	-62.5	189.8	22.5	212.3	ReflexEVS	Geotech	29-Oct-15	5779	<input checked="" type="checkbox"/>	
174	-61.9	187.6	22.5	210.1	ReflexEVS	Geotech	29-Oct-15	5746	<input checked="" type="checkbox"/>	
204	-61.1	188.8	22.5	211.3	ReflexEVS	Geotech	30-Oct-15	5795	<input checked="" type="checkbox"/>	
234	-60	191.5	22.5	214	ReflexEVS	Geotech	30-Oct-15	5902	<input checked="" type="checkbox"/>	
264	-61.1	192.3	22.5	214.8	ReflexEVS	Geotech	30-Oct-15	5872	<input checked="" type="checkbox"/>	
294	-57.1	189.4	22.5	211.9	ReflexEVS	Geotech	31-Oct-15	5759	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	9.00	CASN Casing									



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-309

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
9.00	12.00	FBX									
		Fault Breccia									
9 - 12: Oxydized until 10.75m, QZ vein and heterogeneous RHY clasts.											
<<Struc: 9 - 12 Strong (Alt) Fault>> Fault breccia, oxidized.											
12.00	19.00	RHYva									
		Coarse grained to ash tuff									
		grey-green									
19.00	23.36	RHY									
		undifferentiated rhyolite									
		grey-green									
19 - 23.36: RHYva/RHYcw interbedded. Folded flow bands (crenulations), lapilli , peperitic texture. Repeated sequence.											
23.36	33.32	RHYva									
		Coarse grained to ash tuff									
		grey-green									
23.36 - 33.32: and lapilli. Narrow MAFi dyke from 39.30 to 29.54m, more lapillitic from 27.80 to 28.60 (weakly crenulated). QZ-CA vein, PY in fracture.											
<<Min: 23.36 - 57.38 0.5% Min: Pyrite>> and few patch.											
<<Min: 23.36 - 57.38 0.5% Min: Pyrrhotite>>											
<<Struc: 24.72 - 27.4 Moderate (Alt) Fault>> Multiple minor faults with clay gouge, poor recovery.											
33.32	38.40	RHYcw									
		Curdy textured-flow banded									
		(flows, subvolcanics)									
		grey-green									
33.32 - 38.4: Few QE. Folded, deformed, probably peperitic.											
38.40	39.54	RHYvi									
		Lapilli tuff									
		grey-green									
38.4 - 39.54: Strained,deformed. QZ veins.											
39.54	43.70	RHYcw									
		Curdy textured-flow banded									
		(flows, subvolcanics)									
		grey-green									
39.54 - 43.7: Fractured, PY veinlets fracture filled.											
43.70	45.37	RHYva									
		Coarse grained to ash tuff									
		grey-green									
43.7 - 45.37: Few lapilli.											
45.37	46.37	MAFi									
		Mafic Intrusions (primarily									
		footwall mafic intrusion)									
45.37 - 46.37: Dyke. BI phenos.											
46.37	47.48	RHYva									
		Coarse grained to ash tuff									
		grey-green									
46.37 - 47.48: Few lapilli.											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-309

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
47.48	49.54	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
47.48 - 49.54: BI, probably same composition than dyke at 45.37m.											
49.54	57.38	RHYvl	Lapilli tuff								
49.54 - 57.38: with ashes, CA replacement. Possibly RHYc, xtl locally (from 50 to 51.05m. QZ vein at lower contact.											
57.38	62.00	RHY	undifferentiated rhyolite								
57.38 - 62: RHY clasts. Fault gouge (grey clay), mostly gouge.											
<<Struc: 57.38 - 60.77 Strong (Alt) Fault>> Fault gouge, fault breccia, dominantly RHY clasts.											
62.00	64.87	RHYva	Coarse grained to ash tuff								
62 - 64.87: Few fault gouge..											
<<Struc: 64.67 - 71 Strong (Alt) Fault>> Fault breccia. MU/CL.											
<<Struc: 64.8 - 64.81 Vein>> Calcite vein.											
64.87	89.75	RHY	undifferentiated rhyolite								
64.87 - 89.75: Fault gouge and fault breccia, dominantly RHY. Mafic dyke preserved. Very fine grain PY vein. Brecciated RHY at upper contact. Could be silicic banded from 80.50 to 84.50m.											
<<Struc: 65 - 65.01 Crenulation cleavage>> Dominante fracture above major fault.											
<<Struc: 71 - 79.8 Strong (Alt) Fault>> Fault gouge dominantly.											
<<Struc: 79.8 - 86.2 Strong (Alt) Fault>> Fault breccia.											
<<Struc: 86.2 - 88.3 Strong (Alt) Fault>> Fault gouge.											
<<Struc: 88.3 - 89.75 Moderate (Alt) Fault>> Brecciated RHY.											
89.75	94.64	RHYva	Coarse grained to ash tuff								
89.75 - 94.64: Containing narrow mafic dyke CA rich. CA lapilli replacement. And in fracture.											
94.64	96.64	MDS	Rhyolite tuff dominant mudstone								
94.64 - 96.64: Weakly carbonaceous.											
<<Min: 94.64 - 140.72 0.5% Min: Pyrite>>											
<<Min: 94.64 - 140.72 0.5% Min: Pyrrhotite>>											
<<Struc: 96.25 - 102 Weak (Alt) Fault>> Multiple minor faults and narrow gouge.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-309

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
96.64	103.12	RHYvl Lapilli tuff									
96.64 - 103.12: Very rare QE so not notified as modifier. Locally angular lapilli,few PY patch or vein.CL in fracture.											
103.12	112.76	RHYv Rhyolite volcanoclastic									
103.12 - 112.76: Probably RHYvl with CL/MS halo around lapilli. Mafic dyke from 108.65 to 108.90m.											
112.76	129.71	RHYvl Lapilli tuff	114.61	115.58	0.97	B00265308	4.5	-0.005	-0.01	0.02	-0.01
112.76 - 129.71: Sericite/chlorite altered lapilli.											
<<Min: 125 - 140.72 6% Min: Calcite>> Ca +/- pervasive and associated with qtz-ca veinlets. 6-8%											
<<Alt: 121.8 - 152 Moderate (Alt) Muscovite>>											
<<Struc: 117.41 - 121.91 Moderate (Alt) Fault>> Multiple fault with gouge sandy-clay.											
<<Struc: 125.95 - 125.96 dominant foliation>>											
<<Struc: 129.3 - 129.31 dominant foliation>>											
<<Struc: 129.45 - 129.46 dominant foliation>>											
129.71	140.72	RHYva Coarse grained to ash tuff light grey	115.58	116.58	1.00	B00265309	-0.3	-0.005	-0.01	-0.01	-0.01
129.71 - 140.72: Light grey, homogeneous, coarse grained. Unit moderately foliated and weakly MU altered. Locally, we observe intervals comprising dismembered siliceous bands/ fragments, lapilli? 0.5-1% of Po, disseminated.											
<<Struc: 131.9 - 131.91 dominant foliation>>											
<<Struc: 133.3 - 133.31 Moderate (Alt) dominant foliation>>											
140.72	143.90	MDSw Coherent rhyolite flow with dark grey carbonaceous content	116.58	117.41	0.83	B00265311	-0.3	-0.005	-0.01	-0.01	0.01
140.72 - 143.9: Sequence of carbonaceous mudstone within coherent rhy flow. Alternation of thin carbonaceous bands, very fine grained, with siliceous bands. Unit microfolded and moderately crenulated. 5-6 % of Py (thin stringers and aggregates).											
<<Min: 140.72 - 143.5 5% Min: Pyrite>> Distributed as small aggregates, stringers, and also finely disseminated.											
<<Min: 140.72 - 143.5 0.5% Min: Pyrrhotite>>											
<<Min: 140.72 - 150.1 2% Min: Calcite>> Small blebs distributed within the matrix, also associated with siliceous bands and veinlets.											
<<Min: 143.5 - 155.5 0.5% Min: Pyrite>> Occuring as small aggregates and wisps.											
143.90	148.35	RHYcw Curdy textured-flow banded light grey (flows, subvolcanics)	140.72	142.00	1.28	B00265312	0.4	0.026	-0.01	0.02	0.01
143.9 - 148.35: Light grey, unit moderate to strongly foliated and MU altered. Moderately fractured. Comprising irregular and deformed siliceous bands, flow banded? 1% of PO disseminated within the matrix.											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-309

From (m)		To (m)		Rocktype & Description		From (m)		To (m)		Width		Sample		Ag PPM		Au PPM		Cu %		Pb %		Zn %	
<<Struc: 143.9 - 144 Strong (Alt) Fault>> Minor fault with clay gouge.																							
<<Struc: 147.55 - 148.35 Strong (Alt) Fault>> Fault with clay gouge.																							
148.35 156.00 RHY undifferentiated rhyolite grey																							
148.35 - 156: Light grey, unit moderate to strongly foliated and MU altered. Moderately fractured. Comprinsing irregular and deformed siliceous bands, flow banded? No strong evidence of flow banded texture, could be RHYcw.																							
148.35-152.2m: interval weakly carbonaceous,																							
<<Min: 150.1 - 155.3 4% Min: Calcite>> Small blebs distributed within the matrix, also associated with siliceous bands and veinlets.																							
<<Min: 155.3 - 166.3 2% Min: Calcite>> Small blebs distributed within the matrix, also associated with siliceous bands and veinlets.																							
<<Min: 155.5 - 160 2% Min: Pyrite>> Occuring as small aggregates and wisps.																							
<<Alt: 150.1 - 166.3 Strong (Alt) Muscovite>> Associated with strong foliation.																							
<<Struc: 149.6 - 149.61 dominant foliation>>																							
<<Struc: 150.5 - 156 Moderate (Alt) Fault>> Interval comprising multiple fault with clay gouge associated with moderate fracturation.																							
156.00 166.30 RHYcw Curdy textured-flow banded light grey (flows, subvolcanics)																							
156 - 166.3: Light grey, unit strongly foliated and MU altered. Moderately fractured. Comprising siliceous bands, parallel to the foliation, folded (crenulations). Flow banded texture well conserved.																							
160.05-160.42m: Interval crosscut by small RHYi, grey, aphanitic,																							
<<Min: 160 - 166.3 0.5% Min: Pyrite>>																							
<<Struc: 163 - 163.47 Strong (Alt) Fault>> Gouge fault.																							
166.30 167.90 OA Magnetite bearing sulphides MCG																							
166.3 - 167.9: Massive sulphides lens within RHYcw, sharp contact, magnetic. OA-MET4																							
<<Min: 166.3 - 167.9 3% Min: Sphalerite>> Small aggregates/blebs distributed as irregular bands/patches.																							
<<Min: 166.3 - 167.9 70% Min: Pyrite>> Massive sulphides.																							
<<Min: 166.3 - 167.9 0.5% Min: Chalcopyrite>> Disseminated as small blebs.																							
<<Min: 166.3 - 167.9 4% Min: Calcite>> Thin veinlets subconcordant.																							
167.90 180.20 RHYcw Curdy textured-flow banded light grey (flows, subvolcanics)																							
167.9 - 180.2: Light grey, fine grained, +/- homogeneous, strongly foliated and locally crenuled. Unit characterised by deformed siliceous banded parallel with foliation, which marked flow banded texture. Interval moderately MU altered. Weakly mineralised.																							



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-309

From (m) To (m) Rocktype & Description

<<Min: 167.9 - 180.2 1% Min: Pyrite>>

<<Min: 167.9 - 180.2 0.1% Min: Pyrrhotite>>

<<Min: 167.9 - 180.2 2% Min: Calcite>> Thin veinlets subconcordant.

<<Alt: 167.9 - 180.2 Moderate (Alt) Muscovite>> moderate to strong alteration, associated with strong foliation.

<<Vein: 176.93 - 177.35 90% Quartz>> Massive qtz veins, grey, unmineralized.

<<Struc: 168 - 169.25 Strong (Alt) Fault>> Gouge fault

<<Struc: 169.9 - 171 Moderate (Alt) Fault>> Interval comprising multiple fault with clay gouge associated with moderate fracturation.

<<Struc: 172.85 - 175.5 Moderate (Alt) Fault>> Interval comprising multiple fault with clay gouge associated with moderate fracturation.

<<Struc: 177.6 - 178.1 Weak (Alt) Fault>> Minor faults with clay gouge.

180.20 214.25 MAFI Mafic Intrusions (primarily green footwall mafic intrusion)

180.2 - 214.25: Large interval of mafic unit, massive, moderately foliated. Marked by porphyroblast of biotite and chlorite (clots), mm to cm, distributed and oriented within fine grained matrix moderately chlorite altered. Strong calcite alteration, occurring as thin sub

<<Min: 180.2 - 187 10% Min: Calcite>> Occuring as thin subconcordant veinlets and porphyroblats/blebs.

<<Min: 180.2 - 212.85 0.1% Min: Pyrite>> Trace, aggregates distributed within matrix.

<<Min: 180.2 - 212.85 0.1% Min: Pyrrhotite>> Mineralized at the edges of py aggregates.

<<Min: 187 - 207 5% Min: Calcite>> Occuring as thin subconcordant veinlets and porphyroblats/blebs.

<<Min: 207 - 214.4 10% Min: Calcite>> Occuring as thin subconcordant veinlets and porphyroblats/blebs.

<<Min: 212.85 - 213.3 2% Min: Pyrite>> Associated with fault interval comprising dismembered qtz-cal veins.

<<Min: 212.85 - 213.3 2% Min: Pyrrhotite>> Associated with fault interval comprising dismembered qtz-cal veins.

<<Min: 212.85 - 213.3 0.1% Min: Galena>>

<<Min: 212.85 - 213.3 0.5% Min: Chalcopryite>> veins selvages

<<Min: 213.3 - 214.25 0.1% Min: Pyrite>>

<<Alt: 180.2 - 214.4 Moderate (Alt) Chlorite>>

<<Alt: 180.2 - 214.4 Moderate (Alt) Biotite>> Oriented with foliation.

<<Struc: 181.7 - 182.15 Strong (Alt) Fault>> Gouge fault

<<Struc: 183 - 183.01 Moderate (Alt) dominant foliation>>

<<Struc: 194.5 - 194.51 Moderate (Alt) dominant foliation>>

<<Struc: 203.5 - 203.51 Moderate (Alt) dominant foliation>>

<<Struc: 212.85 - 213.3 Strong (Alt) Fault>> Fault gouge comprising dismembered qtz-ca veins (mineralized).

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
169.25	170.00	0.75	B00265322	0.6	-0.005	-0.01	-0.01	0.02
170.00	171.50	1.50	B00265323	0.8	-0.005	-0.01	0.02	0.08
171.50	173.00	1.50	B00265324	-0.3	-0.005	-0.01	-0.01	-0.01

209.00	210.50	1.50	B00265325	1.5	0.006	-0.01	0.01	0.02
--------	--------	------	-----------	-----	-------	-------	------	------

210.50	212.00	1.50	B00265326	1	0.007	-0.01	-0.01	0.02
212.00	213.30	1.30	B00265327	0.4	-0.005	0.02	-0.01	0.02
213.30	214.25	0.95	B00265328	0.3	-0.005	-0.01	-0.01	0.03



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-309

From (m)	To (m)	Rocktype & Description											
214.25	214.40	OJ	Heavilly disseminated sulphides in proximal altered rock	CG									
214.25 - 214.4: Small OI lens between MAFi and RHY(?).													
<<Min: 214.25 - 214.4 2% Min: Sphalerite>> Associated with OI interval.													
<<Min: 214.25 - 214.4 30% Min: Pyrite>> Associated with OI interval.													
<<Min: 214.25 - 214.4 5% Min: Pyrrhotite>> Associated with OI interval.													
<<Min: 214.25 - 214.4 0.5% Min: Chalcopyrite>> Associated with OI interval.													
214.40	215.73	RHY	undifferentiated rhyolite		214.75	215.80	1.05	B00265331	2.9	0.017	0.03	-0.01	0.07
214.4 - 215.73: Light grey, fine to medium grained, comprising irregular and deformed siliceous bands. OI at the upper contact and massive sulphides at the lower contact. Moderately MU altered and associated with weak chlorite. Felsic unit between 2 MAFi, which hosted													
<<Min: 214.4 - 215.73 1% Min: Pyrrhotite>>													
<<Min: 214.4 - 216.5 4% Min: Calcite>>													
<<Alt: 214.4 - 216.5 Moderate (Alt) Muscovite>>													
215.73	215.80	OJ	Heavilly disseminated sulphides in proximal altered rock	MCG									
<<Min: 215.73 - 215.8 30% Min: Pyrite>> Associated with OI interval.													
215.80	216.50	RHY	undifferentiated rhyolite		215.80	216.50	0.70	B00265332	12.9	0.029	0.02	0.29	1.23
215.8 - 216.5: Light grey, fine to medium grained, comprising irregular and deformed siliceous bands. OI at the upper contact and massive sulphides at the lower contact. Moderately MU altered and associated with weak chlorite. Felsic unit between 2 MAFi, which hosted													
<<Min: 215.8 - 216.5 1% Min: Pyrrhotite>>													
216.50	217.75	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	216.50	217.20	0.70	B00265333	113	0.831	0.42	3.5	8.39
216.5 - 217.75: Homogeneous interval. Sharp upper contact with RHY, 80 ac.													
<<Min: 216.5 - 221.78 10% Min: Calcite>> Associated with breccia.													
<<Min: 216.5 - 222.7 4% Min: Sphalerite>>													
<<Min: 216.5 - 222.7 70% Min: Pyrite>>													
<<Min: 216.5 - 222.7 4% Min: Galena>>													

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-309

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %	
<<Min: 216.5 - 222.7 1.5% Min: Chalcopyrite>> Distributed within matrix and at the edges of ca veins.												
<<Struc: 216.5 - 216.51 Contact>> Sharp contact between RHY and MS.												
217.75	221.78	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG	217.75	218.60	0.85	B00265335	120	1.14	0.38	3.89	6.48
217.75 - 221.78: Interval brecciated, filling by calcite. Homogeneous texture.												
221.78	222.70	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG	221.78	222.70	0.92	B00265339	113	1.21	0.1	3.35	7.49
<<Min: 221.78 - 233.5 5% Min: Calcite>> Veinlets and also patchy.												
222.70	224.95	OA Magnetite bearing sulphides	FMG	222.70	223.70	1.00	B00265341	88.1	0.737	0.4	1.78	9.8
222.7 - 224.95: Laminated texture marked by thin magnetite bands.												
<<Min: 222.7 - 224.95 6% Min: Magnetite>> Occuring as thin bands.												
<<Min: 222.7 - 226.15 1% Min: Sphalerite>>												
<<Min: 222.7 - 226.15 70% Min: Pyrite>>												
<<Min: 222.7 - 226.15 4% Min: Galena>>												
<<Min: 222.7 - 226.15 0.5% Min: Chalcopyrite>>												
224.95	226.15	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	224.95	225.50	0.55	B00265344	102	0.674	0.11	3.47	9.18
226.15	227.75	OI Heavilly disseminated sulphides in host schist	FMG	226.15	227.00	0.85	B00265346	64.8	0.156	0.18	1.86	5.44
226.15 - 227.75: Interval brecciated by Qtz-Ca-Dol veins, cm to dm.												
<<Min: 226.15 - 227.75 2% Min: Sphalerite>> Breccia interval.												
<<Min: 226.15 - 227.75 40% Min: Pyrite>> Breccia interval.												
<<Min: 226.15 - 227.75 1% Min: Galena>>												
<<Min: 226.15 - 227.75 0.5% Min: Chalcopyrite>>												

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-309
From (m) **To (m)** **Rocktype & Description**
227.75 228.35 OA Magnetite bearing sulphides
MG

227.75 - 228.35: Laminated texture marked by thin magnetite bands.

<<Min: 227.75 - 228.35 2% Min: Sphalerite>>

<<Min: 227.75 - 228.35 60% Min: Pyrite>>

<<Min: 227.75 - 228.35 8% Min: Magnetite>> Thin bands, laminated texture.

<<Min: 227.75 - 228.35 2% Min: Galena>>

<<Min: 227.75 - 228.35 1% Min: Chalcopyrite>>

228.35 233.50 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides
FMG

<<Min: 228.35 - 230.7 3% Min: Galena>>

<<Min: 228.35 - 230.7 0.5% Min: Chalcopyrite>>

<<Min: 228.35 - 233.5 5% Min: Sphalerite>>

<<Min: 228.35 - 233.5 70% Min: Pyrite>>

<<Min: 230.7 - 231 5% Min: Galena>> Associated with qtz+/-ca veins, strongly deformed and dismembered.

<<Min: 230.7 - 231 5% Min: Chalcopyrite>> Associated with qtz+/-ca veins, strongly deformed and dismembered.

<<Min: 231 - 233.5 3% Min: Galena>>

<<Min: 231 - 233.5 0.5% Min: Chalcopyrite>>

233.50 234.00 MAFi Mafic Intrusions (primarily footwall mafic intrusion)
green
FG

233.5 - 234: Short MAFi interval between the massive sulphides and OI.

<<Min: 233.5 - 234 0.5% Min: Pyrite>>

<<Min: 233.5 - 237.4 2% Min: Calcite>>

<<Struc: 233.5 - 233.51 Contact>> Sharp contact between MS and MAFi.

234.00 234.35 OI Heavily disseminated sulphides in host schist
FG

234 - 234.35: Strong Py/GL mineralisation, fine to medium grained, occurring as concordant bands semi-massive to massive, 1-5 cm wide.

<<Min: 234 - 234.35 30% Min: Pyrite>> Occuring as concordant bands, semi-massive to massive, associated with GL.

<<Min: 234 - 234.35 10% Min: Galena>> Associated with semi-massive bands (Py).

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
227.75	228.35	0.60	B00265348	87.3	0.349	0.39	2.5	6.93

228.35	229.00	0.65	B00265349	103	1.05	0.19	3.91	5.78
--------	--------	------	-----------	-----	------	------	------	------

229.00	230.00	1.00	B00265351	126	0.837	0.22	5.2	7.23
230.00	231.00	1.00	B00265352	277	1.78	0.76	4.2	7.85
231.00	231.80	0.80	B00265353	83	0.283	0.18	2.36	5.05
231.80	232.80	1.00	B00265354	209	1.32	0.2	3.92	8.25
232.80	233.50	0.70	B00265355	144	0.691	0.14	2.88	8.05

233.50	234.00	0.50	B00265356	3	0.05	0.01	0.08	0.18
--------	--------	------	-----------	---	------	------	------	------

234.00	234.35	0.35	B00265357	126	0.74	0.2	2.54	3.74
--------	--------	------	-----------	-----	------	-----	------	------

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-309
From (m) To (m) Rocktype & Description
234.35 236.97 RHY undifferentiated rhyolite light grey

234.35 - 236.97: Light grey/greenish, fine to medium grained, strongly foliated . Comprising from 236.15 to 236.97m, irregular and deformed grey siliceous bands, aphanitic, homogeneous, 1-4 cm wide, RHYi? . Strongly MU altered and associated with weak chlorite.

Felsic u

<<Min: 234.35 - 236.97 0.1% Min: Pyrite>>

<<Min: 234.35 - 236.97 0.1% Min: Pyrrhotite>>

<<Alt: 234.35 - 236.97 Strong (Alt) Muscovite>> Associated with strong foliation

236.97 237.40 OC Chalcopyrite-pyrrhotite net textured sulphides FG

236.97 - 237.4: Narrow of massive sulphides, massive PO associated with Cp (1-2% and patchy). Sharp upper (RHY) and lower (MAFi) contacts.

<<Min: 236.97 - 237.4 60% Min: Pyrite>> OC, band of massive PO associated with Cp and GL.

<<Min: 236.97 - 237.4 1% Min: Galena>>

<<Min: 236.97 - 237.4 2% Min: Chalcopyrite>>

237.40 243.80 MAFI Mafic Intrusions (primarily green footwall mafic intrusion)

237.4 - 243.8: Interval of mafic unit, massive, moderately foliated. Marked by porphyroblast of biotite and chlorite (clots), mm to cm, distributed and oriented within fine grained matrix, which is moderately chlorite altered. Strong calcite alteration, occurring as thin

<<Min: 237.4 - 243.8 1% Min: Pyrite>> Aggregates centimetric.

<<Min: 237.4 - 243.8 0.5% Min: Pyrrhotite>> Mineralized around Py aggregates, as an envelope.

<<Min: 237.4 - 243.8 10% Min: Calcite>>

<<Alt: 237.4 - 243.8 Moderate (Alt) Chlorite>> MAFi.

<<Alt: 237.8 - 239.6 Moderate (Alt) Biotite>> Porphyroblasts/flakes distributed within the matrix.

<<Alt: 239.6 - 247.9 Strong (Alt) Muscovite>> Associated with strong foliation/shear.

<<Struc: 243 - 245.5 Moderate (Alt) Fault>> Interval comprising minor faults, cm, with clay gouge.

243.80 247.50 RHYcw Curdy textured-flow banded light grey (flows, subvolcanics)

243.8 - 247.5: Light grey, fine grained, strongly foliated and locally crenuled. Unit characterised by deformed siliceous banded parallel with foliation, which marked flow banded texture. Interval strongly MU altered. Weakly mineralised. RHYcw?

<<Min: 243.8 - 255 1% Min: Pyrrhotite>> Distributed within matrix.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
234.35	235.50	1.15	B00265358	21.4	0.094	0.05	0.3	0.66

235.50	236.97	1.47	B00265359	3.4	0.027	-0.01	0.05	0.19
--------	--------	------	-----------	-----	-------	-------	------	------

236.97	237.40	0.43	B00265361	222	0.215	0.66	7.24	9.64
--------	--------	------	-----------	-----	-------	------	------	------

237.40	238.50	1.10	B00265362	0.8	0.007	0.01	0.02	0.04
--------	--------	------	-----------	-----	-------	------	------	------

238.50	240.00	1.50	B00265363	2.4	0.009	0.01	0.07	0.1
--------	--------	------	-----------	-----	-------	------	------	-----

240.00	241.50	1.50	B00265364	1.2	-0.005	-0.01	0.03	0.05
--------	--------	------	-----------	-----	--------	-------	------	------

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-309

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<p><<Min: 243.8 - 306 2% Min: Calcite>> Generally associated with thin veinlets and also as porphyroblasts within the matrix. 2-4 %</p> <p><<Struc: 246.2 - 247.9 Strong (Alt) Fault>> Fault/breccia, polymectic, composed by RHY and MDST fragments, heterogeneous size, within clay gouge.</p> <p>247.50 278.60 RHYva Coarse grained to ash tuff light grey FG</p> <p>247.5 - 278.6: Light grey, +/- homogeneous, fine grained. Unit weakly/moderately foliated and MU altered. We observe irregular and stretched bands/fragments, oriented with foliation, similar to lapilli relics. Comprising multiple fractured intervals with clay gouge fau</p> <p><<Min: 255 - 259.8 2% Min: Pyrite>></p> <p><<Min: 255 - 259.8 1% Min: Pyrrhotite>></p> <p><<Min: 259.8 - 270.7 0.5% Min: Pyrrhotite>></p> <p><<Min: 270.7 - 278.6 1% Min: Pyrite>></p> <p><<Min: 270.7 - 278.6 1% Min: Pyrrhotite>></p> <p><<Struc: 265.25 - 265.7 Moderate (Alt) Fault>> Gouge fault</p> <p>278.60 282.65 RHYcw Curdy textured-flow banded light grey (flows, subvolcanics)</p> <p>278.6 - 282.65: Light grey, fine grained, strongly foliated and locally crenuled. Unit characterised by deformed siliceous banded parallel with foliation, which marked flow banded texture. Interval moderately/strongly MU altered. Weakly mineralised.</p> <p><<Min: 278.6 - 300 0.5% Min: Pyrite>></p> <p><<Min: 278.6 - 300 0.5% Min: Pyrrhotite>></p> <p><<Struc: 280.5 - 282.55 Strong (Alt) Fault>> Fault/breccia, composed by Rhy clasts.</p> <p>282.65 303.75 RHYvi Lapilli tuff light grey</p> <p>282.65 - 303.75: Light grey, fine grained. Unit moderately foliated and MU altered. We observe irregular and deformed fragments, oriented with foliation, similar to lapilli relics. Difficult to determinate cause of the strong foliation/alteration. Comprising multiple fra</p> <p><<Min: 300 - 303 5% Min: Pyrite>> Occuring as concordant bands, 1-3 cm wide, medium grained.</p> <p><<Min: 303 - 306 1% Min: Pyrite>></p> <p><<Vein: 292.1 - 292.2 90% Quartz>> Regular qtz vein, milky to grey, fractured.</p> <p><<Vein: 293.03 - 293.4 15% Tourmaline 30 deg. >> Thin discordant tourmaline vein.</p> <p><<Struc: 298.5 - 299.2 Strong (Alt) Fault>> Fault/breccia, composed by Rhy clasts.</p>											
299.50	301.00	1.50	B00265365	-0.3	-0.005	-0.01	-0.01	-0.01			
301.00	302.00	1.00	B00265366	-0.3	-0.005	-0.01	-0.01	-0.01			
302.00	303.00	1.00	B00265367	-0.3	-0.005	-0.01	-0.01	-0.01			



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-309

From (m)	To (m)	Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
303.75	304.25	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)	brown								
303.75 - 304.25: Brownish, fine to medium grained, strongly Ca altered (pervasive+veinlets). Sharp upper and lower contacts.												
304.25	306.00	RHY	undifferentiated rhyolite	light grey								
End of Hole @ 306												

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-310

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Dillon Hume	Date Logging Start:	28-Oct-15
UTM Easting	415158	Core Size:	HQ3	Azimuth:	210.22	Date Logging Complete:	30-Oct-15
UTM Northing:	6815049	Casing Pulled?:	Yes	Dip:	-45	Drill Company:	Geotech
UTM Elev. (m):	1405.94	Casing Depth (m):	6	Length (m):	191	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	27-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	29-Oct-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

K15-310 was drilled to test the up-dip continuity of the Krakatoa lenses.

K15-310 encountered the felsic hanging wall package to a depth of ~88.5 m, consisting of mixed volcanoclastic and coherent rhyolites and BI+CA schists. Strong faulting begins at 88.5 m and carries throughout the remainder of the hole (to 191 m), with the exception of two lesser faulted blocks within the larger fault structure. The first block was from ~120 m to ~125 m, consisting of CL+BI+CA schist with a small lens of massive sulphide from 123.9-124.9 m. The bottom of this massive sulphide was strongly brecciated and faulted. The second block was from ~144 m to ~170 m, consisting of rhyolite from 144-159.6 m, massive sulphide from 159.6-160.8 m, and argillitic mudstone to ~170 m. Below this block, intense faulting began again, displayed as a polymictic fault gouge breccia.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-45	210.22	0	210.22	APS	Dillon Hume	27-Oct-15		<input checked="" type="checkbox"/>	
26	-45.3	193.7	22.5	216.2	ReflexEVS	Geotech	27-Oct-15	5742	<input checked="" type="checkbox"/>	
50	-44.6	197.6	22.5	220.1	ReflexEVS	Geotech	27-Oct-15	5684	<input checked="" type="checkbox"/>	
75	-45.8	195.4	22.5	217.9	ReflexEVS	Geotech	27-Oct-15	5775	<input checked="" type="checkbox"/>	
110	-45.3	192.7	22.5	215.2	ReflexEVS	Geotech	28-Oct-15	5744	<input checked="" type="checkbox"/>	
125	-45.5	193	22.5	215.5	ReflexEVS	Geotech	28-Oct-15	5767	<input checked="" type="checkbox"/>	
149	-45.6	193.4	22.5	215.9	ReflexEVS	Geotech	28-Oct-15	5738	<input checked="" type="checkbox"/>	
179	-45.9	192.5	22.5	215	ReflexEVS	Geotech	28-Oct-15	5736	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	6.00	CASN Casing									
6.00	17.00	RHYva Coarse grained to ash tuff									
6 - 17: Medium grey fine grained ash tuff with disseminated euhedral BI.											
<<Min: 6 - 17 0.5% Min: Pyrite>>											
<<Min: 6 - 17 0.5% Min: Pyrrhotite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-310

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 6 - 17 2% Min: Calcite>>											
17.00	18.10	RHYvl Lapilli tuff									
17 - 18.1: CA+QZ lpl within medium grey MU groundmass											
<<Min: 17 - 18.1 1% Min: Pyrrhotite>>											
<<Min: 17 - 18.1 10% Min: Calcite>>											
18.10	21.80	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
18.1 - 21.8: Siliceous flow banded rhyolite with local pepperitic texture											
<<Min: 18.1 - 21.8 1% Min: Calcite>>											
<<Min: 18.1 - 32.5 0.5% Min: Pyrite>>											
<<Vein: 18.9 - 19 60% Quartz>> Deformed QZ+CA vein											
21.80	25.70	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
21.8 - 25.7: Bl+CA schist											
<<Min: 21.8 - 25.7 15% Min: Calcite>>											
<<Struc: 25.5 - 25.8 Weak (Alt) Fault>> Highly fractured rock with local fault gouge											
25.70	32.50	RHYva Coarse grained to ash tuff									
25.7 - 32.5: Medium grey fine grained ash tuff with disseminated subhedral Bl and lpl											
<<Min: 25.7 - 32.5 3% Min: Calcite>>											
32.50	34.40	RHYc Rhyolite coherent volcanics									
32.5 - 34.4: Silica banded rhyolite											
<<Min: 32.5 - 50.8 2% Min: Pyrite>>											
<<Min: 32.5 - 50.8 2% Min: Calcite>>											
34.40	50.30	RHYi Aphanitic Rhyolite (intrusion)									
34.4 - 50.3: Coherent aphanitic rhyolite											
<<Struc: 43 - 43.2 Weak (Alt) Fault>> Highly fractured rock with local fault gouge											
50.30	50.80	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
50.3 - 50.8: Silica banded rhyolite with MU groundmass											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-310

From (m)		To (m)		Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
50.80	51.30	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)											
50.8 - 51.3: BI+CA schist														
<<Min: 50.8 - 51.3 10% Min: Calcite>>														
<<Struc: 51.2 - 51.3 Weak (Alt) Fault>> Highly fractured rock with local fault gouge														
51.30	52.00	RHYcw	Curdy textured-flow banded (flows, subvolcanics)											
51.3 - 52: Silica banded rhyolite with medium grey MU groundmass														
<<Min: 51.3 - 52 2% Min: Calcite>>														
52.00	53.00	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)											
52 - 53: BI+CA schist														
<<Min: 52 - 53 15% Min: Calcite>>														
53.00	53.40	RHYcw	Curdy textured-flow banded (flows, subvolcanics)											
53 - 53.4: Silica banded rhyolite with medium grey MU groundmass														
<<Min: 53 - 58.8 2% Min: Pyrite>>														
<<Min: 53 - 58.8 2% Min: Calcite>>														
53.40	58.80	RHYi	Aphanitic Rhyolite (intrusion)											
53.4 - 58.8: Siliceous aphanitic rhyolite														
<<Vein: 53.5 - 54 100% Quartz>> Massive QZ vein with patchy BI														
<<Vein: 56.5 - 56.85 80% Quartz>> Massive QZ+CA with patchy BI														
58.80	63.40	RHYvl	Lapilli tuff											
58.8 - 63.4: Felsic lpl within medium grey MU groundmass														
<<Min: 58.8 - 91.3 1% Min: Pyrite>>														
<<Min: 58.8 - 91.3 0.5% Min: Pyrrhotite>>														
<<Min: 58.8 - 91.3 5% Min: Calcite>>														
<<Struc: 58.8 - 58.9 Weak (Alt) Fault>> Highly fractured rock with local fault gouge														
<<Struc: 60.9 - 61.3 Weak (Alt) Fault>> Highly fractured rock with local fault gouge														

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-310

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
63.40	91.30	RHYva Coarse grained to ash tuff									
63.4 - 91.3: Medium grey fine grained ash tuff with local felsic and CL+BI+CA+QZ lpl											
<<Alt: 69.8 - 91.3 Weak (Alt) Muscovite>>											
<<Vein: 68.3 - 68.6 90% Quartz>> Massive QZ vein with patchy CL											
<<Struc: 67.1 - 67.4 Weak (Alt) Fault>> Highly fractured rock with local fault gouge											
<<Struc: 75.5 - 76.5 Weak (Alt) Fault>> Highly fractured rock with local fault gouge											
<<Struc: 80.9 - 81 Weak (Alt) Fault>> Highly fractured rock with local fault gouge											
<<Struc: 81.5 - 82.4 Weak (Alt) Fault>> Highly fractured rock with local fault gouge											
<<Struc: 87.85 - 90.75 Moderate-Strong (Alt) Fault>> Strongly faulted with fault gouge											
91.30	96.10	RHY undifferentiated rhyolite									
91.3 - 96.1: Strongly faulted rhyolite											
<<Min: 91.3 - 92 10% Min: Pyrite>>											
<<Min: 91.3 - 96.1 2% Min: Calcite>>											
<<Min: 92 - 96.1 1% Min: Pyrite>>											
<<Alt: 91.3 - 128.9 Strong (Alt) Muscovite>> Faulted related alteration?											
<<Struc: 91.3 - 121.7 Strong (Alt) Fault>> Strongly faulted with variable foliation. Felsic clasts within gouge matrix.											
96.10	101.10	MDSc Carbonaceous dominant mudstone									
96.1 - 101.1: Strongly faulted carbonaceous mudstone											
<<Min: 96.1 - 101.1 10% Min: Pyrite>>											
<<Min: 96.1 - 101.1 1% Min: Calcite>>											
101.10	121.70	RHY undifferentiated rhyolite									
101.1 - 121.7: Strongly faulted rhyolite											
<<Min: 101.1 - 121.7 5% Min: Calcite>>											
<<Min: 101.1 - 128.9 2% Min: Pyrite>>											
<<Vein: 118.4 - 119 40% Quartz>> Clasts of massive QZ+CA veins in fault											
121.70	122.60	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
121.7 - 122.6: BI+CA schist. Moderately faulted											
<<Min: 121.7 - 122.6 15% Min: Calcite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-310

From (m)		To (m)		Rocktype & Description		From (m)		To (m)		Width		Sample		Ag PPM		Au PPM		Cu %		Pb %		Zn %	
<<Struc: 121.7 - 122.6 Moderate (Alt) Fault>> Highly fractured rock with local fault gouge																							
122.60		128.90		RHY		undifferentiated rhyolite																	
122.6 - 128.9: Strongly faulted rhyolite																							
<<Min: 122.6 - 128.9 5% Min: Calcite>>																							
<<Struc: 122.6 - 128.9 Strong (Alt) Fault>> Strongly faulted with variable foliation. Felsic clasts within gouge matrix.																							
128.90		133.90		MAFi		Mafic Intrusions (primarily footwall mafic intrusion)																	
128.9 - 133.9: CL+BI+CA schist with local zones of fault gouge																							
<<Min: 128.9 - 133.9 10% Min: Calcite>>																							
<<Alt: 128.9 - 133.9 Strong (Alt) Chlorite>>																							
<<Alt: 128.9 - 133.9 Strong (Alt) Biotite>>																							
<<Struc: 132.7 - 132.8 Weak (Alt) Fault>> Highly fractured rock with local fault gouge																							
<<Struc: 133.8 - 134 Moderate (Alt) Fault>> Fault gouge zone																							
133.90		134.60		OB		MG Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides																	
133.9 - 134.6: Massive PY+GL+/-SP with CA groundmass. Brecciated and faulted lower contact with cm scale angular clasts of CA.																							
<<Min: 133.9 - 134.6 1% Min: Tetrahedrite>>																							
<<Min: 133.9 - 134.6 3% Min: Sphalerite>>																							
<<Min: 133.9 - 134.6 63% Min: Pyrite>>																							
<<Min: 133.9 - 134.6 2% Min: Galena>>																							
<<Min: 133.9 - 134.6 30% Min: Calcite>>																							
<<Min: 133.9 - 134.6 1% Min: Barite>>																							
134.60		136.00		FBX		Fault Breccia																	
134.6 - 136: Polymictic fault gouge breccia. Clasts of MSXS and rhyolite in gouge matrix.																							
<<Min: 134.6 - 136 10% Min: Pyrite>> Clasts of MSXS in fault gouge breccia																							
<<Min: 134.6 - 136 5% Min: Calcite>>																							
<<Struc: 134.6 - 136 Intense (Alt) Fault>> Polymictic fault gouge breccia																							
136.00		140.10		RHY		undifferentiated rhyolite																	
136 - 140.1: Strongly faulted rhyolite																							



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-310

From (m) To (m) Rocktype & Description

<<Min: 136 - 159.5 3% Min: Pyrite>>
<<Min: 136 - 159.5 5% Min: Calcite>>
<<Struc: 136 - 154.5 Moderate (Alt) Fault>> Highly fractured rock with local fault gouge

140.10 141.10 RHYi Aphanitic Rhyolite (intrusion)

140.1 - 141.1: Strongly faulted, light grey, aphanitic rhyolite with QZ amygdules

141.10 142.30 RHY undifferentiated rhyolite

141.1 - 142.3: Strongly faulted rhyolite with CA lpl

142.30 143.00 RHYi Aphanitic Rhyolite (intrusion)

142.3 - 143: Strongly faulted, light grey, aphanitic rhyolite with QZ amygdules

143.00 148.20 RHY undifferentiated rhyolite

143 - 148.2: Grey-green highly fractured, MU+QZ schist, showing local silica bands.

<<Alt: 143 - 150.8 Weak (Alt) Muscovite>>

<<Struc: 145.98 - 145.99 dominant foliation>> MU cleavage

148.20 148.80 RHYi Aphanitic Rhyolite (intrusion)

148.2 - 148.8: Grey aphanitic rhyolite

148.80 152.50 RHYv Rhyolite volcanoclastic

148.8 - 152.5: Green-grey MU+QZ schist with local CA and rhyolitic lpl

<<Alt: 150.8 - 159.5 Moderate (Alt) Muscovite>>

152.50 155.40 RHYi Aphanitic Rhyolite (intrusion)

152.5 - 155.4: Grey aphanitic rhyolite

155.40 159.50 RHYvi Lapilli tuff

155.4 - 159.5: QZ+MU schist with CA and PY lpl

159.50 160.60 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

159.5 - 160.6: Banded PY+CA+SP+/-GL

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
137.50	139.00	1.50	B00233134	1.7	0.017	-0.01	-0.01	-0.01

155.40	156.50	1.10	B00233135	0.5	-0.005	-0.01	-0.01	-0.01
--------	--------	------	-----------	-----	--------	-------	-------	-------

156.50	158.00	1.50	B00233136	-0.3	-0.005	-0.01	-0.01	-0.01
158.00	159.50	1.50	B00233137	0.5	0.008	-0.01	-0.01	-0.01
159.50	160.60	1.10	B00233138	205	1.53	0.28	3.54	11.6

MG



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-310

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %								
<<Min: 159.5 - 160.6 10% Min: Sphalerite>>																			
<<Min: 159.5 - 160.6 60% Min: Pyrite>>																			
<<Min: 159.5 - 160.6 2% Min: Galena>>																			
<<Min: 159.5 - 160.6 23% Min: Calcite>>																			
160.60	160.80	OC Chalcopyrite-pyrrhotite net textured sulphides	MCG	160.60	160.80	0.20	B00233139	137	2.51	5.83	0.48 5.65								
160.6 - 160.8: Massive PO+PY+CP (net-textured) with disseminated MG porphyroblasts																			
<<Min: 160.6 - 160.8 20% Min: Pyrite>>																			
<<Min: 160.6 - 160.8 60% Min: Pyrrhotite>>																			
<<Min: 160.6 - 160.8 5% Min: Magnetite>>																			
<<Min: 160.6 - 160.8 15% Min: Chalcopyrite>>																			
160.80	162.90	RHY undifferentiated rhyolite		160.80	161.30	0.50	B00233141	17.5	0.254	0.19	0.16 0.25								
160.8 - 162.9: Sheared MU+QZ schist. CL-altered from 160.8-161 m and silicified from 161-161.3 m.																			
<<Min: 160.8 - 161 2% Min: Chalcopyrite>>																			
<<Min: 160.8 - 161 5% Min: Calcite>>																			
<<Min: 161 - 161.3 10% Min: Pyrite>>																			
<<Min: 161.3 - 162.9 2% Min: Pyrite>>																			
<<Min: 161.3 - 162.9 5% Min: Calcite>>																			
<<Alt: 160.8 - 161 Moderate (Alt) Chlorite>>																			
<<Alt: 161 - 161.3 Strong (Alt) Silicification>>																			
<<Alt: 161.3 - 162.9 Moderate (Alt) Muscovite>>																			
162.90	164.80	MDS Carbonaceous dominant mudstone		162.90	164.40	1.50	B00233143	2.9	0.035	0.07	0.04 1.53								
162.9 - 164.8: Argillitic mudstone																			
<<Min: 162.9 - 164.8 1% Min: Pyrite>>																			
<<Min: 162.9 - 164.8 1% Min: Pyrrhotite>>																			
<<Min: 162.9 - 164.8 1% Min: Calcite>>																			
164.80	191.00	FBX Fault Breccia																	
164.8 - 191: Polymictic fault gouge breccia. Clasts include RHY, MDS, MSXS (CP+PO and PY), and MAFi. Gouge includes QZ, CL, MU, and GR.																			
<<Min: 164.8 - 191 5% Min: Pyrite>> Clasts of MSXS in fault gouge breccia																			



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-310

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 164.8 - 191 0.5% Min: Pyrrhotite>> Clasts of MSXS in fault gouge breccia											
<<Min: 164.8 - 191 1% Min: Chalcopyrite>> Clasts of MSXS in fault gouge breccia											
<<Min: 164.8 - 191 2% Min: Calcite>> Clasts of CA in fault gouge breccia											
<<Struc: 164.8 - 191 Intense (Alt) Fault>> Polymictic fault gouge breccia											
End of Hole @ 191											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-311

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Dillon Hume	Date Logging Start:	31-Oct-15
UTM Easting	415158	Core Size:	HQ3	Azimuth:	29.71	Date Logging Complete:	03-Nov-15
UTM Northing:	6815051	Casing Pulled?:	Yes	Dip:	-80	Drill Company:	Geotech
UTM Elev. (m):	1406.21	Casing Depth (m):	6	Length (m):	263	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	30-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	02-Nov-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

K15-311 was drilled as an exploration hole to test the continuity of the Krakatoa zone to the south east. Mineralization was anticipated to occur at ~170, ~195, and ~210 m. K15-311 intersected the felsic hanging wall package to a depth of ~99 m, consisting of mixed volcanic rhyolites, BI+CA schists, and rhyolite intrusions. From 99.2-160.8 m, there was strong faulting, mainly composed of faulted rhyolite. Below this fault, a less faulted CL+BI+CA schist (MAFi) occur to a depth of 237.2 m. This unit was followed by strongly MU-altered rhyolite to a depth of 261.1 m, where a fault breccia occurs the end of hole (263 m).

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-80	29.71	0	29.71	APS	Dillon Hume	30-Oct-15		<input checked="" type="checkbox"/>	
17	-79.9	9.8	22.5	32.3	ReflexEVS	Geotech	30-Oct-15	5804	<input checked="" type="checkbox"/>	
50	-80.8	5.5	22.5	28	ReflexEVS	Geotech	30-Oct-15	5775	<input checked="" type="checkbox"/>	
74	-81.5	4.5	22.5	27	ReflexEVS	Geotech	30-Oct-15	5703	<input checked="" type="checkbox"/>	
101	-82.8	18.3	22.5	40.8	ReflexEVS	Geotech	31-Oct-15	5747	<input checked="" type="checkbox"/>	
125	-83.6	17.8	22.5	40.3	ReflexEVS	Geotech	31-Oct-15	5744	<input checked="" type="checkbox"/>	
152	-84.1	17.5	22.5	40	ReflexEVS	Geotech	31-Oct-15	5739	<input checked="" type="checkbox"/>	
158	-84.1	15.6	22.5	38.1	ReflexEVS	Geotech	01-Nov-15	5732	<input checked="" type="checkbox"/>	
188	-84.8	13.7	22.5	36.2	ReflexEVS	Geotech	01-Nov-15	5732	<input checked="" type="checkbox"/>	
200	-85	18.5	22.5	41	ReflexEVS	Geotech	01-Nov-15	5775	<input checked="" type="checkbox"/>	
227	-85.3	21.7	22.5	44.2	ReflexEVS	Geotech	01-Nov-15	5736	<input checked="" type="checkbox"/>	
263	-86.7	9.6	22.5	32.1	ReflexEVS	Geotech	02-Nov-15	5680	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	6.00	CASN Casing									
6.00	7.30	RHYva Coarse grained to ash tuff									
6 - 7.3: Light grey, fine grained ash tuff with local CA lpl and disseminated subhedral to euhedral BI.											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-311

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 6 - 7.3 5% Min: Calcite>>											
7.30	8.90	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
7.3 - 8.9: BI+CA schist with local tuffaceous material. Metapelite?											
<<Min: 7.3 - 8.9 15% Min: Calcite>>											
8.90	11.40	RHYva	Coarse grained to ash tuff								
8.9 - 11.4: Light-medium grey fine grained ash tuff with local CA lpl. Disseminated subhedral to euhedral BI decreasing in abundance (10-1%) from 8.9-10.3 m.											
<<Min: 8.9 - 11.4 5% Min: Calcite>>											
11.40	14.90	RHYvl	Lapilli tuff								
11.4 - 14.9: Medium grey, lpl tuff, with ash matrix and PO, CA, and rhyolitic lpl											
<<Min: 11.4 - 14.9 1% Min: Pyrite>>											
<<Min: 11.4 - 14.9 5% Min: Pyrrhotite>>											
<<Min: 11.4 - 14.9 10% Min: Calcite>>											
14.90	24.10	RHYc	Rhyolite coherant volcanics								
14.9 - 24.1: Silica banded with MU cleavages on the top and bottom of the unit, with a more massive siliceous core with MU filled fractures.											
<<Min: 14.9 - 24.1 2% Min: Pyrite>>											
<<Min: 14.9 - 24.1 5% Min: Calcite>>											
<<Vein: 23.9 - 24.1 90% Quartz>> Massive QZ vein											
24.10	27.20	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
24.1 - 27.2: BI+CA schist. Appears to have some ash material in the matrix from 24.4-25.2 m. Metapelite?											
<<Min: 24.1 - 27.2 15% Min: Calcite>>											
<<Min: 24.1 - 28.8 1% Min: Pyrite>>											
<<Min: 24.1 - 28.8 3% Min: Pyrrhotite>>											
27.20	28.60	RHYvl	Lapilli tuff								
27.2 - 28.6: Fine grained ash matrix with rhyolitic lpl and minor BI cleavages.\											

Project:
KZK
Hole Number:
K15-311

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
28.60	28.80	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
28.6 - 28.8: BI+CA schist (~98% BI). Sharp upper contact with a gradational lower contact. Metapelite?											
<<Min: 28.6 - 28.8 2% Min: Calcite>>											
28.80	35.85	RHYva	Coarse grained to ash tuff								
28.8 - 35.85: Light to medium grey fine grained ash tuff with local disseminated subhedral to euhedral BI, CA and rhyolitic lpl, and silica banding.											
<<Min: 28.8 - 35.85 2% Min: Pyrite>>											
<<Min: 28.8 - 35.85 1% Min: Pyrrhotite>>											
<<Min: 28.8 - 35.85 5% Min: Calcite>>											
35.85	37.80	RHYc	Rhyolite coherant volcanics								
35.85 - 37.8: Silica banded to massive siliceous rhyolite. Local FD? Porphyries.											
<<Min: 35.85 - 37.8 5% Min: Calcite>>											
<<Min: 35.85 - 62.9 2% Min: Pyrite>>											
<<Min: 35.85 - 62.9 0.5% Min: Pyrrhotite>>											
37.80	62.90	RHYi	Aphanitic Rhyolite (intrusion)								
37.8 - 62.9: Light grey to pink massive aphanitic siliceous rhyolite with QZ porphyries/amygdules and highly variable healed fractures.											
<<Min: 37.8 - 64 3% Min: Calcite>>											
<<Vein: 49.55 - 50.35 95% Quartz>> Massive QZ+CA vein											
<<Vein: 52.7 - 52.95 80% Quartz>> Massive QZ+CA vein											
62.90	64.00	RHYc	Rhyolite coherant volcanics								
62.9 - 64: Medium blue-grey, silica banded, QZ+MU schist.											
<<Min: 62.9 - 66.4 1% Min: Pyrite>>											
64.00	65.00	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
64 - 65: BI+CA schist with CA bands. Metapelite?											
<<Min: 64 - 65 15% Min: Calcite>>											
65.00	66.40	RHYc	Rhyolite coherant volcanics								
65 - 66.4: Medium grey, silica banded, QZ+MU schist											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-311

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 65 - 66.4 5% Min: Calcite>>											
66.40	70.60	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
66.4 - 70.6: Black, BI+CA schist with local CA bands. Metapelite?											
<<Min: 66.4 - 70.6 2% Min: Pyrite>>											
<<Min: 66.4 - 70.6 10% Min: Calcite>>											
<<Struc: 70.4 - 70.8 Weak (Alt) Fault>> Highly fractured with local fault gouge											
70.60	71.70	RHYc	Rhyolite coherant volcanics								
70.6 - 71.7: Medium grey, silica banded, QZ+MU schist											
<<Min: 70.6 - 72.6 15% Min: Calcite>>											
<<Struc: 71.3 - 71.6 Weak (Alt) Fault>> Highly fractured with local fault gouge											
71.70	72.60	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
71.7 - 72.6: Purplish-black, BI+CA schist, with local olive green matrix (CL?).											
<<Struc: 72.4 - 72.6 Weak (Alt) Fault>> Highly fractured with local fault gouge											
72.60	78.30	RHYvl	Lapilli tuff								
72.6 - 78.3: Dark grey, QZ and CL+QZ lpl within fine grained ash tuff.											
<<Min: 72.6 - 96.5 0.5% Min: Pyrrhotite>>											
<<Min: 72.6 - 96.5 5% Min: Calcite>>											
<<Struc: 73.5 - 74 Weak (Alt) Fault>> Highly fractured with local fault gouge											
<<Struc: 76.94 - 76.95 dominant foliation>> Elongated lpl											
<<Struc: 78 - 78.2 Weak (Alt) Fault>> Highly fractured with local fault gouge											
78.30	80.90	RHYvl	Lapilli tuff								
78.3 - 80.9: Dark grey ash tuff matrix with cream coloured rhyolitic lpl. Shows elongation of lpl.											
<<Struc: 79.82 - 79.83 dominant foliation>> Elongated lpl											
<<Struc: 80.4 - 80.8 Weak (Alt) Fault>> Highly fractured with local fault gouge											
80.90	96.50	RHYvl	Lapilli tuff								
80.9 - 96.5: Dark grey ash matrix with QZ, rhyolitic, and CL+QZ lpl.											
<<Alt: 92.3 - 98.8 Weak (Alt) Muscovite>> Fault related? Or original?											
<<Vein: 86.8 - 87.6 90% Quartz>> Massive QZ+/-CA vein											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-311

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Vein: 96.4 - 96.6 70% Quartz>> Deformed massive QZ+CA vein with blebs of PY											
<<Struc: 83.35 - 84 Moderate (Alt) Fault>> Highly fractured with local fault gouge											
<<Struc: 85.6 - 85.8 Weak (Alt) Fault>> Highly fractured with local fault gouge											
<<Struc: 88.96 - 88.97 dominant foliation>> Elongated lpl											
<<Struc: 92.9 - 93.1 Moderate (Alt) Shear>> Variable foliation with local fault gouge											
<<Struc: 95.4 - 95.7 Moderate (Alt) Shear>> Variable foliation with local fault gouge											
96.50 160.80 RHY undifferentiated rhyolite											
96.5 - 160.8: Moderately to strongly faulted rhyolite. Strongly MU-altered cleavages display slip, as well as local gouge zones that cross-cut foliation. Local heavily disseminated sulphide (Ol) in clasts of local fault breccia from 104.7-105 m.											
<<Min: 96.5 - 101 2% Min: Pyrite>>											
<<Min: 96.5 - 160.8 2% Min: Calcite>>											
<<Min: 101 - 106.6 5% Min: Pyrite>>											
<<Min: 106.6 - 160.8 2% Min: Pyrite>>											
<<Alt: 98.8 - 107.5 Strong (Alt) Muscovite>> Fault related?											
<<Alt: 107.5 - 121.5 Moderate (Alt) Muscovite>> Fault related?											
<<Alt: 121.5 - 160.8 Strong (Alt) Muscovite>> Fault related?											
<<Vein: 97.2 - 97.6 80% Quartz>> Massive QZ+CA vein with blebs of Tourmaline and PY											
<<Vein: 116.5 - 116.6 90% Quartz>> Fractured massive QZ vein											
<<Vein: 157 - 157.2 80% Quartz>> Massive QZ vein											
<<Struc: 99.2 - 143 Strong (Alt) Fault>> Strongly faulted and sheared. Signs of slip along Mu-cleavages/foliation as well as local fault gouge zones that cross-cut the foliation.											
<<Struc: 102.2 - 102.21 Fault>> Gouged fracture											
<<Struc: 103.2 - 103.21 Fault>> Gouged fracture											
<<Struc: 112.3 - 112.31 Foliation>> Foliation in fault zone											
<<Struc: 116.75 - 116.76 Foliation>> Faulted foliation in fault zone											
<<Struc: 119.2 - 119.21 Fault>> Fracture cross-cutting foliation in fault zone											
<<Struc: 121.45 - 121.46 Foliation>> Foliation in fault zone											
<<Struc: 133.8 - 133.81 Fault>> Fracture (minor gouge) cross-cutting foliation in fault zone											
<<Struc: 139 - 139.01 Fault>> Fracture (minor gouge) cross-cutting foliation in fault zone											
<<Struc: 142.6 - 142.61 Fault>> Foliation in gouge zone											
<<Struc: 143 - 160.8 Moderate (Alt) Fault>> Strongly faulted and sheared. Signs of slip along Mu-cleavages/foliation as well as local fault gouge zones that cross-cut the foliation.											
<<Struc: 145 - 145.01 Foliation>> Foliation in fault zone											
<<Struc: 146.1 - 146.11 Foliation>> Foliation in fault zone											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-311

From (m)		To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 149.1 - 149.11		Foliation>>	Foliation in fault zone									
<<Struc: 152.45 - 152.46		Foliation>>	Foliation in fault zone									
160.80	164.30	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)									
160.8 - 164.3: CL+BI+CA+AK schist												
<<Min: 160.8 - 164.3 20% Min: Calcite>>												
164.30	167.30	RHY	undifferentiated rhyolite									
164.3 - 167.3: Grey aphanitic rhyolite with low angle (TCA) fractures												
<<Min: 164.3 - 167.3 3% Min: Calcite>>												
<<Alt: 164.3 - 167.3 Moderate (Alt) Muscovite>>												
<<Struc: 164.3 - 167.3 Moderate (Alt) Fault>> Highly fractured with slip along foliation as well as local fault gouge/breccia zones.												
167.30	237.20	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)									
167.3 - 237.2: Green, patchy, CL+BI+CA schist.												
<<Min: 167.3 - 178.3 20% Min: Calcite>>												
<<Min: 167.3 - 237.2 0.1% Min: Pyrrhotite>>												
<<Min: 178.3 - 229.1 5% Min: Calcite>>												
<<Min: 229.1 - 237.2 20% Min: Calcite>>												
<<Alt: 167.3 - 178.3 Strong (Alt) Biotite>>												
<<Alt: 167.3 - 237.2 Strong (Alt) Chlorite>>												
<<Alt: 178.3 - 237.2 Moderate (Alt) Biotite>>												
<<Struc: 176.2 - 176.21 dominant foliation>> Continuous BI foliation												
<<Struc: 179.6 - 179.61 dominant foliation>> Discontinuous BI foliation												
<<Struc: 199.8 - 200.2 Weak (Alt) Fault>> Strongly fractured with minor fault gouge												
<<Struc: 229.7 - 229.71 dominant foliation>> CL cleavage												
<<Struc: 233.07 - 233.08 dominant foliation>> Discontinuous CA foliation												
<<Struc: 235.9 - 235.91 dominant foliation>> Discontinuous CA foliation												
237.20	261.10	RHYvl	Lapilli tuff									
237.2 - 261.1: MU-altered lpl tuff, with rhyolitic, CA, and PY lpl in a QZ+MU matrix.												
<<Min: 237.2 - 244.1 0.5% Min: Sphalerite>>												

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-311

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 237.2 - 244.1 3% Min: Pyrite>>											
<<Min: 237.2 - 263 3% Min: Calcite>>											
<<Min: 244.1 - 244.8 15% Min: Pyrite>>											
<<Min: 244.8 - 250.4 3% Min: Pyrite>>											
<<Min: 250.4 - 250.9 10% Min: Pyrite>>											
<<Min: 250.9 - 263 2% Min: Pyrite>>											
<<Min: 250.9 - 263 1% Min: Pyrrhotite>>											
<<Alt: 237.2 - 253.2 Strong (Alt) Muscovite>>											
<<Alt: 253.2 - 261.1 Moderate (Alt) Muscovite>>											
<<Vein: 237.3 - 240.1 60% Quartz>> Zone of massive QZ+/-CA veining in RHY											
<<Vein: 242.3 - 242.45 70% Quartz>> Massive QZ+/-CA vein											
<<Vein: 244 - 244.1 90% Quartz>> Massive QZ+/-CA vein											
<<Vein: 244.85 - 244.9 90% Quartz>> Massive QZ+/-CA vein											
<<Vein: 253.5 - 253.7 90% Quartz>> Massive QZ+CA vein											
<<Struc: 237.2 - 240.1 Moderate (Alt) Fault>> Strongly fractured with local fault gouge											
<<Struc: 246.7 - 251.9 Moderate (Alt) Fault>> Highly fractured with local fault gouge											
<<Struc: 255.5 - 258.2 Weak-Moderate (Alt) Fault>> Strongly fractured with local fault gouge											
<<Struc: 259.9 - 261.1 Moderate (Alt) Fault>> Strongly fractured with local fault gouge											
261.10 263.00 FBX Fault Breccia											
261.1 - 263: Highly faulted zone with clasts of MAFi, massive PY, MDS, and RHY within a gouge matrix.											
<<Struc: 261.1 - 263 Strong (Alt) Fault>> Highly faulted with polymictic clasts in gouge matrix											
End of Hole @ 263											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-312

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Roger Hulstein
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Roger Hulstein	Date Logging Start:	01-Nov-15
UTM Easting	415036.1	Core Size:	HQ3	Azimuth:	209.97	Date Logging Complete:	03-Nov-15
UTM Northing:	6814952	Casing Pulled?:	Yes	Dip:	-48	Drill Company:	Geotech
UTM Elev. (m):	1387.217	Casing Depth (m):	39	Length (m):	110	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	30-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	02-Nov-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

The purpose of the drill hole was to test for the presence of the up dip extension of the Krakatoa lens on cross section SE1. The drill hole was successful in intersecting the Krakatoa lens, consisting of three separate bodies of OB type mineralization from 58.46 – 68.43m totalling 4.87 m of sulphides separated by muscovite – sericite altered Mafi (or possibly RHY?) and RHYi. The RHYi and later quartz veining 65.2 – 67.33 m may possibly displace or replace the sulphides. Mineralization is not strong with only a few narrow sections containing >10% sphalerite with chalcopyrite and galena percentages being generally low. The middle and lower Krakatoa lens are estimated to contain up to 25% and 10% barite respectively as gangue. Below the lower Krakatoa lens (from 67.33 m) the drill hole intersected RHYi with lesser sections of silicified RHY to EOH at 110m. From 99.3-104.9 a fault zone with sheared and altered RHYi, possible RHY and gouge zones were intersected.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-48	209.97	0	209.97	APS	Sean Suttie	30-Oct-15		<input checked="" type="checkbox"/>	
47	-47.4	187	22.5	209.5	ReflexEVS	Geotech	01-Nov-15	5768	<input checked="" type="checkbox"/>	
77	-47	186.7	22.5	209.2	ReflexEVS	Geotech	01-Nov-15	5748	<input checked="" type="checkbox"/>	
101	-46.3	186.3	22.5	208.8	ReflexEVS	Geotech	01-Nov-15	5739	<input checked="" type="checkbox"/>	
110	-46.6	188.8	22.5	211.3	ReflexEVS	Geotech	01-Nov-15	5735	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	38.00	OVBN Overburden									
0 - 38: Overburden log provided by N/S driller Matt ?? 0-2.5m soil and organics (marsh) 2.5-4.0m small gravel, coarse sand, trace silt 4.0 – 7.0m fine sand/silt, no gravel 7.0-7.8m fine sand/silt/small boulder patch 7.8-10m silty sand 10.0-10.7m boulders 10.7-15.0m silty sand 15.0 – 15.5 boulders 15.5-18.5m Boulder 18.5 – 21m sand/gravel 21.0- 23.0m sand 23.0 – 26.25m no record											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-312

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
26.25 – 32m clay, soil, gravel, boulders – looks like glacial till 32 – 39m no record Casing to 39m											
38.00	39.00	CASN	Casing								
39.00	40.08	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)	green							
39 - 40.08: No blebby calcite											
<<Min: 39 - 40.1 5% Min: Calcite>>											
<<Min: 39 - 48.33 0.1% Min: Pyrite>>											
<<Alt: 39 - 40 Moderate (Alt) Chlorite>>											
<<Alt: 39 - 40 Moderate (Alt) Biotite>>											
<<Alt: 40 - 40.6 Trace (Alt) Biotite>> associated with RHYi											
<<Alt: 40 - 41.8 Strong (Alt) Silicification>> RHYi and silicified wallrock											
40.08	41.80	RHYi	Aphanitic Rhyolite (intrusion)								
40.08 - 41.8: Dominantly silicified MAFi cut by narrow RHYi dykes - lumped altogether. Contains diss biotite.											
<<Min: 41.1 - 50 5% Min: Calcite>>											
<<Min: 41.7 - 41.8 0.1% Min: Galena>> in fractured RHYi											
41.80	48.45	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)	green							
41.8 - 48.45: pseudo leucoxene at lower contact.											
<<Min: 41.8 - 44.4 5% Min: Calcite>> veins blebs and diss											
<<Min: 44.4 - 47 15% Min: Calcite>>											
<<Min: 47 - 48.33 3% Min: Calcite>>											
<<Alt: 42 - 47.3 Moderate (Alt) Chlorite>>											
<<Alt: 42 - 47.3 Moderate (Alt) Biotite>>											
<<Alt: 47.3 - 48.45 Weak (Alt) Chlorite>>											
<<Alt: 47.3 - 48.45 Moderate (Alt) Biotite>> looks similar to 40.0-40.6m											
<<Struc: 42 - 45.5 Moderate (Alt) dominant foliation>>											
<<Struc: 45.7 - 45.8 Moderate-Strong (Alt) Fault>> brittle fault with crushed MAFi (alpha at 30-55 deg).											
48.45	48.80	OI	Heavily disseminated sulphides in host schist								
<<Min: 48.45 - 48.8 2% Min: Sphalerite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-312

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 48.45 - 48.8 10% Min: Pyrite>>											
<<Min: 48.45 - 48.8 7% Min: Pyrrhotite>> bands and as diss											
<<Min: 48.45 - 48.8 1% Min: Galena>>											
<<Min: 48.45 - 48.8 0.2% Min: Chalcopyrite>>											
<<Min: 48.6 - 54.2 5% Min: Calcite>>											
<<Alt: 48.45 - 48.8 Moderate (Alt) Chlorite>>											
<<Alt: 48.45 - 48.8 Moderate (Alt) Biotite>>											
48.80	50.15	MAFi Mafic Intrusions (primarily grey-green footwall mafic intrusion)	48.80	50.15	1.35	B00269855	11.2	0.039	0.02	0.1	0.38
48.8 - 50.15: Light green, strongly sericite altered, minor gouge (20 cm total) in zone of poor recovery.											
<<Alt: 48.8 - 50.15 Strong (Alt) Muscovite>> sericite and clay											
<<Struc: 48.8 - 50 Moderate (Alt) dominant foliation>> mostly missing core											
<<Struc: 48.8 - 50.15 Strong (Alt) Fault>> mostly missing core but some gouge and crushed sericite altered - clay rich wallrock (MAFi?).											
<<Struc: 50 - 65.2 Moderate (Alt) dominant foliation>> 75-80 deg foliation and banding in sulfides											
50.15	50.55	OJ Heavily disseminated sulphides in proximal altered rock	50.15	50.55	0.40	B00269856	98.5	0.205	0.95	0.61	5.78
50.15 - 50.55: Zone of poor recovery, OI unit is actual length measured from 50.15m.											
<<Min: 50.15 - 50.55 15% Min: Pyrite>>											
<<Min: 50.15 - 50.55 3% Min: Pyrrhotite>>											
<<Min: 50.15 - 50.55 0.5% Min: Galena>>											
<<Min: 50.15 - 50.55 3% Min: Chalcopyrite>>											
<<Min: 50.15 - 50.55 0.1% Min: Arsenopyrite>>											
<<Alt: 50.15 - 50.55 Strong (Alt) Chlorite>>											
<<Alt: 50.15 - 50.55 Strong (Alt) Biotite>> original?											
50.55	54.20	RHY undifferentiated rhyolite grey-green	50.55	53.00	2.45	B00269857	69.5	0.043	0.85	0.04	0.16
50.55 - 54.2: Original protolith difficult to determine, now a sericite - clay schist. Could easily be altered MAFi and not RHY.											
<<Min: 50.55 - 53 0.5% Min: Pyrite>>											
<<Min: 50.55 - 53 0.5% Min: Chalcopyrite>> in sulfide clast at 55.60											
<<Alt: 50.55 - 54.2 Strong (Alt) Muscovite>> sericite and clay											
<<Struc: 50.55 - 54.2 Strong (Alt) Fault>> missing core, sericite-clay altered, minor (15cm) gouge zones recovered											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-312

From (m) To (m) Rocktype & Description

54.20 58.46 MAFi Mafic Intrusions (primarily footwall mafic intrusion) green

54.2 - 58.46: Sharp contact at 54.2m with MAFi against CP rich section of OB.

<<Min: 54.2 - 58.46 0.5% Min: Pyrite>>

<<Min: 54.2 - 58.46 10% Min: Calcite>> Veins blebs and diss

<<Min: 54.2 - 58.46 0.1% Min: Arsenopyrite>>

<<Alt: 54.2 - 58.46 Moderate (Alt) Chlorite>>

<<Alt: 54.2 - 58.46 Moderate (Alt) Biotite>>

<<Alt: 58.2 - 58.46 Moderate (Alt) Chlorite>>

<<Alt: 58.2 - 58.46 Moderate (Alt) Biotite>>

58.46 58.98 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Min: 58.46 - 58.98 1% Min: Sphalerite>>

<<Min: 58.46 - 58.98 35% Min: Pyrite>>

<<Min: 58.46 - 58.98 1% Min: Pyrrhotite>> with CP in 1cm band a 58.46m contact

<<Min: 58.46 - 58.98 0.5% Min: Galena>>

<<Min: 58.46 - 58.98 2% Min: Chalcopyrite>> In 1 cm band with Pyrrhotite at 58.46m contact.

<<Min: 58.46 - 59.05 20% Min: Calcite>>

58.98 61.63 MAFi Mafic Intrusions (primarily footwall mafic intrusion) grey-green

58.98 - 61.63: Banded, sericite altered. Unit could also be altered RHY as it has silic bands with sericite partings. Unit is calcareous, both diss and as bands (stronger near the upper contact), low (1% diss py) and possible remnant texture of MAFi unit.

<<Min: 58.98 - 61.63 1% Min: Pyrite>> and as wisps and fracture filling

<<Min: 59.05 - 60.3 5% Min: Calcite>>

<<Min: 60.03 - 78.2 1% Min: Calcite>> fracture fillings, rare vein;lets and minor blebs - diss.

<<Alt: 58.98 - 61.63 Moderate-Strong (Alt) Silicification>>

<<Alt: 58.98 - 61.63 Moderate (Alt) Muscovite>> sericite

<<Struc: 59 - 60.8 Moderate (Alt) dominant foliation>> silic bands with sericite partings.

<<Struc: 60.9 - 61.4 Moderate (Alt) Fault>> crushed and broken core, mostly along 30 deg to CA.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
54.20	55.50	1.30	B00269859	0.5	-0.005	-0.01	-0.01	0.03

55.50	57.00	1.50	B00269861	-0.3	-0.005	-0.01	-0.01	0.01
57.00	58.46	1.46	B00269862	4.8	0.015	0.03	0.07	0.06

58.46	58.98	0.52	B00269863	182	0.613	0.37	3.94	5.92
-------	-------	------	-----------	-----	-------	------	------	------

58.98	60.20	1.22	B00269864	1.2	0.009	-0.01	-0.01	0.04
-------	-------	------	-----------	-----	-------	-------	-------	------

60.20	61.63	1.43	B00269865	7.6	0.036	0.02	0.06	0.23
-------	-------	------	-----------	-----	-------	------	------	------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-312
From (m) **To (m)** **Rocktype & Description**

61.63 64.13 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

61.63 - 64.13: Overall approximately 25% sulfides, zone of massive sulfides at: 62.4 - 63.1m. Bands of heavily disseminated sulfides with calcite - barite? (grey-soft, no fizz) - Qtz and minor chert gangue.

<<Min: 61.63 - 62 1% Min: Galena>>

<<Min: 61.63 - 62 30% Min: Pyrite>>

<<Min: 61.63 - 62 3% Min: Sphalerite>>

<<Min: 61.63 - 62 1% Min: Chalcopryrite>>

<<Min: 62 - 62.4 5% Min: Sphalerite>>

<<Min: 62 - 62.4 2% Min: Galena>>

<<Min: 62 - 62.4 25% Min: Pyrite>>

<<Min: 62.15 - 64.13 25% Min: Barite>> gangue

<<Min: 62.4 - 63.1 5% Min: Galena>>

<<Min: 62.4 - 63.1 30% Min: Pyrite>>

<<Min: 62.4 - 63.1 15% Min: Sphalerite>>

<<Min: 62.4 - 63.1 1% Min: Chalcopryrite>>

<<Min: 63.1 - 63.4 3% Min: Magnetite>>

<<Min: 63.1 - 64.13 7% Min: Sphalerite>>

<<Min: 63.1 - 64.13 1% Min: Galena>>

<<Min: 63.1 - 64.13 20% Min: Pyrite>>

<<Struc: 63.9 - 64.13 Moderate (Alt) Foliation>> banded sulfides

64.13 65.20 RHY undifferentiated rhyolite

64.13 - 65.2: Silicified with diss biotite (not present in OB or RHYi). Unit could also be silicified MAFi.

<<Min: 64.14 - 65.67 3% Min: Pyrite>>

<<Alt: 64.13 - 65.2 Weak (Alt) Biotite>> similar to 40-40.6m

<<Alt: 64.13 - 65.7 Intense (Alt) Silicification>> protolith uncertain but now silicified

<<Struc: 64.5 - 65.3 Moderate (Alt) Foliation>> Banding and poor foliation

65.20 67.33 RHYi Aphanitic Rhyolite (intrusion)

65.2 - 67.33: Extremely siliceous, locally brecciated and silica healed, clasts/sections of silicified RHY or MAFi. 65.7-67m; White Qtz vein, clasts of Qtz-feldspar-chlorite (possible altered MAFi?), minor diss sphalerite and galena - end fraction member of RHYi or late metamorphic vein of remobilized Qtz? Irregular ragged contact at 67.33 with sulfide clasts and wisps from 67.23 - 67.33. Difficult to say which one is cutting the other.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
61.63	62.00	0.37	B00269866	540	2.14	0.88	3.85	5.15

62.00	62.40	0.40	B00269867	430	4.6	0.51	3.59	4.88
62.40	63.10	0.70	B00269868	698	2.16	0.06	8.74	11.7
63.10	64.13	1.03	B00269869	565	4.44	0.22	3.1	4.1

64.13	65.20	1.07	B00269872	31.4	0.239	-0.01	0.12	0.29
-------	-------	------	-----------	------	-------	-------	------	------

65.20	65.67	0.47	B00269873	122	0.484	0.05	0.47	0.38
-------	-------	------	-----------	-----	-------	------	------	------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-312
From (m) To (m) Rocktype & Description

<<Min: 65.67 - 66.95 0.2% Min: Pyrite>>

<<Min: 65.67 - 66.95 0.1% Min: Galena>>

<<Min: 66.95 - 67.33 0.2% Min: Sphalerite>>

<<Min: 66.95 - 67.33 3% Min: Pyrite>>

<<Min: 66.95 - 67.33 0.2% Min: Galena>>

<<Vein: 65.3 - 67 100% Quartz>> White qtz vein with 1 - 2% irregular clasts or xenoliths of possible altered MAFi (qtz-fled-chl). Trace diss blebs galena and sphalerite.

67.33 68.43 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

67.33 - 68.43: 67.33-67.80m; Approx 25% total diss and wispy sulfides, concentrated in bands, Gangue of qtz-dolomite-barite(?). 67.80-68.43; Massive sulphide with 5-10% diss magnetite from 67.80-68.10m and approximately 20% pyrrhotite and 5% galena from 68.1-68.43m.

<<Min: 67.33 - 67.75 8% Min: Sphalerite>>

<<Min: 67.33 - 67.75 20% Min: Pyrite>>

<<Min: 67.33 - 67.75 0.5% Min: Galena>>

<<Min: 67.33 - 68.2 10% Min: Barite>>

<<Min: 67.75 - 68.1 25% Min: Pyrite>>

<<Min: 67.75 - 68.43 5% Min: Sphalerite>>

<<Min: 67.75 - 68.43 3% Min: Magnetite>> in patches

<<Min: 67.75 - 68.43 3% Min: Chalcocopyrite>> and as blebs at lower contact

<<Min: 68.1 - 68.43 50% Min: Pyrrhotite>> in bands

<<Alt: 68.1 - 68.43 Moderate (Alt) Chlorite>>

<<Struc: 68.4 - 68.43 Moderate (Alt) Contact>> MxSx_schist contact

68.43 110.00 RHYi Aphanitic Rhyolite (intrusion)

68.43 - 110: Dominantly RHYi, minor sections of silicified RHY(?) pr ??. 68.43-95.3m; Massive brittle fractured RHYi, local faint pink hematite colored. 95.0-99.3m RHYi gets progressively more strained until fault contact at 95.3m. 95.3 - 105.3m; fault zone with cataclastic textured RHYi and gouge zones. 105.3-107.2m strained - foliated RHYi. 107.2-110.0m; lammelar banded and cataclastic foliated textured RHYi. Very schistose fabric.

<<Min: 68.43 - 73.23 0.5% Min: Sphalerite>> and as diss

<<Min: 68.43 - 73.23 3% Min: Pyrite>> and as diss

<<Min: 68.43 - 73.23 0.5% Min: Galena>> and as diss

<<Min: 73.23 - 73.42 3% Min: Sphalerite>>

<<Min: 73.23 - 73.42 10% Min: Pyrite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
65.67	66.95	1.28	B00269874	4.6	0.038	-0.01	-0.01	0.08
66.95	67.33	0.38	B00269875	19.4	0.172	0.01	0.2	0.58

67.33	67.75	0.42	B00269876	396	1.74	0.13	2.16	3.23
-------	-------	------	-----------	-----	------	------	------	------

67.75	68.43	0.68	B00269877	309	0.235	0.19	4.21	5.58
-------	-------	------	-----------	-----	-------	------	------	------

68.43	69.00	0.57	B00269878	12.8	0.02	-0.01	0.25	0.3
-------	-------	------	-----------	------	------	-------	------	-----

69.00	70.00	1.00	B00269879	1.3	0.006	-0.01	-0.01	0.08
70.00	71.50	1.50	B00269881	2	0.015	-0.01	0.05	0.06
71.50	73.00	1.50	B00269882	0.8	0.006	-0.01	0.02	0.04
73.00	73.45	0.45	B00269883	8.7	0.07	-0.01	0.14	0.38
73.45	75.00	1.55	B00269884	0.5	0.009	-0.01	-0.01	-0.01

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-312

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 73.42 - 86 0.1% Min: Sphalerite>> <<Min: 73.42 - 86 2% Min: Pyrite>> and as Diss <<Min: 73.42 - 86 0.1% Min: Galena>> <<Min: 78.2 - 79.3 5% Min: Calcite>> diss and as thin bands <<Min: 79.3 - 97 1% Min: Calcite>> <<Min: 86 - 99 0.1% Min: Galena>> <<Min: 86 - 99.3 3% Min: Pyrite>> <<Min: 97 - 101 5% Min: Calcite>> <<Min: 99.3 - 110 1% Min: Pyrite>> <<Min: 103 - 110 3% Min: Calcite>> fracture fillings, rare vein;lets and minor blebs - diss. <<Alt: 95 - 99.3 Weak (Alt) Muscovite>> muscovite and sericite associated with fault and shearing <<Alt: 99.3 - 102.5 Moderate (Alt) Muscovite>> mostly sericite in fault <<Alt: 102.5 - 110 Moderate (Alt) Muscovite>> mostly sericite associated with fault zones. <<Vein: 68.43 - 68.76 50% Quartz 10 deg. >> irregular qtz vein cutting altered silicified RHY (or MAFI) and overlying OB unit. <<Vein: 85 - 93 5% Quartz>> irregular white - light grey qtz veins cross cutting RHYi at various angles. <<Vein: 91.4 - 91.9 50% Calcite>> Calcite veining, more a breccia matrix with RHYi clasts. <<Struc: 76 - 77 Moderate (Alt) dominant foliation>> parallel to wispy sulfides <<Struc: 96.5 - 97.3 Moderate (Alt) Foliation>> foliation and cataclastic texture. <<Struc: 99.3 - 102.9 Strong (Alt) Fault>> shear planes at variable angles but low angles appear to dominate. <<Struc: 103.6 - 110 Moderate (Alt) Foliation>> foliation and cataclastic texture, silic bands with sericite - clay partings. <<Struc: 103.9 - 104 Strong (Alt) Fault>> 10 cm recovered gouge <<Struc: 104.2 - 104.9 Strong (Alt) Fault>> gouge zone with crushed schist, upper contact at 15 deg to CA.											
End of Hole @ 110											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-313

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Florent Pons
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Sean Suttie	Date Logging Start:	02-Nov-15
UTM Easting	414925	Core Size:	HQ3	Azimuth:	30	Date Logging Complete:	03-Nov-15
UTM Northing:	6814965.6	Casing Pulled?:	No	Dip:	-80	Drill Company:	Geotech
UTM Elev. (m):	1389.055	Casing Depth (m):	21	Length (m):	153	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	31-Oct-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	02-Nov-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

K15-313 was drilled to test the up-dip extent of the Krakatoa target on section NW2.

The hole collared into MAFi, and partially (50 cm intersection) intersecting the Krakatoa massive sulphide lens at 43.13 m. The intersection is thought to represent the lower-most lens in the MAFi-hosted massive sulphide. The upper lens hosted in RHYv was not intersected and is most likely subcrops downdip (to the NE) within the Krakatoa target. Significantly thicker overburden (24m) was also encountered. Footwall lithological sequence was tested and the hole was extended to completely intersect RHYi at the lower contact of the massive sulphides. The RHYi has a thickness of ~60m. At the lower contact of RHYi is MAFi that hosts two separate, thin (<50cm) lenses of massive sulphides. Below the subeconomic massive sulphide lenses is a mudstone. The sequence is similar to ABM section 415050mE, 414800mE and 414900mE. 12m of casing was left stuck in the hole.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-80	30.23	0	30.23	APS	Sean Suttie	01-Nov-15		<input checked="" type="checkbox"/>	
36	-80.5	7.8	22.5	30.3	ReflexEVS	Geotech	01-Nov-15	5790	<input checked="" type="checkbox"/>	
66	-81.3	4.9	22.5	27.4	ReflexEVS	Geotech	01-Nov-15	5813	<input checked="" type="checkbox"/>	
96	-81.9	12.1	22.5	34.6	ReflexEVS	Geotech	02-Nov-15	5779	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	21.00	CASN									
21.00	24.00	MAFi									
		Casing									
		Mafic Intrusions (primarily footwall mafic intrusion)									
		brown MG									
21 - 24: Brown/greenish, medium grained MAFi, strongly foliated and biotite altered (coarse flakes oriented with foliation). Also chlorite altered (pervasive). Strong CA associated with thin concordant veinlets and blebs/clots.											
<<Min: 21 - 24 10% Min: Calcite>> Veinlets and clots/blebs											
<<Alt: 21 - 24 Strong (Alt) Biotite>> MAFi											
<<Struc: 21 - 39 Strong (Alt) Fault>> Interval strongly fractured, comprising fault gouge, poor recovery.											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-313

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
24.00	39.00	RHYc Rhyolite coherent volcanics beige MG									
24 - 39: Beige to greenish (light), medium grained RHY, comprising thin siliceous bands (+/- CA) concordant with foliation, planar texture (banded). Matrix strongly MU altered. Strongly fractured with poor recovery. Could be RHYcw.											
<<Min: 24 - 39 4% Min: Calcite>> Associated with qtz veinlets											
<<Min: 24.15 - 25.2 1% Min: Sphalerite>> Associated with qtz-ca veins/veinlets.											
<<Min: 24.15 - 25.2 2% Min: Pyrrhotite>> Associated with qtz-ca veins/veinlets.											
<<Min: 24.15 - 25.2 0.5% Min: Galena>> Associated with qtz-ca veins/veinlets.											
<<Min: 24.15 - 25.2 0.1% Min: Chalcopryite>> Associated with qtz-ca veins/veinlets.											
<<Min: 25.2 - 39 1% Min: Sphalerite>> Thin stringers, concordant.											
<<Min: 25.2 - 39 1% Min: Pyrite>> Thin stringers, concordant.											
<<Min: 30 - 43.13 0.1% Min: Pyrrhotite>> Small aggregates distributed											
<<Alt: 24 - 39 Strong (Alt) Muscovite>> Associated with strong foliation/fracturation											
39.00	43.13	MAFi Mafic Intrusions (primarily brown MCG footwall mafic intrusion)	39.00	40.50	1.50	B00265368	0.4	-0.005	0.01	-0.01	0.05
39 - 43.13: Brown/greenish, medium/coarse grained MAFi, strongly foliated and biotite altered (coarse flakes oriented with foliation). Also chlorite altered (pervasive). Strong CA associated with thin concordant veinlets and blebs/clots.											
<<Min: 39 - 39.3 90% Min: Calcite>> Massive calcite vein											
<<Min: 39.3 - 43.13 12% Min: Calcite>> Veinlets and clots/blebs											
<<Alt: 39 - 43.13 Moderate (Alt) Chlorite>>											
<<Alt: 39 - 43.13 Moderate (Alt) Biotite>>											
<<Vein: 39 - 39.3 90% Calcite 40 deg. >> Massive calcite vein, regular, concordant, 40 ac.											
<<Struc: 41.4 - 41.41 Moderate (Alt) dominant foliation>>											
43.13	43.70	OB Wispy laminate, fine MCG buckshot textured, non-magnetite bearing sulphides	43.13	43.70	0.57	B00265372	263	1.26	0.16	2.49	9.26
43.13 - 43.7: Probably Krakatoa lens, Associated with OB domain, PY-SP-GL. Sharp contact.											
<<Min: 43.13 - 43.7 4% Min: Sphalerite>> Massive sulphides, OB domain, MET 5, Krakatoa deposit.											
<<Min: 43.13 - 43.7 70% Min: Pyrite>> Massive sulphides, OB domain, MET 5, Krakatoa deposit.											
<<Min: 43.13 - 43.7 2% Min: Galena>> Massive sulphides, OB domain, MET 5, Krakatoa deposit.											
<<Struc: 43.13 - 43.14 Contact>> Contact between MAFi and OB											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-313

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
43.70	48.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion) green FMG	43.70	45.00	1.30	B00265373	1.2	0.006	-0.01	0.02	0.07
<p>43.7 - 48: Green/brownish, fine to medium grained MAFi, moderately foliated and biotite altered (coarse flakes oriented with foliation, mainly concentrated in the upper part of unit). Fine grained Matrix , chlorite altered (pervasive). Strong CA associated with thin concordant veinlets and blebs/clots.</p> <p><<Min: 43.7 - 48 5% Min: Calcite>> Veinlets and clots/blebs</p> <p><<Min: 43.7 - 50.4 0.5% Min: Pyrrhotite>> Distributed as small aggregates.</p> <p><<Alt: 43.7 - 48 Moderate (Alt) Chlorite>></p> <p><<Alt: 43.7 - 48 Weak (Alt) Biotite>></p>											
45.00	46.50		45.00	46.50	1.50	B00265374	0.6	0.007	0.01	-0.01	0.02
46.50	48.00		46.50	48.00	1.50	B00265375	1.8	-0.005	-0.01	0.01	0.06
48.00	49.98	RHY undifferentiated rhyolite green FMG	48.00	48.60	0.60	B00265376	1.3	0.006	-0.01	0.02	0.05
<p>48 - 49.98: Beige to greenish (light), fine to medium grained RHY, comprising siliceous bands (+/- CA) concordant with foliation, planar texture (banded). Matrix moderately MU altered. Could be RHYc.</p> <p><<Alt: 49.97 - 62.45 Moderate (Alt) Chlorite>></p> <p><<Alt: 49.97 - 62.45 Strong (Alt) Biotite>> MAFi, coarse grained (flakes)</p> <p><<Struc: 48.6 - 49.97 Moderate (Alt) Fault>> Interval comprising 2 short faults.</p>											
48.60	49.98		48.60	49.98	1.38	B00265377	2.2	0.015	-0.01	0.03	0.05
49.98	50.40	MAFi Mafic Intrusions (primarily footwall mafic intrusion) brown MCG	49.98	50.40	0.42	B00265378	0.7	-0.005	0.02	-0.01	0.08
<p>49.98 - 50.4: Brownish, medium to coarse grained MAFi, strongly foliated and biotite altered (coarse flakes composed the matrix). Also weak chlorite altered (pervasive). Strong CA associated with thin concordant veinlets and blebs/clots.</p> <p><<Min: 50 - 62.45 12% Min: Calcite>> Associated with MAFi</p>											
50.40	50.67	OI Heavily disseminated sulphides in host schist CG	50.40	50.80	0.40	B00265379	143	3.95	0.51	1.17	2.02
<p>50.4 - 50.67: Short narrow of massive sulphide within MAFi BI+, OI/MET6 domains, PY-PO-CP-SP mineralised at the margin of Qtz-Ca veins.</p> <p><<Min: 50.4 - 50.67 6% Min: Sphalerite>> At the margin of Qtz-Ca vein.</p> <p><<Min: 50.4 - 50.67 20% Min: Pyrite>> Coarse grained, localised at the margin of Qtz-Ca vein. OI</p> <p><<Min: 50.4 - 50.67 8% Min: Pyrrhotite>> Coarse grained, localised at the margin of Qtz-Ca vein. OI</p> <p><<Min: 50.4 - 50.67 5% Min: Chalcopyrite>> Aggregate at the margin of Qtz-Ca vein.</p> <p><<Vein: 50.4 - 50.67 50% Calcite>> Irregular and deformed Qtz-Ca vein, within semi to massive sulphide (OI).</p>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-313

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
50.67	64.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion) brown CG	50.80	52.00	1.20	B00265381	0.4	0.005	-0.01	-0.01	0.03
<p>50.67 - 64: Brownish, medium to coarse grained MAFi, strongly foliated and biotite altered (coarse flakes composed the matrix). Also weak chlorite altered (pervasive), moderately from 55.2 to 59m. Strong CA associated with thin concordant veinlets and blebs/clots.</p> <p>62.45-64m: Strong SI alteration (pervasive, MAFi bleached) associated with MU.</p> <p><<Min: 50.67 - 64 0.5% Min: Pyrrhotite>></p> <p><<Min: 62.45 - 125.15 0.5% Min: Calcite>> Mainly associated with qtz veins/veinlets.</p> <p><<Struc: 56.3 - 57.2 Strong (Alt) Fault>> Fault Gouge (breccia). CL filled.</p>											
64.00	125.15	RHYi Aphanitic Rhyolite (intrusion) grey VFG	52.00	53.50	1.50	B00265382	0.5	0.006	-0.01	-0.01	0.02
<p>64 - 125.15: Large unit of RHYi, grey to light grey, aphanitic to very fine grained, fractured unit and also locally micro cracked (consolidate), heterogeneous texture. From 64 to 66m, banded texture marked by parallel leucocratic bands. Mostly, the texture is more massive, homogeneous, with aphanitic matrix. QE, mm, disseminated within matrix. Locally, interval marked by diffused hematite. Mineralized, 1-2 % of py, occurring as thin stringers, filling fractures and also disseminated. Locally crosscut by grey qtz veins, irregular oriented, "stockwerk".</p> <p><<Min: 64 - 125.15 1% Min: Pyrite>> 1-2 % of py, occuring as thin stringers, filling fractures and also disseminated</p> <p><<Alt: 124.65 - 128.6 Moderate (Alt) Muscovite>> Marked by fracture surfaces. Associated with strong foliation.</p> <p><<Vein: 74.7 - 75 80% Quartz>> Massive grey qtz vein, discordant.</p> <p><<Vein: 120.65 - 122.6 20% Quartz>> Interval comprising multiple grey qtz veins, 1-3 cm cm, irregular oriented, weakly associated with CA. "stockwerk"</p> <p><<Struc: 68.7 - 69 Strong (Alt) Fault>> Fault Gouge (breccia), RHYi clasts.</p> <p><<Struc: 96.7 - 97.5 Moderate (Alt) Fault>> Interval strongly fractured associated with fault gouge.</p> <p><<Struc: 102.6 - 104 Weak (Alt) Fault>> Interval comprising multiple short faults.</p> <p><<Struc: 108.6 - 109.15 Strong (Alt) Fault>> Fault Gouge (breccia), RHYi clasts.</p>											
125.15	128.60	MAFi Mafic Intrusions (primarily footwall mafic intrusion) grey-green FCG	125.15	126.50	1.35	B00265384	0.9	-0.005	-0.01	-0.01	-0.01
<p>125.15 - 128.6: Grey to greenish (light), fine to coarse grained, moderately to strongly MU altered associated with strong foliation. Characterized by siliceous bands/veins, +/- CA, subconcordant, and also QE distributed within fine grained matrix. MAFi strongly MU altered or could be RHY. Gradual upper and lower contacts.</p> <p><<Min: 125.15 - 129.1 0.5% Min: Pyrite>></p> <p><<Min: 125.15 - 129.1 2% Min: Calcite>> Associated with MAFi</p> <p><<Struc: 126.5 - 126.7 Strong (Alt) Fault>> Fault gouge.</p>											
128.60	129.10	RHYi Aphanitic Rhyolite (intrusion) grey-green FMG	128.60	129.10	0.50	B00265387	2.2	0.005	-0.01	0.02	0.02
<p>128.6 - 129.1: RHYi?</p>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-313
From (m) **To (m)** **Rocktype & Description**
129.10 129.30 OB **Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides**
MCG

129.1 - 129.3: Short narrow of massive sulphides, OB/MET5 domain, PY-SP-GL.

<<Min: 129.1 - 129.3 40% Min: Pyrite>> Medium grained, bands.

<<Min: 129.1 - 129.3 5% Min: Pyrrhotite>> Associated with PY bands.

<<Min: 129.1 - 129.3 3% Min: Galena>> Associated with PY bands.

129.30 130.85 MAFi **Mafic Intrusions (primarily green-brown footwall mafic intrusion)** **FCG**

129.3 - 130.85: Green/brownish, very fine to coarse grained MAFi, strongly foliated, biotite altered, flakes/clots of biotite distributed within strong CL altered matrix. Strong CA associated with thin concordant veinlets and blebs/clots, also pervasive.

<<Min: 129.3 - 129.6 4% Min: Pyrite>> Occuring as concordant bands, coarse grained.

<<Min: 129.3 - 129.6 3% Min: Pyrrhotite>> Occuring as concordant bands, coarse grained.

<<Min: 129.3 - 129.6 1% Min: Galena>> Associated with mineralized bands.

<<Min: 129.3 - 129.6 1% Min: Chalcopyrite>>

<<Min: 129.3 - 130.85 6% Min: Calcite>> Associated with MAFi

<<Min: 129.6 - 130.85 0.5% Min: Pyrrhotite>>

<<Alt: 129.3 - 130.85 Strong (Alt) Chlorite>> Within MAFi.

<<Struc: 130.25 - 130.85 Strong (Alt) Fault>> Fault gouge within MAFi. At contact with OB.

130.85 131.06 OB **Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides**
FMG

130.85 - 131.06: Short narrow of massive sulphides within MAFi, OB/MET5 domain, PY-CP(trace).

<<Min: 130.85 - 131.06 1% Min: Sphalerite>> OB

<<Min: 130.85 - 131.06 70% Min: Pyrite>> OB

<<Min: 130.85 - 131.06 0.5% Min: Chalcopyrite>>

131.06 131.75 MAFi **Mafic Intrusions (primarily green footwall mafic intrusion)** **FG**

131.06 - 131.75: Green, very fine to coarse grained MAFi, strongly foliated, Matrix is totally replace by CL, original alteration? Strong CA associated with thin concordant veinlets and blebs/clots, also pervasive. The lower contact with the RHY unit is gradual and brecciated, "peperitic texture".

<<Min: 131.06 - 131.75 2% Min: Pyrite>> Coarse grained.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
129.10	129.60	0.50	B00265388	143	0.291	0.05	1.8	4.68

129.60	130.85	1.25	B00265389	6.1	0.077	0.1	0.02	0.05
--------	--------	------	-----------	-----	-------	-----	------	------

130.85	131.30	0.45	B00265391	69.1	0.38	0.45	0.55	1.62
--------	--------	------	-----------	------	------	------	------	------

131.30	131.75	0.45	B00265392	3.2	-0.005	-0.01	0.04	0.07
--------	--------	------	-----------	-----	--------	-------	------	------

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-313

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 131.06 - 131.75 Strong (Alt) Chlorite>>											
131.75	136.30	RHY undifferentiated rhyolite light grey FMG	131.75	133.00	1.25	B00265393	-0.3	-0.005	-0.01	-0.01	0.01
131.75 - 136.3: Light grey, fine to medium grained, strongly MU altered associated with strong foliation. Original alteration? Comprising siliceous bands, concordant, deformed and locally dismembered, associated with weak CA, marked a moderate banded texture which let thinking at a RHY cw sequence strongly foliated. RHYcw?											
<<Min: 131.75 - 134.6 0.5% Min: Pyrite>>			133.00	134.50	1.50	B00265394	0.5	-0.005	-0.01	-0.01	0.01
<<Min: 131.75 - 153 1% Min: Calcite>> Patchy and locally associated with qtz veins/bands.			134.50	135.60	1.10	B00265395	0.3	-0.005	-0.01	-0.01	0.01
<<Min: 134.6 - 136.3 1% Min: Pyrrhotite>>			135.60	136.30	0.70	B00265396	-0.3	-0.005	-0.01	-0.01	0.01
<<Alt: 131.75 - 137.35 Moderate (Alt) Muscovite>> Marked by fracture surfaces. Associated with strong foliation.											
<<Alt: 131.75 - 137.35 Weak (Alt) Chlorite>> Original?											
<<Struc: 132 - 132.01 dominant foliation>>											
136.30	141.00	MDS Carbonaceous dominant black VFG mudstone	136.30	136.80	0.50	B00265397	4.5	0.071	0.02	0.19	0.46
136.3 - 141: Black to very dark grey, very fine grained, homogeneous, folded, bedding texture. Mudstone unit comprising very siliceous interval (Intense SI), grey, very homogeneous. 136.3-136.8m: Thin siliceous bands/beds, folded, associated with 5-6 % of py (stringers), syntectonic? 3-5 % of py in the rest of the unit (stringers and disseminated).											
<<Min: 136.3 - 136.8 6% Min: Pyrite>> Occuring as Wisps/stringers parallel with foliation			136.80	138.00	1.20	B00265398	1.3	0.018	0.02	0.06	0.19
<<Min: 136.8 - 139.25 3% Min: Pyrrhotite>> Dissiminated and as small wisps.			138.00	139.25	1.25	B00265399	1.9	0.007	0.01	0.13	0.31
<<Min: 139.25 - 139.65 7% Min: Pyrite>>			139.25	139.65	0.40	B00265401	5.6	0.122	0.03	0.34	0.51
<<Min: 139.25 - 139.65 4% Min: Pyrrhotite>>			139.65	141.00	1.35	B00265402	4.2	0.025	0.02	0.27	0.6
<<Min: 139.65 - 141 3% Min: Pyrrhotite>> Dissiminated and as small wisps.											
141.00	146.45	RHYcw Curdy textured-flow banded light grey FMG (flows, subvolcanics)	141.00	142.50	1.50	B00265403	-0.3	-0.005	-0.01	0.01	0.04
141 - 146.45: Light grey, fine to medium grained, moderately MU altered associated with moderate foliation (moderately crenulated). Original alteration? Comprising siliceous bands, concordant, deformed and locally dismembered, associated with weak CA, marked a moderate flow banded texture which let thinking at a RHYcw.											
<<Min: 141 - 152.4 2% Min: Pyrrhotite>> Occuring as small wisps, oriented within foliation, locally thin stringers.			142.50	144.00	1.50	B00265404	-0.3	-0.005	-0.01	-0.01	0.01
<<Alt: 141 - 153 Moderate (Alt) Muscovite>> Moderate to strong. Original?			144.00	145.00	1.00	B00265405	-0.3	-0.005	-0.01	-0.01	0.01
<<Struc: 141 - 141.01 Contact>> Lower contact between MDSTc and RHY, sharp.			145.00	146.40	1.40	B00265406	-0.3	-0.005	-0.01	-0.01	-0.01
146.45	153.00	RHYva Coarse grained to ash tuff light grey MCG									
146.45 - 153: Light grey, medium to coarse grained, +/- homogeneous, moderately foliated (regular cleavage). We observe <5 % of stretched siliceous fragments, deformed, lapilli relics? QE distributed within the matrix. 1-2 % of PO disseminated, occurring as wisps/stringers. Probably ash tuff with lapilli.											
<<Struc: 152.4 - 153 Strong (Alt) Fault>> Fault gouge.											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-313

From (m) To (m)

Rocktype & Description

From (m)

To (m)

Width

Sample

Ag PPM

Au PPM

Cu %

Pb %

Zn %

End of Hole @ 153

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-314

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Florent Pons
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Florent Pons	Date Logging Start:	04-Nov-15
UTM Easting	414945.5	Core Size:	HQ3	Azimuth:	30	Date Logging Complete:	06-Nov-15
UTM Northing:	6815000.8	Casing Pulled?:	Yes	Dip:	-78	Drill Company:	Geotech
UTM Elev. (m):	1386.396	Casing Depth (m):	27	Length (m):	195	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	03-Nov-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	05-Nov-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

This hole collared into portions of the upper Krakatoa lens before encountering the lower lens. It continued through isolated MXSX lenses that have limited width between thick sequences of RHYi. Hole was extended to test the lower permissive contact of RHYi where hole K15-316 encountered MXSX. Geology encountered indicates that smaller, poorly developed lenses (<0.6m) as strongly disseminated sulphides (OI) exist between two well-formed massive sulphide lenses (>0.5m). The well formed massive sulphide lenses occur interleaved between thick intervals of RHYi. An unusual marker horizon of OI (143.71 - 149.60), which exists as interstitial or matrix replacement of py-gl-cpy-sph within a calcareous (?) or calcite rich breccia (with clasts of RHY and sulphide + calcite matrix. From 171.7 to 177.7 exists footwall-style alteration (chlorite-cordierite) associated with gl+sph (<3%). Remainder of hole was fine grained RHYv(a,l) with portions of strongly disseminated stratiform sulphides.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-78	30	0	30	APS	Florent Pons	04-Nov-15		<input checked="" type="checkbox"/>	
39	-78.9	12.2	22.5	34.7	ReflexEVS	Geotech	04-Nov-15	5799	<input checked="" type="checkbox"/>	
69	-79.5	9.9	22.5	32.4	ReflexEVS	Geotech	04-Nov-15	5790	<input checked="" type="checkbox"/>	
96	-79.9	10.1	22.5	32.6	ReflexEVS	Geotech	05-Nov-15	5780	<input checked="" type="checkbox"/>	
150	-81.5	11.6	22.5	34.1	ReflexEVS	Geotech	05-Nov-15	5705	<input checked="" type="checkbox"/>	
180	-82.9	13.5	22.5	36	ReflexEVS	Geotech	06-Nov-15	5624	<input checked="" type="checkbox"/>	
195	-84.8	16.3	22.5	38.8	ReflexEVS	Geotech	06-Nov-15	5772	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	26.00	OVBN Overburden									
0 - 26: Casing at 27 m											
<<Struc: 25.67 - 26 Strong (Alt) Fault>> Fault gouge (breccia)											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-314

From (m) To (m) Rocktype & Description

26.00 28.65 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides MG

26 - 28.65: Upper lens of Krakatoa deposit, OB/MET5 domain, Massive Py associated with bands of Sp. Seems to be hosted within RHV, strongly foliated felsic interval between 26.25-26.45m (fault?) was observed. Locally fractured.

<<Min: 26 - 27 4% Min: Sphalerite>> "patchy" within MS.

<<Min: 26 - 27 60% Min: Pyrite>> Massive sulphide, OB, medium grained.

<<Min: 26 - 27 2% Min: Galena>> "patchy" within MS.

<<Min: 26 - 28.65 5% Min: Calcite>> CA pervasive and patchy within MS.

<<Min: 27 - 27.5 3% Min: Sphalerite>> Occuring as concordant bands.

<<Min: 27 - 27.5 70% Min: Pyrite>> Massive sulphide, OB, medium grained.

<<Min: 27 - 27.5 0.5% Min: Galena>>

<<Min: 27.5 - 28 2% Min: Sphalerite>>

<<Min: 27.5 - 28 60% Min: Pyrite>>

<<Min: 27.5 - 28 4% Min: Galena>>

<<Min: 27.5 - 28 1% Min: Chalcopryite>>

<<Min: 28 - 28.65 5% Min: Sphalerite>> Occuring as concordant bands.

<<Min: 28 - 28.65 70% Min: Pyrite>>

<<Alt: 26.25 - 26.45 Strong (Alt) Muscovite>> Associated with fault.

<<Alt: 27.5 - 27.85 Moderate (Alt) Cordierite>>

<<Struc: 26.25 - 26.45 Moderate (Alt) Fault>> Fault/intense foliation, interval of RHV.

28.65 29.20 MAFi Mafic Intrusions (primarily green footwall mafic intrusion)

28.65 - 29.2: Interval of MAFi between massive sulphide, strongly CL altered (original) and cordierite altered. Cordierite occurring as surrounded porphyroblast, 0.5-2 cm size, moderately stretched. Comprising >25 % of bands/dismembered veins of calcite, concordant. Strongly mineralized (Py)

<<Min: 28.65 - 29.2 6% Min: Pyrite>> Coarse grained

<<Min: 28.65 - 29.5 12% Min: Calcite>> Occuring as bands/dismembered veins

<<Alt: 28.65 - 29.5 Strong (Alt) Chlorite>> Associated with strong foliated MAFi.

<<Alt: 28.65 - 29.5 Strong (Alt) Cordierite>> Cordierite occurring as subrounded porphyroblates, 0.5-2 cm size, moderately stretched.

<<Struc: 28.8 - 28.81 Strong (Alt) dominant foliation>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
26.00	27.00	1.00	B00265407	423	4.2	0.47	1.11	3.36

27.00	27.50	0.50	B00265408	469	2.38	0.19	4.97	10.8
27.50	27.85	0.35	B00265409	463	4.33	0.52	1.93	5.99
27.85	28.65	0.80	B00265411	271	1.42	0.3	2.15	9.23

28.65	29.20	0.55	B00265412	8.2	0.05	0.01	0.07	0.11
-------	-------	------	-----------	-----	------	------	------	------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-314
From (m) To (m) Rocktype & Description

29.20 29.50 OI Heavily disseminated sulphides in host schist CG

29.2 - 29.5: Stringers of Py within altered MAFI (CL and cordierite). At the contact with short lens of massive sulphide (OB).

<<Min: 29.2 - 29.5 1% Min: Sphalerite>>

<<Min: 29.2 - 29.5 12% Min: Pyrite>> Occuring as stringers. OI

<<Struc: 29.2 - 29.5 Moderate (Alt) Fault>> Fault interval at the contact with MS.

29.50 29.85 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides MG

29.5 - 29.85: Lens of massive sulphide hosted within MAFi.

<<Min: 29.5 - 29.85 2% Min: Sphalerite>>

<<Min: 29.5 - 29.85 70% Min: Pyrite>> OB

<<Min: 29.5 - 29.85 1% Min: Galena>> Galena ?

29.85 67.60 MAFi Mafic Intrusions (primarily green-brown footwall mafic intrusion) CG

29.85 - 67.6: Large interval of mafic unit, massive, moderately foliated (DFOL ~ 40 ac). Marked by porphyroblast of biotite (from 57.75m to 65.6m) and chlorite (clots), mm to cm, distributed and oriented within fine grained matrix moderately chlorite altered. Strong calcite alteration, occurring as thin subconcordant veinlets and porphyroblast/blebs. Also comprising minor faults gouge.

<<Min: 29.85 - 67.6 0.1% Min: Pyrite>> Trace of Py, coarse grained.

<<Min: 29.85 - 67.6 0.1% Min: Pyrrhotite>> Rare trace.

<<Min: 29.85 - 67.6 10% Min: Calcite>> Occuring as porphyroblats distributed within matrix (also pervasive altered) and as thin veinlets/fracture filling.

<<Alt: 29.85 - 57.75 Moderate (Alt) Chlorite>> MAFi

<<Alt: 57.75 - 65.6 Weak (Alt) Chlorite>> MAFi

<<Alt: 57.75 - 65.6 Moderate (Alt) Biotite>> Porphyroblats of BI, coarse grained, distributed within matrix.

<<Struc: 38 - 38.01 Strong (Alt) dominant foliation>>

<<Struc: 45 - 45.01 Moderate (Alt) dominant foliation>>

<<Struc: 63.1 - 63.55 Strong (Alt) Fault>> Fault (clay gouge)

<<Struc: 66.2 - 67.6 Strong (Alt) Fault>> Fault interval, gouge at the contact with massive sulphide.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
29.20	29.85	0.65	B00265413	188	0.798	0.07	1.47	5.2

29.85	31.00	1.15	B00265414	0.8	-0.005	0.03	0.01	0.05
-------	-------	------	-----------	-----	--------	------	------	------

31.00	32.50	1.50	B00265415	1.7	-0.005	-0.01	-0.01	0.02
32.50	34.00	1.50	B00265416	265	1.18	0.02	0.02	0.02
62.00	63.00	1.00	B00265417	-0.3	-0.005	-0.01	-0.01	0.01

63.00	65.00	2.00	B00265418	0.4	-0.005	-0.01	0.01	0.02
65.00	66.00	1.00	B00265419	0.4	0.006	-0.01	-0.01	0.01
66.00	66.50	0.50	B00265421	0.5	0.007	0.01	-0.01	0.02
66.50	67.60	1.10	B00265422	65.4	0.241	0.12	0.83	1.25



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-314

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
67.60	75.00	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides MG	67.60	68.50	0.90	B00265423	417	1.85	0.18	5.03	9.87
67.6 - 75: Massive sulphide, Py-Sp-GL with trace of Cp, OB/MET 5 domain. Locally fractured, comprising fault gouge.											
<<Min: 67.6 - 71.4 10% Min: Sphalerite>> Homogeneous texture, massive, medium grained, locally weakly laminated marked by bands of SP.			68.50	69.50	1.00	B00265424	336	1.79	0.23	2.61	12
<<Min: 67.6 - 71.4 70% Min: Pyrite>> Homogeneous texture, massive, medium grained, locally weakly laminated marked by bands of SP.			69.50	71.00	1.50	B00265425	115	1.14	0.18	2.2	6.91
<<Min: 67.6 - 71.4 3% Min: Galena>>			71.00	71.40	0.40	B00265426	327	2.83	0.2	3.21	13.3
<<Min: 67.6 - 74 5% Min: Calcite>>			71.40	72.00	0.60	B00265427	306	3.23	0.26	2.85	9.33
<<Min: 71.4 - 73.75 5% Min: Sphalerite>> Homogeneous texture, massive, medium grained, locally weakly laminated marked by bands of SP.			72.00	73.75	1.75	B00265428	296	2.06	0.19	3.35	7.98
<<Min: 71.4 - 73.75 70% Min: Pyrite>> Homogeneous texture, massive, medium grained, locally weakly laminated marked by bands of SP.			73.75	74.20	0.45	B00265429	143	1.81	0.5	1.36	5.44
<<Min: 71.4 - 73.75 3% Min: Galena>>			74.20	75.00	0.80	B00265431	170	1.27	0.45	1.64	7.18
<<Min: 73.75 - 74.2 4% Min: Sphalerite>>											
<<Min: 73.75 - 74.2 60% Min: Pyrite>> Interval weakly fractured/brecciated filling by calcite and cordierite?											
<<Min: 73.75 - 74.2 5% Min: Galena>>											
<<Min: 73.75 - 74.2 2% Min: Chalcopyrite>>											
<<Min: 74 - 75 8% Min: Calcite>> Also pervasive.											
<<Min: 74.2 - 75 8% Min: Sphalerite>> Bands, marked a weak laminated texture.											
<<Min: 74.2 - 75 70% Min: Pyrite>>											
<<Min: 74.2 - 75 4% Min: Galena>>											
<<Alt: 73.75 - 74.2 Weak (Alt) Cordierite>> Porphyroblast of Cl ?											
<<Struc: 68.7 - 70.9 Strong (Alt) Fault>> Fault within massive sulphide, gouge, filling by sericite/MU.											
<<Struc: 72.45 - 73.75 Moderate (Alt) Fault>> Interval strongly fractured, comprising gouge.											
75.00	86.55	MAFi Mafic Intrusions (primarily green-brown footwall mafic intrusion) MCG	75.00	76.50	1.50	B00265432	1.1	0.006	-0.01	0.02	0.03
75 - 86.55: Interval of mafic unit, massive, moderately foliated (DFOL ~ 45 ac). Marked by porphyroblast of biotite (from 83 to 86.55m) and chlorite (clots), mm to cm, distributed and oriented within fine grained matrix moderately chlorite altered. Strong calcite alteration, occurring as thin subconcordant veinlets and porphyroblast/blebs. Also comprising minor faults gouge.											
<<Min: 75 - 78 8% Min: Calcite>> Occuring as porphyroblats distributed within matrix (also pervasive altered) and as thin veinlets/fracture filling.			76.50	78.00	1.50	B00265433	0.9	0.006	-0.01	-0.01	0.02
<<Min: 75 - 86.55 0.1% Min: Pyrite>>			78.00	79.00	1.00	B00265434	3	0.017	-0.01	0.03	0.02



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-314

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<p><<Min: 78 - 83 5% Min: Calcite>> Occuring as porphyroblats distributed within matrix (also pervasive altered) and as thin veinlets/fracture filling.</p> <p><<Min: 83 - 86.55 12% Min: Calcite>> Occuring as porphyroblats distributed within matrix (also pervasive altered) and as thin veinlets/fracture filling.</p> <p><<Alt: 76.5 - 86.55 Moderate (Alt) Chlorite>> MAFi</p> <p><<Alt: 83 - 86.55 Moderate (Alt) Biotite>> Porphyroblats of BI, coarse grained, distributed and oriented within matrix.</p> <p><<Struc: 75.3 - 75.31 Moderate (Alt) dominant foliation>> Marked by BI.</p> <p><<Struc: 80.1 - 80.11 Moderate (Alt) dominant foliation>> Marked by BI.</p> <p><<Struc: 86 - 86.01 Moderate (Alt) dominant foliation>> Marked by BI.</p>											
86.55	89.00	RHY undifferentiated rhyolite									
<p>86.55 - 89: Grey, fine to medium grained, moderately foliated and Mu altered. Comprising siliceous bands, concordant, partially dismembered, banded texture. Probably RHY interval, cw?</p> <p><<Min: 86.55 - 89 1% Min: Pyrite>> Also associated with Vn.</p> <p><<Min: 86.55 - 89 6% Min: Calcite>></p> <p><<Vein: 86.6 - 86.7 95% Quartz 80 deg. >> Regular qtz-ca vein, grey, unmineralized.</p>											
89.00	95.35	RHYi Aphanitic Rhyolite (intrusion)									
<p>89 - 95.35: Unit of RHYi, grey to light grey, massive, aphanitic to very fine grained, fractured unit, homogeneous texture. Mineralized, 1-2 % of py, occurring as thin stringers, filling fractures and also disseminated.</p> <p><<Min: 89 - 95.35 2% Min: Pyrite>> Occuring as stringers and also disseminated</p> <p><<Alt: 89 - 95.35 Weak (Alt) Albite>> Diffused, bleached.</p>											
95.35	97.35	RHYvl Lapilli tuff									
<p>95.35 - 97.35: Light grey, fine to coarse grained, weakly foliated, competent unit. Siliceous fragments are distributed within homogeneous fine grained matrix, organised as bands, weakly oriented with foliation, lapilli?</p> <p><<Min: 95.35 - 97.35 1% Min: Pyrite>></p> <p><<Alt: 96.8 - 97.35 Moderate (Alt) Chlorite>></p> <p><<Vein: 96.4 - 97.25 20% Quartz 80 deg. >> Interval comprising group of discordant qtz-/-Ca veins, deformed, margins CI altered (Original?)</p> <p><<Struc: 95.35 - 95.36 Contact>> Gradual contact between RHYi and RHYvl.</p>											
97.35	97.70	OI Heavily disseminated sulphides in host schist									
<p>97.35 - 97.7: OI, strongly Ca altered (pervasive), Py-GI-Sp. Sharp contact, ~45 ac.</p> <p><<Min: 97.35 - 97.7 3% Min: Sphalerite>> OI interval</p> <p><<Min: 97.35 - 97.7 60% Min: Pyrite>> Medium grained, OI interval.</p>											

93.00	94.50	1.50	B00265435	2.2	0.012	-0.01	0.09	0.1
-------	-------	------	-----------	-----	-------	-------	------	-----

94.50	95.35	0.85	B00265436	1.3	-0.005	-0.01	0.02	0.03
-------	-------	------	-----------	-----	--------	-------	------	------

95.35	96.50	1.15	B00265437	8.4	0.021	-0.01	0.12	0.11
-------	-------	------	-----------	-----	-------	-------	------	------

96.50	97.35	0.85	B00265438	1.9	0.006	-0.01	0.02	0.03
-------	-------	------	-----------	-----	-------	-------	------	------

97.35	97.70	0.35	B00265439	287	0.851	0.06	3.13	5.71
-------	-------	------	-----------	-----	-------	------	------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-314

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 97.35 - 97.7 5% Min: Galena>> OI interval											
<<Min: 97.35 - 97.7 10% Min: Calcite>> Pervasive within OI interval.											
<<Struc: 97.35 - 97.36 Contact>> Sharp contact (upper) between RHYvl and OI.											
97.70	98.60	RHYcw Curdy textured-flow banded (flows, subvolcanics) light grey MG	97.70	98.60	0.90	B00265441	5.1	0.024	-0.01	0.06	0.07
97.7 - 98.6: Light grey, fine to medium grained, weakly foliated. Comprising siliceous bands, parallel, well preserved, within homogeneous fine grained matrix, flow banded texture? Probably RHYcw.											
<<Min: 97.7 - 102 1% Min: Calcite>> Trace.											
<<Min: 97.7 - 102.9 2% Min: Pyrite>> Finely disseminated within matrix.											
<<Alt: 97.7 - 103.85 Weak (Alt) Chlorite>> Original?											
<<Struc: 97.7 - 97.71 Contact>> Sharp contact (Lower) between OI and RHYcw											
98.60	103.85	RHYvl Lapilli tuff light grey FCG	98.60	100.00	1.40	B00265442	1.7	0.006	-0.01	0.02	0.02
98.6 - 103.85: Light grey, fine to coarse grained, moderately foliated and fractured. >20 % of siliceous fragments are distributed within homogeneous fine grained matrix (weakly MU altered), weakly oriented with foliation, lapilli?											
<<Min: 102.9 - 104.3 4% Min: Pyrite>> At the selvages of Qtz-Ca veins and also as stringers.											
103.85	106.30	MAFi Mafic Intrusions (primarily footwall mafic intrusion) grey-green VFG	100.00	101.00	1.00	B00265443	0.4	0.006	-0.01	-0.01	-0.01
103.85 - 106.3: Grey to greenish, very fine grained, homogeneous, strong pervasive Cl/Mu alterations. Comprising deformed/dismembered Ca veinlets, porphyroblasts of calcite distributed within matrix. Probably MAFi. Could be a altered ash tuff very fine grained.											
<<Min: 104.3 - 108.2 2% Min: Pyrite>> Disseminated and stringers											
<<Alt: 103.85 - 106.3 Weak (Alt) Muscovite>> Matrix totally altered.											
<<Alt: 103.85 - 106.3 Moderate (Alt) Chlorite>> Matrix totally altered.											
106.30	122.70	RHYi Aphanitic Rhyolite (intrusion) beige VFG	122.00	122.70	0.70	B00265444	1.4	0.006	-0.01	-0.01	0.01
106.3 - 122.7: Unit of RHYi, beige to light grey, massive, aphanitic to very fine grained, locally fractured but mostly competent, homogeneous texture. Very siliceous and moderate to strongly albite altered (diffused). Mineralized, 1-2 % of py, occurring as thin stringers, filling fractures and also disseminated.											
<<Min: 108.2 - 122.7 3% Min: Pyrite>> Disseminated and occurring as thin stringers +/- parallel with foliation.											
<<Alt: 108.5 - 117.5 Moderate (Alt) Albite>> Diffused, beige colored.											
<<Alt: 117.5 - 120.1 Strong (Alt) Albite>> Diffused, beige/pinkish colored.											
<<Alt: 120.1 - 122.7 Moderate (Alt) Albite>> Diffused, beige colored.											
<<Struc: 120 - 120.01 Weak (Alt) dominant foliation>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-314

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
122.70	123.75	RHY undifferentiated rhyolite grey-green FMG	122.70	123.75	1.05	B00265445	1.2	0.007	-0.01	-0.01	-0.01
<p>122.7 - 123.75: Rhy? RHYva? Fine grained, homogeneous, strongly foliated and MU altered.</p> <p><<Min: 122.7 - 123.75 2% Min: Pyrite>></p> <p><<Alt: 122.7 - 123.75 Strong (Alt) Muscovite>> Associated with strong foliation</p> <p><<Struc: 123 - 123.01 Strong (Alt) dominant foliation>></p>											
123.75	128.15	RHYi Aphanitic Rhyolite (intrusion) beige VFG	123.75	124.70	0.95	B00265446	14.5	0.103	0.02	0.11	0.12
<p>123.75 - 128.15: Unit of RHYi, beige to light grey, massive, aphanitic to very fine grained, mostly competent, homogeneous texture. Very siliceous and moderate to strongly albite altered (diffused). Mineralized, 5-20 % of py, occurring as thin stringers, filling fractures and concordant/parallel bands close from massive sulphide.</p> <p><<Min: 123.75 - 126.75 6% Min: Pyrite>> Disseminated and occurring as thin stringers +/- parallel with foliation and fracture filling.</p> <p><<Min: 126.75 - 128.15 18% Min: Pyrite>> 15-20 %. Disseminated (medium/coarse grained) and occurring as bands/stringers, parallel with foliation and fracture filling. Semi massive at the margins of Qtz vein.</p> <p><<Alt: 123.75 - 125.5 Strong (Alt) Albite>> Diffused, beige/pinkish colored.</p> <p><<Alt: 125.5 - 126.75 Moderate (Alt) Albite>></p> <p><<Vein: 125.5 - 126.2 70% Quartz 40 deg. >> Massive grey qtz vein, strong Py at the margins associated with Sp/GL.</p>											
128.15	129.30	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides MG	128.15	128.70	0.55	B00265451	210	0.968	0.15	3.64	5.65
<p>128.15 - 129.3: Massive sulphide interval, OB domain, massive py associated with Sp and weak galena. Pervasive calcite. Sharp contact.</p> <p><<Min: 128.15 - 129.3 10% Min: Sphalerite>> Occuring as subparallel bands.</p> <p><<Min: 128.15 - 129.3 70% Min: Pyrite>> OB, medium grained.</p> <p><<Min: 128.15 - 129.3 3% Min: Galena>> Difficult to estimate.</p> <p><<Min: 128.15 - 129.3 10% Min: Calcite>> Pervasive within massive sulphide.</p>											
129.30	134.14	RHYi Aphanitic Rhyolite (intrusion) grey VFG	129.30	130.40	1.10	B00265453	92.1	0.723	0.23	0.02	0.04
<p>129.3 - 134.14: Unit of RHYi, beige to light grey, massive, aphanitic to very fine grained, locally fractured but mostly competent, homogeneous texture. Very siliceous. Mineralized, 1-3 % of py, occurring as thin stringers, filling fractures and also disseminated.</p> <p><<Min: 129.3 - 134.15 2% Min: Pyrite>> Disseminated and occurring as thin stringers +/- parallel with foliation and fracture filling.</p> <p><<Alt: 133 - 134.57 Moderate (Alt) Muscovite>> Sr/Mu pervasive.</p> <p><<Struc: 129.3 - 129.31 Contact>> Sharp lower contact between massive sulphide/RHYi.</p>											
			130.40	131.50	1.10	B00265454	6.5	0.114	0.01	0.03	0.02
			131.50	133.00	1.50	B00265455	0.8	0.008	-0.01	-0.01	-0.01
			133.00	134.15	1.15	B00265456	6.8	0.062	-0.01	0.07	0.1



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-314

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %										
134.14	134.57	OI Heavilly disseminated sulphides in host schist	MG	134.15	134.57	0.42	B00265457	128	0.387	0.03	2.12	5.2									
134.14 - 134.57: OI, medium grained. Mineralized bands, parallel with foliation. Hosted by RHYi.																					
<<Min: 134.15 - 134.57 8% Min: Sphalerite>> OI, medium to coarse grained, occurring as parallel bands (with foliation)																					
<<Min: 134.15 - 134.57 15% Min: Pyrite>> OI, medium to coarse grained, occurring as parallel bands (with foliation)																					
<<Min: 134.15 - 134.57 4% Min: Galena>>																					
134.57	134.70	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	134.57	135.35	0.78	B00265458	110	0.732	0.04	1.65	2.95									
134.57 - 134.7: OB, moderate laminated texture. Ca pervasive																					
<<Min: 134.57 - 134.7 10% Min: Sphalerite>> OB																					
<<Min: 134.57 - 134.7 60% Min: Pyrite>> OB, medium grained																					
<<Min: 134.57 - 134.7 4% Min: Galena>>																					
134.70	135.35	OI Heavilly disseminated sulphides in host schist	MG																		
134.7 - 135.35: OI, medium grained. Mineralized bands, parallel with foliation. Hosted by RHYi.																					
<<Min: 134.7 - 135.35 10% Min: Sphalerite>> OI, medium to coarse grained, occurring as parallel bands (with foliation)																					
<<Min: 134.7 - 135.35 20% Min: Pyrite>> OI, medium to coarse grained, occurring as parallel bands (with foliation)																					
<<Min: 134.7 - 135.35 3% Min: Galena>>																					
135.35	136.00	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG	135.35	136.00	0.65	B00265459	180	0.642	0.08	2.02	4.6									
135.35 - 136: OB, moderate laminated texture. Ca pervasive																					
<<Min: 135.35 - 136 3% Min: Sphalerite>> OB, medium grained																					
<<Min: 135.35 - 136 60% Min: Pyrite>> OB, medium grained																					
<<Min: 135.35 - 136 1% Min: Galena>>																					
136.00	143.71	RHYi Aphanitic Rhyolite (intrusion) light grey	VFG	136.00	137.00	1.00	B00265461	13	0.06	-0.01	0.07	0.28									
136 - 143.71: Unit of RHYi, beige to light grey, massive, aphanitic to very fine grained, locally fractured but mostly competent, homogeneous texture. Very siliceous. Mineralized, 1-3 % of py, occurring as thin stringers, filling fractures and also disseminated.																					
<<Min: 136 - 136.6 10% Min: Pyrite>> Occuring as bands parallel with foliation.																					
				137.00	138.00	1.00	B00265462	0.9	-0.005	-0.01	0.01	0.03									



From (m) To (m) Rocktype & Description

<<Min: 136.6 - 142.15 1% Min: Pyrite>> Also thin stringers.
 <<Min: 142.5 - 143.2 4% Min: Pyrite>> Disseminated and occurring as thin stringers/fracture filling.
 <<Min: 143.2 - 143.71 0.5% Min: Pyrite>>
 <<Alt: 136 - 138.5 Moderate (Alt) Muscovite>> Sr/Mu pervasive.
 <<Struc: 138 - 138.01 Moderate (Alt) dominant foliation>>

143.71 149.60 OI Heavily disseminated sulphides in host schist

FCG

143.71 - 149.6: Large OI unit, strongly Calcite altered (pervasive/fracture filling), seems hosted within brecciated/fragmented RHY (RHYi?), SI pervasive. Strong mineralization, stringers/fracture filling, weakly laminated texture, fine to coarse grained, locally aggregates. Qtz-ca-+/-Dol associated as fracture filling.

<<Min: 143.71 - 149.6 6% Min: Sphalerite>> Aggregates distributed, fracture filling.
 <<Min: 143.71 - 149.6 30% Min: Pyrite>> Occuring as large aggregates/fracture filling and also disseminated.
 <<Min: 143.71 - 149.6 10% Min: Galena>>
 <<Min: 143.71 - 149.6 3% Min: Chalcopryite>> Irreguraly disseminated within interval, locally as small aggregates.
 <<Min: 143.71 - 149.6 10% Min: Calcite>> Pervasive and fracture filling.

149.60 153.95 RHY undifferentiated rhyolite grey-green FG

149.6 - 153.95: Light greenish, fine grained, foliated, strongly MU altered. Moderate banded texture marked by thin siliceous bands, concordant, locally dismembered. Felsic unit, probably RHY,ash?

<<Min: 149.6 - 153.95 1% Min: Pyrite>>
 <<Min: 149.6 - 153.95 3% Min: Calcite>> Ca veinlets.
 <<Alt: 149.6 - 153.95 Strong (Alt) Muscovite>>
 <<Struc: 149.6 - 149.61 Contact>> Sharp lower contact between massive sulphide OI /RHY.
 <<Struc: 153 - 153.01 Strong (Alt) dominant foliation>>

153.95 154.40 OI Heavily disseminated sulphides in host schist

CG

153.95 - 154.4: OI at the contact between RHY and MAFI.

<<Min: 153.95 - 154.4 4% Min: Sphalerite>> Coarse grained.
 <<Min: 153.95 - 154.4 20% Min: Pyrite>> Occuring as bands, coarse grained.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
138.00	139.00	1.00	B00265463	0.7	-0.005	-0.01	-0.01	-0.01
139.00	140.00	1.00	B00265464	0.6	0.016	-0.01	-0.01	-0.01
140.00	141.50	1.50	B00265465	0.7	-0.005	-0.01	-0.01	-0.01
141.50	142.15	0.65	B00265466	0.5	-0.005	-0.01	-0.01	-0.01
142.15	143.20	1.05	B00265467	2.3	0.202	-0.01	0.01	-0.01
143.20	143.70	0.50	B00265468	1.5	-0.005	-0.01	0.01	0.01
143.70	144.50	0.80	B00265469	207	1.94	0.3	0.57	7.69
144.50	145.50	1.00	B00265471	292	1.6	0.32	0.94	9.47

145.50	146.50	1.00	B00265472	318	3.25	0.78	3.62	5.39
146.50	147.50	1.00	B00265473	246	2.63	0.58	3.08	5.33
147.50	148.50	1.00	B00265474	378	1.94	0.24	4.34	6.24
148.50	149.60	1.10	B00265475	141	0.833	0.13	1.74	4.21

149.60	150.70	1.10	B00265476	4.3	0.006	0.03	-0.01	0.02
--------	--------	------	-----------	-----	-------	------	-------	------

150.70	152.00	1.30	B00265477	0.8	0.005	-0.01	-0.01	-0.01
152.00	153.00	1.00	B00265478	0.4	-0.005	-0.01	0.01	-0.01
153.00	153.95	0.95	B00265479	0.6	-0.005	-0.01	-0.01	-0.01

153.95	154.40	0.45	B00265481	43.9	0.379	0.08	0.72	3.84
--------	--------	------	-----------	------	-------	------	------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-314

From (m) To (m) Rocktype & Description

154.40 156.10 MAFi Mafic Intrusions (primarily green FMG
footwall mafic intrusion)

154.4 - 156.1: Interval of mafic unit, moderately/strongly foliated (DFOL ~ 55 ac). Porphyroblast of biotite (from 154.4 to 154.7m) , mm to cm, distributed and oriented within fine grained matrix moderately chlorite altered. Strong calcite alteration, occurring as thin subconcordant veinlets and porphyroblasts/blebs. Also comprising minor faults gouge.

<<Min: 154.4 - 156.1 0.5% Min: Pyrite>>

<<Min: 154.4 - 156.1 10% Min: Calcite>> Blebs/veinlets

<<Alt: 154.4 - 154.7 Moderate (Alt) Biotite>>

<<Alt: 154.4 - 156.1 Strong (Alt) Chlorite>> Original?

<<Struc: 154.4 - 154.41 Contact>> Sharp lower contact between OI and MAFi.

<<Struc: 155.5 - 155.51 Strong (Alt) dominant foliation>>

156.10 156.70 OG Chalcopyrite rich sulphides FCG

156.1 - 156.7: Interval of massive sulphide, MAFi hosted, Cp rich, essentially mineralized at the lower part of the unit as aggregates. Porphyroblasts of cordierite are distributed within the mxsx and at the margins.

<<Min: 156.1 - 156.7 4% Min: Sphalerite>>

<<Min: 156.1 - 156.7 70% Min: Pyrite>> OG, medium to coarse grained (At the margins)

<<Min: 156.1 - 156.7 3% Min: Galena>>

<<Min: 156.1 - 156.7 10% Min: Chalcopyrite>> Concentrated at the margins of the mxsx as aggregates/patch.

<<Min: 156.1 - 195 1% Min: Calcite>> Locally associated with veinlets.

<<Alt: 156.1 - 156.7 Weak (Alt) Cordierite>> Small Cl porphyroblasts distributed within mxsx and at the margins.

156.70 157.70 RHYcw Curdy textured-flow banded light grey
(flows, subvolcanics)

156.7 - 157.7: Short sequence of RHY cw, flow banded texture well conserved. Strongly MU altered associated with strong foliation.

<<Min: 156.7 - 160 0.5% Min: Pyrite>>

<<Min: 156.7 - 160 3% Min: Pyrrhotite>> Small wisps of PO distributed within the matrix, oriented.

<<Alt: 156.7 - 171.7 Strong (Alt) Muscovite>> Original alteration?

<<Struc: 156.7 - 156.71 Contact>> Sharp lower contact between OG and RHY.

<<Struc: 156.7 - 157.7 Weak (Alt) Fault>> Strong foliation associated with minor fault gouge.

157.70 180.20 RHYv Rhyolite volcaniclastic light grey MCG

157.7 - 180.2: Light grey, medium to coarse grained, +/- homogeneous texture. Unit strongly MU altered (original), associated with strong foliation. Locally, we observe dismembered bands/lapilli? Volcanoclastic sequence, coarse grained ash tuff with trace of lapilli?. 1-2 % of Po (wisps).

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
154.40	155.60	1.20	B00265482	2.3	0.022	-0.01	0.03	0.07

155.60	156.10	0.50	B00265483	36.2	0.232	0.03	0.55	0.21
--------	--------	------	-----------	------	-------	------	------	------

156.10	156.70	0.60	B00265484	132	3.85	2.6	0.76	4.45
--------	--------	------	-----------	-----	------	-----	------	------

156.70	157.70	1.00	B00265485	5.7	0.141	0.06	0.06	0.11
--------	--------	------	-----------	-----	-------	------	------	------

157.70	159.00	1.30	B00265486	-0.3	0.009	-0.01	-0.01	0.02
--------	--------	------	-----------	------	-------	-------	-------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-314

From (m) To (m) Rocktype & Description

<<Min: 160 - 171.7 2% Min: Pyrrhotite>>

<<Min: 171.7 - 174.15 3% Min: Pyrrhotite>>

<<Min: 174.15 - 176.4 5% Min: Pyrrhotite>> Occuring as bands associated with CL/CI.

<<Min: 174.15 - 176.4 1% Min: Galena>> Associated with CL/CI alteration.

<<Min: 176.4 - 177.7 2% Min: Pyrrhotite>>

<<Min: 177.7 - 186.8 2% Min: Pyrite>> Bands/wisps

<<Alt: 157.7 - 159 Weak (Alt) Chlorite>> Weakly diffused.

<<Alt: 171.7 - 177.7 Strong (Alt) Chlorite>> Occuring as subconcordant bands, very fine grained, usually associated with porphyroblast of cordierite and Po, locally galena.

<<Alt: 171.7 - 177.7 Weak (Alt) Cordierite>> Porphyroblast of cordierite associated with bands of chlorite and PO.

<<Alt: 177.7 - 195 Moderate (Alt) Muscovite>> Original?

<<Struc: 175 - 175.01 Moderate (Alt) dominant foliation>>

180.20 195.00 RHYvl Lapilli tuff

light grey

180.2 - 195: Light grey, medium to coarse grained. Unit moderately MU altered (original), associated with strong foliation. Locally, we observe dismembered siliceous bands/lapilli? Marked by heterogeneous QE distributed within matrix. Volcanoclastic sequence, coarse grained ash tuff with trace of lapilli?. 1-2 % of Po/py (wisps).

<<Min: 186.8 - 195 1% Min: Pyrite>> Coarse grained

<<Min: 186.8 - 195 3% Min: Pyrrhotite>>

<<Struc: 183 - 183.01 Moderate (Alt) dominant foliation>>

<<Struc: 185.7 - 186.4 Strong (Alt) Fault>> Fault gouge

<<Struc: 191.2 - 191.5 Moderate (Alt) Fault>> Fault gouge

<<Struc: 192 - 192.01 Moderate (Alt) dominant foliation>>

End of Hole @ 195

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
159.00	160.50	1.50	B00265487	0.5	0.009	-0.01	0.01	0.02
174.13	175.50	1.37	B00265488	1.1	0.006	0.01	-0.01	0.55
175.50	176.45	0.95	B00265489	-0.3	-0.005	0.03	-0.01	1.3

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-315

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Dillon Hume	Date Logging Start:	04-Nov-15
UTM Easting	415108	Core Size:	HQ3	Azimuth:	210.76	Date Logging Complete:	06-Nov-15
UTM Northing:	6815066	Casing Pulled?:	Yes	Dip:	-48	Drill Company:	Geotech
UTM Elev. (m):	1392.95	Casing Depth (m):	8	Length (m):	210	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	02-Nov-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	06-Nov-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

K15-315 was drilled as an exploration hole to confirm the continuity and extent of the Krakatoa zone.

K15-315 encountered a felsic hanging wall package, consisting of mixed volcanoclastic and coherent rhyolite, as well as narrow BI+CA schist horizons, to a depth of 98.8 m. Strong muscovite alteration begins at ~69 m and persists to the first massive sulphide lens (98.8-104 m), which consists of OJ, OA, and OB, respectively. Below the first MSXS lens, there is strongly muscovite altered rhyolite to 107 m, followed by MAFi to 122.8 m. From 122.8-122.9 m there is an intersection of OJ mineralization, followed by strongly muscovite altered rhyolite to 128.7 m. MAFi is encountered from 128.7-133.9 m. Below this MAFi a second (mafic-hosted) MSXS lens occurs from 133.9-144.4 m, consisting of OA, OB, and OI. RHYi with MU+QZ schists on either side, occurs from 144.4-177.6 m. Another MSXS lens occurs from 177.6-183.1 m, consisting of OA, OJ, and OC, and a ~.5 m section of MAFi. The hanging wall package of the lowest sulphide lens consists of strongly muscovite altered, volcanoclastic and coherent rhyolites to a final depth of 210 m (E.O.H.).

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-48	210.76	0	210.76	APS	Dillon Hume	02-Nov-15		<input checked="" type="checkbox"/>	
41	-47.8	191.8	22.5	214.3	ReflexEVS	Geotech	03-Nov-15	5764	<input checked="" type="checkbox"/>	
83	-47.8	193.7	22.5	216.2	ReflexEVS	Geotech	04-Nov-15	5768	<input checked="" type="checkbox"/>	
113	-48.1	194.4	22.5	216.9	ReflexEVS	Geotech	04-Nov-15	5768	<input checked="" type="checkbox"/>	
152	-48.4	193.6	22.5	216.1	ReflexEVS	Geotech	05-Nov-15	5771	<input checked="" type="checkbox"/>	
176	-48.7	197.4	22.5	219.9	ReflexEVS	Geotech	05-Nov-15	5758	<input checked="" type="checkbox"/>	
200	-49.4	195	22.5	217.5	ReflexEVS	Geotech	05-Nov-15	5750	<input checked="" type="checkbox"/>	
210	-49.3	192.9	22.5	215.4	ReflexEVS	Geotech	05-Nov-15	5746	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	6.90	OVBN	Overburden								
6.90	7.40	RHYc	Rhyolite coherent volcanics								



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-315

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
7.40	11.90	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
7.4 - 11.9: BI+CA schist											
<<Min: 7.4 - 11.9 15% Min: Calcite>>											
<<Min: 7.4 - 27 0.5% Min: Pyrite>>											
11.90	27.00	RHYi	Aphanitic Rhyolite (intrusion)								
11.9 - 27: Pink-grey aphanitic rhyolite. Upper contact shows minor porphyritic texture (RHYc?) and asymmetric crenulations.											
<<Min: 11.9 - 27 2% Min: Calcite>>											
27.00	28.40	RHYvl	Lapilli tuff								
27 - 28.4: CA lpl in fine grained, grey ash tuff											
<<Min: 27 - 28.4 1% Min: Pyrite>>											
<<Min: 27 - 28.4 10% Min: Calcite>>											
28.40	31.00	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
28.4 - 31: BI+CA+/-CL schist											
<<Min: 28.4 - 31 0.5% Min: Pyrite>>											
<<Min: 28.4 - 31 15% Min: Calcite>>											
31.00	34.60	RHYc	Rhyolite coherant volcanics								
31 - 34.6: Silica banded on both upper and lower lens, with pink-grey aphanitic rhyolite (RHYi) in the center.											
<<Min: 31 - 34.6 2% Min: Calcite>>											
34.60	35.50	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
34.6 - 35.5: BI+CA schist											
<<Min: 34.6 - 35.5 1% Min: Pyrite>>											
<<Min: 34.6 - 35.5 15% Min: Calcite>>											
35.50	38.90	RHYc	Rhyolite coherant volcanics								
35.5 - 38.9: Silica banded rhyolite with MU cleavages											
<<Min: 35.5 - 41.1 0.5% Min: Pyrite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-315

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 35.5 - 57.7 2% Min: Calcite>>											
38.90	41.10	RHYvl Lapilli tuff									
38.9 - 41.1: Rhyolitic lpl in fine grained, grey, ash matrix											
41.10	49.60	RHYva Coarse grained to ash tuff									
41.1 - 49.6: Medium grey, fine grained ash tuff with local rhyolitic and CA lpl											
<<Min: 41.1 - 57.7 1% Min: Pyrite>>											
<<Min: 41.1 - 57.7 1% Min: Pyrrhotite>>											
49.60	52.30	RHYvl Lapilli tuff									
49.6 - 52.3: Highly strained rhyolitic lpl tuff. Lpl are elongated into lineations.											
52.30	69.00	RHYva Coarse grained to ash tuff									
52.3 - 69: Fine grained ash tuff with local rhyolitic and PO lpl											
<<Min: 57.7 - 69 2% Min: Pyrite>>											
<<Min: 57.7 - 69 1% Min: Pyrrhotite>>											
<<Min: 57.7 - 98.8 3% Min: Calcite>>											
<<Alt: 57.7 - 69 Weak (Alt) Muscovite>>											
<<Vein: 68.7 - 68.9 40% Quartz>> Two deformed massive QZ+CA veins with disseminated blebby PO											
<<Struc: 65.6 - 65.8 Weak (Alt) Fault>> Fault gouge zone											
69.00	79.60	RHYc Rhyolite coherant volcanics									
69 - 79.6: Strongly crenulated siliceous rhyolite, with MU-crenulation cleavages.											
<<Min: 69 - 71.5 3% Min: Pyrite>>											
<<Min: 69 - 71.5 3% Min: Pyrrhotite>>											
<<Min: 71.5 - 98.8 3% Min: Pyrite>>											
<<Alt: 69 - 98.8 Strong (Alt) Muscovite>>											
<<Struc: 72 - 73 Weak-Moderate (Alt) Fault>> Fault gouge zone											
<<Struc: 77.14 - 77.15 dominant foliation>> MU-cleavage											
79.60	84.30	RHYv Rhyolite volcaniclastic									
79.6 - 84.3: Siliceous, PO, and CA lpl within MU matrix											
84.30	98.80	RHYc Rhyolite coherant volcanics	94.30	95.80	1.50	B00233144	0.9	0.008	-0.01	-0.01	0.01
84.3 - 98.8: Silica banded rhyolite with MU-cleavages											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-315

From (m) To (m) Rocktype & Description

<<Vein: 94.9 - 95 90% Quartz>> Massive QZ+CA vein

<<Struc: 97.15 - 97.25 Weak (Alt) Fault>> Fault gouge zone

98.80 99.50 OJ Heavilly disseminated sulphides in proximal altered rock

MCG

98.8 - 99.5: Heavilly disseminated to semi-massive PY+SP+CP in CL matrix

<<Min: 98.8 - 99.5 5% Min: Sphalerite>>

<<Min: 98.8 - 99.5 60% Min: Pyrite>>

<<Min: 98.8 - 99.5 2% Min: Chalcopryite>>

<<Min: 98.8 - 99.5 1% Min: Calcite>>

<<Alt: 98.8 - 99.5 Moderate (Alt) Chlorite>>

99.50 101.20 OA Magnetite bearing sulphides

MG

99.5 - 101.2: Massive PY+SP+/-GL with blebby CP, wispy/banded MG, and disseminated to blebby CA+/-CL matrix.

<<Min: 99.5 - 101.2 10% Min: Sphalerite>>

<<Min: 99.5 - 101.2 70% Min: Pyrite>>

<<Min: 99.5 - 101.2 7% Min: Magnetite>>

<<Min: 99.5 - 101.2 2% Min: Galena>>

<<Min: 99.5 - 101.2 3% Min: Chalcopryite>>

<<Min: 99.5 - 101.2 3% Min: Calcite>>

<<Struc: 101.19 - 101.2 dominant foliation>> SP band

101.20 104.00 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

MG

101.2 - 104: Massive PY+SP+GL with disseminated to blebby CA+CL matrix gangue.

<<Min: 101.2 - 104 15% Min: Sphalerite>>

<<Min: 101.2 - 104 75% Min: Pyrite>>

<<Min: 101.2 - 104 2% Min: Galena>>

<<Min: 101.2 - 104 5% Min: Calcite>>

104.00 107.00 RHY undifferentiated rhyolite

104 - 107: MU+QZ schist with minor band of semi-massive sulphide. Silica-banded with strongly MU-altered cleavages.

<<Min: 104 - 104.4 1% Min: Pyrite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
95.80	97.30	1.50	B00233145	1.4	0.008	-0.01	-0.01	0.03
97.30	98.80	1.50	B00233146	3.2	0.019	-0.01	0.07	0.1
98.80	99.50	0.70	B00233147	178	1.49	1.11	2.79	8.91

99.50	100.20	0.70	B00233148	256	4.83	1.91	5.33	10.5
-------	--------	------	-----------	-----	------	------	------	------

100.20	101.20	1.00	B00233149	243	2.17	0.58	7.14	8.75
--------	--------	------	-----------	-----	------	------	------	------

101.20	102.00	0.80	B00233152	248	1.46	0.01	6.91	9.26
--------	--------	------	-----------	-----	------	------	------	------

102.00	103.00	1.00	B00233153	288	1.79	0.01	7.32	10.3
103.00	104.00	1.00	B00233154	378	2.05	0.01	7.22	11.5

104.00	105.50	1.50	B00233155	221	3.12	0.35	0.31	0.63
--------	--------	------	-----------	-----	------	------	------	------

105.50	107.00	1.50	B00233156	1.9	0.013	-0.01	-0.01	0.01
--------	--------	------	-----------	-----	-------	-------	-------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-315

From (m)		To (m)	Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 104 - 107 2% Min: Calcite>>													
<<Min: 104.4 - 104.45 10% Min: Sphalerite>>													
<<Min: 104.4 - 104.45 40% Min: Pyrite>>													
<<Min: 104.4 - 104.45 5% Min: Galena>>													
<<Min: 104.45 - 108.3 1% Min: Pyrite>>													
<<Alt: 104 - 108.3 Strong (Alt) Muscovite>>													
<<Struc: 104.8 - 104.9 Weak (Alt) Fault>>			Fault gouge zone										
<<Struc: 106.1 - 106.25 Weak (Alt) Fault>>			Fault gouge zone										
107.00	122.80	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)		107.00	108.50	1.50	B00233157	3.9	0.017	-0.01	0.03	0.01
107 - 122.8: Gradational/altered upper contact, with CA and BI increasing, and MU decreasing, from 107.1-108.5 m (Gradational from Mu+QZ schist to CL+BI+CA schist). CL+BI+CA from 108.5-122.8 m. Sharp lower contact.													
<<Min: 107 - 108.3 10% Min: Calcite>>													
<<Min: 108.3 - 122.8 0.5% Min: Pyrrhotite>>													
<<Min: 108.3 - 122.8 15% Min: Calcite>>													
<<Alt: 108.3 - 122.8 Strong (Alt) Chlorite>>													
<<Alt: 108.3 - 122.8 Strong (Alt) Biotite>>													
<<Struc: 110.2 - 110.21 dominant foliation>>			CA foliation										
<<Struc: 113.1 - 113.11 dominant foliation>>			Discontinuous BI foliation										
<<Struc: 113.7 - 113.71 dominant foliation>>			Discontinuous BI foliation										
<<Struc: 115.94 - 115.95 dominant foliation>>			Discontinuous BI foliation										
<<Struc: 116.95 - 116.96 dominant foliation>>			Discontinuous BI foliation										
<<Struc: 121.95 - 121.96 dominant foliation>>			Discontinuous BI foliation										
122.80	122.90	OJ	Heavilly disseminated sulphides in proximal altered rock		CG								
122.8 - 122.9: Semi-massive PY+SP+CP in CL+CA matrix.													
<<Min: 122.8 - 122.9 5% Min: Sphalerite>>													
<<Min: 122.8 - 122.9 40% Min: Pyrite>>													
<<Min: 122.8 - 122.9 2% Min: Chalcopyrite>>													
<<Min: 122.8 - 122.9 15% Min: Calcite>>													
<<Alt: 122.8 - 122.9 Moderate (Alt) Chlorite>>													

107.00	108.50	1.50	B00233157	3.9	0.017	-0.01	0.03	0.01
--------	--------	------	-----------	-----	-------	-------	------	------

121.20	122.70	1.50	B00233158	1	0.006	-0.01	0.01	0.04
122.70	123.00	0.30	B00233159	65.7	0.197	0.19	0.81	5

CG



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-315
From (m) **To (m)** **Rocktype & Description**
122.90 128.70 RHY undifferentiated rhyolite

122.9 - 128.7: Silica banded rhyolite with MU cleavage

<<Min: 122.9 - 128.7 2% Min: Pyrite>>

<<Min: 122.9 - 128.7 3% Min: Calcite>>

<<Alt: 122.9 - 128.7 Strong (Alt) Muscovite>>

<<Struc: 126 - 129 Weak (Alt) Fault>> Highly fractured with local fault gouge and local foliation at low angle to core axis

128.70 133.90 MAFI Mafic Intrusions (primarily footwall mafic intrusion)

128.7 - 133.9: Green, CL+BI+CA schist.

<<Min: 128.7 - 133.9 0.5% Min: Pyrite>>

<<Min: 128.7 - 133.9 20% Min: Calcite>>

<<Alt: 128.7 - 133.9 Strong (Alt) Chlorite>>

<<Alt: 128.7 - 133.9 Moderate (Alt) Biotite>>

<<Vein: 130.3 - 130.6 80% Quartz>> Massive QZ+CA vein

<<Struc: 131.3 - 131.31 dominant foliation>> Discontinuous BI foliation/Continuous CL foliation

133.90 134.90 OA Magnetite bearing sulphides

133.9 - 134.9: Massive, laminated, PY+PO+SP+CA+/-CP+/-GL with heavily disseminated to wispy MG.

<<Min: 133.9 - 134.9 5% Min: Sphalerite>>

<<Min: 133.9 - 134.9 60% Min: Pyrite>>

<<Min: 133.9 - 134.9 3% Min: Pyrrhotite>>

<<Min: 133.9 - 134.9 25% Min: Magnetite>>

<<Min: 133.9 - 134.9 1% Min: Galena>>

<<Min: 133.9 - 134.9 1% Min: Chalcopyrite>>

<<Min: 133.9 - 134.9 2% Min: Calcite>>

134.90 136.75 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

134.9 - 136.75: Massive, laminated PY+SP+/-AS+/-GL with disseminated to blebby CA matrix

<<Min: 134.9 - 136.75 5% Min: Sphalerite>>

<<Min: 134.9 - 136.75 80% Min: Pyrite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
123.00	124.50	1.50	B00233161	0.4	-0.005	-0.01	-0.01	0.02

129.40	130.90	1.50	B00233162	0.4	-0.005	-0.01	0.01	0.03
--------	--------	------	-----------	-----	--------	-------	------	------

130.90	132.40	1.50	B00233163	0.6	-0.005	-0.01	0.02	0.02
132.40	133.90	1.50	B00233164	1.1	0.008	0.02	0.01	0.04

133.90	134.90	1.00	B00233165	165	1.34	1.21	4.67	9.99
--------	--------	------	-----------	-----	------	------	------	------

134.90	135.90	1.00	B00233166	137	1.7	0.3	4.63	8.34
--------	--------	------	-----------	-----	-----	-----	------	------

135.90	136.75	0.85	B00233167	114	1.14	0.26	4.84	9.03
--------	--------	------	-----------	-----	------	------	------	------

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-315

From (m) To (m) Rocktype & Description

<<Min: 134.9 - 136.75 1% Min: Galena>>

<<Min: 134.9 - 136.75 1% Min: Calcite>>

<<Min: 134.9 - 136.75 0.5% Min: Arsenopyrite>>

136.75 139.20 OA Magnetite bearing sulphides

136.75 - 139.2: Laminated massive PY+GL+/-CP with wispy to disseminated MG

<<Min: 136.75 - 139.2 5% Min: Sphalerite>>

<<Min: 136.75 - 139.2 65% Min: Pyrite>>

<<Min: 136.75 - 139.2 25% Min: Magnetite>>

<<Min: 136.75 - 139.2 2% Min: Galena>>

<<Min: 136.75 - 139.2 1% Min: Chalcopyrite>>

<<Min: 136.75 - 139.2 1% Min: Calcite>>

<<Struc: 137.25 - 137.26 dominant foliation>> Sulphide lamination

139.20 143.30 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

139.2 - 143.3: Massive PY+/-SP+/-GL+/-CP with disseminated CA matrix

<<Min: 139.2 - 143.3 2% Min: Sphalerite>>

<<Min: 139.2 - 143.3 75% Min: Pyrite>>

<<Min: 139.2 - 143.3 2% Min: Magnetite>>

<<Min: 139.2 - 143.3 1% Min: Galena>>

<<Min: 139.2 - 143.3 20% Min: Calcite>>

<<Struc: 139.68 - 139.69 dominant foliation>> Sulphide lamination

143.30 144.40 OI Heavily disseminated sulphides in host schist

143.3 - 144.4: Patchy PY in albite-altered rhyolite

<<Min: 143.3 - 144.4 10% Min: Pyrite>>

<<Min: 143.3 - 144.4 5% Min: Calcite>>

<<Alt: 143.3 - 144.4 Moderate (Alt) Muscovite>>

<<Alt: 143.3 - 144.4 Strong (Alt) Albite>>

144.40 146.10 RHY undifferentiated rhyolite

144.4 - 146.1: MU+QZ+CA schist with strong MU foliation

MG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

136.75	137.30	0.55	B00233168	106	0.712	0.21	4.82	11.3
--------	--------	------	-----------	-----	-------	------	------	------

137.30	138.20	0.90	B00233169	110	0.607	0.21	5.28	11.1
--------	--------	------	-----------	-----	-------	------	------	------

138.20	139.20	1.00	B00233172	116	1.3	0.34	5.39	9.4
--------	--------	------	-----------	-----	-----	------	------	-----

MG

139.20	140.20	1.00	B00233173	145	2.7	0.14	3.91	5.93
--------	--------	------	-----------	-----	-----	------	------	------

140.20	141.20	1.00	B00233174	192	2.01	0.22	5.03	7.45
--------	--------	------	-----------	-----	------	------	------	------

141.20	142.20	1.00	B00233175	159	2.13	0.32	5.05	7.16
--------	--------	------	-----------	-----	------	------	------	------

142.20	143.30	1.10	B00233176	235	2.22	0.35	4.62	6.36
--------	--------	------	-----------	-----	------	------	------	------

MG

143.30	144.40	1.10	B00233177	31.7	0.454	0.04	0.29	0.42
--------	--------	------	-----------	------	-------	------	------	------

144.40	145.00	0.60	B00233178	0.9	0.006	-0.01	0.01	0.03
--------	--------	------	-----------	-----	-------	-------	------	------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-315
From (m) **To (m)** **Rocktype & Description**

<<Min: 144.4 - 146.1 2% Min: Pyrite>>

<<Min: 144.4 - 146.1 10% Min: Calcite>>

<<Alt: 144.4 - 146.1 Strong (Alt) Muscovite>> Overprint from RHYi or original from MSXS?

146.10 174.60 RHYi Aphanitic Rhyolite (intrusion)

146.1 - 174.6: Aphanitic rhyolite with QZ phenocrysts and healed PY fractures. Locally pink (hematized).

<<Min: 146.1 - 174.6 3% Min: Pyrite>>

<<Min: 146.1 - 174.6 3% Min: Calcite>>

<<Vein: 166.1 - 167.1 20% Calcite>> Zone with massive CA veins

<<Struc: 160 - 160.1 Weak (Alt) Fault>> Fault gouge zone

<<Struc: 167.1 - 167.4 Weak (Alt) Fault>> Fault gouge breccia

174.60 177.60 RHY undifferentiated rhyolite

174.6 - 177.6: QZ+MU+CA schist with strong MU foliation

<<Min: 174.6 - 177.6 2% Min: Pyrite>>

<<Min: 174.6 - 177.6 10% Min: Calcite>>

<<Alt: 174.6 - 177.6 Strong (Alt) Muscovite>> Overprint from RHYi or original from MSXS?

<<Struc: 175.68 - 175.69 dominant foliation>> Continuous MU foliation

<<Struc: 177.1 - 177.5 Weak (Alt) Fault>> Strongly fractured with local fault gouge

**177.60 178.20 OB Wispy laminate, fine
buckshot textured, non-
magnetite bearing sulphides**

177.6 - 178.2: Massive PY+SP+/-GL with disseminated to blebby CA matrix

<<Min: 177.6 - 178.2 15% Min: Sphalerite>>

<<Min: 177.6 - 178.2 58% Min: Pyrite>>

<<Min: 177.6 - 178.2 2% Min: Galena>>

<<Min: 177.6 - 178.2 25% Min: Calcite>>

**178.20 178.70 MAFi Mafic Intrusions (primarily
footwall mafic intrusion)**

178.2 - 178.7: CL+CA+BI schist with ~30% CA porphyroblasts

<<Min: 178.2 - 178.7 30% Min: Calcite>>

<<Alt: 178.2 - 178.7 Strong (Alt) Chlorite>>

<<Alt: 178.2 - 178.7 Strong (Alt) Biotite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
145.00	146.10	1.10	B00233179	1.2	0.01	-0.01	-0.01	0.02

146.10	147.60	1.50	B00233181	2.3	0.02	-0.01	0.02	0.02
--------	--------	------	-----------	-----	------	-------	------	------

147.60	149.10	1.50	B00233182	1.3	0.015	-0.01	0.01	0.09
--------	--------	------	-----------	-----	-------	-------	------	------

173.10	174.60	1.50	B00233183	-0.3	0.006	-0.01	-0.01	-0.01
--------	--------	------	-----------	------	-------	-------	-------	-------

174.60	176.10	1.50	B00233184	-0.3	-0.005	-0.01	-0.01	-0.01
--------	--------	------	-----------	------	--------	-------	-------	-------

176.10	177.60	1.50	B00233185	0.7	0.005	-0.01	-0.01	0.01
--------	--------	------	-----------	-----	-------	-------	-------	------

177.60	178.20	0.60	B00233186	65	0.144	0.08	1.3	5.3
--------	--------	------	-----------	----	-------	------	-----	-----

178.20	178.70	0.50	B00233187	2.2	-0.005	-0.01	0.05	0.08
--------	--------	------	-----------	-----	--------	-------	------	------

MG

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-315

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %	
<<Struc: 178.2 - 178.3 Weak (Alt) Fault>> Fault gouge at contact of MSXS and MAFi												
178.70	180.45	OA Magnetite bearing sulphides	MCG	178.70	179.70	1.00	B00233188	48.6	0.299	0.91	0.61	10.4
178.7 - 180.45: Massive PY+/-SP+/-PO+/-CP+/-GL with heavily disseminated MG porphyroblasts/phenocrysts												
<<Min: 178.7 - 180.45 2% Min: Sphalerite>>												
<<Min: 178.7 - 180.45 75% Min: Pyrite>>												
<<Min: 178.7 - 180.45 1% Min: Pyrrhotite>>												
<<Min: 178.7 - 180.45 20% Min: Magnetite>>												
<<Min: 178.7 - 180.45 1% Min: Galena>>												
<<Min: 178.7 - 180.45 1% Min: Chalcopyrite>>												
<<Struc: 179.15 - 179.16 dominant foliation>> Discontinuous MG foliation												
<<Struc: 180.23 - 180.24 dominant foliation>> Discontinuous MG foliation												
180.45	180.80	OJ Heavilly disseminated sulphides in proximal altered rock	FCG	180.45	180.80	0.35	B00233192	113	0.682	1.06	1.51	9.65
180.45 - 180.8: Semi-massive PY+PO+/-SP+/-CP in a CL+CI schist with coarse grained CI porphyroblasts												
<<Min: 180.45 - 180.8 2% Min: Sphalerite>>												
<<Min: 180.45 - 180.8 40% Min: Pyrite>>												
<<Min: 180.45 - 180.8 10% Min: Pyrrhotite>>												
<<Min: 180.45 - 180.8 1% Min: Chalcopyrite>>												
<<Alt: 180.45 - 180.8 Strong (Alt) Chlorite>>												
<<Alt: 180.45 - 183.1 Moderate (Alt) Cordierite>> Disseminated coarse grained CI porphyroblasts												
180.80	181.80	OC Chalcopyrite-pyrrhotite net textured sulphides	FCG	180.80	181.80	1.00	B00233193	212	1.99	9.83	0.81	5.49
180.8 - 181.8: Net-textured massive PO+CP+PY with disseminated coarse grained CL-after-CI porphyroblasts												
<<Min: 180.8 - 181.8 20% Min: Pyrite>>												
<<Min: 180.8 - 181.8 45% Min: Pyrrhotite>>												
<<Min: 180.8 - 181.8 20% Min: Chalcopyrite>>												
<<Alt: 181.7 - 181.8 Moderate (Alt) Chlorite>>												
<<Struc: 181.44 - 181.45 dominant foliation>> CP+PO foliation												



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-315

From (m) To (m) Rocktype & Description

181.80 183.10 OJ

**Heavily disseminated
sulphides in proximal altered
rock**

MCG

181.8 - 183.1: Patchy to semi-massive SP+CP+PY+/-PO in CL+QZ schist with disseminated coarse grained Cl porphyroblasts

<<Min: 181.8 - 183.1 15% Min: Sphalerite>>

<<Min: 181.8 - 183.1 5% Min: Pyrite>>

<<Min: 181.8 - 183.1 2% Min: Pyrrhotite>>

<<Min: 181.8 - 183.1 2% Min: Chalcopyrite>>

<<Alt: 181.8 - 183.1 Strong (Alt) Chlorite>>

<<Vein: 182.7 - 182.9 70% Quartz>> Massive QZ+AB (?) vein

<<Struc: 182.2 - 183.5 Moderate (Alt) Fault>> Highly fractured with fault gouge

183.10 188.60 RHYc Rhyolite coherent volcanics

183.1 - 188.6: Silica banding with MU cleavages. Strongly MU altered\

<<Min: 183.1 - 183.9 2% Min: Pyrite>>

<<Min: 183.1 - 183.9 2% Min: Pyrrhotite>>

<<Min: 183.1 - 183.9 1% Min: Chalcopyrite>>

<<Min: 183.1 - 194.4 2% Min: Calcite>>

<<Min: 183.9 - 188.6 2% Min: Pyrite>>

<<Alt: 183.1 - 183.9 Weak (Alt) Chlorite>>

<<Alt: 183.1 - 198.6 Strong (Alt) Muscovite>>

<<Vein: 183.55 - 183.65 80% Quartz>> Massive QZ vein with patchy CL+CA+/-PO+CP

<<Struc: 186.5 - 186.65 Weak (Alt) Fault>> Fault gouge zone

188.60 194.40 RHYvl Lapilli tuff

188.6 - 194.4: Rhyolitic, CA, and sulphide lpl in strongly MU-altered MU+QZ matrix

<<Min: 188.6 - 194.4 1% Min: Pyrite>>

<<Min: 188.6 - 194.4 2% Min: Pyrrhotite>>

<<Struc: 188.6 - 188.9 Weak (Alt) Fault>> Variable foliation and fault gouge zone

<<Struc: 191.7 - 191.8 Weak (Alt) Fault>> Fault gouge zone

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
181.80	182.40	0.60	B00233194	106	0.367	2.1	0.64	8.08
182.40	183.10	0.70	B00233195	46.1	0.295	1.26	0.22	3.17
183.10	184.60	1.50	B00233196	3.8	0.01	0.2	0.01	0.1
184.60	186.10	1.50	B00233197	-0.3	-0.005	0.01	-0.01	0.01
186.10	187.60	1.50	B00233198	0.4	-0.005	0.01	-0.01	0.03



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-315

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
194.40	195.50	MDSt Rhyolite tuff dominant mudstone									
194.4 - 195.5: Strongly silicified unit with minor (~5%) carbonaceous material											
<<Min: 194.4 - 195.5 3% Min: Pyrrhotite>>											
<<Min: 194.4 - 195.5 0.5% Min: Arsenopyrite>>											
<<Alt: 194.4 - 195.5 Strong (Alt) Silicification>>											
195.50	210.00	RHYvl Lapilli tuff									
195.5 - 210: Rhyolitic, CA, and sulphide lpl in strongly MU-altered MU+QZ matrix											
<<Min: 195.5 - 210 1% Min: Pyrite>>											
<<Min: 195.5 - 210 2% Min: Pyrrhotite>>											
<<Min: 195.5 - 210 2% Min: Calcite>>											
<<Alt: 197.7 - 198.6 Weak (Alt) Chlorite>>											
<<Alt: 198.6 - 210 Moderate (Alt) Muscovite>>											
<<Vein: 197 - 197.65 50% Quartz>> Pieces of QZ vein in rubble zone (high core loss)											
<<Struc: 203 - 204 Moderate (Alt) Fault>> Fault gouge breccia											
<<Struc: 205 - 206 Moderate (Alt) Fault>> Fault gouge breccia											
<<Struc: 209 - 209.3 Weak (Alt) Fault>> Strongly fractured with fault gouge											
End of Hole @ 210											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-316

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Roger Hulstein
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Roger Hulstein	Date Logging Start:	04-Nov-15
UTM Easting	414988.8	Core Size:	HQ3	Azimuth:	210.15	Date Logging Complete:	07-Nov-15
UTM Northing:	6814983.2	Casing Pulled?:	Yes	Dip:	-55	Drill Company:	Geotech
UTM Elev. (m):	1386.656	Casing Depth (m):	31	Length (m):	181	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	02-Nov-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	06-Nov-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

The purpose of DDH K15-316 on section NW1 is to test up-dip continuity of the Krakatoa target.

The Krakatoa sulphide horizon was intersected at 52.46 - 55.12 m (2.66 m of OB and OJ) which was within 3 m of the predicted depth. The hole collared in MAFi and the Krakatoa sulphide horizon was intersected at 52.46 - 55.12 m (2.66 m of OB and OJ) which was within 3 m of the predicted depth. An additional OB sulphide horizon was intersected at 119.3 – 120.08m in the footwall felsic package below 57 m of RHYi that appears to displace or expand the stratigraphic package. This DDH correlates well with nearby drill holes (ie. K15-312, K15-313, K15-315) where similar lithological sequences were intersected. Of note in this DDH is a correlatable MDSc at 130.8 – 131.6 m. A pyrrhotite bearing cordierite, chlorite altered zone in RHY centered over 138.6 – 139.4 m in a broader zone of chlorite alteration may represent the distal portion of a sulphide horizon.

Summary of the stratigraphic package is as follows;

0 – 31 m: Casing

31 – 44.35 m: MAFi

44.35 – 48.5 m: RHY, muscovite – sericite altered (possibly altered MAFi)

48.5 – 52.46 m: OB (approx. 15% sphalerite)

52.46 – 55.12 m: OJ (<1% CP, 3% sphalerite)

55.12 – 61.5 m: MAFi

61.5 – 118.6 m: RHYi

118.6 – 119.3 m: RHY

119.3 – 120.08 m: OB

120.08 – 130.8 m: RHYc and RHY

130.8 – 131.6 m: MDSc

131.6 – 136.9 m: RHY (muscovite – sericite – clay altered)

136 – 139.4 m RHY and possible MAFi, Chlorite altered with cordierite, pyrrhotite and silicification.

139.4 -181.0m RHY (including RHYv, RHYvl, RHYva, minor MAFi dykes

(EOH)

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-55	210.15	0	210.15	APS	Roger Hulstein	05-Nov-15		<input checked="" type="checkbox"/>	APS survey tool
43	-56.7	188.8	22.5	211.3	ReflexEVS	Geotech	04-Nov-15	5762	<input checked="" type="checkbox"/>	
73	-56.9	187.6	22.5	210.1	ReflexEVS	Geotech	04-Nov-15	5764	<input checked="" type="checkbox"/>	
97	-55.5	187	22.5	209.5	ReflexEVS	Geotech	05-Nov-15	5723	<input checked="" type="checkbox"/>	
127	-54.8	187.4	22.5	209.9	ReflexEVS	Geotech	04-Nov-15	5766	<input checked="" type="checkbox"/>	
157	-53.7	188.6	22.5	211.1	ReflexEVS	Geotech	05-Nov-15	5736	<input checked="" type="checkbox"/>	



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-316

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
181	-53.4	189.6	22.5	212.1	ReflexEVS	Geotech	05-Nov-15	5743	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	------------------------	----------	--------	-------	--------	--------	--------	------	------	------

0.00 31.00 CASN
Casing
31.00 44.35 MAFi
Mafic Intrusions (primarily footwall mafic intrusion)

<<Min: 31 - 43.3 8% Min: Calcite>> and as foliaform veinlets

<<Min: 31 - 43.8 0.1% Min: Pyrite>>

<<Min: 43.3 - 44 15% Min: Calcite>> and as foliaform veinlets

<<Min: 43.8 - 44.1 2% Min: Pyrrhotite>>

<<Min: 44 - 48.6 5% Min: Calcite>>

<<Min: 44.1 - 48.6 0.2% Min: Sphalerite>> and in wispy pyrite stringer veinlets

<<Min: 44.1 - 48.6 2% Min: Pyrite>> and as wispy stringer veinlets

<<Min: 44.1 - 48.6 0.2% Min: Galena>> and in wispy pyrite stringer veinlets

<<Alt: 31 - 43.9 Moderate (Alt) Chlorite>>

<<Alt: 31 - 43.9 Moderate (Alt) Biotite>>

<<Alt: 43.9 - 48.5 Moderate (Alt) Muscovite>>

<<Struc: 31 - 42 Moderate (Alt) dominant foliation>>

<<Struc: 40 - 48.5 Moderate (Alt) dominant foliation>>

<<Struc: 41.5 - 41.6 Moderate (Alt) Foliation>> banded sulfides

44.35 48.50 RHY
undifferentiated rhyolite

44.35 - 48.5: silic bands, musc-seritcrite altered, 2% py as diss and thin wispy bands. Tr diss gn. Sharp alteration contacts with Mafi. Poor core recovery at upper contact - contact meterage not exact.

<<Struc: 45.55 - 45.65 Moderate (Alt) Fault>>

48.50 52.46 MAFi
Mafic Intrusions (primarily footwall mafic intrusion)

<<Min: 48.6 - 52.46 0.1% Min: Pyrite>>

<<Min: 48.6 - 52.46 18% Min: Calcite>> and as foliaform veinlets

<<Alt: 48.5 - 52.46 Moderate (Alt) Chlorite>>

<<Alt: 48.5 - 52.46 Moderate (Alt) Biotite>>

<<Alt: 52.36 - 52.46 Weak-Moderate (Alt) Muscovite>> sercite, weak bleaching

<<Struc: 48.5 - 52 Moderate (Alt) dominant foliation>>

47.00	48.50	1.50	B00269885	0.8	0.008	-0.01	0.03	0.11
-------	-------	------	-----------	-----	-------	-------	------	------

48.50	49.50	1.00	B00269886	-0.3	-0.005	-0.01	-0.01	0.02
-------	-------	------	-----------	------	--------	-------	-------	------

49.50	51.00	1.50	B00269887	-0.3	0.008	-0.01	-0.01	0.01
-------	-------	------	-----------	------	-------	-------	-------	------

51.00	52.45	1.45	B00269888	0.6	0.007	-0.01	-0.01	0.03
-------	-------	------	-----------	-----	-------	-------	-------	------

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-316

From (m) To (m) Rocktype & Description

52.46 54.67 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

MG

52.46 - 54.67: Good OB, bands of concentrated diss sphalerite. Gangue of silica - calcite (5%).

<<Min: 52.46 - 54.67 15% Min: Sphalerite>>

<<Min: 52.46 - 54.67 40% Min: Pyrite>>

<<Min: 52.46 - 54.67 3% Min: Galena>>

<<Min: 52.46 - 54.67 10% Min: Calcite>> and as foliaform irregular veinlets

<<Alt: 54.52 - 61.15 Moderate (Alt) Biotite>>

<<Struc: 52.46 - 52.46 Moderate (Alt) Contact>>

54.67 55.12 OJ Heavily disseminated sulphides in proximal altered rock

54.67 - 55.12: Marginal OJ. Calcite & chlorite banded and altered Mafi. 1% diss and blebby chalcopryrite.

<<Min: 54.67 - 55.12 3% Min: Sphalerite>>

<<Min: 54.67 - 55.12 8% Min: Pyrite>>

<<Min: 54.67 - 55.12 0.5% Min: Galena>>

<<Min: 54.67 - 55.12 1% Min: Chalcopryrite>> minor blebs

<<Min: 54.67 - 55.12 20% Min: Calcite>> and as foliaform veinlets

<<Alt: 54.67 - 55.12 Moderate (Alt) Chlorite>>

<<Struc: 54.67 - 54.67 Moderate (Alt) Contact>>

<<Struc: 54.67 - 55.12 Moderate (Alt) Foliation>> very subjective measurement, alpha at 85 deg

55.12 61.50 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

<<Min: 55.12 - 61 0.1% Min: Pyrite>>

<<Min: 55.12 - 61.2 15% Min: Calcite>>

<<Min: 61 - 61.1 2% Min: Pyrrhotite>>

<<Min: 61.1 - 96.3 0.2% Min: Sphalerite>>

<<Min: 61.1 - 96.3 0.2% Min: Galena>>

<<Min: 61.1 - 99.3 2% Min: Pyrite>> and as diss

<<Min: 61.2 - 99.3 2% Min: Calcite>> locally 1-3%

<<Alt: 55.12 - 61.15 Moderate (Alt) Chlorite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
52.46	53.00	0.54	B00269889	229	2.28	0.2	3.95	10.4

53.00	54.00	1.00	B00269892	217	1.38	0.21	1.69	7.96
54.00	54.67	0.67	B00269893	240	1.52	0.3	2.5	7.75

54.67	55.12	0.45	B00269894	84.3	1.01	0.62	0.53	1.22
-------	-------	------	-----------	------	------	------	------	------

55.12	56.50	1.38	B00269895	0.5	0.006	-0.01	-0.01	0.02
-------	-------	------	-----------	-----	-------	-------	-------	------

56.50	58.00	1.50	B00269896	-0.3	-0.005	-0.01	-0.01	0.02
58.00	59.43	1.43	B00269897	0.6	-0.005	-0.01	-0.01	0.02
59.43	60.85	1.42	B00269898	0.4	-0.005	-0.01	-0.01	0.02



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-316

From (m) To (m) Rocktype & Description

<<Struc: 119.3 - 120.08 Moderate (Alt) Contact>> irregular contacts

120.08 123.00 RHYc Rhyolite coherent volcanics

120.08 - 123: some solid silic bands and what looks like RHYc dismembered by foliation. Not a classic example of RHYc!

<<Min: 120.08 - 124 5% Min: Pyrite>> in qtz bands, heavy diss and fine diss.

<<Alt: 120.08 - 131.8 Moderate-Strong (Alt) Muscovite>> Muscovite, sericite and clays

<<Alt: 120.08 - 131.8 Trace (Alt) Chlorite>>

<<Struc: 120.45 - 120.55 Strong (Alt) Fault>> 10 cm recovered fault gouge in zone of missing core

<<Struc: 120.55 - 121 Moderate (Alt) Foliation>>

<<Struc: 121.3 - 122 Moderate-Strong (Alt) Fault>> gouge on foliated qtz

<<Struc: 122 - 123.7 Weak-Moderate (Alt) Fault>> gouge zones on fracture planes cutting foliation

123.00 130.80 RHY undifferentiated rhyolite

123 - 130.8: strongly foliated. Upper section may be continuation of possible RHYc.

<<Min: 124 - 131.8 2% Min: Pyrite>> and as blebs and wisps

<<Min: 125 - 126 1% Min: Pyrrhotite>>

<<Struc: 124 - 133 Moderate (Alt) dominant foliation>>

<<Struc: 126.3 - 137 Moderate (Alt) Fault>> weakly crackle brx with gougy fractures from 30 - 70 deg.

130.80 131.60 MDSc Carbonaceous dominant mudstone

<<Alt: 130.8 - 131.6 Moderate-Strong (Alt) Silicification>> Original silicification?

131.60 136.90 RHYv Rhyolite volcanoclastic

131.6 - 136.9: weak to intense chl alt from 135 - 150 m. Mod - intense silicification and moderate muscovite alteration from 137.6-150.

<<Min: 131.8 - 132.6 3% Min: Pyrite>> in mudstone

<<Min: 131.8 - 132.6 3% Min: Pyrrhotite>> in bands

<<Min: 132.6 - 136 2% Min: Pyrite>>

<<Min: 132.6 - 137 0.5% Min: Pyrrhotite>>

<<Min: 136.3 - 147 3% Min: Calcite>>

<<Alt: 131.6 - 136.9 Moderate-Strong (Alt) Muscovite>> plus strong sericite and clays on foliation and fractures. Solf in competent rock

<<Alt: 134.2 - 136.9 Moderate (Alt) Chlorite>> patchy bands and wisps plus diss as clast - crystal replacements.

<<Vein: 133 - 151.3 2% Quartz-Tourmaline 25 deg. >> Qtz-tourmaline veins (<3-4cm wide) veinlets with tourmaline selvege at low angles to CA.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
120.08	120.45	0.37	B00269905	84.4	0.093	0.25	0.89	2.99
120.45	121.87	1.42	B00269906	5.9	0.104	0.03	0.06	0.4
121.87	122.50	0.63	B00269907	1.4	0.04	-0.01	-0.01	0.06
122.50	123.00	0.50	B00269908	0.4	0.006	-0.01	-0.01	0.01
123.00	124.50	1.50	B00269909	0.6	0.024	-0.01	-0.01	0.01

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-316

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 133 - 133.1 Moderate (Alt) Vein>> qtz-tour veinlet											
136.90	137.60	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
136.9 - 137.6: Intensely chloritized, possibly a MAFi, sharp contacts but could be an altered RHY horizon representing a distal edge of a sulfide horizon. Chlorite, muscovite alteration and silicification to about 150m. Corderite alteration at 138.6-139.4m with thin pyrrhotite bands and diss.											
<<Alt: 136.9 - 137.6 Intense (Alt) Chlorite>> massive green chlorite either an altered MAFi or an altered bed of RHY? Or ??											
<<Struc: 136.9 - 136.9 Moderate (Alt) Contact>> fault, crushed schist and gouge at 50 deg with Intensely chloritized MAFI dyke.											
137.60	159.20	RHYv Rhyolite volcanoclastic	138.50	139.70	1.20	B00269911	0.4	-0.005	-0.01	-0.01	0.02
137.6 - 159.2: Chloritized, muscovite and silicified tto about 150m. Cordierite from 138.6-139.4m. Unit is likely a succession of ash and lapilli tuffs.											
<<Min: 137.6 - 138.56 0.5% Min: Pyrite>>											
<<Min: 137.6 - 138.56 0.5% Min: Pyrrhotite>>											
<<Min: 138.56 - 139.7 5% Min: Pyrrhotite>> and in thin bands											
<<Min: 139.7 - 143.5 1% Min: Pyrite>>											
<<Min: 139.7 - 143.5 1% Min: Pyrrhotite>>											
<<Min: 143.5 - 162.2 2% Min: Pyrite>>											
<<Min: 147 - 150 56% Min: Calcite>>											
<<Min: 150 - 165.7 1% Min: Calcite>>											
<<Alt: 137.6 - 140.2 Weak-Moderate (Alt) Silicification>> associated with pyrrhotite.											
<<Alt: 137.6 - 142 Weak-Moderate (Alt) Muscovite>> likely Original?											
<<Alt: 137.6 - 150 Weak (Alt) Chlorite>> wisps and diss replacing crystals and clasts											
<<Alt: 138.6 - 139.4 Moderate (Alt) Cordierite>> in siliceous chlorite pyrrhotite bearing bands.											
<<Alt: 142 - 162.2 Weak (Alt) Muscovite>> possibly overprint											
<<Struc: 137.75 - 137.75 Moderate (Alt) Contact>> sharp contact with chloritized MAFi dyke											
<<Struc: 138.25 - 171.62 Moderate (Alt) dominant foliation>> mostly close to 80 deg but varies from 75 - 90 deg.											
<<Struc: 142.4 - 151.7 Weak (Alt) Fault>> narrow (10-20 cm) gougy - crushed schist zones spaced approx 2 m throughout section. Angles vary between 80 - 45 deg to CA											
<<Struc: 158.5 - 159.2 Moderate-Strong (Alt) Fault>> crushed core and gouge, missing core,											
159.20	165.70	RHYva Coarse grained to ash tuff									
159.2 - 165.7: Overall likely a RHYva, locally some lapilli, especially near lower contact.											
<<Min: 162.2 - 166.6 1% Min: Pyrite>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-316

From (m)		To (m)	Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<p><<Alt: 162 - 166.6 Weak (Alt) Chlorite>> in dykes and on qtz vein margins plus as rare diss.</p> <p><<Alt: 163.1 - 171 Weak-Moderate (Alt) Muscovite>> possibly overprint, strong light green sericite alteration and clays on foliation and a crystal and clasts replacements.</p> <p><<Vein: 162.2 - 163.1 70% Quartz>></p> <p><<Struc: 162.16 - 163.1 Moderate (Alt) Vein>> irregular contacts</p> <p>165.70 166.60 MAFi Mafic Intrusions (primarily footwall mafic intrusion)</p> <p><<Min: 165.7 - 166.6 3% Min: Calcite>></p> <p><<Alt: 165.7 - 166.6 Moderate (Alt) Biotite>> mafic dyke</p> <p><<Struc: 165.7 - 166.6 Moderate (Alt) Contact>> MAFi dyke</p> <p>166.60 168.80 RHYv Rhyolite volcaniclastic</p> <p>166.6 - 168.8: Blue qtz phenocrysts.</p> <p><<Min: 166.6 - 172 2% Min: Pyrite>></p> <p><<Min: 168 - 170 3% Min: Calcite>></p> <p>168.80 169.00 RHYif feldspar and quartz porphyry intrusions</p> <p>168.8 - 169: Looks like RHYi! Trace dis py, GL and SP.</p> <p>169.00 172.20 RHYv Rhyolite volcaniclastic</p> <p><<Min: 171.7 - 173.2 10% Min: Calcite>></p> <p><<Min: 172 - 176.1 2% Min: Pyrrhotite>></p> <p><<Vein: 171.62 - 173.8 20% Quartz>></p> <p><<Struc: 171.9 - 172 Moderate (Alt) Foliation>></p> <p>172.20 173.90 MAFi Mafic Intrusions (primarily footwall mafic intrusion)</p> <p><<Min: 173.2 - 177.5 2% Min: Calcite>></p> <p>173.90 175.18 RHYva Coarse grained to ash tuff</p> <p>173.9 - 175.18: distinctive fine grained ash with 1-3% 1-2mm feldspar (and qtz?) phenos.</p> <p><<Alt: 175 - 181 Weak (Alt) Muscovite>> Overprint? - Far from Mineralization and not great muscovite. Weak sericite and clays on fractures and foliation.</p> <p><<Struc: 174 - 181 Moderate (Alt) dominant foliation>></p>													

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-316

From (m) To (m) Rocktype & Description

175.18 181.00 RHY undifferentiated rhyolite

175.18 - 181: Similar to 169-172.2 but no visible blue qtz eyes, has what looks like sheared fragments of silic bands - could have been a more coherent RHY. Contains approx 1cm patches of fine grained diss py - transposed bands?.

<<Min: 176.1 - 181 2% Min: Pyrite>> wispy approx 1cm blebs

End of Hole @ 181

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
179.50	181.00	1.50	B00269912	-0.3	-0.005	-0.01	-0.01	0.01

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-317

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Roger Hulstein
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Roger Hulstein	Date Logging Start:	08-Nov-15
UTM Easting	415036.8	Core Size:	HQ3	Azimuth:	29.46	Date Logging Complete:	10-Nov-15
UTM Northing:	6814948.8	Casing Pulled?:	Yes	Dip:	-78	Drill Company:	Geotech
UTM Elev. (m):	1387.368	Casing Depth (m):	31.5	Length (m):	170.6	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	06-Nov-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	08-Nov-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

The purpose of the drill hole was to test Krakatoa sulphide horizon and the sulphide lens above the Krakatoa (in the hanging wall RHY volcanoclastics) between drill holes K15-312 and K15-315. DDH K15-317 was successful in hitting the targets just below casing depth (set at 31.5m) with the upper sulfide lens intercepted at 32.0 - 35.97m (OB and minor OI) and the Krakatoa at 76.75 - 92.04 m (OJ, OA and OB mineralization). In addition a lower lens, on the footwall contact of the MAFi was cut at 132.82 – 133.35 m(OB) and at 135.52 – 138.95 m (OJ). A 40.3 m thick RHYi body with minor RHY separates the Krakatoa from the lower lens. The dominant foliation and banded sulfides are a consistent 35-45 degrees to core axis throughout the DDH. Below the lower OJ zone is a package of sericite - muscovite altered RHY and a MDSc unit from 140.93 - 141.85 m. Alteration is most intense (Chlorite after cordierite) for about 4 m below the MDSc and alteration decreases in intensity downhole. This lower OB and OJ mineralization, MDSc and altered zone correlates very well with a similar section in DDH K15-316 (on section NW1, 50 m to the north).

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-78	6.96	22.5	29.46	APS	Roger Hulstein	06-Nov-15		<input checked="" type="checkbox"/>	APS unit on rod in drill head at approx 4 m elev and SW of actual collar by approx 3 m.
38	-76.2	286.4	22.5	308.9	ReflexEVS	Geotech	07-Nov-15	5506	<input type="checkbox"/>	Measured likely off due to nearby proximity to two -90 deg anchors and the casing from this hole.
71	-78.1	8.9	22.5	31.4	ReflexEVS	Geotech	08-Nov-15	5773	<input checked="" type="checkbox"/>	
101	-78.3	14.1	22.5	36.6	ReflexEVS	Geotech	08-Nov-15	5781	<input checked="" type="checkbox"/>	
131	-78.5	14.5	22.5	37	ReflexEVS	Geotech	08-Nov-15	5732	<input checked="" type="checkbox"/>	
161	-79.7	12.8	22.5	35.3	ReflexEVS	Geotech	08-Nov-15	5730	<input checked="" type="checkbox"/>	
170	-80.9	10.9	22.5	33.4	ReflexEVS	Geotech	08-Nov-15	5741	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	31.50	CASN									
31.50	32.00	RHY									
<<Min: 31.5 - 32 1% Min: Pyrite>> <<Min: 31.5 - 32 0.2% Min: Galena>> <<Alt: 31.5 - 32 Weak-Moderate (Alt) Muscovite>> sericite grey green alteration											
			31.50	32.00	0.50	B00269913	5.3	0.028	-0.01	0.07	0.13



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-317

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %	
<<Alt: 31.5 - 35.1 Weak (Alt) Biotite>>												
<<Struc: 31.5 - 32 Moderate (Alt) dominant foliation>>												
32.00	35.10	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG	32.00	33.00	1.00	B00269914	328	1.93	0.25	3.55	8.83
<<Min: 32 - 35.1 6% Min: Sphalerite>>												
<<Min: 32 - 35.1 65% Min: Pyrite>>												
<<Min: 32 - 35.1 4% Min: Galena>>												
<<Min: 32 - 35.1 5% Min: Calcite>>												
<<Struc: 32 - 33 Moderate (Alt) Foliation>> banded sulfides												
<<Struc: 33 - 35 Moderate (Alt) Foliation>> banded sulfides												
35.10	35.97	OI Heavilly disseminated sulphides in host schist	FMG	35.10	35.97	0.87	B00269917	403	3.03	0.11	5.16	7.24
35.1 - 35.97: Chlorite - biotite alteration increases towards bottom of interval and mineralization decreases.												
<<Min: 35.1 - 35.97 8% Min: Sphalerite>>												
<<Min: 35.1 - 35.97 17% Min: Pyrite>>												
<<Min: 35.1 - 35.97 34% Min: Galena>>												
<<Min: 35.1 - 35.97 30% Min: Calcite>>												
<<Alt: 35.1 - 36.1 Weak (Alt) Muscovite>>												
<<Alt: 35.1 - 36.1 Moderate (Alt) Chlorite>> Alteration increases towards bottom of interval and mineralization decreases												
<<Struc: 35.1 - 35.1 Moderate (Alt) Contact>> sulfide - RHY contact												
<<Struc: 35.1 - 38.9 Moderate (Alt) Foliation>> sericite - muscovite partings												
35.97	39.20	RHYc Rhyolite coherant volcanics		35.97	37.03	1.06	B00269918	3.6	0.016	-0.01	0.04	0.03
35.97 - 39.2: White siliceous RHY cut by sericite - muscovite partings - foliation. Lower contact in zone of missing core and core rubble. 38.9-39.1m; 20cm of siliceous dark grey banded silica - qtz with 4% diss py and weak chloite - biotite alteration. Upper contact along strong 70 deg foliation with sericite - clay alteration. Shearing and foliation at 040 deg to CA starting 10cm below contact. Minor clay and sericite on partings.												
<<Min: 35.97 - 39.2 7% Min: Calcite>> and as fractures												
<<Alt: 36.1 - 39.2 Weak-Moderate (Alt) Muscovite>> sericite - muscovite alteration												
<<Struc: 39.1 - 40 Weak-Moderate (Alt) Fault>> broken core - missing core												

32.00	33.00	1.00	B00269914	328	1.93	0.25	3.55	8.83
-------	-------	------	-----------	-----	------	------	------	------

33.00	34.00	1.00	B00269915	258	1.85	0.24	3.47	7.09
34.00	35.10	1.10	B00269916	492	2.97	0.19	5.04	8.63

35.10	35.97	0.87	B00269917	403	3.03	0.11	5.16	7.24
-------	-------	------	-----------	-----	------	------	------	------

35.97	37.03	1.06	B00269918	3.6	0.016	-0.01	0.04	0.03
-------	-------	------	-----------	-----	-------	-------	------	------

37.03	38.00	0.97	B00269919	1.4	0.006	-0.01	0.01	-0.01
38.00	39.20	1.20	B00269921	84.6	0.507	-0.01	0.07	0.05



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-317
From (m) **To (m)** **Rocktype & Description**

39.20 65.70 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

39.2 - 65.7: Massive green foliated MAFi speckled white (calcite and feldspar) and black (biotite). More banded type chlorite from approximately 50m down.

<<Min: 39.2 - 42 10% Min: Calcite>> and as veinlets.

<<Min: 42 - 50 5% Min: Calcite>>

<<Min: 50 - 65.7 12% Min: Calcite>> and as veinlets and bands

<<Alt: 39.2 - 65.7 Moderate (Alt) Chlorite>>

<<Alt: 39.2 - 65.7 Weak (Alt) Biotite>>

<<Alt: 50 - 60 Weak (Alt) Chlorite>>

<<Alt: 60 - 65.7 Weak-Moderate (Alt) Chlorite>>

<<Alt: 60 - 65.7 Moderate (Alt) Biotite>>

<<Struc: 40.4 - 41.5 Moderate (Alt) dominant foliation>>

<<Struc: 42 - 44 Moderate (Alt) dominant foliation>>

<<Struc: 45 - 46 Moderate (Alt) dominant foliation>>

<<Struc: 46 - 49 Moderate (Alt) dominant foliation>>

<<Struc: 49 - 51.6 Moderate (Alt) dominant foliation>>

<<Struc: 55.9 - 56.7 Moderate (Alt) dominant foliation>>

<<Struc: 61 - 61.34 Moderate (Alt) Fault>> minor gouge

<<Struc: 64.48 - 65.5 Moderate (Alt) dominant foliation>>

65.70 65.81 OJ Heavily disseminated sulphides in proximal altered rock

65.7 - 65.81: Narrow zone of OJ mineralization on 'top' of RHY at contact with 'overlying' MAFi. Fits the theory (M. Baknes) that fluids are migrating along RHY units, flowing updip, below MAFi aquatard.

<<Min: 65.7 - 65.81 20% Min: Pyrite>>

<<Min: 65.7 - 65.81 2% Min: Pyrrhotite>>

<<Min: 65.7 - 65.81 1% Min: Galena>>

<<Min: 65.7 - 65.81 5% Min: Chalcopyrite>>

<<Min: 65.7 - 65.81 10% Min: Calcite>> diss, bands, blebs

<<Alt: 65.7 - 65.81 Weak-Moderate (Alt) Chlorite>>

<<Struc: 65.7 - 65.7 Moderate (Alt) Contact>> OJ - MAFi contact

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
39.20	40.70	1.50	B00269922	0.5	0.122	-0.01	0.01	0.02

64.70	65.70	1.00	B00269923	0.6	0.007	-0.01	0.01	0.12
-------	-------	------	-----------	-----	-------	-------	------	------

65.70	65.81	0.11	B00269924	111	0.385	1.13	1.51	12.4
-------	-------	------	-----------	-----	-------	------	------	------

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-317
From (m) To (m) Rocktype & Description

65.81 71.70 RHY undifferentiated rhyolite

65.81 - 71.7: grey - green muscovite alteration

<<Min: 65.81 - 71.7 1% Min: Pyrite>>

<<Min: 65.81 - 71.7 2% Min: Calcite>>

<<Alt: 65.81 - 71.7 Weak-Moderate (Alt) Muscovite>> sericitre - muscovite

<<Struc: 66.6 - 68 Moderate (Alt) Fault>> Missing core, core rubble

<<Struc: 68.5 - 70.8 Moderate (Alt) dominant foliation>>

<<Struc: 70.9 - 71.2 Moderate-Strong (Alt) Fault>> missing core, broken core, 20 cm gouge.

71.70 76.75 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

<<Min: 71.7 - 72.3 2% Min: Pyrite>>

<<Min: 71.7 - 73.3 15% Min: Calcite>>

<<Min: 72.3 - 76.75 0.5% Min: Pyrite>>

<<Min: 73.3 - 76.75 8% Min: Calcite>>

<<Alt: 71.7 - 72.7 Moderate-Strong (Alt) Biotite>> or overprint?

<<Alt: 72.3 - 76 Moderate (Alt) Chlorite>> can't separate overprint chlorite

<<Alt: 72.4 - 76 Weak (Alt) Biotite>>

<<Alt: 76 - 77.9 Strong (Alt) Chlorite>>

<<Alt: 76 - 77.9 Moderate-Strong (Alt) Biotite>> with chlorite and chalcopyrite

<<Struc: 72 - 74 Moderate (Alt) dominant foliation>>

<<Struc: 74 - 77 Moderate (Alt) dominant foliation>>

76.75 77.90 OJ Heavily disseminated sulphides in proximal altered rock

76.75 - 77.9: Bands of OR chlorite alteration and OP chl-biot. Approx 10% dis cpy blebs, trace magnetite. 15% calcite gangue.

<<Min: 76.75 - 77.9 2% Min: Pyrite>>

<<Min: 76.75 - 77.9 1% Min: Magnetite>>

<<Min: 76.75 - 77.9 10% Min: Chalcopyrite>> diss blebs

<<Min: 76.75 - 77.9 15% Min: Calcite>> Bands, diss and wisps

<<Struc: 77 - 77.9 Moderate (Alt) dominant foliation>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
65.81	66.60	0.79	B00269925	0.6	-0.005	-0.01	0.01	0.02

72.50	74.00	1.50	B00269926	-0.3	-0.005	-0.01	0.02	0.02
-------	-------	------	-----------	------	--------	-------	------	------

74.00	75.50	1.50	B00269927	0.8	-0.005	-0.01	0.01	0.02
-------	-------	------	-----------	-----	--------	-------	------	------

75.50	76.75	1.25	B00269928	2.3	0.059	0.15	-0.01	0.55
-------	-------	------	-----------	-----	-------	------	-------	------

76.75	77.50	0.75	B00269929	32.9	0.89	2.13	0.03	0.61
-------	-------	------	-----------	------	------	------	------	------

77.50	77.90	0.40	B00269932	27.8	1.21	1.93	0.05	1.47
-------	-------	------	-----------	------	------	------	------	------

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-317

From (m) To (m) Rocktype & Description

77.90 82.60 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Min: 77.9 - 80.4 12% Min: Sphalerite>>
 <<Min: 77.9 - 80.4 60% Min: Pyrite>>
 <<Min: 77.9 - 80.4 1% Min: Magnetite>>
 <<Min: 77.9 - 80.4 5% Min: Galena>>
 <<Min: 77.9 - 80.4 1% Min: Chalcopryrite>> and as rare blebs
 <<Min: 77.9 - 80.4 2% Min: Calcite>> patchy diss
 <<Min: 77.9 - 80.4 5% Min: Barite>> difficult to determine - interstitial
 <<Min: 80.4 - 82.6 10% Min: Sphalerite>>
 <<Min: 80.4 - 82.6 40% Min: Pyrite>>
 <<Min: 80.4 - 82.6 8% Min: Galena>> local blebs and aggregations
 <<Min: 80.4 - 82.6 23% Min: Chalcopryrite>> diss and as blebs
 <<Min: 80.4 - 82.6 2% Min: Calcite>> patchy
 <<Min: 80.4 - 82.6 5% Min: Barite>> difficult to determine - interstitial
 <<Struc: 77.9 - 77.9 Moderate (Alt) Contact>> MAFi (OJ) - OB contact
 <<Struc: 77.9 - 79 Moderate (Alt) dominant foliation>> Banded sulphides
 <<Struc: 79 - 80 Moderate (Alt) dominant foliation>> Banded sulphides
 <<Struc: 82.2 - 83 Moderate (Alt) dominant foliation>> Banded sulphides

82.60 84.83 OA Magnetite bearing sulphides

82.6 - 84.83: Banded and DMG magnetite.

<<Min: 82.6 - 84.83 5% Min: Sphalerite>>
 <<Min: 82.6 - 84.83 40% Min: Pyrite>>
 <<Min: 82.6 - 84.83 12% Min: Magnetite>> wispy bands and as diss
 <<Min: 82.6 - 84.83 5% Min: Galena>> local blebs and aggregations
 <<Min: 82.6 - 84.83 4% Min: Chalcopryrite>>
 <<Min: 82.6 - 84.83 1% Min: Calcite>> and fracture filling
 <<Min: 82.6 - 84.83 5% Min: Barite>> difficult to determine - interstitial
 <<Min: 84.3 - 86 0.5% Min: Chalcopryrite>>
 <<Struc: 84 - 85 Moderate (Alt) dominant foliation>> Banded sulphides

FMG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
77.90	79.00	1.10	B00269933	151	0.878	0.56	5.97	9.97

79.00	80.00	1.00	B00269934	102	0.421	0.05	4.54	8.76
80.00	81.00	1.00	B00269935	91	1.5	0.3	5.19	7.34
81.00	82.00	1.00	B00269936	107	2.2	0.45	4.93	7.03
82.00	82.60	0.60	B00269937	113	1.4	0.12	5.69	8.9

MCG

82.60	83.00	0.40	B00269938	101	0.745	0.36	4.06	8.34
-------	-------	------	-----------	-----	-------	------	------	------

83.00	84.00	1.00	B00269939	121	2.19	0.27	5.87	7.57
84.00	84.83	0.83	B00269941	123	2.23	0.25	5.19	6.67



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-317

From (m) To (m) Rocktype & Description

84.83 92.04 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

<<Min: 84.83 - 86 10% Min: Sphalerite>>
 <<Min: 84.83 - 86 5% Min: Galena>> Local blebs and aggregations
 <<Min: 84.83 - 92.04 10% Min: Barite>> difficult to determine
 <<Min: 84.83 - 92.04 40% Min: Pyrite>> and as diss
 <<Min: 86 - 91 8% Min: Sphalerite>>
 <<Min: 86 - 91 5% Min: Barite>> difficult to determine, interstitial as well
 <<Min: 86 - 91 1% Min: Chalcopryrite>>
 <<Min: 86 - 91 3% Min: Galena>>
 <<Min: 86 - 91 40% Min: Pyrite>>
 <<Min: 86 - 91 2% Min: Magnetite>> dis patches
 <<Min: 87.5 - 90.05 12% Min: Calcite>>
 <<Min: 90.5 - 91.7 5% Min: Calcite>>
 <<Min: 91 - 92.04 1% Min: Chalcopryrite>>
 <<Min: 91 - 92.04 3% Min: Galena>>
 <<Min: 91 - 92.04 50% Min: Pyrite>>
 <<Min: 91 - 92.04 15% Min: Sphalerite>> diss in prominent bands
 <<Min: 91.7 - 92.04 15% Min: Calcite>>
 <<Struc: 85 - 86 Moderate (Alt) dominant foliation>> banded sulphides
 <<Struc: 89 - 89.5 Moderate (Alt) dominant foliation>> banded sulphides
 <<Struc: 89.5 - 90 Moderate (Alt) dominant foliation>> banded sulphides
 <<Struc: 90 - 91.2 Moderate (Alt) dominant foliation>> banded sulphides
 <<Struc: 91.2 - 92 Moderate (Alt) dominant foliation>> banded sulphides

92.04 92.80 RHY undifferentiated rhyolite

92.04 - 92.8: Could also be highly altered MAFi

<<Min: 92.04 - 92.2 5% Min: Pyrite>>
 <<Min: 92.04 - 92.2 3% Min: Chalcopryrite>>
 <<Min: 92.2 - 108 3% Min: Calcite>>
 <<Min: 92.2 - 109 0.1% Min: Sphalerite>> Rare, trace on FRA and in Qtz veins
 <<Min: 92.2 - 109 2% Min: Pyrite>> and as diss
 <<Min: 92.2 - 109 0.1% Min: Galena>> Rare, trace on FRA and in Qtz veins

MCG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
84.83	85.83	1.00	B00269942	141	2.3	0.12	5.77	7.69

85.83	86.80	0.97	B00269943	126	1.71	0.15	3.41	5.35
86.80	87.50	0.70	B00269944	143	2.98	0.14	2.92	4.23
87.50	88.50	1.00	B00269945	257	2.6	0.05	5.56	6.25
88.50	89.50	1.00	B00269946	209	2.9	0.11	4.34	6.05
89.50	90.20	0.70	B00269947	224	2.82	0.37	3.61	4.59
90.20	91.00	0.80	B00269948	139	1.38	0.03	3.26	4.85
91.00	92.04	1.04	B00269949	421	3.05	0.31	7.24	10.5

92.04	92.80	0.76	B00269952	52.3	0.89	0.19	0.09	0.14
-------	-------	------	-----------	------	------	------	------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-317

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 92.2 - 109 0.1% Min: Chalcopryite>> Rare, trace on FRA and in Qtz veins											
<<Struc: 92.04 - 92.04 Moderate (Alt) Contact>>											
<<Struc: 92.04 - 113 Weak (Alt) Fault>> not really faulted but very fractured, broken, core rubble											
92.80	131.00	RHYi Aphanitic Rhyolite (intrusion)	92.80	94.00	1.20	B00269953	0.4	-0.005	-0.01	0.02	0.02
92.8 - 131: Upper contact banded at 60 deg. Locally not schistose but massive with brittle fracture. Locally where foliation or shearing more intense RHYi is soft and sericite altered. Core was dropped from 113m - 131m due to core lifter spring problems....											
<<Min: 108 - 132.82 5% Min: Calcite>> and as FRA filling, veinlets, mm foliiform bands			94.00	95.50	1.50	B00269954	1.2	0.007	-0.01	0.02	0.02
<<Min: 109 - 130.8 1% Min: Pyrite>>			95.50	97.00	1.50	B00269955	0.7	-0.005	-0.01	0.02	0.02
<<Min: 130.8 - 132.82 0.2% Min: Pyrite>>			128.00	129.50	1.50	B00269956	0.9	-0.005	-0.01	-0.01	-0.01
<<Min: 130.8 - 132.82 0.2% Min: Arsenopyrite>>			129.50	131.00	1.50	B00269957	-0.3	-0.005	-0.01	0.03	0.04
<<Alt: 107 - 119 Weak (Alt) Muscovite>> Patchy sericite - clay and weak muscovite in stronger foliation - shear or fault zones serperated by fresher grey, more massive but fractured, RHYi.											
<<Alt: 119 - 130.8 Weak-Moderate (Alt) Muscovite>> similar to 107-119.0 m but intensity increasing downhole.											
<<Alt: 130.8 - 132.82 Weak-Moderate (Alt) Muscovite>> Similar to light green sericite alteration from 107 - 130.8m but now pervasive and along with more intense foliation obscures the original lithology - likely a RHYi based on remnant qtz eyes and angular shards of glassy RHYi.											
<<Vein: 109.3 - 109.5 100% Quartz>>											
<<Vein: 118.8 - 121.3 35% Quartz>>											
<<Vein: 127.6 - 128.3 25% Calcite 27 deg. >>											
<<Struc: 103.5 - 104.5 Moderate (Alt) dominant foliation>>											
<<Struc: 111 - 111.8 Weak-Moderate (Alt) Fault>> broken core, minor gouge - clay on fractures											
<<Struc: 115.3 - 116 Moderate (Alt) dominant foliation>>											
<<Struc: 119 - 125 Weak-Moderate (Alt) Fault>> broken core, minor gouge zones, clay on fractures. Core has been dropped (113-131m) so locations and intensity is suspect. Most gouge zones - shears seem to be at lower angles.											
<<Struc: 125.12 - 125.12 Moderate (Alt) Vein>> 0.20m qtz vein											
<<Struc: 126.3 - 127.4 Moderate (Alt) dominant foliation>> sericite altered											
<<Struc: 128.35 - 128.4 Moderate (Alt) Vein>> 5cm calcite vein											
<<Struc: 128.65 - 128.75 Moderate (Alt) Foliation>> sericite altered, strongly foliated - almost a shear band											
<<Struc: 128.75 - 132.82 Moderate (Alt) dominant foliation>>											
131.00	132.82	RHYi Aphanitic Rhyolite (intrusion)	131.00	132.00	1.00	B00269958	0.6	0.006	-0.01	-0.01	-0.01
131 - 132.82: Moderate to stongly foliated. Rare remnant qtz eyes and angular RHYi shards, unit could be RHY?. Sharp contact at 132.82.											
			132.00	132.82	0.82	B00269959	2.7	0.008	-0.01	0.03	0.09



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-317

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
132.82	133.35	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	132.82	133.35	0.53	B00269961	82.3	0.234	-0.01	1.08	3.82
132.82 - 133.35: No visible galena or chalcopyrite, Low, <10% diss sphalerite.											
<<Min: 132.82 - 133.35 5% Min: Sphalerite>> and thin weak bands											
<<Min: 132.82 - 133.35 50% Min: Pyrite>>											
<<Min: 132.82 - 133.35 20% Min: Calcite>>											
<<Struc: 132.82 - 133.35 Moderate (Alt) dominant foliation>> banded sulfides											
133.35	135.52	MAFI Mafic Intrusions (primarily footwall mafic intrusion)	133.35	134.00	0.65	B00269962	1.2	0.006	-0.01	0.03	0.04
<<Min: 133.35 - 135.52 1% Min: Pyrite>>											
<<Min: 133.35 - 135.52 15% Min: Calcite>>											
<<Alt: 133.35 - 135.52 Moderate (Alt) Chlorite>> MAFI banded chlorite, blebs and clots of OP type chlorite not present.											
<<Alt: 133.35 - 135.52 Weak (Alt) Biotite>>											
<<Struc: 133.35 - 135.52 Moderate (Alt) dominant foliation>>											
135.52	138.95	OJ Heavily disseminated sulphides in proximal altered rock	135.52	136.25	0.73	B00269964	18.6	0.051	0.13	0.37	1.55
<<Min: 135.52 - 136.25 5% Min: Pyrite>> and as thin mm bands and diss											
<<Min: 135.52 - 136.25 1% Min: Chalcopyrite>> and as wisps											
<<Min: 136.25 - 136.55 20% Min: Pyrite>>											
<<Min: 136.25 - 136.55 8% Min: Chalcopyrite>>											
<<Min: 136.35 - 136.55 20% Min: Pyrrhotite>>											
<<Min: 136.55 - 137.9 10% Min: Pyrrhotite>>											
<<Min: 136.55 - 138.38 8% Min: Chalcopyrite>>											
<<Min: 136.95 - 138.38 3% Min: Magnetite>>											
<<Min: 137.9 - 138.95 20% Min: Pyrrhotite>> bands, blebs, AGR and diss											
<<Min: 138.38 - 138.95 3% Min: Chalcopyrite>>											
<<Alt: 135.52 - 136.2 Moderate (Alt) Cordierite>> diss in bands											
<<Alt: 135.52 - 137.3 Weak (Alt) Biotite>>											
<<Alt: 135.52 - 138.9 Strong (Alt) Chlorite>> Banded and semimassive chlorite in OJ unit											
<<Alt: 137.5 - 138.95 Moderate-Strong (Alt) Silicification>>											
<<Alt: 138.9 - 140.8 Trace (Alt) Chlorite>> rare											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-317
From (m) **To (m)** **Rocktype & Description**

<<Struc: 136.3 - 137 Moderate (Alt) dominant foliation>>

138.95 140.80 RHY undifferentiated rhyolite

<<Min: 138.95 - 140.8 0.5% Min: Pyrite>>

<<Min: 138.95 - 140.8 1% Min: Pyrrhotite>>

<<Min: 140.68 - 142 7% Min: Pyrrhotite>> and as thin mm foliaform bands

<<Alt: 139.9 - 141.85 Moderate (Alt) Muscovite>> Green sericite - muscovite on foliation and shear planes

<<Alt: 140 - 141.7 Moderate (Alt) Silicification>> siliceous patches. Some silica in RHY could be sheared qtz vein.

<<Vein: 140 - 140.8 25% Quartz 50 deg. >>

<<Struc: 138.95 - 139.85 Moderate-Strong (Alt) Fault>> gouge and broken core

140.80 141.85 MDSc Carbonaceous dominant mudstone

140.8 - 141.85: Siliceous, weakly sulfidized (pyrrhotite), MDSc, contains minor RHY sections.

<<Min: 140.8 - 140.95 10% Min: Pyrite>>

141.85 170.60 RHY undifferentiated rhyolite

141.85 - 170.6: Muscovite - sericite altered (OR type) throughout. Foliation at approx. 30 deg with clay - sericite on surfaces. 141.85-147.3m: intense sericite - musc alteration with bands of diss 1-3 mm cordierite replaced by chlorite. This alteration correlates with a zone of cordierite - chlorite - silicification alteration in K15-316, also found below the mudstone, at a similar elevation. Alteration is still moderately intense at EOH but does decrease in intensity going downhole.

<<Min: 142 - 144 5% Min: Pyrite>> and as thin mm foliaform bands

<<Min: 144 - 159.9 2% Min: Pyrite>> and as thin mm foliaform veinlets

<<Min: 144 - 159.9 2% Min: Pyrrhotite>>

<<Min: 147.17 - 150 5% Min: Calcite>>

<<Min: 150 - 161 10% Min: Calcite>>

<<Min: 159 - 164 1% Min: Pyrrhotite>>

<<Min: 159.9 - 170.6 2% Min: Pyrite>>

<<Min: 163.5 - 170.6 5% Min: Calcite>>

<<Alt: 141.85 - 147 Weak (Alt) Chlorite>>

<<Alt: 141.85 - 147.3 Strong (Alt) Muscovite>> green sericite - muscovite on foliation partings and as bands.

<<Alt: 143.9 - 144.6 Cordierite>> Chlorite replacing cordierite

<<Alt: 147 - 170.6 Trace (Alt) Chlorite>>

<<Alt: 147.3 - 170.6 Moderate-Strong (Alt) Muscovite>> More intense alteration (intensity 5-6) is over short (<1-2m) sections, remainder is intensity 4 with good sericite - muscovite on partings.

<<Struc: 141.85 - 146.9 Weak-Moderate (Alt) Fault>> low angle foliation with strong sericite and clay plus local shearing - 'slips'

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

138.95	140.00	1.05	B00269968	1.4	-0.005	0.03	-0.01	0.19
--------	--------	------	-----------	-----	--------	------	-------	------

140.00	140.80	0.80	B00269969	1.4	-0.005	0.02	0.01	0.08
--------	--------	------	-----------	-----	--------	------	------	------

140.80	141.85	1.05	B00269971	3.2	0.019	0.03	0.05	0.25
--------	--------	------	-----------	-----	-------	------	------	------

141.85	143.00	1.15	B00269972	0.6	-0.005	0.02	0.02	0.06
--------	--------	------	-----------	-----	--------	------	------	------

143.00	144.60	1.60	B00269973	-0.3	-0.005	-0.01	-0.01	0.02
--------	--------	------	-----------	------	--------	-------	-------	------

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-317

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 145.6 - 147 Moderate (Alt) dominant foliation>>											
<<Struc: 146.9 - 147.2 Moderate-Strong (Alt) Fault>> gouge and broken core											
<<Struc: 147.2 - 150 Weak-Moderate (Alt) Fault>> low angle foliation with strong sericite and clay plus local shearing - 'slips'											
<<Struc: 147.2 - 150 Moderate (Alt) dominant foliation>>											
<<Struc: 150 - 151 Moderate-Strong (Alt) Fault>>											
<<Struc: 152 - 155 Moderate (Alt) dominant foliation>>											
<<Struc: 157 - 159.5 Moderate (Alt) dominant foliation>>											
<<Struc: 161 - 162.3 Strong (Alt) Fault>> gouge zones, broken core and missing core.											
<<Struc: 162.3 - 170.6 Moderate (Alt) dominant foliation>>											
End of Hole @ 170.6											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-318

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Dillon Hume	Date Logging Start:	08-Nov-15
UTM Easting	415075	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	08-Nov-15
UTM Northing:	6815120	Casing Pulled?:	Yes	Dip:	-90	Drill Company:	Geotech
UTM Elev. (m):	1385.18	Casing Depth (m):	7.5	Length (m):	35	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	06-Nov-15
Local Northing:		Cemented?:	SP	Core Storage Loc.:	KZK Camp	Drill Completed:	07-Nov-15
Local Elev. (m):						Purpose:	Hydro
Comments:						Parent Hole:	

K15-318 was drilled as a monitoring well.
K15-318 encountered felsic volcanics and coherent flows, locally cross-cut by BI+CA schists.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-90	0	0	0	APS	Dillon Hume	08-Nov-15		<input checked="" type="checkbox"/>	
26	-88.8	185	22.5	207.5	ReflexEVS	Geotech	07-Nov-15	5774	<input checked="" type="checkbox"/>	
35	-88.3	172.9	22.5	195.4	ReflexEVS	Geotech	07-Nov-15	5779	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	7.50	OVB									
7.50	19.10	RHY									
<p>7.5 - 19.1: Rhyolitic and calcareous lpl within grey, fine grained, ash matrix.</p> <p><<Min: 7.5 - 19.1 5% Min: Calcite>></p> <p><<Min: 7.5 - 23 1% Min: Pyrrhotite>></p> <p><<Struc: 13.2 - 13.6 Weak (Alt) Fault>> Tightly spaced cleavage with local fault gouge and higher oxidation than surrounding rock.</p>											
19.10	20.70	MAFI									
<p>19.1 - 20.7: Gradiational, from top to bottom: heavily disseminated BI in grey, fine grained ash matrix to massive BI+CA schist. (metapelite with BI being pelitic sediment material?). Relatively sharp lower contact.</p> <p><<Min: 19.1 - 20.7 20% Min: Calcite>></p>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-318

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
20.70	23.00	RHYvl Lapilli tuff									
20.7 - 23: Rhyolitic and calcareous lpl within grey, fine grained, ash matrix. Abundance of lpl decreases from the top to the bottom.											
<<Min: 20.7 - 23 10% Min: Calcite>>											
23.00	27.70	RHYc Rhyolite coherent volcanics									
23 - 27.7: Very siliceous coherent rhyolite, with local pepperitic textures. Local blebs of PY+/-PO.											
<<Min: 23 - 27.7 3% Min: Pyrite>>											
<<Min: 23 - 27.7 2% Min: Pyrrhotite>>											
<<Min: 23 - 27.7 3% Min: Calcite>>											
27.70	32.30	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
27.7 - 32.3: BI+CA+CL schist with rounded CA phenocrysts?											
<<Min: 27.7 - 32.3 20% Min: Calcite>>											
<<Min: 27.7 - 35 0.5% Min: Pyrite>>											
32.30	34.20	RHYva Coarse grained to ash tuff									
32.3 - 34.2: Grey, fine grained, ash tuff with anastamosing MU cleavage											
<<Min: 32.3 - 35 2% Min: Calcite>>											
34.20	35.00	No Core No Core									
34.2 - 35: Almost no core recovered. By correlating with K15-307, there should be a FBX here.											
<<Struc: 34.2 - 35 Moderate (Alt) Fault>> Poor core recovery with minor fault gouge recovered											
End of Hole @ 35											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-319

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Florent Pons
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Florent Pons	Date Logging Start:	08-Nov-15
UTM Easting	414945.5	Core Size:	HQ3	Azimuth:	30	Date Logging Complete:	11-Nov-15
UTM Northing:	6815000.8	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1386.396	Casing Depth (m):	31	Length (m):	254	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	06-Nov-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	10-Nov-15
Local Elev. (m):						Purpose:	Exploration
Comments:						Parent Hole:	

Hole collared into portions of RHY (Mu schist) before encountering the upper Krakatoa lens right at the contact with MAFi. The lower Krakatoa lens (OB, MAFi hosted) was encountered at 106.7 m. From 167.2 m to 196.8 m, the hole encountered the Ol horizon (encountered in the K15-314, from 143.71 to 149.60m), which exists as interstitial or matrix replacement of py-gl-cpy-sph within a calcareous (?) or calcite rich breccia (with clasts of RHY and sulphide + calcite matrix), ~ 29.6 m of thickness. Followed by another OB lens 3 m below (~ 2.9 m of thickness, MAFi hosted). From 202.9 to 219.8m, Fault breccia interval, intercalated by mudstone unit (which was missing in the K15-314) and RHYcw. Remainder of hole was fine grained RHYv(a,l) with portions of moderately/strongly disseminated stratiform sulphides.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	30	0	30	APS	Florent Pons	06-Nov-15		<input checked="" type="checkbox"/>	
41	-59.5	7.2	22.5	29.7	ReflexEVS	Geotech	07-Nov-15	5793	<input checked="" type="checkbox"/>	
71	-61.2	7.6	22.5	30.1	ReflexEVS	Geotech	07-Nov-15	5794	<input checked="" type="checkbox"/>	
101	-63.8	7.2	22.5	29.7	ReflexEVS	Geotech	08-Nov-15	5766	<input checked="" type="checkbox"/>	
127	-68.1	7.9	22.5	30.4	ReflexEVS	Geotech	09-Nov-15	5778	<input checked="" type="checkbox"/>	
131	-65.4	6.8	22.5	29.3	ReflexEVS	Geotech	09-Nov-15	5807	<input checked="" type="checkbox"/>	
161	-66.6	8.2	22.5	30.7	ReflexEVS	Geotech	09-Nov-15	5799	<input checked="" type="checkbox"/>	
191	-66.2	58.2	22.5	80.7	ReflexEVS	Geotech	09-Nov-15	7648	<input type="checkbox"/>	High Mag
251	-70	8.4	22.5	30.9	ReflexEVS	Geotech	10-Nov-15	5756	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	33.13	OVBN Overburden									
33.13	59.45	RHY undifferentiated rhyolite light grey	53.00	55.50	2.50	B00265491	1.5	0.037	-0.01	0.01	0.07
33.13 - 59.45: Light grey, shiny (fracture surface), muscovite schist, intensively Mu altered (original) associated with intense foliation/fracturation. Characterized by deformed/dismembered siliceous bands, concordant with foliation. The protolith could be RHYcw.											
<<Min: 33.13 - 59.45 0.5% Min: Pyrite>> Trace of disseminated py.											
			55.50	58.50	3.00	B00265492	2	0.015	-0.01	0.02	-0.01



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-319

From (m) To (m) Rocktype & Description

<<Alt: 33.13 - 59.45 Intense (Alt) Muscovite>> Muscovite schist.

<<Struc: 38.8 - 38.81 Strong (Alt) dominant foliation>>

<<Struc: 55.5 - 59.45 Strong (Alt) Fault>> Large interval of fault gouge/breccia, fragments are from the hosted rock (RHY?). Discordant with DFOL.

59.45 59.90 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides MG

59.45 - 59.9: Interval of massive sulphide within fault gouge, OB domain, brecciated (fragmented) filling by calcite.

<<Min: 59.45 - 59.9 6% Min: Sphalerite>> Medium grained

<<Min: 59.45 - 59.9 70% Min: Pyrite>> OB interval, medium grained (homogeneous)

<<Min: 59.45 - 59.9 6% Min: Galena>>

<<Min: 59.45 - 59.9 10% Min: Calcite>> Pervasive and fracture filling.

59.90 106.70 MAFi Mafic Intrusions (primarily green FCG footwall mafic intrusion)

59.9 - 106.7: Green, very fine to coarse grained MAFi, moderately foliated, Matrix is totally CI altered. ~10 % of porphyroblast of Bi, stretched and oriented with foliation. Strong CA associated with thin concordant veinlets and blebs/clots, also pervasive.

<<Min: 59.9 - 70 10% Min: Calcite>> Associated with dismembered veinlets and blebs/porphyroblast

<<Min: 59.9 - 106.5 0.1% Min: Pyrite>>

<<Min: 59.9 - 106.5 0.1% Min: Pyrrhotite>>

<<Min: 70 - 84.35 5% Min: Calcite>> Associated with dismembered veinlets and blebs/porphyroblast

<<Min: 84.35 - 85 12% Min: Calcite>> Associated with weak breccia.

<<Min: 85 - 106.5 7% Min: Calcite>> Associated with dismembered veinlets and blebs/porphyroblast

<<Min: 106.5 - 106.7 2% Min: Pyrite>>

<<Alt: 59.9 - 62 Moderate (Alt) Muscovite>> MU alteration within MAFi

<<Alt: 62 - 71 Strong (Alt) Chlorite>> MAFi

<<Alt: 71 - 106.5 Moderate (Alt) Chlorite>> MAFi

<<Alt: 106.5 - 106.7 Moderate (Alt) Muscovite>> Short interval MU altered (original), at the upper contact with massive sulphide.

<<Vein: 84.35 - 85 15% Calcite 70 deg. >> Interval weakly brecciated by Calcite veinlets, fracture filling, discordant (~70 ac).

<<Struc: 62 - 64 Strong (Alt) Fault>> Fault clay gouge.

<<Struc: 64 - 64.01 Strong (Alt) dominant foliation>>

<<Struc: 64.5 - 65.15 Strong (Alt) Fault>> Fault clay gouge.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
58.50	59.45	0.95	B00265493	0.7	0.013	-0.01	0.01	-0.01

59.45	59.90	0.45	B00265494	106	1.14	0.12	2.03	7.85
-------	-------	------	-----------	-----	------	------	------	------

59.90	62.00	2.10	B00265495	5.5	0.034	-0.01	0.1	0.05
-------	-------	------	-----------	-----	-------	-------	-----	------

62.00	64.00	2.00	B00265496	14.6	0.015	0.02	0.01	0.04
64.00	65.15	1.15	B00265497	0.5	-0.005	-0.01	-0.01	0.02
101.00	102.50	1.50	B00265498	0.6	0.014	-0.01	-0.01	0.01
102.50	104.00	1.50	B00265499	0.5	-0.005	-0.01	0.01	0.02
104.00	105.30	1.30	B00232651	0.6	-0.005	-0.01	-0.01	0.02
105.30	106.70	1.40	B00232652	3	0.029	-0.01	0.02	0.03



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-319

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %																																													
<div><<Struc: 68 - 69 Strong (Alt) Fault>> Fault, intensively fractured.</div> <div><<Struc: 72 - 72.01 Moderate (Alt) dominant foliation>></div> <div><<Struc: 88 - 88.01 Moderate (Alt) dominant foliation>></div> <div><div>106.70112.70OB</div><div>Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides</div><div>MCG</div></div> <div>106.7 - 112.7: Interval of massive sulphide, OB domain, medium to coarse grained, moderate laminated texture marked by Sp bands. Ca pervasive and associated with fractures. Unit fractured. Sharp upper and lower contact.</div> <div>108.4-108.8m: Short interval of RHY? Strongly Mu/Sr altered.</div> <div><<Min: 106.7 - 109.75 4% Min: Sphalerite>> Occuring as bands.</div> <div><<Min: 106.7 - 109.75 70% Min: Pyrite>> Medium to coarse grained. OB</div> <div><<Min: 106.7 - 109.75 2% Min: Galena>></div> <div><<Min: 106.7 - 112.7 4% Min: Calcite>> Pervasive, disseminated blebs and also as thin veinlets.</div> <div><<Min: 109.75 - 111.75 4% Min: Galena>></div> <div><<Min: 109.75 - 112.7 10% Min: Sphalerite>> Occuring as parallel bands, laminated texture.</div> <div><<Min: 109.75 - 112.7 70% Min: Pyrite>> Medium to coarse grained. OB</div> <div><<Min: 111.75 - 112.7 7% Min: Galena>> Aggregates at the margins. Disseminated.</div> <div><<Struc: 106.7 - 106.71 Contact>> Upper contact of massive sulphide.</div> <div><div>112.70120.45RHYc</div><div>Rhyolite coherent volcanics</div><div>light grey</div><div>FG</div></div> <div>112.7 - 120.45: Light grey, banded texture marked by grey siliceous bands, parallel with foliation,0.5-5 cm wide. Interval strongly foliated and MU altered (original). Could be RHYcw or RHYi intensively foliated. 0.5-1 % of Py disseminated.</div> <div>116.4-116.95m: Bands/intrusive of RHYi, concordant with foliation.</div> <div><<Min: 113.4 - 120.45 0.5% Min: Pyrite>></div> <div><<Alt: 112.7 - 120.45 Strong (Alt) Muscovite>> Strong Mu alteration (original, shiny), associated with strong foliation.</div> <div><<Vein: 112.85 - 113.4 85% Quartz 25 deg. >> massive qtz +/- ca vein, grey, subconcordant, 1% of py at margins.</div> <div><<Struc: 112.7 - 112.71 Contact>> lower contact of massive sulphide.</div> <div><<Struc: 116.1 - 116.11 Strong (Alt) dominant foliation>></div> <div><div>120.45167.20MAFi</div><div>Mafic Intrusions (primarily footwall mafic intrusion)</div><div>brown</div><div>FCG</div></div> <div>120.45 - 167.2: Brown/greenish, fine to coarse grained MAFi, moderately to strongly foliated and biotite altered (medium/strong,coarse flakes distributed within matrix, oriented with foliation). Fine grained Matrix , chlorite altered (pervasive). Strong CA associated with thin concordant veinlets and blebs/clots.</div> <div><<Min: 120.45 - 120.8 5% Min: Pyrite>> Occuring as subparallel bands.</div>												<table><tr><td>106.70</td><td>107.55</td><td>0.85</td><td>B00232653</td><td>170</td><td>0.966</td><td>0.3</td><td>1.73</td><td>7.71</td></tr></table>	106.70	107.55	0.85	B00232653	170	0.966	0.3	1.73	7.71																																			
106.70	107.55	0.85	B00232653	170	0.966	0.3	1.73	7.71																																																
<table><tr><td>107.55</td><td>108.00</td><td>0.45</td><td>B00232654</td><td>241</td><td>0.928</td><td>0.04</td><td>2.89</td><td>9.89</td></tr><tr><td>108.00</td><td>109.75</td><td>1.75</td><td>B00232655</td><td>96.7</td><td>0.719</td><td>0.36</td><td>0.9</td><td>4.92</td></tr><tr><td>109.75</td><td>110.75</td><td>1.00</td><td>B00232656</td><td>129</td><td>1.01</td><td>0.79</td><td>0.96</td><td>7</td></tr><tr><td>110.75</td><td>111.75</td><td>1.00</td><td>B00232657</td><td>224</td><td>1.98</td><td>1.37</td><td>2.01</td><td>11.3</td></tr><tr><td>111.75</td><td>112.70</td><td>0.95</td><td>B00232658</td><td>119</td><td>0.721</td><td>0.34</td><td>0.94</td><td>6.57</td></tr></table>												107.55	108.00	0.45	B00232654	241	0.928	0.04	2.89	9.89	108.00	109.75	1.75	B00232655	96.7	0.719	0.36	0.9	4.92	109.75	110.75	1.00	B00232656	129	1.01	0.79	0.96	7	110.75	111.75	1.00	B00232657	224	1.98	1.37	2.01	11.3	111.75	112.70	0.95	B00232658	119	0.721	0.34	0.94	6.57
107.55	108.00	0.45	B00232654	241	0.928	0.04	2.89	9.89																																																
108.00	109.75	1.75	B00232655	96.7	0.719	0.36	0.9	4.92																																																
109.75	110.75	1.00	B00232656	129	1.01	0.79	0.96	7																																																
110.75	111.75	1.00	B00232657	224	1.98	1.37	2.01	11.3																																																
111.75	112.70	0.95	B00232658	119	0.721	0.34	0.94	6.57																																																
<table><tr><td>112.70</td><td>113.40</td><td>0.70</td><td>B00232659</td><td>2.1</td><td>0.02</td><td>-0.01</td><td>0.01</td><td>0.04</td></tr></table>												112.70	113.40	0.70	B00232659	2.1	0.02	-0.01	0.01	0.04																																				
112.70	113.40	0.70	B00232659	2.1	0.02	-0.01	0.01	0.04																																																
<table><tr><td>113.40</td><td>115.50</td><td>2.10</td><td>B00232661</td><td>1.2</td><td>0.015</td><td>-0.01</td><td>0.02</td><td>0.02</td></tr><tr><td>115.50</td><td>117.00</td><td>1.50</td><td>B00232662</td><td>1</td><td>0.008</td><td>-0.01</td><td>0.01</td><td>0.02</td></tr></table>												113.40	115.50	2.10	B00232661	1.2	0.015	-0.01	0.02	0.02	115.50	117.00	1.50	B00232662	1	0.008	-0.01	0.01	0.02																											
113.40	115.50	2.10	B00232661	1.2	0.015	-0.01	0.02	0.02																																																
115.50	117.00	1.50	B00232662	1	0.008	-0.01	0.01	0.02																																																
<table><tr><td>161.00</td><td>162.50</td><td>1.50</td><td>B00232663</td><td>10.1</td><td>0.161</td><td>0.14</td><td>0.08</td><td>0.05</td></tr></table>												161.00	162.50	1.50	B00232663	10.1	0.161	0.14	0.08	0.05																																				
161.00	162.50	1.50	B00232663	10.1	0.161	0.14	0.08	0.05																																																
<table><tr><td>162.50</td><td>163.75</td><td>1.25</td><td>B00232664</td><td>3.6</td><td>0.103</td><td>0.05</td><td>0.02</td><td>0.07</td></tr></table>												162.50	163.75	1.25	B00232664	3.6	0.103	0.05	0.02	0.07																																				
162.50	163.75	1.25	B00232664	3.6	0.103	0.05	0.02	0.07																																																



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-319

From (m) To (m) Rocktype & Description

<<Min: 120.45 - 144.6 10% Min: Calcite>> MAFi, associated with veinlets/blebs.

<<Min: 120.8 - 161 0.1% Min: Pyrite>> Locally associated with qtz-ca veinlets.

<<Min: 144.6 - 145.42 60% Min: Calcite>> Calcite-qtz vein, >50 cm wide.

<<Min: 145.41 - 162.42 12% Min: Calcite>> Pervasive, thin veinlets.

<<Min: 161 - 163.75 3% Min: Pyrite>> Disseminated as subheudral crystal and also associated with Qtz-Ca veinlets/veins.

<<Min: 161 - 163.75 0.5% Min: Chalcopryite>> Associated with veinlets.

<<Min: 162.42 - 163.75 1% Min: Calcite>>

<<Min: 163.75 - 167.2 2% Min: Sphalerite>> Occuring as aggregates distributed within the vein and at the selvage. Locally centimetric size.

<<Min: 163.75 - 167.2 3% Min: Pyrite>> Occuring as aggregates distributed within the vein and at the selvage. Locally centimetric size.

<<Min: 163.75 - 167.2 4% Min: Galena>> Occuring as aggregates distributed within the vein and at the selvage. Locally centimetric size.

<<Min: 163.75 - 167.2 2% Min: Chalcopryite>> Occuring as aggregates distributed within the vein and at the selvage. Locally centimetric size.

<<Min: 163.75 - 167.2 5% Min: Calcite>> Associated with massive qtz veins.

<<Alt: 120.45 - 123.4 Strong (Alt) Chlorite>> Also associated with strong foliation.

<<Alt: 123.4 - 131.9 Moderate (Alt) Chlorite>> MAFi

<<Alt: 123.45 - 131.9 Moderate (Alt) Biotite>> Medium/coarse flakes distributed within matrix, oriented with foliation.

<<Alt: 131.9 - 161 Weak (Alt) Chlorite>>

<<Alt: 131.9 - 161 Strong (Alt) Biotite>> Fine/medium size flakes distributed within matrix, oriented with foliation.

<<Alt: 161 - 167.2 Moderate (Alt) Muscovite>> Mu pervasive, syngenetic

<<Alt: 161 - 167.2 Moderate (Alt) Chlorite>>

<<Vein: 123.05 - 123.88 10% Quartz>> Group of discordant qtz-ca veins, 2-4 cm wide, deformed/dismembered.

<<Vein: 144.6 - 146.55 60% Calcite>> 2 massive Ca veins, 25-70 cm wide, discordant, irregular.

<<Vein: 163.75 - 167.2 90% Quartz>> Massive qtz +/- calcite vein, grey/milky, > 2 m wide, comprising Cpy/Py/GL/Sp occurring as aggregates at the margins and within the vein.

<<Struc: 121.7 - 122.95 Moderate (Alt) Fault>> Strong/intense foliation.

<<Struc: 123.2 - 123.21 Strong (Alt) dominant foliation>>

<<Struc: 128 - 128.01 Moderate (Alt) dominant foliation>>

<<Struc: 140 - 140.01 Moderate (Alt) dominant foliation>>

<<Struc: 146.57 - 151.55 Strong (Alt) Fault>> Fault gouge/breccia interval. Clasts from hosted rocks (mafi)

<<Struc: 152.6 - 160.7 Strong (Alt) Foliation>> Interval strongly/intensively foliated, irregular, folded. Comprising short fault gouge.

<<Struc: 159.5 - 159.51 Strong (Alt) dominant foliation>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
163.75	165.00	1.25	B00232665	4.6	0.03	0.01	0.14	0.02
165.00	166.00	1.00	B00232666	32.4	0.021	0.08	0.41	0.03
166.00	167.20	1.20	B00232667	18.9	0.105	0.09	0.3	0.4

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-319

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
167.20	168.55	OA Magnetite bearing sulphides									
MCG											
167.2 - 168.55: Massive sulphide strongly Py/GL/SP/Cp mineralised, magnetite distributed within matrix (coarse grained).											
<<Min: 167.2 - 168.55 12% Min: Sphalerite>> Aggregates/clots distributed within the matrix. <<Min: 167.2 - 168.55 6% Min: Magnetite>> Distributed within matrix, coarse grained. <<Min: 167.2 - 168.55 10% Min: Galena>> Disseminated, locally aggregates. <<Min: 167.2 - 168.55 6% Min: Chalcopryite>> Aggregates/clots distributed within the matrix. <<Min: 167.2 - 170 50% Min: Pyrite>> Medium grained, semi-massive to massive. <<Min: 167.2 - 190 2% Min: Calcite>> Associated with fracture filling and interval of OI. <<Min: 168.5 - 170 4% Min: Sphalerite>> Disseminated, locally aggregates. <<Min: 168.5 - 170 10% Min: Chalcopryite>> aggregates disseminated. <<Min: 168.5 - 172.8 12% Min: Galena>> Disseminated, locally aggregates. <<Struc: 167.2 - 167.21 Contact>> Sharp upper contact of massive sulphide											
			167.20	168.00	0.80	B00232668	265	2.17	1.53	4.77	14.1
			168.00	168.55	0.55	B00232669	201	0.958	0.64	4.06	14.2
168.55	172.80	OI Heavilly disseminated sulphides in host schist									
MCG											
168.55 - 172.8: Semi massive to massive sulphide within brecciated interval filled by Qtz-Ca-Ak. Magnetite locally disseminated, coarse grained.											
<<Min: 168.55 - 172.8 1% Min: Magnetite>> Distributed within matrix, coarse grained. <<Min: 170 - 171.32 6% Min: Chalcopryite>> <<Min: 170 - 171.7 5% Min: Sphalerite>> Occuring as bands, Weak laminated texture. <<Min: 170 - 180.2 50% Min: Pyrite>> Occuring as bands, Weak laminated texture. <<Min: 171.32 - 171.7 10% Min: Chalcopryite>> <<Min: 171.7 - 172.8 12% Min: Sphalerite>> Medium grained <<Min: 171.7 - 172.8 3% Min: Chalcopryite>>											
			168.55	169.50	0.95	B00232671	142	0.926	0.84	3.8	7.72
			169.50	170.00	0.50	B00232672	191	1.13	1.1	3.23	5.09
			170.00	171.00	1.00	B00232673	106	0.732	0.08	4.16	7.15
			171.00	171.70	0.70	B00232674	193	1.35	0.42	5.15	7.22
			171.70	172.80	1.10	B00232675	205	1.08	0.32	6.44	12.5
172.80	180.20	OA Magnetite bearing sulphides									
MG											
172.8 - 180.2: OA/OI moderately magnetic, laminated texture marked by bands of mineralisation and magnetite (coarse grained). Comprising short interval of OI magnetic.											
<<Min: 172.8 - 173.7 12% Min: Chalcopryite>> Cm size. <<Min: 172.8 - 174.3 3% Min: Sphalerite>> <<Min: 172.8 - 174.3 4% Min: Galena>> Medium grained, disseminated within matrix. <<Min: 172.8 - 180.2 8% Min: Magnetite>> Distributed within matrix, coarse grained. Locally aggregate size. <<Min: 173.7 - 174.3 2% Min: Chalcopryite>> <<Min: 174.3 - 180.2 4% Min: Sphalerite>>											
			172.80	173.70	0.90	B00232676	323	1.52	2.21	7.04	9.31
			173.70	174.30	0.60	B00232677	200	1.23	0.81	5.02	7.76
			174.30	175.00	0.70	B00232678	288	3.03	1.61	6.57	8.47
			175.00	176.00	1.00	B00232679	273	0.766	0.41	7.4	10
			176.00	177.00	1.00	B00232681	256	1.74	1.31	6.05	7.81
			177.00	178.00	1.00	B00232682	298	3.89	1.6	6.6	8.45
			178.00	179.00	1.00	B00232683	218	1.43	0.15	6.14	7.87



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-319

From (m) To (m) Rocktype & Description

<<Min: 174.3 - 184.95 12% Min: Galena>> Medium grained, distributed within matrix. Locally aggregates.

<<Min: 174.3 - 184.95 6% Min: Chalcopryite>> Aggregates, fine grained.

180.20 185.25 OI Heavilly disseminated sulphides in host schist FCG

180.2 - 185.25: Semi massive to massive sulphide within brecciated interval filled by Qtz-Ca-Ak. Magnetite locally disseminated, coarse grained.

<<Min: 180.2 - 184.95 5% Min: Sphalerite>> Locally aggregates.

<<Min: 180.2 - 184.95 40% Min: Pyrite>> Large aggregates, fine/medium grained.

<<Min: 180.2 - 196.8 0.5% Min: Magnetite>> Distributed within matrix, coarse grained.

<<Min: 184.95 - 192.1 15% Min: Sphalerite>> Medium grained, occuring as bands, laminated texture.

<<Min: 184.95 - 192.1 10% Min: Galena>> Medium to coarse grained, disseminated within matrix.

<<Min: 184.95 - 192.1 10% Min: Chalcopryite>> Fine grained.

<<Min: 184.95 - 196.8 50% Min: Pyrite>> Fine/medium grained, semi massive to massive, occuring as bands, marked with Sp a moderate laminated texture.

185.25 191.00 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides FCG

185.25 - 191: Laminated texture marked by bands of mineralisation, comprinsing short interval of OI

<<Min: 190 - 196.8 6% Min: Calcite>> And also weakly/moderately pervasive.

191.00 196.00 OI Heavilly disseminated sulphides in host schist FCG

191 - 196: Semi massive to massive sulphide within brecciated interval filled by Qtz-Ca-Ak. Laminated texture marked by bands of mineralisation, fracture filling. Hard to determinate the protolith, strongly SI.

<<Min: 192.1 - 193.9 8% Min: Sphalerite>> medium grained

<<Min: 192.1 - 193.9 5% Min: Galena>> Medium to coarse grained.

<<Min: 192.1 - 193.9 4% Min: Chalcopryite>>

<<Min: 193.9 - 195.42 10% Min: Sphalerite>> Medium grained.

<<Min: 193.9 - 195.42 15% Min: Galena>> Medium to coarse grained.

<<Min: 193.9 - 195.42 15% Min: Chalcopryite>> Fine grained.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
179.00	180.20	1.20	B00232684	209	1.21	0.23	5.57	7.31

180.20	181.00	0.80	B00232685	191	1.36	0.13	4.75	5.87
--------	--------	------	-----------	-----	------	------	------	------

181.00	182.00	1.00	B00232686	251	1.9	0.2	4.93	5.94
182.00	183.00	1.00	B00232687	210	3.29	0.31	3.87	5.68
183.00	184.00	1.00	B00232688	218	2.15	0.05	4.43	7.58
184.00	184.50	0.50	B00232689	410	4.56	0.37	4.28	7.17
184.50	185.25	0.75	B00232691	400	3.85	0.36	4	8.85

185.25	186.00	0.75	B00232692	270	2.27	0.7	4.31	17.7
--------	--------	------	-----------	-----	------	-----	------	------

186.00	187.00	1.00	B00232693	251	1.84	1.63	3.98	16.9
187.00	188.00	1.00	B00232694	409	2.49	1.84	7.79	16.1
188.00	189.00	1.00	B00232695	421	2.62	2.71	8.31	15.4
189.00	190.00	1.00	B00232696	398	1.64	1.66	7.79	16.2
190.00	191.00	1.00	B00232697	301	1.8	2.02	4.82	14.3
191.00	192.10	1.10	B00232698	389	4.12	3.36	4.75	9.68

192.10	193.00	0.90	B00232699	277	1.51	1.24	4	11.3
193.00	194.00	1.00	B00232701	264	1.41	0.76	3.09	12.3
194.00	195.00	1.00	B00232702	560	3.28	5.5	5.8	12.2
195.00	195.42	0.42	B00232703	399	6.85	5.79	3.5	11
195.42	196.00	0.58	B00232704	159	0.683	0.45	2.14	6.19

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-319

From (m)			To (m)			Rocktype & Description			From (m)			To (m)			Width			Sample			Ag PPM			Au PPM			Cu %			Pb %			Zn %																	
<<Min: 195.42 - 196.42 5% Min: Galena>>																																																		
<<Min: 195.42 - 196.8 6% Min: Sphalerite>>																																																		
<<Min: 195.42 - 196.8 1% Min: Chalcopyrite>>																																																		
<<Alt: 195.42 - 197.2 Moderate (Alt) Chlorite>> Occuring as bands, very fine grained associated with mineralisation.																																																		
196.00			196.80			OB			Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides												FMG			196.00			196.80			0.80			B00232705			146			0.955			0.32			2.21			5.37		
196 - 196.8: OB, >70 % of py medium grained. Sharp lower contact.																																																		
196.80			200.00			MAFi			Mafic Intrusions (primarily footwall mafic intrusion)												FMG			196.80			198.00			1.20			B00232706			3.2			0.031			0.01			0.02			0.07		
196.8 - 200: Green, medium grained MAFi, moderately/strongly foliated, Matrix is totally Cl altered. Strong CA associated with thin concordant veinlets and blebs/clots, also pervasive.																																																		
<<Min: 196.8 - 200 1% Min: Pyrite>> Coarse grained, disseminated within matrix.																																																		
<<Min: 196.8 - 200 10% Min: Calcite>> MAFi																																																		
<<Alt: 197.2 - 200 Moderate (Alt) Chlorite>> MAFi																																																		
<<Struc: 196.8 - 196.81 Contact>> Sharp lower contact of mxsx.																																																		
<<Struc: 197.5 - 197.51 Moderate (Alt) dominant foliation>>																																																		
200.00			202.08			OB			Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides												FMG			200.00			201.00			1.00			B00232709			35.2			0.24			0.38			0.33			1.93		
200 - 202.08: OB, homogeneous and massive texture. >70 % Py.																																																		
<<Min: 200 - 202.08 70% Min: Pyrite>> Massive sulphide, OB domain.																																																		
<<Min: 200 - 202.08 2% Min: Galena>>																																																		
<<Min: 200 - 202.08 2% Min: Chalcopyrite>>																																																		
202.08			202.90			OJ			Heavilly disseminated sulphides in proximal altered rock												CG			202.08			202.90			0.82			B00232712			19.7			0.02			0.22			0.15			5.56		
202.08 - 202.9: Interval strongly mineralized, brecciated and CL altered, localized between OB and fault breccia. OJ?																																																		
<<Min: 202.08 - 202.4 10% Min: Sphalerite>> fracture filling, OJ?																																																		
<<Min: 202.08 - 202.4 5% Min: Pyrite>> fracture filling, OJ?																																																		
<<Min: 202.08 - 202.4 5% Min: Chalcopyrite>> fracture filling, OJ?																																																		
<<Alt: 202.08 - 202.9 Strong (Alt) Chlorite>> OJ associated.																																																		



Project:

KZK

Hole Number:

K15-319

From (m) To (m) Rocktype & Description

202.90 206.00 FBX Fault Breccia

202.9 - 206: Fault breccia interval, comprising polygenetic fragments (RHY/MDS/MXSX) within MU/SR matrix, heterogeneous, cm size.

<<Struc: 202.9 - 206 Intense (Alt) Fault>> Fault breccia interval, comprising polygenetic fragments (RHY/MDS/MXSX) within MU/SR matrix, heterogeneous, cm size.

206.00 209.85 MDSt Rhyolite tuff dominant mudstone

MG

206 - 209.85: Grey to dark grey, carbonaceous tuff/rhy, comprising bands/intervals of mudstone associated with RHYcw (banded texture marked by siliceous bands). Strongly foliated and MU altered.

<<Min: 206 - 212 3% Min: Pyrrhotite>> Small wisps and disseminated.

<<Alt: 206 - 209.75 Strong (Alt) Muscovite>>

<<Struc: 209.5 - 209.51 Strong (Alt) Foliation>>

209.85 212.00 FBX Fault Breccia

209.85 - 212: Fault breccia interval, comprising polygenetic fragments (RHY/MDS/MXSX, RHY dominant) within MU/SR matrix, heterogeneous, cm size.

<<Struc: 209.85 - 212 Intense (Alt) Fault>> Fault breccia interval, comprising polygenetic fragments (RHY/MDS/MXSX, RHY dominant) within MU/SR matrix, heterogeneous, cm size.

212.00 212.88 RHYcw Curdy textured-flow banded (flows, subvolcanics)

212 - 212.88: Short interval of RHYcw, flow banded texture marked by parallel siliceous bands, deformed and locally dismembered within intense foliation. Weakly carbonaceous?

<<Min: 212 - 212.8 1% Min: Pyrite>>

<<Min: 212 - 212.8 1% Min: Pyrrhotite>>

<<Alt: 212 - 231.5 Strong (Alt) Muscovite>>

212.88 219.80 FBX Fault Breccia

212.88 - 219.8: Fault breccia interval, comprising polygenetic fragments (RHY/MDS/MXSX) within MU/SR matrix, heterogeneous, cm size.

<<Struc: 212.88 - 219.8 Intense (Alt) Fault>> Fault breccia interval, comprising polygenetic fragments (RHY/MDS/MXSX) within MU/SR matrix, heterogeneous, cm size.

219.80 231.50 RHY undifferentiated rhyolite

219.8 - 231.5: Interval of RHY, banded texture marked by parallel siliceous bands, deformed and locally dismembered within intense foliation. Strong MU alteration, original? 1-2 % of py/po disseminated. Could be a RHYcw unit.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
202.90	204.00	1.10	B00232713	0.7	0.005	-0.01	0.01	0.03

204.00	205.50	1.50	B00232714	0.3	-0.005	-0.01	-0.01	0.02
--------	--------	------	-----------	-----	--------	-------	-------	------

205.50	206.00	0.50	B00232715	0.5	-0.005	-0.01	-0.01	0.02
--------	--------	------	-----------	-----	--------	-------	-------	------

206.00	207.00	1.00	B00232716	-0.3	-0.005	-0.01	-0.01	0.04
--------	--------	------	-----------	------	--------	-------	-------	------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-319

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 219.8 - 227.57 1% Min: Pyrite>> Also occurring as small wisps. <<Min: 227.57 - 228.55 3% Min: Pyrite>> Coarse grained. <<Min: 228.55 - 231.5 1% Min: Pyrite>> <<Struc: 222 - 222.01 Strong (Alt) Foliation>> Irregular foliation from 219.8 to 231.5m, folded. <<Struc: 227.4 - 227.41 Strong (Alt) Foliation>> <<Struc: 230.65 - 230.8 Strong (Alt) Fault>> Fault gouge 231.50 254.00 RHYva Coarse grained to ash tuff light grey MCG 231.5 - 254: Light grey, medium to coarse grained, +/- homogeneous, moderately foliated (regular cleavage). We observe <5 % of stretched siliceous fragments, deformed, lapilli relics? After 339.15m, Pervasive CL alteration appears associated with mineralisation (po/py). QE locally observed, distributed within the matrix. 1-2 % of Po/Py disseminated, occurring as wisps/stringers. Probably ash tuff with lapilli intervals. 236-239.15m: Lapillis tuff interval? <<Min: 231.5 - 238.1 2% Min: Pyrrhotite>> Associated with CL alteration (original?) <<Min: 238.1 - 247.3 4% Min: Pyrrhotite>> Associated with CL alteration (original?) <<Min: 247.3 - 254 2% Min: Pyrrhotite>> Associated with CL alteration (original?) <<Alt: 231.5 - 254 Moderate (Alt) Muscovite>> Original? <<Alt: 239.15 - 254 Weak (Alt) Chlorite>> Pervasive/patchy and locally occurring as bands. Associated with mineralisation (po/py) <<Struc: 233 - 233.01 Moderate (Alt) Foliation>> <<Struc: 242 - 242.01 Moderate (Alt) Foliation>> <<Struc: 253.5 - 253.51 Moderate (Alt) Foliation>> End of Hole @ 254											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-320

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Dillon Hume	Date Logging Start:	08-Nov-15
UTM Easting	415076	Core Size:	HQ3	Azimuth:	210.5	Date Logging Complete:	11-Nov-15
UTM Northing:	6815121	Casing Pulled?:	Yes	Dip:	-46.5	Drill Company:	Geotech
UTM Elev. (m):	1385.285	Casing Depth (m):	9	Length (m):	269	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	07-Nov-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	10-Nov-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

K15-320 was drilled to confirm and define the resource along section NW1.

K15-320 encountered overburden to 12.5 m depth, followed by a felsic hanging wall package to 128.5 m. This hanging wall package consists of mixed volcanoclastic rhyolites, BI+CA schists, coherent rhyolites, and two OB massive sulphide lenses from 120.5-121 m and 122.1-123.2 m. Strong muscovite alteration became apparent around 99.5 m. Below this hanging wall sequence, a CL+BI+CA schist (MAFi) occurs to 150 m (with minor rhyolitic material within), where another massive sulphide lens is encountered. This mafic-hosted massive sulphide lens persists to a depth of 163.7 m, consisting of OB and OA mineralization. RHYi is encountered from 163.7-202.9 m, with sharp contacts, suggesting it intruded the massive sulphide lens. Below the RHYi, OB mineralization occurs from 202.9-203.2 m, followed by another CL+BI+CA schist (MAFi). Below this MAFi there is a final massive sulphide lens, from 207.7-210.2 m, consisting of OA mineralization. The footwall package consists of argillitic mudstone and volcanoclastic rhyolites, with decreasing alteration intensity down the hole.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-46.5	210.5	0	210.5	APS	Dillon Hume	07-Nov-15		<input checked="" type="checkbox"/>	
26	-45.4	193.2	22.5	215.7	ReflexEVS	Geotech	07-Nov-15	5755	<input checked="" type="checkbox"/>	
50	-46.3	191.6	22.5	214.1	ReflexEVS	Geotech	07-Nov-15	5745	<input checked="" type="checkbox"/>	
80	-46.7	193.5	22.5	216	ReflexEVS	Geotech	08-Nov-15	5788	<input checked="" type="checkbox"/>	
107	-47.3	191.2	22.5	213.7	ReflexEVS	Geotech	08-Nov-15	5760	<input checked="" type="checkbox"/>	
134	-47.5	190.3	22.5	212.8	ReflexEVS	Geotech	08-Nov-15	5760	<input checked="" type="checkbox"/>	
164	-48.4	189.9	22.5	212.4	ReflexEVS	Geotech	08-Nov-15	5741	<input checked="" type="checkbox"/>	
203	-48.2	190.4	22.5	212.9	ReflexEVS	Geotech	09-Nov-15	5744	<input checked="" type="checkbox"/>	
227	-48.7	191.1	22.5	213.6	ReflexEVS	Geotech	09-Nov-15	5736	<input checked="" type="checkbox"/>	
251	-49	193.2	22.5	215.7	ReflexEVS	Geotech	09-Nov-15	5727	<input checked="" type="checkbox"/>	
269	-49.4	192.8	22.5	215.3	ReflexEVS	Geotech	10-Nov-15	5751	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	12.50	OVBN Overburden									
0 - 12.5: Overburden includes 3 small pieces of MSXS (un-oxidized). Maybe core lost from K15-307.											



From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
12.50	19.60	RHYvl Lapilli tuff									
12.5 - 19.6: Calcareous and PO lpl within grey, fine grained ash tuff with local disseminated subhedral BI.											
<<Min: 12.5 - 19.6 10% Min: Calcite>>											
<<Min: 12.5 - 33.1 1% Min: Pyrrhotite>>											
<<Struc: 15 - 15.2 Weak (Alt) Fault>> Tightly spaced foliation with local fault gouge and higher oxidation than surrounding rock.											
19.60	23.10	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
19.6 - 23.1: Grades from top to bottom from: Heavily disseminated BI in grey, fine grained ash tuff to BI+CA schist.											
<<Min: 19.6 - 23.1 20% Min: Calcite>>											
<<Vein: 22.6 - 22.7 80% Calcite>> Massive QZ+CA veining											
23.10	33.10	RHYvl Lapilli tuff									
23.1 - 33.1: Calcareous and PO lpl within grey, fine grained ash tuff with local disseminated subhedral BI.											
<<Min: 23.1 - 33.1 10% Min: Calcite>>											
<<Vein: 23.15 - 23.3 80% Quartz>> Massive QZ+CA vein											
<<Vein: 31.3 - 31.35 70% Quartz>> Massive QZ vein											
33.10	37.00	RHYc Rhyolite coherent volcanics									
33.1 - 37: Silica banded to flow banded rhyolite with wavy to anastomosing MU cleavage											
<<Min: 33.1 - 37 5% Min: Calcite>>											
37.00	38.20	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
37 - 38.2: Disseminated BI and CA porphyroblasts within ~olive green CL (?) matrix											
<<Min: 37 - 38.2 20% Min: Calcite>>											
38.20	40.70	RHYc Rhyolite coherent volcanics									
38.2 - 40.7: Silica banded to flow banded rhyolite with wavy to anastomosing MU cleavage											
<<Min: 38.2 - 44.5 5% Min: Calcite>>											
40.70	44.00	RHYva Coarse grained to ash tuff									
40.7 - 44: Local lpl and flow banding, but dominated by grey, fine grained ash tuff											
<<Min: 40.7 - 44 1% Min: Pyrrhotite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-320

From (m)To (m)Rocktype & Description			From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 42.3 - 42.4 Weak (Alt) Fault>> Local fault gouge zone											
44.0044.50 MDS			Carbonaceous dominant mudstone								
44 - 44.5: Black, carbonaceous mudstone with bands of silica+CA. Crenulation cleavage deforms original (?) foliation.											
<<Min: 44 - 44.5 2% Min: Pyrite>>											
<<Min: 44 - 44.5 2% Min: Pyrrhotite>>											
44.5099.50 RHY			Coarse grained to ash tuff								
44.5 - 99.5: Grey fine grained ash tuff with local blebs (~2 mm) of PO. Alteration increases intensity down the unit.											
<<Min: 44.5 - 91.6 1% Min: Pyrite>>											
<<Min: 44.5 - 91.6 1% Min: Pyrrhotite>>											
<<Min: 44.5 - 99.5 2% Min: Calcite>>											
<<Min: 91.6 - 120.5 1% Min: Pyrite>>											
<<Min: 91.6 - 120.5 5% Min: Pyrrhotite>>											
<<Alt: 53 - 68.6 Weak (Alt) Muscovite>>											
<<Alt: 68.6 - 99.5 Moderate (Alt) Muscovite>>											
<<Vein: 79.1 - 79.3 80% Quartz>> Massive QZ+Tourmaline vein											
<<Vein: 94.85 - 94.97 95% Quartz>> Massive QZ vein											
<<Vein: 95.3 - 95.4 80% Quartz>> Massive QZ vein											
<<Vein: 99.35 - 99.5 90% Quartz>> Massive QZ vein											
<<Struc: 46.6 - 46.65 Weak (Alt) Fault>> Local fault gouge zone											
<<Struc: 65.8 - 66 Weak (Alt) Fault>> Fault gouge zone											
<<Struc: 68.3 - 68.6 Weak-Moderate (Alt) Fault>> Fault gouge zone											
<<Struc: 73.3 - 75.6 Weak (Alt) Fault>> Highly fractured with local fault gouge											
<<Struc: 78.7 - 89.6 Moderate (Alt) Fault>> Highly fractured zone with local fault gouge											
<<Struc: 90.7 - 91.1 Moderate (Alt) Fault>> Fault gouge zone											
<<Struc: 93.2 - 93.3 Weak (Alt) Fault>> Fault gouge zone											
<<Struc: 99.1 - 99.3 Moderate (Alt) Fault>> Fault gouge zone											
99.50120.50 RHY			Curdy textured-flow banded (flows, subvolcanics)								
			116.00	117.50	1.50	B00233199	1.1	0.025	-0.01	0.02	0.03
99.5 - 120.5: Silica banded rhyolite with strongly MU-alterated cleavages. Strong crenulation/transposition foliation developed.											
<<Min: 99.5 - 120.5 2% Min: Calcite>>											
			117.50	119.00	1.50	B00233201	2	0.049	-0.01	0.03	0.07



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-320
From (m) To (m) Rocktype & Description

<<Alt: 99.5 - 120.5 Strong (Alt) Muscovite>>

<<Struc: 99.8 - 101.8 Weak (Alt) Fault>> Highly fractured with local fault gouge along MU-cleavages (DFOL/transposition foliation)

<<Struc: 109.98 - 109.99 dominant foliation>> MU-cleavage, transposition foliation

<<Struc: 115.98 - 115.99 dominant foliation>> MU-cleavage, transposition foliation

<<Struc: 117 - 117.1 Weak (Alt) Fault>> Local fault gouge zone cross-cutting foliation

<<Struc: 118.85 - 118.86 dominant foliation>> MU cleavage, transposition foliation

**120.50 121.00 OB Wispy laminate, fine
buckshot textured, non-
magnetite bearing sulphides**
MG

120.5 - 121: Massive PY+CA+SP+/-GL with blebby silica and tetrahedrite/arsenopyrite (?)

<<Min: 120.5 - 121 8% Min: Sphalerite>>

<<Min: 120.5 - 121 70% Min: Pyrite>>

<<Min: 120.5 - 121 1% Min: Galena>>

<<Min: 120.5 - 121 10% Min: Calcite>>

<<Min: 120.5 - 121 1% Min: Arsenopyrite>> Tetrahedrite?

121.00 122.10 RHYc Rhyolite coherent volcanics

121 - 122.1: Silica banded with MU-cleavages. Local heavily disseminated PY+SP+CP on upper and lower contacts.

<<Min: 121 - 121.2 2% Min: Sphalerite>>

<<Min: 121 - 121.2 5% Min: Pyrite>>

<<Min: 121.2 - 121.8 0.5% Min: Sphalerite>>

<<Min: 121.2 - 121.8 2% Min: Pyrite>>

<<Min: 121.8 - 122.1 3% Min: Sphalerite>>

<<Min: 121.8 - 122.1 3% Min: Pyrite>>

<<Min: 121.8 - 122.1 3% Min: Chalcopyrite>>

<<Min: 121.8 - 122.1 10% Min: Calcite>>

<<Alt: 121 - 122.1 Strong (Alt) Muscovite>>

<<Vein: 121.1 - 121.2 80% Quartz>> Massive QZ vein

**122.10 123.20 OB Wispy laminate, fine
buckshot textured, non-
magnetite bearing sulphides**

122.1 - 123.2: Massive PY+SP+CA+/-GL with local blebs of CP

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
119.00	120.50	1.50	B00233202	6.9	0.057	0.03	0.1	0.15

120.50	121.00	0.50	B00233203	174	1.31	0.21	2.79	7.86
--------	--------	------	-----------	-----	------	------	------	------

121.00	121.80	0.80	B00233204	24.1	0.114	0.33	0.16	0.31
--------	--------	------	-----------	------	-------	------	------	------

121.80	122.10	0.30	B00233205	94	1.15	0.95	0.68	2.18
--------	--------	------	-----------	----	------	------	------	------

122.10	122.70	0.60	B00233206	216	2.07	0.42	2.06	8.41
--------	--------	------	-----------	-----	------	------	------	------

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-320
From (m) **To (m)** **Rocktype & Description**

<<Min: 122.1 - 123.2 10% Min: Sphalerite>>

<<Min: 122.1 - 123.2 75% Min: Pyrite>>

<<Min: 122.1 - 123.2 1% Min: Galena>>

<<Min: 122.1 - 123.2 1% Min: Chalcopryite>>

<<Min: 122.1 - 123.2 5% Min: Calcite>>

<<Min: 122.1 - 123.2 2% Min: Arsenopyrite>> Tetrahedrite?

123.20 128.50 RHYc Rhyolite coherant volcanics

123.2 - 128.5: Silica banded rhyolite with MU-cleavages

<<Min: 123.2 - 128.5 5% Min: Calcite>>

<<Min: 123.2 - 130.3 0.5% Min: Pyrite>>

<<Alt: 123.2 - 128.5 Strong (Alt) Muscovite>>

<<Struc: 124.98 - 124.99 dominant foliation>> MU cleavage, transposition foliation

<<Struc: 128.3 - 128.5 Moderate (Alt) Fault>> Fault gouge zone

128.50 139.40 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

128.5 - 139.4: CL+BI+CA schist with a moderately MU-altered upper contact

<<Min: 128.5 - 130.3 10% Min: Calcite>>

<<Min: 130.3 - 139.4 20% Min: Calcite>>

<<Alt: 128.5 - 130.3 Moderate (Alt) Muscovite>>

<<Alt: 128.5 - 130.3 Moderate (Alt) Chlorite>>

<<Alt: 128.5 - 130.3 Moderate (Alt) Biotite>>

<<Alt: 130.3 - 131.7 Moderate (Alt) Chlorite>>

<<Alt: 130.3 - 131.7 Strong (Alt) Biotite>>

<<Alt: 131.7 - 139.4 Strong (Alt) Chlorite>>

<<Alt: 131.7 - 139.4 Moderate (Alt) Biotite>>

<<Struc: 130.9 - 130.91 dominant foliation>> Discontinuous BI foliation

<<Struc: 132 - 132.01 dominant foliation>> Discontinuous BI foliation

<<Struc: 133 - 133.01 dominant foliation>> Discontinuous BI foliation

<<Struc: 136.74 - 136.75 dominant foliation>> Discontinuous BI foliation

139.40 143.70 RHY undifferentiated rhyolite

139.4 - 143.7: QZ+MU schist with semi-massive sulphide mineralization for ~5cm on both upper and lower contacts

<<Min: 139.4 - 139.5 80% Min: Pyrite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
122.70	123.20	0.50	B00233207	150	1.17	0.3	2.79	9.1

123.20	124.70	1.50	B00233208	1.7	0.022	-0.01	0.02	0.02
--------	--------	------	-----------	-----	-------	-------	------	------

124.70	126.20	1.50	B00233209	1.6	0.009	-0.01	-0.01	0.03
--------	--------	------	-----------	-----	-------	-------	-------	------

126.20	127.70	1.50	B00233211	1.5	0.009	-0.01	0.01	-0.01
--------	--------	------	-----------	-----	-------	-------	------	-------

139.30	139.60	0.30	B00233212	28.7	0.131	0.04	0.25	1.35
--------	--------	------	-----------	------	-------	------	------	------

143.55	143.90	0.35	B00233213	9.7	0.087	0.1	0.05	1.78
--------	--------	------	-----------	-----	-------	-----	------	------

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-320

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 139.4 - 143.7 1% Min: Calcite>>											
<<Min: 139.5 - 143.65 0.5% Min: Pyrite>>											
<<Min: 143.65 - 143.7 20% Min: Sphalerite>>											
<<Min: 143.65 - 143.7 30% Min: Pyrite>>											
<<Alt: 139.4 - 143.7 Strong (Alt) Muscovite>>											
<<Vein: 139.6 - 140.3 100% Quartz 45 deg. >> Massive QZ vein											
<<Vein: 141.6 - 141.65 100% Quartz>> Massive QZ vein											
<<Struc: 142.4 - 143.5 Moderate (Alt) Fault>> Highly fractured with fault gouge zones											
143.70	150.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	145.50	147.00	1.50	B00233214	-0.3	0.005	-0.01	-0.01	0.03
143.7 - 150: CL+BI+CA schist											
<<Min: 143.7 - 150 50% Min: Calcite>>			147.00	148.50	1.50	B00233215	0.6	0.005	-0.01	0.01	0.06
<<Alt: 143.7 - 150 Strong (Alt) Chlorite>>			148.50	150.00	1.50	B00233216	1.1	0.007	-0.01	-0.01	0.04
<<Alt: 143.7 - 150 Moderate (Alt) Biotite>>											
<<Struc: 145.93 - 145.94 dominant foliation>> Discontinuous BI foliation											
<<Struc: 149.4 - 149.7 Weak (Alt) Fault>> Highly fractured with local fault gouge and tightly space foliation											
150.00	151.10	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	150.00	151.10	1.10	B00233217	174	1.4	0.11	4.41	7.13
150 - 151.1: Massive PY+SP+CA+/-GL with blebby CA and silica											
<<Min: 150 - 151.1 5% Min: Sphalerite>>											
<<Min: 150 - 151.1 70% Min: Pyrite>>											
<<Min: 150 - 151.1 1% Min: Galena>>											
<<Min: 150 - 151.1 1% Min: Chalcopyrite>>											
<<Min: 150 - 151.1 15% Min: Calcite>> Disseminated CA and veinlet CA											
151.10	151.70	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	151.10	151.70	0.60	B00233218	5.5	0.03	0.02	0.09	0.16
151.1 - 151.7: Faulted CL+BI schist											
<<Min: 151.1 - 151.7 5% Min: Calcite>>											
<<Alt: 151.1 - 151.7 Strong (Alt) Chlorite>>											
<<Alt: 151.1 - 151.7 Moderate (Alt) Biotite>>											
<<Struc: 151.1 - 151.6 Weak (Alt) Fault>> Highly fractured with fault gouge											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-320

From (m) To (m) Rocktype & Description

151.70 160.90 OB **Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides**

MG

151.7 - 160.9: Semi-massive to massive PY+SP+CA+/-GL with blebs of CA and silica+/-barite (?). Small zone of CL+BI+CA schist from 158.1-158.3 m.

<<Min: 151.7 - 158.1 5% Min: Sphalerite>>

<<Min: 151.7 - 158.1 65% Min: Pyrite>>

<<Min: 151.7 - 158.1 2% Min: Galena>>

<<Min: 151.7 - 158.1 1% Min: Chalcopryrite>>

<<Min: 151.7 - 158.1 15% Min: Calcite>>

<<Min: 151.7 - 158.1 1% Min: Arsenopyrite>>

<<Min: 158.1 - 158.3 10% Min: Calcite>>

<<Min: 158.3 - 160.9 8% Min: Sphalerite>>

<<Min: 158.3 - 160.9 60% Min: Pyrite>>

<<Min: 158.3 - 160.9 1% Min: Magnetite>>

<<Min: 158.3 - 160.9 2% Min: Galena>>

<<Min: 158.3 - 160.9 15% Min: Calcite>>

<<Alt: 158.1 - 158.3 Strong (Alt) Chlorite>>

<<Alt: 158.1 - 158.3 Moderate (Alt) Biotite>>

<<Struc: 151.9 - 151.91 dominant foliation>> Sulphide lamination

<<Struc: 157.48 - 157.49 dominant foliation>> Sulphide lamination

<<Struc: 158.1 - 158.2 Weak (Alt) Fault>> Fault gouge

160.90 163.00 OA **Magnetite bearing sulphides**

MCG

160.9 - 163: Massive PY+SP+CA+/- GL with disseminated coarse grain MG

<<Min: 160.9 - 163 5% Min: Sphalerite>>

<<Min: 160.9 - 163 65% Min: Pyrite>>

<<Min: 160.9 - 163 10% Min: Magnetite>>

<<Min: 160.9 - 163 1% Min: Galena>>

<<Min: 160.9 - 163 5% Min: Calcite>>

<<Struc: 160.91 - 160.92 dominant foliation>> Sulphide lamination

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
151.70	152.70	1.00	B00233219	348	2.62	0.13	4.24	7.19

152.70	153.70	1.00	B00233221	370	2.97	0.16	5.26	6.52
153.70	154.70	1.00	B00233222	238	2.14	0.27	4.18	6.02
154.70	155.70	1.00	B00233223	286	2.2	0.32	5.92	6.99
155.70	156.70	1.00	B00233224	219	2.55	0.22	4.36	5.84
156.70	157.70	1.00	B00233225	286	2.75	0.33	5.28	10.5
157.70	158.10	0.40	B00233226	255	1.37	0.15	3.79	5.32
158.10	158.30	0.20	B00233227	289	4.3	0.69	0.26	0.55
158.30	159.30	1.00	B00233228	334	2.49	0.2	3.85	6.1
159.30	160.10	0.80	B00233229	330	2.84	0.26	2.86	3.79
160.10	160.90	0.80	B00233232	229	2.84	0.16	2.69	3.85

160.90	162.00	1.10	B00233233	323	2.6	0.25	3.2	4.64
--------	--------	------	-----------	-----	-----	------	-----	------

162.00	163.00	1.00	B00233234	274	1.51	0.23	4.31	5.8
--------	--------	------	-----------	-----	------	------	------	-----



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-320
From (m) **To (m)** **Rocktype & Description**

163.00 163.70 OB **Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides**

MG

163 - 163.7: Massive PY+SP+CA+/-GL

<<Min: 163 - 163.7 10% Min: Sphalerite>>

<<Min: 163 - 163.7 70% Min: Pyrite>>

<<Min: 163 - 163.7 2% Min: Galena>>

<<Min: 163 - 163.7 1% Min: Chalcopyrite>>

<<Min: 163 - 163.7 15% Min: Calcite>>

163.70 198.50 RHYi **Aphanitic Rhyolite (intrusion)**

163.7 - 198.5: Grey and patchy pink-orange, glassy, aphanitic rhyolite. QZ amygdules/phenocrysts as well as PY stringers/healed fractures.

<<Min: 163.7 - 198.5 3% Min: Pyrite>>

<<Min: 163.7 - 202.9 5% Min: Calcite>>

<<Alt: 178 - 187 Moderate (Alt) Muscovite>> Pervasive green sericite alteration. More intense on fracture/gouge surfaces.

<<Vein: 185.9 - 186 80% Calcite>> Massive CA+QZ vein

<<Vein: 186.8 - 187 100% Quartz>> Massive QZ vein

<<Struc: 178 - 178.1 Weak (Alt) Fault>> Minor fault gouge zone.

<<Struc: 180.4 - 180.6 Weak (Alt) Fault>> Minor fractures with fault gouge

<<Struc: 183.1 - 183.2 Weak (Alt) Fault>> Minor fractures with fault gouge

<<Struc: 184.8 - 185 Weak (Alt) Fault>> Minor fractures with fault gouge

<<Struc: 186 - 186.1 Weak (Alt) Fault>> Minor fractures with fault gouge

<<Struc: 194.08 - 194.09 dominant foliation>> Spaced foliation in RHYi

198.50 202.90 RHY **undifferentiated rhyolite**

198.5 - 202.9: QZ+MU+/-CA schist

<<Min: 198.5 - 202.9 3% Min: Pyrite>>

<<Alt: 198.5 - 202.9 Strong (Alt) Muscovite>>

<<Struc: 201.5 - 202 Weak (Alt) Fault>> Minor fractures with fault gouge

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
163.00	163.70	0.70	B00233235	374	1.57	0.21	6.51	7.86

163.70	165.20	1.50	B00233236	2.9	0.024	-0.01	0.03	0.06
--------	--------	------	-----------	-----	-------	-------	------	------

165.20	166.70	1.50	B00233237	0.6	0.011	-0.01	-0.01	0.01
--------	--------	------	-----------	-----	-------	-------	-------	------

166.70	168.20	1.50	B00233238	0.8	0.025	-0.01	-0.01	0.03
--------	--------	------	-----------	-----	-------	-------	-------	------

198.50	199.90	1.40	B00233239	0.4	0.009	-0.01	-0.01	-0.01
--------	--------	------	-----------	-----	-------	-------	-------	-------

199.90	201.40	1.50	B00233241	0.5	0.009	-0.01	-0.01	-0.01
--------	--------	------	-----------	-----	-------	-------	-------	-------

201.40	202.90	1.50	B00233242	2.9	0.037	-0.01	0.02	0.05
--------	--------	------	-----------	-----	-------	-------	------	------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-320
From (m) **To (m)** **Rocktype & Description**

202.90 203.20 OB **Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides**

MG

202.9 - 203.2: Massive PY+SP+CA

<<Min: 202.9 - 203.2 10% Min: Sphalerite>>

<<Min: 202.9 - 203.2 69% Min: Pyrite>>

<<Min: 202.9 - 203.2 1% Min: Galena>>

<<Min: 202.9 - 203.2 20% Min: Calcite>>

<<Struc: 203.06 - 203.07 dominant foliation>> Sulphide lamination

203.20 207.70 MAFi **Mafic Intrusions (primarily footwall mafic intrusion)**

203.2 - 207.7: CL+BI+CA schist

<<Min: 203.2 - 207.7 1% Min: Pyrite>>

<<Min: 206.1 - 206.4 2% Min: Sphalerite>>

<<Min: 206.1 - 206.4 1% Min: Pyrrhotite>>

<<Alt: 203.2 - 207.7 Strong (Alt) Chlorite>>

<<Alt: 203.2 - 207.7 Strong (Alt) Biotite>>

<<Alt: 206.1 - 206.4 Moderate (Alt) Epidote>>

<<Struc: 203.33 - 203.34 dominant foliation>> Discontinuous BI foliation

207.70 210.20 OA **Magnetite bearing sulphides**

FMG

207.7 - 210.2: Massive PY+PO+SP with disseminated MG and blebby PO+CP. Locally coarse grained PY in PO bands.

<<Min: 207.7 - 210.2 3% Min: Sphalerite>>

<<Min: 207.7 - 210.2 50% Min: Pyrite>>

<<Min: 207.7 - 210.2 30% Min: Pyrrhotite>>

<<Min: 207.7 - 210.2 10% Min: Magnetite>>

<<Min: 207.7 - 210.2 3% Min: Chalcopyrite>>

<<Min: 207.7 - 210.2 2% Min: Calcite>>

<<Struc: 209.5 - 209.6 Weak (Alt) Fault>> Fault gouge zone

210.20 210.90 RHY **undifferentiated rhyolite**

210.2 - 210.9: QZ+MU+CL schist

<<Min: 210.2 - 214.2 2% Min: Pyrrhotite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
202.90	203.20	0.30	B00233243	164	0.601	-0.01	2.75	5.08

203.20	204.70	1.50	B00233244	1.9	0.014	-0.01	0.01	0.05
--------	--------	------	-----------	-----	-------	-------	------	------

204.70	206.10	1.40	B00233245	3.7	0.018	-0.01	0.03	0.05
206.10	206.40	0.30	B00233246	0.9	0.015	-0.01	0.02	0.04
206.40	207.70	1.30	B00233247	17.7	0.092	0.02	0.34	0.08

207.70	208.50	0.80	B00233248	115	0.891	0.93	1.23	6.41
--------	--------	------	-----------	-----	-------	------	------	------

208.50	209.30	0.80	B00233249	110	1.51	2.84	0.27	9.88
209.30	210.20	0.90	B00233252	102	2.53	3.71	0.1	7.87

210.20	210.90	0.70	B00233253	1.3	0.015	0.03	0.01	0.12
--------	--------	------	-----------	-----	-------	------	------	------

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-320

From (m)		To (m)		Rocktype & Description													
<<Min: 210.2 - 269 1% Min: Calcite>>																	
<<Alt: 210.2 - 210.9 Moderate (Alt) Muscovite>>																	
<<Struc: 210.5 - 210.9 Moderate (Alt) Fault>>				Fault gouge zone													
210.90	211.70	MDS	Carbonaceous dominant mudstone	210.90	211.70	0.80	B00233254	1.9	0.024	0.05	0.02	0.24					
210.9 - 211.7: Argillitic mudstone with strongly faulted upper and lower contact.																	
<<Struc: 211.6 - 211.7 Weak (Alt) Fault>>				Fault gouge zone													
211.70	226.00	RHYv	Rhyolite volcaniclastic	211.70	213.20	1.50	B00233255	0.7	0.006	-0.01	-0.01	0.01					
211.7 - 226: QZ+MU schist with local 20-60 cm zones of weak CL-alteration with PO+PY stringers.																	
<<Min: 214.2 - 214.8 3% Min: Pyrite>>				213.20	214.20	1.00	B00233256	-0.3	0.006	-0.01	-0.01	0.01					
<<Min: 214.2 - 214.8 5% Min: Pyrrhotite>>				214.20	214.80	0.60	B00233257	0.9	0.012	0.01	-0.01	0.02					
<<Min: 214.8 - 219.2 2% Min: Pyrrhotite>>				214.80	216.30	1.50	B00233258	-0.3	-0.005	-0.01	-0.01	0.08					
<<Min: 219.2 - 219.4 2% Min: Pyrite>>																	
<<Min: 219.2 - 219.4 5% Min: Pyrrhotite>>																	
<<Min: 219.4 - 225.9 0.5% Min: Pyrrhotite>>																	
<<Min: 225.9 - 226 2% Min: Pyrite>>																	
<<Min: 225.9 - 226 5% Min: Pyrrhotite>>																	
<<Alt: 211.7 - 227 Moderate (Alt) Muscovite>>																	
<<Alt: 214.2 - 214.8 Weak (Alt) Chlorite>>																	
<<Alt: 219.2 - 219.4 Weak (Alt) Chlorite>>																	
<<Alt: 224.9 - 226 Weak (Alt) Chlorite>>																	
<<Struc: 212.7 - 213 Weak (Alt) Fault>>				Highly fractured with local fault gouge													
<<Struc: 218.9 - 219.1 Weak (Alt) Fault>>				Highly fractured with local fault gouge													
<<Struc: 221.3 - 221.8 Weak (Alt) Fault>>				Highly fractured with local fault gouge													
226.00	269.00	RHYvl	Lapilli tuff														
226 - 269: Variable amounts of rhyolitic, PO+PY, and CL+QZ+BI lpl within QZ+MU schist																	
<<Min: 226 - 269 2% Min: Pyrite>>																	
<<Min: 226 - 269 2% Min: Pyrrhotite>>																	
<<Alt: 227 - 234 Weak (Alt) Muscovite>>																	
<<Struc: 226.6 - 227 Moderate (Alt) Fault>>													Fault gouge zone				
<<Struc: 229.94 - 229.95 dominant foliation>>													Mu cleavage				
<<Struc: 233.24 - 233.25 dominant foliation>>													MU cleavage				

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-320

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 236.28 - 236.29		dominant foliation>> MU cleavage									
<<Struc: 239.25 - 239.26		dominant foliation>> MU cleavage									
<<Struc: 241.5 - 241.6		Weak (Alt) Fault>> Fault gouge zone									
<<Struc: 245.18 - 245.19		dominant foliation>> MU cleavage									
<<Struc: 247.93 - 247.94		dominant foliation>> MU cleavage									
<<Struc: 248.33 - 248.34		dominant foliation>> MU cleavage									
<<Struc: 250.3 - 250.4		Weak (Alt) Fault>> Highly fractured with local fault gouge									
<<Struc: 254.7 - 254.71		dominant foliation>>									
<<Struc: 258.13 - 258.14		dominant foliation>>									
<<Struc: 264.9 - 266		Weak (Alt) Fault>> Highly fractured with local fault gouge									
End of Hole @ 269											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-321

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Dillon Hume	Date Logging Start:	12-Nov-15
UTM Easting	415076	Core Size:	HQ3	Azimuth:	211.1	Date Logging Complete:	15-Nov-15
UTM Northing:	6815225	Casing Pulled?:	Yes	Dip:	-45	Drill Company:	Geotech
UTM Elev. (m):	1388.445	Casing Depth (m):	24	Length (m):	308	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	10-Nov-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	14-Nov-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

K15-321 was drilled to test the resource extension of the Krakatoa zone to the north near the East Fault.

K15-321 encountered 22.7 m of overburden, followed by a felsic hanging wall package, consisting of QZ+FD porphyritic glassy rhyolite, volcanoclastic rhyolites, coherent rhyolites, and BI+CA+/-CL schists, to a depth of 139.1 m. From 139.1-195.2 m, a CL+BI+CA schist (MAFi) was encountered, with massive sulphide occurring within from 179.4-180.5 m (OB and OI mineralization) and 183.9-184.7 m (OB mineralization). The MAFi unit was followed by massive sulphide (195.2-198.8 m), consisting of OB mineralization. Below the massive sulphide is strongly altered rhyolite, followed by a faulted zone of rhyolite, RHYi, and fault breccia, to a depth of 218.3 m. Below this fault zone another CL+BI+CA schist (MAFi) occurs to a depth of 226.4 m. Below this massive sulphide is encountered (226.4-246.6 m) with horizons of MAFi (228.7-230.6 m) and faulted rhyolite (246.6-248.3 m) within . This sulphide lens consists of OB, OA, OI, and OD mineralization. Below this final sulphide lens a unit of faulted rhyolite occurs to a depth of 155.8 m, followed by unaltered felsic volcanoclastics to the end of the hole (308 m).

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-45	211.1	0	211.1	APS	Dillon Hume	10-Nov-15		<input checked="" type="checkbox"/>	
29	-44.4	192.7	22.5	215.2	ReflexEVS	Geotech	11-Nov-15	5761	<input checked="" type="checkbox"/>	
59	-44.1	191.4	22.5	213.9	ReflexEVS	Geotech	11-Nov-15	5743	<input checked="" type="checkbox"/>	
77	-45.2	190.8	22.5	213.3	ReflexEVS	Geotech	11-Nov-15	5744	<input checked="" type="checkbox"/>	
101	-46.2	190	22.5	212.5	ReflexEVS	Geotech	11-Nov-15	5725	<input checked="" type="checkbox"/>	
128	-46.8	189.5	22.5	212	ReflexEVS	Geotech	12-Nov-15	5730	<input checked="" type="checkbox"/>	
158	-47.2	189.9	22.5	212.4	ReflexEVS	Geotech	12-Nov-15	5738	<input checked="" type="checkbox"/>	
176	-47.4	190.8	22.5	213.3	ReflexEVS	Geotech	12-Nov-15	5752	<input checked="" type="checkbox"/>	
203	-48.2	188.9	22.5	211.4	ReflexEVS	Geotech	12-Nov-15	5660	<input checked="" type="checkbox"/>	
233	-48.7	184.2	22.5	206.7	ReflexEVS	Geotech	13-Nov-15	5653	<input type="checkbox"/>	
254	-49.1	192.5	22.5	215	ReflexEVS	Geotech	13-Nov-15	5791	<input checked="" type="checkbox"/>	
275	-49.5	192.1	22.5	214.6	ReflexEVS	Geotech	13-Nov-15	5800	<input checked="" type="checkbox"/>	
302	-50	191.8	22.5	214.3	ReflexEVS	Geotech	13-Nov-15	5725	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	22.70	OVBN Overburden									



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-321

From (m)	To (m)	Rocktype & Description										From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
22.70	35.60	RHYif	feldspar and quartz porphyry intrusions																	
22.7 - 35.6: QZ-eye and FD porphyry, rhyolite with aphanitic siliceous groundmass.																				
<<Min: 22.7 - 35.6 1% Min: Pyrite>>																				
<<Min: 22.7 - 35.6 1% Min: Calcite>>																				
35.60	41.30	RHYva	Coarse grained to ash tuff																	
35.6 - 41.3: Dark green-grey, fine grained QZ+MU schist with blebby to veined CA.																				
<<Min: 35.6 - 41.3 2% Min: Pyrrhotite>>																				
<<Min: 35.6 - 41.3 10% Min: Calcite>>																				
<<Vein: 35.7 - 36.1 80% Quartz>> Massive QZ vein with patchy CA																				
<<Vein: 37.9 - 38.6 70% Quartz>> Massive QZ vein with clasts of entrained QZ+MU schist																				
41.30	46.90	RHYcw	Curdy textured-flow banded (flows, subvolcanics)																	
41.3 - 46.9: QZ-eye bearing curdy rhyolite with MU cleavages.																				
<<Min: 41.3 - 46.9 3% Min: Pyrrhotite>>																				
<<Min: 41.3 - 80 5% Min: Calcite>>																				
46.90	54.70	RHYvl	Lapilli tuff																	
46.9 - 54.7: QZ+MU schist with calcareous and rhyolitic lpl																				
<<Min: 46.9 - 54.7 1% Min: Pyrite>>																				
<<Min: 46.9 - 54.7 2% Min: Pyrrhotite>>																				
54.70	64.20	RHYc	Rhyolite coherant volcanics																	
54.7 - 64.2: Siliceous banded to massive silica, locally lpl texture, with QZ+MU groundmass.																				
<<Min: 54.7 - 64.2 3% Min: Pyrrhotite>>																				
<<Vein: 58.3 - 59.2 90% Quartz>> Zone of massive QZ veining																				
<<Vein: 59.6 - 60.3 80% Quartz>> Massive QZ vein with entrained clasts of QZ+MU schist																				
64.20	66.90	RHYva	Coarse grained to ash tuff																	
64.2 - 66.9: Dark brown-grey, fine grained QZ+MU schist with blebby to banded QZ+CA. Local heavily disseminated to wispy PY.																				
<<Min: 64.2 - 66.9 8% Min: Pyrite>> Locally heavily disseminated to wispy PY.																				

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-321

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
66.90	74.20	RHYc Rhyolite coherant volcanics									
66.9 - 74.2: Silica banded to massive siliceous rhyolite.											
<<Min: 66.9 - 80 3% Min: Pyrite>>											
<<Vein: 70.5 - 70.7 90% Quartz>> Massive QZ+CA vein											
<<Vein: 71.1 - 72.4 70% Quartz>> Zone of massive QZ veining											
74.20	76.10	RHYva Coarse grained to ash tuff									
74.2 - 76.1: Medium grey, fine grained QZ+MU schist. Wispy PY from 74.2-74.6 m. Heavily disseminated BI from 75.5-76.1 m.											
76.10	80.00	RHYc Rhyolite coherant volcanics									
76.1 - 80: Silica banded with QZ+MU groundmass.											
80.00	82.10	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
80 - 82.1: BI+CA+QZ schist											
<<Min: 80 - 82.1 0.5% Min: Sphalerite>>											
<<Min: 80 - 82.1 2% Min: Pyrite>>											
<<Min: 80 - 82.1 1% Min: Pyrrhotite>>											
<<Min: 80 - 82.1 10% Min: Calcite>>											
82.10	82.80	RHYc Rhyolite coherant volcanics									
82.1 - 82.8: Siliceous rhyolite with curdy texture											
<<Min: 82.1 - 87.9 2% Min: Pyrrhotite>>											
<<Min: 82.1 - 87.9 5% Min: Calcite>>											
82.80	87.90	RHYva Coarse grained to ash tuff									
82.8 - 87.9: Light grey, fine grained ash tuff with local calcareous and rhyolitic lpl.											
87.90	91.10	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
87.9 - 91.1: Purple and green, BI+CL+CA schist with local CA phenocrysts.											
<<Min: 87.9 - 91.1 3% Min: Pyrite>>											
<<Min: 87.9 - 91.1 1% Min: Pyrrhotite>>											
<<Min: 87.9 - 91.1 10% Min: Calcite>>											

Project:

KZK

Hole Number:

K15-321

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
91.10	106.90	RHYva Coarse grained to ash tuff									
91.1 - 106.9: Light grey, fine grained ash tuff. Local curdy, silica-banded, and lpl texture.											
<<Min: 91.1 - 106.9 2% Min: Pyrrhotite>>											
<<Min: 91.1 - 106.9 2% Min: Calcite>>											
<<Struc: 103.6 - 103.7 Weak (Alt) Fault>> Fault gouge zone											
<<Struc: 105.6 - 105.8 Weak (Alt) Fault>> Minor fault gouge											
106.90	111.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
106.9 - 111: Banded BI+CA+QZ+CL with muscovite cleavages. Resembles lpl of similar composition which is found commonly in RHYvl.											
<<Min: 106.9 - 111 2% Min: Pyrrhotite>>											
<<Min: 106.9 - 111 10% Min: Calcite>>											
111.00	127.20	RHYva Coarse grained to ash tuff									
111 - 127.2: Light grey-green (alteration), fine grained ash tuff. Local lpl texture.											
<<Min: 111 - 125.9 3% Min: Pyrrhotite>>											
<<Min: 111 - 127.2 2% Min: Calcite>>											
<<Min: 125.9 - 127.2 5% Min: Pyrite>>											
<<Min: 125.9 - 127.2 5% Min: Pyrrhotite>>											
<<Alt: 113 - 127.2 Weak (Alt) Muscovite>>											
<<Alt: 125.9 - 126.5 Weak (Alt) Chlorite>>											
<<Vein: 120.23 - 120.3 90% Quartz>> Massive QZ vein with CL selvage											
<<Struc: 114.8 - 115 Weak (Alt) Fault>> Highly fractured with local fault gouge											
<<Struc: 120 - 120.1 Weak (Alt) Fault>> Fault gouge zone											
127.20	129.20	MDS Sc Carbonaceous dominant mudstone									
127.2 - 129.2: Siliceous argillitic mudstone with heavily disseminated PO+PY.											
<<Min: 127.2 - 129.2 3% Min: Pyrite>>											
<<Min: 127.2 - 129.2 5% Min: Pyrrhotite>>											
<<Min: 127.2 - 129.2 3% Min: Calcite>>											
<<Alt: 127.2 - 129.2 Moderate (Alt) Silicification>>											

Project:
KZK
Hole Number:
K15-321

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
129.20	139.10	RHY undifferentiated rhyolite									
129.2 - 139.1: QZ+MU schist. Hard to determine original texture, whether coherent or volcanoclastic.											
<<Min: 129.2 - 129.9 2% Min: Pyrite>>											
<<Min: 129.2 - 129.9 8% Min: Pyrrhotite>>											
<<Min: 129.2 - 139.1 2% Min: Calcite>>											
<<Min: 129.9 - 139.1 1% Min: Pyrite>>											
<<Min: 129.9 - 139.1 1% Min: Pyrrhotite>>											
<<Alt: 129.2 - 139.1 Moderate (Alt) Muscovite>>											
<<Vein: 132.5 - 132.85 40% Quartz>> Zone with massive QZ veining											
<<Vein: 133.9 - 134.1 100% Quartz>> Massive QZ vein											
<<Vein: 136.7 - 137.7 50% Quartz>> Zone of massive QZ veining											
<<Vein: 138.55 - 138.7 80% Tourmaline>> QZ vein breccia clasts within fine grained tourmaline vein											
<<Struc: 134.1 - 134.3 Weak-Moderate (Alt) Fault>> Fault gouge zone											
139.10	140.70	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
139.1 - 140.7: TML+Fuchsite+CA+QZ mafic (?) schist. Cross-cut by TML+QZ veins/stwk.											
<<Min: 139.1 - 140.7 25% Min: Calcite>>											
<<Alt: 139.1 - 140.7 Moderate (Alt) Muscovite>> Fuchsite+TML alteration (?)											
<<Vein: 139.1 - 140.7 60% Tourmaline>> TML+BI+CA+QZ stockwork											
140.70	150.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
140.7 - 150: CL+CA+/-BI schist. Agglomeritic CA that appears to replace laths (FD?). Rock has a bleached green colour.											
<<Min: 140.7 - 170 20% Min: Calcite>>											
<<Alt: 140.7 - 172.5 Strong (Alt) Chlorite>>											
<<Vein: 143.7 - 144.1 100% Tourmaline>> TML+CA+QZ vein (intrusion?). Equigranular.											
150.00	172.50	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
150 - 172.5: CL+CA+/-BI schist. Well foliated with blebby CL and CA.											
<<Min: 170 - 170.5 5% Min: Pyrite>>											
<<Min: 170.5 - 172.5 0.5% Min: Pyrrhotite>>											
<<Min: 170.5 - 172.5 20% Min: Calcite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-321

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 169.8 - 172.5 Moderate (Alt) Biotite>>											
<<Vein: 155.2 - 155.3 100% Calcite>> Massive CA vein											
<<Struc: 158.4 - 158.41 dominant foliation>> Discontinuous CL foliation											
<<Struc: 160.2 - 160.4 Weak (Alt) Fault>> Fault gouge zone											
<<Struc: 164.24 - 164.25 dominant foliation>> Discontinuous CL foliation											
<<Struc: 165.5 - 165.51 dominant foliation>> Discontinuous CL foliation											
<<Struc: 169.2 - 169.4 Weak (Alt) Fault>> Fault gouge zone											
<<Struc: 170.1 - 170.25 Weak (Alt) Fault>> Fault gouge zone											
172.50	172.90	RHYc Rhyolite coherent volcanics									
172.5 - 172.9: Silica-banded rhyolite											
<<Min: 172.5 - 172.9 3% Min: Calcite>>											
172.90	179.40	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	174.90	176.40	1.50	B00233259	-0.3	0.007	-0.01	-0.01	0.01
172.9 - 179.4: CL+BI+CA schist. Well foliated with local kinks/folds.											
<<Min: 172.9 - 179.4 0.5% Min: Pyrite>>			176.40	177.90	1.50	B00233261	-0.3	-0.005	-0.01	0.01	0.02
<<Min: 172.9 - 179.4 20% Min: Calcite>>			177.90	179.40	1.50	B00233262	2.4	0.015	-0.01	0.04	0.07
<<Alt: 172.9 - 179.4 Strong (Alt) Chlorite>>											
<<Alt: 172.9 - 179.4 Moderate (Alt) Biotite>>											
179.40	179.70	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	179.40	179.70	0.30	B00233263	52.6	0.708	0.24	0.62	5.2
179.4 - 179.7: Massive PY+CA+SP+/-GL											
<<Min: 179.4 - 179.7 4% Min: Sphalerite>>											
<<Min: 179.4 - 179.7 70% Min: Pyrite>>											
<<Min: 179.4 - 179.7 1% Min: Galena>>											
<<Min: 179.4 - 179.7 10% Min: Calcite>>											
179.70	179.90	OJ Heavilly disseminated sulphides in proximal altered rock	179.70	179.90	0.20	B00233264	7.5	0.169	0.14	0.02	0.11
179.7 - 179.9: Massive CL with blebby PO+PY+CP											
<<Min: 179.7 - 179.9 2% Min: Pyrite>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-321

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 179.7 - 179.9 2% Min: Pyrrhotite>>											
<<Min: 179.7 - 179.9 1% Min: Chalcopyrite>>											
<<Alt: 179.7 - 179.9 Strong (Alt) Chlorite>>											
179.90	180.50	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	medium grey							
179.9 - 180.5: Massive PY+CA+SP+/-GL											
<<Min: 179.9 - 180.5 8% Min: Sphalerite>>											
<<Min: 179.9 - 180.5 90% Min: Pyrite>>											
<<Min: 179.9 - 180.5 1% Min: Galena>>											
<<Min: 179.9 - 180.5 1% Min: Calcite>>											
180.50	182.70	RHYc	Rhyolite coherant volcanics								
180.5 - 182.7: Silica-banded rhyolite											
<<Min: 180.5 - 182.7 3% Min: Calcite>>											
182.70	183.90	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)								
182.7 - 183.9: CL+BI+CA schist											
<<Min: 182.7 - 183.9 0.5% Min: Pyrite>>											
<<Min: 182.7 - 183.9 20% Min: Calcite>>											
<<Alt: 182.7 - 183.9 Moderate (Alt) Chlorite>>											
<<Alt: 182.7 - 183.9 Strong (Alt) Biotite>>											
<<Struc: 183.75 - 183.76 dominant foliation>> Crenulation cleavage											
183.90	184.70	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	MG							
183.9 - 184.7: Semi-massive to massive PY+PO+CA+SP+/-GL. Locally massive BA with disseminated PY+/-TT and bands of SP+PY											
<<Min: 183.9 - 184.7 2% Min: Tetrahedrite>>											
<<Min: 183.9 - 184.7 10% Min: Sphalerite>>											
<<Min: 183.9 - 184.7 70% Min: Pyrite>>											
<<Min: 183.9 - 184.7 3% Min: Pyrrhotite>>											
<<Min: 183.9 - 184.7 2% Min: Galena>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-321

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 183.9 - 184.7 5% Min: Calcite>>											
<<Min: 183.9 - 184.7 15% Min: Barite>>											
184.70	195.20	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	184.70	186.20	1.50	B00233272	4.3	0.029	0.01	0.07	0.47
184.7 - 195.2: CL+BI+CA+/-EP schist. Locally altered to fuchsite around faulted zone (192.7-193.8 m).											
<<Min: 184.7 - 187.9 1% Min: Pyrrhotite>>			186.20	187.70	1.50	B00233273	0.6	0.006	-0.01	0.01	0.02
<<Min: 184.7 - 195.2 8% Min: Calcite>>			187.70	189.20	1.50	B00233274	-0.3	-0.005	-0.01	-0.01	0.01
<<Alt: 184.7 - 187.9 Moderate (Alt) Epidote>>			189.20	190.70	1.50	B00233275	-0.3	0.006	-0.01	-0.01	0.02
<<Alt: 184.7 - 192.7 Strong (Alt) Chlorite>>			190.70	191.70	1.00	B00233276	-0.3	-0.005	-0.01	-0.01	-0.01
<<Alt: 184.7 - 192.7 Moderate (Alt) Biotite>>			191.70	192.70	1.00	B00233277	-0.3	-0.005	-0.01	-0.01	-0.01
<<Alt: 192.7 - 193.8 Strong (Alt) Muscovite>> Fuchsite (?) alteration of MAFi			192.70	193.80	1.10	B00233278	2.2	0.016	-0.01	0.03	0.02
<<Alt: 192.7 - 193.8 Weak (Alt) Chlorite>>			193.80	195.20	1.40	B00233279	57.4	0.26	0.04	1.15	0.04
<<Alt: 193.8 - 195.2 Strong (Alt) Chlorite>>											
<<Alt: 193.8 - 195.2 Strong (Alt) Biotite>>											
<<Struc: 184.7 - 184.71 Contact>> Contact between MSXS and MAFi											
<<Struc: 191.25 - 191.26 dominant foliation>> Discontinuous BI foliation											
<<Struc: 193.3 - 193.7 Moderate (Alt) Fault>> Fault gouge zone											
195.20	197.15	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	195.20	196.20	1.00	B00233281	51.8	0.482	0.09	1.11	5.19
195.2 - 197.15: Massive PY+CA+SP+GL with local blebby CP											
<<Min: 195.2 - 197.15 8% Min: Sphalerite>>			196.20	197.15	0.95	B00233282	139	1.06	0.12	2.88	6.44
<<Min: 195.2 - 197.15 75% Min: Pyrite>>											
<<Min: 195.2 - 197.15 2% Min: Galena>>											
<<Min: 195.2 - 197.15 0.5% Min: Chalcopyrite>>											
<<Min: 195.2 - 197.15 10% Min: Calcite>>											
197.15	198.80	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	197.15	198.00	0.85	B00233283	86.9	0.847	0.17	2	4.47
197.15 - 198.8: Patchy CA (~40%) within massive PY+SP+GL with blebby CP											
<<Min: 197.15 - 198.8 10% Min: Sphalerite>>			198.00	198.80	0.80	B00233284	85.3	1.09	0.21	1.64	3.62
<<Min: 197.15 - 198.8 45% Min: Pyrite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-321

From (m) To (m) Rocktype & Description

<<Min: 197.15 - 198.8 3% Min: Galena>>
<<Min: 197.15 - 198.8 2% Min: Chalcopyrite>>
<<Min: 197.15 - 198.8 40% Min: Calcite>>

198.80 206.10 RHYv Rhyolite volcanoclastic

198.8 - 206.1: QZ+MU schist with local lpl and silica bands

<<Min: 198.8 - 199.5 0.5% Min: Sphalerite>>
<<Min: 198.8 - 199.5 4% Min: Pyrite>>
<<Min: 198.8 - 199.5 1% Min: Pyrrhotite>>
<<Min: 198.8 - 199.5 0.5% Min: Chalcopyrite>>

<<Min: 198.8 - 218.3 3% Min: Calcite>>

<<Min: 199.5 - 217.4 2% Min: Pyrite>>

<<Alt: 198.8 - 199.5 Strong (Alt) Albite>>

<<Alt: 199.5 - 205 Moderate (Alt) Muscovite>>

<<Alt: 205 - 210 Strong (Alt) Muscovite>>

<<Vein: 200.15 - 200.3 100% Quartz>> Massive QZ vein with blebby CA

<<Vein: 204.1 - 204.3 100% Quartz>> Massive QZ vein

<<Struc: 204.3 - 204.4 Weak (Alt) Fault>> Highly fracture with minor fault gouge

<<Struc: 205.6 - 208.5 Moderate (Alt) Fault>> Highly fractured with variable foliation and gouge on fracture surfaces

206.10 210.00 RHY undifferentiated rhyolite

206.1 - 210: Highly faulted QZ+MU schist

<<Struc: 208.7 - 210 Strong (Alt) Fault>> Fault gouge breccia

210.00 214.00 RHYi Aphanitic Rhyolite (intrusion)

210 - 214: Strongly faulted, medium grey, aphanitic rhyolite

<<Struc: 210 - 217.4 Moderate (Alt) Fault>> Highly fractured with local fault gouge

214.00 217.40 RHY undifferentiated rhyolite

214 - 217.4: Strongly faulted QZ+MU schist

<<Alt: 214 - 218.3 Strong (Alt) Muscovite>>

217.40 218.30 FBX Fault Breccia

217.4 - 218.3: Strong fault zone dominated by green sericite gouge, with clasts of RHY, MAF, and MSXS.

<<Min: 217.4 - 218.3 5% Min: Pyrite>> Clast of MSXS

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

198.80	199.50	0.70	B00233285	1431	2.61	0.17	0.11	0.22
--------	--------	------	-----------	------	------	------	------	------

199.50	201.00	1.50	B00233286	0.9	-0.005	-0.01	-0.01	0.02
--------	--------	------	-----------	-----	--------	-------	-------	------

201.00	202.50	1.50	B00233287	2.2	0.01	-0.01	-0.01	0.02
--------	--------	------	-----------	-----	------	-------	-------	------

202.50	204.00	1.50	B00233288	2.3	0.01	-0.01	0.02	-0.01
--------	--------	------	-----------	-----	------	-------	------	-------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-321

From (m) To (m) Rocktype & Description

<<Struc: 217.4 - 218.3 Strong (Alt) Fault>> Fault gouge breccia

218.30 226.40 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

218.3 - 226.4: CL+BI+CA schist, with strongly faulted upper and lower contacts.

<<Min: 218.3 - 226.4 0.5% Min: Pyrite>>

<<Min: 218.3 - 226.4 0.5% Min: Pyrrhotite>>

<<Min: 218.3 - 226.4 20% Min: Calcite>>

<<Alt: 218.3 - 226.4 Strong (Alt) Chlorite>>

<<Alt: 218.3 - 226.4 Moderate (Alt) Biotite>>

<<Vein: 225.3 - 225.5 40% Quartz>> Clasts of massive QZ vein in fault

<<Struc: 225.3 - 226.4 Strong (Alt) Fault>> Fault gouge breccia

226.40 228.70 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

226.4 - 228.7: Massive PY+CA+SP+GL with blebby CP

<<Min: 226.4 - 228.7 2% Min: Tetrahedrite>>

<<Min: 226.4 - 228.7 5% Min: Sphalerite>>

<<Min: 226.4 - 228.7 70% Min: Pyrite>>

<<Min: 226.4 - 228.7 1% Min: Galena>>

<<Min: 226.4 - 228.7 2% Min: Chalcopyrite>>

<<Min: 226.4 - 228.7 10% Min: Calcite>>

228.70 230.60 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

228.7 - 230.6: BI+CL+CA schist

<<Min: 228.7 - 230.6 1% Min: Pyrite>>

<<Min: 228.7 - 230.6 15% Min: Calcite>>

<<Alt: 228.7 - 230.6 Strong (Alt) Chlorite>>

<<Alt: 228.7 - 230.6 Strong (Alt) Biotite>>

<<Struc: 229.8 - 230.2 Moderate (Alt) Fault>> Faulted MAFi

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

220.70	222.20	1.50	B00233289	1.5	-0.005	-0.01	0.02	0.04
--------	--------	------	-----------	-----	--------	-------	------	------

222.20	223.70	1.50	B00233291	0.6	-0.005	-0.01	-0.01	0.02
223.70	225.20	1.50	B00233292	0.6	-0.005	-0.01	-0.01	0.02
225.20	226.40	1.20	B00233293	136	0.532	0.24	0.96	0.74

MG

226.40	227.20	0.80	B00233294	106	1.54	0.21	3.7	6.46
--------	--------	------	-----------	-----	------	------	-----	------

227.20	228.00	0.80	B00233295	292	1.78	1.87	4.72	12.5
228.00	228.70	0.70	B00233296	317	2.05	1.65	4.48	11.4

228.70	229.70	1.00	B00233297	9.4	0.05	0.03	0.12	0.12
--------	--------	------	-----------	-----	------	------	------	------

229.70	230.60	0.90	B00233298	18.3	0.068	0.01	0.26	0.05
--------	--------	------	-----------	------	-------	------	------	------

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-321
From (m) To (m) Rocktype & Description

230.60 236.20 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

230.6 - 236.2: Massive PY+CA+SP+GL with blebby CP and abundant gangue

<<Min: 230.6 - 236.2 5% Min: Sphalerite>>

<<Min: 230.6 - 236.2 70% Min: Pyrite>>

<<Min: 230.6 - 236.2 2% Min: Galena>>

<<Min: 230.6 - 236.2 1% Min: Chalcopryrite>>

<<Min: 230.6 - 236.2 10% Min: Calcite>>

<<Vein: 230.65 - 230.75 60% Quartz>> Clast of massive QZ vein in fault

<<Struc: 230.6 - 230.9 Moderate (Alt) Fault>> Fault gouge breccia

236.20 237.80 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

236.2 - 237.8: Massive PY+CA+SP+GL with blebby CP+MG

<<Min: 236.2 - 237.8 10% Min: Sphalerite>>

<<Min: 236.2 - 237.8 70% Min: Pyrite>>

<<Min: 236.2 - 237.8 3% Min: Galena>>

<<Min: 236.2 - 237.8 3% Min: Chalcopryrite>>

<<Min: 236.2 - 237.8 10% Min: Calcite>>

<<Struc: 236.8 - 236.81 dominant foliation>> Sulphide lamination

237.80 240.20 OA Magnetite bearing sulphides

237.8 - 240.2: Massive PY+SP+GL+/-CP with large cm-scale blebs of CP+MG and disseminated MG.

<<Min: 237.8 - 240.2 5% Min: Sphalerite>>

<<Min: 237.8 - 240.2 40% Min: Pyrite>>

<<Min: 237.8 - 240.2 20% Min: Pyrrhotite>>

<<Min: 237.8 - 240.2 10% Min: Magnetite>>

<<Min: 237.8 - 240.2 5% Min: Chalcopryrite>>

<<Min: 237.8 - 240.2 5% Min: Calcite>>

MG

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
230.60	231.30	0.70	B00233299	167	0.667	0.04	3.02	4.72

231.30	232.20	0.90	B00233301	204	1.57	0.35	4.57	11.1
232.20	233.20	1.00	B00233302	279	2.1	1.51	5.61	10.6
233.20	234.20	1.00	B00233303	188	1.41	0.5	5.18	7.45
234.20	235.20	1.00	B00233304	250	1.19	0.59	5.43	7.61
235.20	236.20	1.00	B00233305	178	2.41	0.58	4.02	6.48

MG

236.20	237.00	0.80	B00233306	268	1.63	1.3	3.26	14.7
--------	--------	------	-----------	-----	------	-----	------	------

237.00	237.80	0.80	B00233307	327	1.77	1.08	4.1	11.5
--------	--------	------	-----------	-----	------	------	-----	------

MCG

237.80	238.60	0.80	B00233308	446	2.34	2.74	5.1	9.68
--------	--------	------	-----------	-----	------	------	-----	------

238.60	239.40	0.80	B00233309	372	1.7	2.17	5.29	10.9
239.40	240.20	0.80	B00233312	329	2.12	2.04	5.55	13.3

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-321

From (m) To (m) Rocktype & Description

240.20 242.40 OB **Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides**

MG

240.2 - 242.4: Massive/laminated PY+SP+GL+CP

<<Min: 240.2 - 242.4 10% Min: Sphalerite>>

<<Min: 240.2 - 242.4 80% Min: Pyrite>>

<<Min: 240.2 - 242.4 1% Min: Galena>>

<<Min: 240.2 - 242.4 2% Min: Chalcopyrite>>

<<Min: 240.2 - 242.4 5% Min: Calcite>>

<<Struc: 240.89 - 240.9 dominant foliation>> Sulphide lamination

<<Struc: 242.21 - 242.22 dominant foliation>> Sulphide lamination

242.40 244.10 OA **Magnetite bearing sulphides**

MCG

242.4 - 244.1: Massive PY+SP+GL+/-CP with large cm-scale blebs of CP+MG and disseminated MG.

<<Min: 242.4 - 244.1 10% Min: Sphalerite>>

<<Min: 242.4 - 244.1 70% Min: Pyrite>>

<<Min: 242.4 - 244.1 10% Min: Magnetite>>

<<Min: 242.4 - 244.1 3% Min: Chalcopyrite>>

<<Min: 242.4 - 244.1 5% Min: Calcite>>

<<Struc: 243.35 - 243.36 dominant foliation>> Sulphide lamination

244.10 244.70 OI **Heavily disseminated sulphides in host schist**

MG

244.1 - 244.7: Heavily disseminated sulphide in coherent rhyolite. Upper contact appears more gradational than lower contact.

<<Min: 244.1 - 244.7 2% Min: Pyrite>>

<<Min: 244.1 - 244.7 2% Min: Pyrrhotite>>

<<Min: 244.1 - 244.7 1% Min: Chalcopyrite>>

244.70 246.60 OB **Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides**

MCG

244.7 - 246.6: Massive PY+SP+GL with blebs of CP+MG

<<Min: 244.7 - 246.6 5% Min: Sphalerite>>

<<Min: 244.7 - 246.6 60% Min: Pyrite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
240.20	241.30	1.10	B00233313	362	1.44	0.57	4.97	13.8

241.30	242.40	1.10	B00233314	294	1.38	0.75	4.63	14
--------	--------	------	-----------	-----	------	------	------	----

242.40	243.30	0.90	B00233315	423	2.04	2.74	4.99	13.4
--------	--------	------	-----------	-----	------	------	------	------

243.30	244.10	0.80	B00233316	392	3.96	5.3	3.72	14.5
--------	--------	------	-----------	-----	------	-----	------	------

244.10	244.70	0.60	B00233317	70.4	0.54	0.42	0.78	2.31
--------	--------	------	-----------	------	------	------	------	------

244.70	245.70	1.00	B00233318	248	1.55	1.01	3.05	9.27
--------	--------	------	-----------	-----	------	------	------	------

245.70	246.60	0.90	B00233319	223	2.46	0.18	2.23	7.66
--------	--------	------	-----------	-----	------	------	------	------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-321

From (m)		To (m)	Rocktype & Description									
<<Min: 244.7 - 246.6 15% Min: Pyrrhotite>>												
<<Min: 244.7 - 246.6 2% Min: Galena>>												
<<Min: 244.7 - 246.6 2% Min: Chalcopyrite>>												
<<Min: 244.7 - 246.6 10% Min: Calcite>>												
246.60		248.30		RHY		undifferentiated rhyolite						
246.6 - 248.3: Moderately-strongly faulted RHYc (?)												
<<Min: 246.6 - 248.3 1% Min: Pyrrhotite>>												
<<Min: 246.6 - 248.3 1% Min: Calcite>>												
<<Alt: 246.6 - 248.3 Strong (Alt) Muscovite>>												
<<Struc: 246.6 - 248.3		Moderate-Strong (Alt) Fault>>		Strongly faulted RHYc with local fault gouge								
248.30		249.50		OD		Brecciated sulphides			medium grey			
248.3 - 249.5: Brecciated massive PY+PO+CP appears												
<<Min: 248.3 - 249.5 60% Min: Pyrite>>												
<<Min: 248.3 - 249.5 30% Min: Pyrrhotite>>												
<<Min: 248.3 - 249.5 4% Min: Chalcopyrite>>												
249.50		255.80		RHY		undifferentiated rhyolite						
249.5 - 255.8: Strongly faulted rhyolite to fault gouge breccia dominated by rhyolitic material.												
<<Min: 249.5 - 255.8 1% Min: Pyrrhotite>>												
<<Alt: 249.5 - 258 Weak (Alt) Muscovite>>												
<<Struc: 249.5 - 255.8		Strong (Alt) Fault>>		Strongly faulted rhyolite to fault gouge breccia with varying foliation orientations								
255.80		308.00		RHYv		Rhyolite volcaniclastic						
255.8 - 308: Medium grey, unaltered QZ+MU schist (volcaniclastic rhyolite) varying from fine grained ash tuff to lpl tuff with rhyolitic, sulphide, and CL+QZ+BI lpl.												
<<Min: 255.8 - 308 2% Min: Pyrite>>												
<<Min: 255.8 - 308 2% Min: Pyrrhotite>>												
<<Min: 255.8 - 308 2% Min: Calcite>>												
<<Vein: 305.3 - 305.4		100% Quartz 70 deg. >>		Massive QZ vein with blebby PO+PY								
<<Struc: 256.38 - 256.39		dominant foliation>>		Mu cleavage								
<<Struc: 260.13 - 260.14		dominant foliation>>		CA band								
<<Struc: 263.17 - 263.18		dominant foliation>>		Band of disseminated PO								
<<Struc: 266.41 - 266.42		dominant foliation>>		Discontinuous PO cleavage								

246.60	247.60	1.00	B00233321	0.7	0.006	-0.01	-0.01	0.02
--------	--------	------	-----------	-----	-------	-------	-------	------

247.60	248.30	0.70	B00233322	0.4	0.005	-0.01	-0.01	0.01
--------	--------	------	-----------	-----	-------	-------	-------	------

248.30	248.90	0.60	B00233323	47.9	0.44	1.32	0.15	1.26
--------	--------	------	-----------	------	------	------	------	------

248.90	249.50	0.60	B00233324	46.9	0.25	0.99	0.23	0.94
--------	--------	------	-----------	------	------	------	------	------

249.50	251.00	1.50	B00233325	-0.3	-0.005	-0.01	-0.01	0.01
--------	--------	------	-----------	------	--------	-------	-------	------

251.00	252.50	1.50	B00233326	0.4	0.007	-0.01	-0.01	0.01
252.50	254.00	1.50	B00233327	-0.3	0.007	-0.01	-0.01	-0.01

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-321

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 271.23 - 271.24		dominant foliation>> MU cleavage									
<<Struc: 272.15 - 272.16		dominant foliation>> Discontinuous foliation defined by lpl									
<<Struc: 273.3 - 273.31		dominant foliation>> Sulphide band									
<<Struc: 274.37 - 274.38		dominant foliation>> Mu cleavage									
<<Struc: 278.16 - 278.17		dominant foliation>> Mu cleavage									
<<Struc: 280.4 - 280.41		dominant foliation>> MU cleavage									
<<Struc: 283.5 - 285.3		Weak (Alt) Fault>> Faulted with local fault gouge on cleavage surfaces									
<<Struc: 286.9 - 287.1		Weak (Alt) Fault>> Faulted with local fault gouge on cleavage surfaces									
<<Struc: 290.69 - 290.7		dominant foliation>> MU cleavage									
<<Struc: 292.8 - 292.81		dominant foliation>> MU-CL cleavage									
<<Struc: 295.96 - 295.97		dominant foliation>> MU cleavage									
<<Struc: 299.4 - 299.41		dominant foliation>> MU cleavage									
<<Struc: 300.3 - 300.4		Weak (Alt) Fault>> Faulted zone with minor fault gouge									
<<Struc: 301.3 - 301.4		Weak (Alt) Fault>> Faulted zone with minor fault gouge									
<<Struc: 301.9 - 302		Weak (Alt) Fault>> Faulted zone with minor fault gouge									
<<Struc: 302.15 - 302.16		dominant foliation>> Mu cleavage									
<<Struc: 307.8 - 307.9		Weak (Alt) Fault>> Faulted zone with minor fault gouge									

End of Hole @ 308

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-322

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Roger Hulstein
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Roger Hulstein	Date Logging Start:	13-Nov-15
UTM Easting	414987.9	Core Size:	HQ	Azimuth:	29.9	Date Logging Complete:	16-Nov-15
UTM Northing:	6814977.6	Casing Pulled?:	Yes	Dip:	-82	Drill Company:	Geotech
UTM Elev. (m):	1387.022	Casing Depth (m):	23	Length (m):	197	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	11-Nov-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	15-Nov-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

The purpose of DDH K15-322 is to test the Krakatoa sulphide horizon on section NW1 between DDH K15-316 and K15-320. The drill hole collared in RHY at 25.34 m and a upper sulphide unit (OI and OB) was intersected at 39.4 – 42.25 m (2.85 m thickness), followed by MAFi and minor RHY from 42.25 – 68.25 m. The top of the Krakatoa sulphide horizon was intersected at 68.25 m, about 14 m above where it was expected (at about 82 m). The Krakatoa consists of an upper OB horizon from 68.25 m to 74.15 m (5.9 m), followed by 10.18 m of RHY and minor MAFi to 84.33 m. A lower OB sulphide horizon was cut from 84.33 – 91.25 m (6.92 m). This section appears to contain minor barite. Both sulphide horizons are not particularly well mineralized with an estimated average of about 10% disseminated sphalerite and 1-2% disseminated galena and visible chalcocopyrite restricted to narrow zones and averaging <2%. Other than intersecting the Krakatoa a little higher than expected and consisting of two lenses, the zone correlates well with adjacent drill holes on section NW1. Below the Krakatoa lens is altered – bleached and quartz veined (30-40%) MAFi from 91.25 – 103.0 m, basically a transitional contact, followed by RHYi from 103.0 to 148.1 m and MAFi from 148.1 – 153.0 m followed by a two meter horizon of OB & OF from 153.0 – 155.0 m. The 0.7 m section of OF contains about 20% chalcocopyrite and the OB contains an average of about 10% sphalerite. Below the sulphide horizon variably weakly chloritized and pyritized RHY and RHYvi were cut to EOH.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-82	29.9	0	29.9	APS	Geotech	15-Nov-15		<input checked="" type="checkbox"/>	
29	-80.8	8.6	22.5	31.1	ReflexEVS	Geotech	12-Nov-15	5850	<input checked="" type="checkbox"/>	
59	-81.3	8.6	22.5	31.1	ReflexEVS	Geotech	13-Nov-15	5749	<input checked="" type="checkbox"/>	
89	-81.8	9.1	22.5	31.6	ReflexEVS	Geotech	13-Nov-15	5761	<input checked="" type="checkbox"/>	
119	-82.4	358.9	22.5	21.4	ReflexEVS	Geotech	14-Nov-15	2097	<input type="checkbox"/>	mag field low, measurement is suspect...
155	-83.5	17.6	22.5	40.1	ReflexEVS	Geotech	14-Nov-15	5429	<input checked="" type="checkbox"/>	
194	-85.2	28.4	22.5	50.9	ReflexEVS	Geotech	15-Nov-15	5772	<input checked="" type="checkbox"/>	
197	-85.3	29.2	22.5	51.7	ReflexEVS	Geotech	15-Nov-15	5766	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	23.00	OVB									
23.00	25.34	No Core									
23 - 25.34: Overburden pebbles of drill rounded RHY, Qtz veining, MDS and MxSx											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-322

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
25.34	30.80	RHY undifferentiated rhyolite									
25.34 - 30.8: Well developed planer foliation with moderate muscovite on foliation. Minor, thin (2-4mm), silic bands.											
<<Min: 25.34 - 30.8 1% Min: Pyrite>>											
<<Min: 25.34 - 30.8 3% Min: Calcite>> and on foliation - fractures											
<<Alt: 25.34 - 30.8 Moderate-Strong (Alt) Muscovite>> looks like OR alteration											
<<Struc: 25.34 - 30.8 Moderate (Alt) dominant foliation>>											
<<Struc: 26 - 30.8 Moderate (Alt) Fault>> broken core and missing core with sericite - clay on foliation partings											
30.80	37.00	RHYcw Curdy textured-flow banded grey-green (flows, subvolcanics)	30.80	32.00	1.20	B00269974	1.7	0.018	-0.01	0.02	0.04
30.8 - 37: Curdy texture caused by 0.5-1.0 cm thick silic bands being cut and dismembered by spaced cleavage (the DFOL). Approx 3% sulphides (py,gl, sp) as blebby diss patches and wispy bands, also deformed by cleavage. Moderate muscovite-sericite on foliation partings.											
<<Min: 30.8 - 36 5% Min: Calcite>> and as diss and fracture filling											
<<Min: 30.8 - 37 0.1% Min: Sphalerite>> diss with py in wispy bands and diss patches											
<<Min: 30.8 - 37 2% Min: Pyrite>> diss in wispy bands and diss patches											
<<Min: 30.8 - 37 0.1% Min: Galena>> diss with py in wispy bands and diss patches											
<<Min: 36 - 39.25 8% Min: Calcite>> bands, diss an fracture filling											
<<Alt: 30.8 - 37 Moderate (Alt) Muscovite>> muscovite - sericite - clay on spaced cleavage											
<<Struc: 30.8 - 37 Moderate (Alt) dominant foliation>>											
<<Struc: 36.6 - 37 Moderate (Alt) Fault>> broklen, crushed and missing core											
37.00	39.40	RHY undifferentiated rhyolite grey-green	37.00	38.30	1.30	B00269979	2.3	0.019	-0.01	0.01	0.04
37 - 39.4: Similar to 25.34-30.8m. Minor silic bands. Lower contact is 10 cm of clay gouge in RHY.											
<<Min: 37 - 39.25 2% Min: Pyrite>>											
<<Min: 39.25 - 39.87 8% Min: Sphalerite>>											
<<Min: 39.25 - 39.87 20% Min: Pyrite>> and as diss											
<<Min: 39.25 - 39.87 1% Min: Galena>>											
<<Min: 39.25 - 40.5 5% Min: Calcite>>											
<<Alt: 37 - 39.4 Moderate (Alt) Muscovite>>											
<<Struc: 37 - 39.4 Moderate (Alt) dominant foliation>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-322

From (m) To (m) Rocktype & Description

39.40 39.87 OI Heavily disseminated sulphides in host schist

39.4 - 39.87: approx 20% diss py and py bands, 8% diss sphalerite, 1-2% FD galena. Approx. 70% green sericite altered fine grained rhy wallrock bands and groundmass to diss sulphides.

<<Struc: 39.4 - 39.4 Strong (Alt) Contact>> 10cm crushed RHY - clay gouge in contact with OI unit.

<<Struc: 39.8 - 41 Strong (Alt) dominant foliation>> banded sulfides

39.87 41.25 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

39.87 - 41.25: approx 60% buckshot py, 12% diss sphalerite & 2% diss galena. Maybe 1% CP mixed with py?

<<Min: 39.87 - 40.25 12% Min: Sphalerite>>

<<Min: 39.87 - 40.25 60% Min: Pyrite>>

<<Min: 39.87 - 40.25 2% Min: Galena>>

<<Min: 40.5 - 41.25 10% Min: Calcite>>

41.25 42.06 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

41.25 - 42.06: Non calcareous light green bleached sericite altered MAFi (looks most like MAFi but could be altered ??)

<<Min: 41.25 - 42.06 0.1% Min: Sphalerite>> concentrated near upper and lower contacts

<<Min: 41.25 - 42.06 2% Min: Pyrite>> concentrated near upper and lower contacts

<<Min: 41.25 - 42.06 0.1% Min: Galena>> concentrated near upper and lower contacts

<<Alt: 41.25 - 42.06 Moderate (Alt) Muscovite>> sercite green, not really muscovite alteration

<<Struc: 41.25 - 41.25 Moderate (Alt) Contact>> along foliation

<<Struc: 41.8 - 42 Moderate (Alt) Foliation>>

42.06 42.40 OI Heavily disseminated sulphides in host schist

42.06 - 42.4: Not a great OI; barren and mineralized qtz-calcite veining (approx 60% veinimg overall) and chlorite - sericite altered MAFi. Lower contact with pale green altered MAFi similar to 41.25-42.06 m. Upper contact is in qtz- calcite veining and irregular, lower contact is calcite vein at 40 deg.

<<Min: 42.06 - 42.4 3% Min: Sphalerite>>

<<Min: 42.06 - 42.4 10% Min: Pyrite>>

<<Min: 42.06 - 42.4 0.3% Min: Chalcopryite>>

<<Min: 42.06 - 42.4 15% Min: Calcite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
39.40	39.87	0.47	B00269982	181	1.26	0.18	1.68	3.88

39.87	40.40	0.53	B00269983	144	0.617	0.11	2	5.42
-------	-------	------	-----------	-----	-------	------	---	------

40.40	41.25	0.85	B00269984	173	0.633	0.41	2.75	6.45
-------	-------	------	-----------	-----	-------	------	------	------

41.25	42.06	0.81	B00269985	2.6	0.029	0.02	0.03	0.12
-------	-------	------	-----------	-----	-------	------	------	------

42.06	42.40	0.34	B00269986	13.6	0.052	0.18	0.21	1.02
-------	-------	------	-----------	------	-------	------	------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-322

From (m) To (m) Rocktype & Description

<<Alt: 42.06 - 42.4 Weak-Moderate (Alt) Chlorite>>

42.40 66.75 MAFi Mafic Intrusions (primarily green footwall mafic intrusion)

42.4 - 66.75: Upper contact at 40 degrees to CA and consist of pale green fine grained sericite altered MAFi that grades into fresher calcareous green chlorite - biotite massive MAFi.

<<Min: 42.4 - 43 1% Min: Pyrrhotite>>

<<Min: 42.4 - 49 20% Min: Calcite>> and as fine diss

<<Min: 49 - 66.75 10% Min: Calcite>>

<<Alt: 42.4 - 43.56 Weak-Moderate (Alt) Muscovite>> sericite green, not really muscovite alteration

<<Alt: 43 - 66.75 Strong (Alt) Chlorite>>

<<Alt: 43 - 66.75 Strong (Alt) Biotite>>

<<Vein: 57.5 - 66 3% Calcite>> irregular clacite veins and veinlets cross cutting foliation

<<Struc: 42.4 - 42.4 Moderate (Alt) Contact>> along foliation

<<Struc: 44.6 - 45 Moderate (Alt) Fault>> crosses foliation and drags it.

<<Struc: 45 - 45.5 Moderate (Alt) dominant foliation>>

<<Struc: 47 - 52 Moderate (Alt) dominant foliation>>

<<Struc: 52.5 - 53 Moderate (Alt) dominant foliation>>

<<Struc: 54.7 - 55.67 Moderate (Alt) Fault>> broken core, shear planes with slicks.

<<Struc: 55.67 - 56.4 Moderate (Alt) dominant foliation>>

<<Struc: 66.25 - 66.3 Moderate (Alt) Fault>> crushed MAFi, minor gouge, crosscuts foliation.

66.75 68.25 RHY undifferentiated rhyolite

66.75 - 68.25: upper and lower contacts sharp along foliation.

<<Min: 66.75 - 68.25 1% Min: Pyrite>>

<<Alt: 66.75 - 68.25 Moderate (Alt) Muscovite>> grey green alteration

<<Struc: 66.75 - 66.75 Moderate (Alt) Contact>> minor shearing along foliaton

<<Struc: 66.75 - 68.25 Moderate (Alt) dominant foliation>>

<<Struc: 67.35 - 67.5 Moderate (Alt) Fault>> 15cm gouge with sharp contacts

68.25 74.15 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

68.25 - 74.15: Homogonous OB. 70.1 - 70.2 m: Thin bands of wispy diss galena, approx 5% total. Diss chalcopryrite noted 72.0 - 74.0 m. Weak open space breccia throughout, locally filled with calcite.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

42.40	43.50	1.10	B00269987	-0.3	-0.005	0.02	-0.01	0.03
-------	-------	------	-----------	------	--------	------	-------	------

43.50	45.00	1.50	B00269988	-0.3	-0.005	-0.01	-0.01	0.02
45.00	46.50	1.50	B00269989	-0.3	-0.005	-0.01	-0.01	0.02
46.50	48.00	1.50	B00269991	-0.3	-0.005	-0.01	-0.01	0.01
63.50	65.00	1.50	B00269992	-0.3	-0.005	-0.01	-0.01	0.01
65.00	65.75	0.75	B00269993	-0.3	-0.005	-0.01	-0.01	0.01
65.75	66.75	1.00	B00269994	-0.3	-0.005	-0.01	-0.01	0.05

66.75	67.70	0.95	B00269995	5.4	0.017	-0.01	0.07	0.1
-------	-------	------	-----------	-----	-------	-------	------	-----

67.70	68.25	0.55	B00269996	10.2	0.031	-0.01	0.12	0.2
-------	-------	------	-----------	------	-------	-------	------	-----

68.25	69.00	0.75	B00269997	286	1.61	0.11	2.42	9.33
-------	-------	------	-----------	-----	------	------	------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-322

From (m) To (m) Rocktype & Description

<<Min: 68.25 - 72 1% Min: Chalcopryite>>

<<Min: 68.25 - 74.15 10% Min: Sphalerite>> locally concentrated in bands

<<Min: 68.25 - 74.15 60% Min: Pyrite>> lower contact in core rubble, likley missing core from this area.

<<Min: 68.25 - 74.15 2% Min: Galena>> Diss and locally concentrated in wispy bands (ie. 70.1-70.2m)

<<Min: 68.25 - 74.15 20% Min: Calcite>> and as blebs, fracute vein filling.

<<Min: 72 - 74.15 2% Min: Chalcopryite>>

<<Struc: 68.25 - 68.25 Moderate (Alt) Contact>>

<<Struc: 68.25 - 74.15 >>

<<Struc: 69.5 - 70 Weak (Alt) Foliation>> banded sulfides

<<Struc: 73.4 - 73.6 Moderate (Alt) Foliation>> banded sulfides

74.15 75.10 RHY undifferentiated rhyolite

74.15 - 75.1: 74.15-74.35: Ol type mineralization, sheared and weakly qtz veined, weak chlorite alteration, Originally may have been MAFi? Similar to 75.1-76.1 and 83.0-83.2m.

<<Min: 74.15 - 75.35 20% Min: Calcite>>

<<Min: 74.15 - 75.8 2% Min: Pyrite>>

<<Alt: 74.15 - 74.35 Weak (Alt) Chlorite>> at contact with OB unit, also weakly sheared, qtz veined.

<<Alt: 74.15 - 75.1 Weak-Moderate (Alt) Muscovite>> sericite muscovite clay on partings

<<Struc: 74.2 - 74.25 Weak (Alt) Fault>> broiken core, minor gouge, qtz clasts in fault zone

<<Struc: 74.35 - 75.1 Moderate (Alt) dominant foliation>>

75.10 76.10 Ol Heavilly disseminated sulphides in host schist

75.1 - 76.1: Originally unit may have been a MAFi, now contains approx 20+% banded calcite, weak chlorite alteration, sericite muscovite partings and bands and diss py and minor sphalerite in preferential bands as well.

<<Min: 75.1 - 76.1 1% Min: Sphalerite>>

<<Min: 75.1 - 76.1 10% Min: Pyrite>> in bands

<<Min: 75.1 - 76.1 0.1% Min: Galena>>

<<Min: 75.1 - 76.1 25% Min: Calcite>> diss and in bands

<<Alt: 75.1 - 76.1 Moderate (Alt) Muscovite>> sericite muscovite clay on partings and as bands

<<Alt: 75.1 - 76.1 Weak (Alt) Chlorite>>

<<Alt: 75.1 - 76.1 Weak (Alt) Biotite>>

<<Struc: 75.1 - 76.1 Moderate-Strong (Alt) dominant foliation>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
69.00	70.00	1.00	B00269998	420	1.46	0.02	3.89	8.46
70.00	70.50	0.50	B00269999	575	2.33	0.04	3.95	7.96
70.50	71.00	0.50	B00233501	140	0.899	-0.01	1.73	7.56
71.00	72.00	1.00	B00233502	172	1.01	0.02	1.75	8.3
72.00	73.00	1.00	B00233503	145	1.15	0.43	1.3	9.32
73.00	73.50	0.50	B00233504	281	3.59	1.54	2.24	8.28
73.50	74.15	0.65	B00233505	225	0.986	0.04	2.06	9.17

74.15	74.50	0.35	B00233506	21	0.183	0.02	0.08	0.15
-------	-------	------	-----------	----	-------	------	------	------

74.50	75.10	0.60	B00233507	43.2	0.487	0.06	0.09	0.47
-------	-------	------	-----------	------	-------	------	------	------

75.10	76.10	1.00	B00233508	92.9	0.672	0.1	0.21	2.17
-------	-------	------	-----------	------	-------	-----	------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-322

From (m) To (m) Rocktype & Description

76.10 83.00 RHY undifferentiated rhyolite

76.1 - 83: silic bands

<<Min: 76.1 - 82.8 1% Min: Pyrite>>

<<Min: 76.1 - 82.8 0.1% Min: Galena>>

<<Alt: 76.1 - 78 Strong (Alt) Muscovite>> sericite - clay - muscovite on partings

<<Alt: 78 - 82.8 Moderate (Alt) Muscovite>>

<<Vein: 82.8 - 83 100% Quartz-Carbonate>>

<<Struc: 76.1 - 79 Moderate-Strong (Alt) dominant foliation>>

<<Struc: 78.5 - 80.7 Moderate (Alt) Fault>> irregular narrow (1-3cm) shallow gouge - clay - crushed zones

<<Struc: 79 - 82.5 Moderate (Alt) dominant foliation>>

83.00 84.33 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

83 - 84.33: Intense biotite alt - original protolith uncertain

<<Min: 83 - 83.23 25% Min: Sphalerite>>

<<Min: 83 - 83.23 30% Min: Pyrite>>

<<Min: 83 - 83.23 5% Min: Calcite>>

<<Min: 83.23 - 84.33 15% Min: Calcite>> AGR, wisps, diss and foliaform veins

<<Min: 83.23 - 84.33 1% Lith: Biotite Chlorite>> concentrated near 84.33m

<<Alt: 83 - 84.33 Strong (Alt) Biotite>>

<<Alt: 83 - 84.55 Weak-Moderate (Alt) Chlorite>>

<<Alt: 83 - 84.55 Weak (Alt) Cordierite>>

<<Vein: 84 - 91.25 15% Carbonate-Sulphide>> mixed QTZ-calcite-barite and possibly barite as foliaform stringers, semimassive (86.2-86.6m) and fracture veinlet filling. No sulphide in veining (barium sulphate). No Barite in vein code....

<<Struc: 83 - 83 Moderate (Alt) Contact>> Ol in contact with overlying qtz-calcite vein.

<<Struc: 83.3 - 84 Moderate (Alt) dominant foliation>>

84.33 91.25 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

84.33 - 91.25: Low sulphide OB with average 15-20% white - light grey qtz-calcite (and possibly dolomite) - barite (exact percentage barite uncertain) as wispy foliation, as matrix to (local jigsaw) breccia and as fracture filling. 86.2-86.8m: barite etc is 70% of interval. OB is not well mineralized, average is maybe 10% sphalerite and 1-2% galena. Trace - 3% diss magnetite 89.8-90.15m.

<<Min: 84.33 - 85 2% Min: Chalcopryrite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
76.10	77.00	0.90	B00233509	34.9	0.401	0.02	0.13	0.25

77.00	78.50	1.50	B00233511	3.6	0.022	-0.01	0.03	0.06
78.50	80.00	1.50	B00233512	0.7	0.006	-0.01	-0.01	0.01
80.00	81.50	1.50	B00233513	1.1	0.016	-0.01	0.03	0.04
81.50	82.60	1.10	B00233514	0.4	-0.005	-0.01	-0.01	0.01
82.60	83.00	0.40	B00233515	11.9	0.021	0.02	0.14	0.44

83.00	83.40	0.40	B00233516	83.4	0.386	0.32	0.68	5.44
-------	-------	------	-----------	------	-------	------	------	------

83.40	84.33	0.93	B00233517	46.4	0.069	0.04	0.1	0.22
-------	-------	------	-----------	------	-------	------	-----	------

84.33	85.00	0.67	B00233518	611	4.66	0.48	4.58	7.56
-------	-------	------	-----------	-----	------	------	------	------

85.00	85.50	0.50	B00233519	461	5.24	0.43	3.26	5.21
-------	-------	------	-----------	-----	------	------	------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-322

From (m) To (m) Rocktype & Description

<<Min: 84.33 - 85 2% Min: Galena>>
 <<Min: 84.33 - 85 50% Min: Pyrite>>
 <<Min: 84.33 - 85 15% Min: Sphalerite>>
 <<Min: 84.33 - 85 8% Min: Calcite>>
 <<Min: 85 - 86.1 10% Min: Sphalerite>>
 <<Min: 85 - 86.1 5% Min: Barite>>
 <<Min: 85 - 86.1 3% Min: Calcite>>
 <<Min: 85 - 86.1 2% Min: Chalcopryite>>
 <<Min: 85 - 86.1 2% Min: Galena>>
 <<Min: 85 - 86.1 40% Min: Pyrite>>
 <<Min: 86.1 - 89.2 8% Min: Calcite>> and as fracture filling and diss
 <<Min: 86.1 - 89.2 1% Min: Galena>>
 <<Min: 86.1 - 89.2 25% Min: Pyrite>>
 <<Min: 86.1 - 89.2 5% Min: Sphalerite>>
 <<Min: 86.1 - 89.2 10% Min: Barite>> as diss, wisps, fracture filling blebs; mixed with calcite, qtz and possibly dolomite.
 <<Min: 89.2 - 90.5 10% Min: Calcite>> and as fracture filling
 <<Min: 89.2 - 91.25 2% Min: Galena>>
 <<Min: 89.2 - 91.25 40% Min: Pyrite>>
 <<Min: 89.2 - 91.25 15% Min: Sphalerite>> locally concentrated in bands
 <<Min: 89.8 - 90.15 3% Min: Magnetite>>
 <<Min: 90.5 - 91.25 15% Min: Calcite>> and as blebby bands
 <<Struc: 84.33 - 84.33 Moderate (Alt) Contact>> sharp contact along foliation, no shearing or faulting
 <<Struc: 84.5 - 85 Moderate (Alt) Foliation>> banded sulphides
 <<Struc: 87.8 - 88 Moderate (Alt) Foliation>> banded sulphides
 <<Struc: 90.8 - 91.1 Moderate (Alt) Foliation>> banded sulphides

91.25 93.70 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

91.25 - 93.7: 91.25-92.8: Green fine grained, calcite porphroblasts, banded MAFi with calcite and pepperite texture at lower contact.

<<Min: 91.25 - 102.45 0.5% Min: Pyrite>>
 <<Min: 91.25 - 102.45 0.1% Min: Galena>> and as diss
 <<Min: 93.2 - 96.5 5% Min: Calcite>> diss in MAFi and as fracture filling in qtz vein and RHYi
 <<Alt: 91.25 - 104 Moderate (Alt) Muscovite>> Sericite and fine muscovite on foliation.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
85.50	86.20	0.70	B00233521	609	3.93	0.27	3.74	4.31
86.20	87.20	1.00	B00233522	236	2.36	0.07	1.42	1.77
87.20	88.20	1.00	B00233523	354	3.09	0.11	2.08	3.02
88.20	89.20	1.00	B00233524	321	3.19	0.16	2.73	3.84
89.20	89.80	0.60	B00233525	706	5.06	0.36	4.9	7.58
89.80	90.30	0.50	B00233526	687	5	0.37	4.9	7.01
90.30	91.25	0.95	B00233527	430	1.75	0.1	3.73	6.2

91.25	92.00	0.75	B00233528	11.4	0.107	-0.01	0.26	0.26
-------	-------	------	-----------	------	-------	-------	------	------

92.00	93.00	1.00	B00233529	101	0.416	0.14	0.34	0.04
93.00	93.70	0.70	B00233531	-0.3	-0.005	-0.01	-0.01	0.01



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-322

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 91.25 - 104 Moderate-Strong (Alt) Chlorite>> chlorite green altered MAFi											
<<Vein: 91.25 - 102.45 40% Quartz>> irregular white qtz veining in MAFi and related to contact with RHYi - transitional contact zone marked by an excess of qtz..											
<<Struc: 91.25 - 91.25 Moderate (Alt) Contact>> massive sulphide - fault gouge (5cm recovered) contact											
<<Struc: 93.1 - 93.3 Moderate (Alt) Foliation>>											
93.70	95.20	RHYi									
95.20	104.00	MAFi									
<<Min: 102.45 - 104 5% Min: Calcite>>											
<<Struc: 97.1 - 97.3 Moderate (Alt) Foliation>> foliation and qtz vein contact.											
<<Struc: 97.4 - 99.3 Moderate (Alt) Fault>> crushed, brx MAFi and qtz vein, minor gouge, shear at low angle to core axis.											
<<Struc: 99.3 - 99.8 Moderate (Alt) Foliation>>											
104.00	118.00	RHYif									
104 - 118: Brittle fractured RHYi with pyrite trace galena and sphalerite wisps, thin foliaform bands, diss and fracture fillings. Local pink patches - albite alteration?											
<<Min: 104 - 118 0.1% Min: Sphalerite>> with py											
<<Min: 104 - 118 2% Min: Pyrite>> Brittle fractured RHYi with pyrite trace galena and sphalerite wisps, thin foliaform bands, diss and fracture fillings.											
<<Min: 104 - 118 0.1% Min: Galena>> with Py											
<<Min: 104 - 118 3% Min: Calcite>>											
<<Alt: 104 - 118 Trace (Alt) Muscovite>> sericite - fine muscovite on fractures and foliation.											
<<Alt: 104 - 118 Weak (Alt) Albite>> patches of pink hued RHYi - possible albite alteration											
<<Struc: 104 - 111.5 Weak (Alt) Fault>> brittle fractured RHYi, trace clay on foliation - fracture faces.											
<<Struc: 112 - 114.7 Moderate (Alt) dominant foliation>> planer foliated RHYi											
118.00	148.10	RHYi									
118 - 148.1: very similar to above (104-118.0m) but dominated by green sericite altered planer foliated RHYi separated by shorter sections of grey glassy RHYi. This unit contains less sulfides than above RHYi.											
<<Min: 118 - 120.5 5% Min: Calcite>>											
<<Min: 118 - 134 1% Min: Pyrite>>											
<<Min: 123.6 - 125.6 5% Min: Calcite>>											
<<Min: 131.3 - 134.5 5% Min: Calcite>>											
<<Min: 134 - 143 2% Min: Pyrite>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-322

From (m) To (m) Rocktype & Description

<<Struc: 148.1 - 148.2 Moderate (Alt) Foliation>> banded sulphides

148.50 153.00 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

148.5 - 153: 0.35m of OI at upper contact of MAFi - RHYi contact.

<<Min: 148.5 - 153 0.5% Min: Pyrite>>

<<Min: 148.5 - 153 15% Min: Calcite>> and as blebs and veinlets

<<Alt: 148.7 - 153 Weak (Alt) Muscovite>> green sericite replacing chlorite.

<<Alt: 148.7 - 153 Moderate (Alt) Biotite>>

<<Alt: 152 - 153 Weak-Moderate (Alt) Chlorite>> partially altered to sericite

<<Struc: 148.5 - 149 Weak (Alt) Fault>> brittle fracture

<<Struc: 150 - 151.8 Weak (Alt) Fault>> brittle fracture, trace gouge

<<Struc: 150.9 - 151.2 Moderate (Alt) dominant foliation>>

153.00 154.35 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

153 - 154.35: massive OB, approx 8-10% diss sphalerite as wisps and irregular bands. Solid core from 153.0 - 153.86m. Rubble and very poor recovery (max 20%) from 153.86 - 154.35 m.

<<Min: 153 - 154.35 8% Min: Sphalerite>>

<<Min: 153 - 154.35 60% Min: Pyrite>>

<<Min: 153 - 154.35 20% Min: Calcite>> and as AGR

154.35 155.00 OF Pyrrhotite rich sulphides

154.35 - 155: Average approx 20% chalcopyrite, concentrated at lower contact. Approx 40% pyrrhotite, 20% pyrite and 1-3% diss magnetite.

<<Min: 154.35 - 155 20% Min: Pyrite>>

<<Min: 154.35 - 155 40% Min: Pyrrhotite>>

<<Min: 154.35 - 155 3% Min: Magnetite>>

<<Min: 154.35 - 155 20% Min: Chalcopyrite>> average approx 20% chalcopyrite, concentrated at lower contact

<<Struc: 154.35 - 154.35 Moderate (Alt) Shear>> shear - slip plane within sulphide unit

155.00 156.60 RHY undifferentiated rhyolite

155 - 156.6: silic bands, locally foliaform bands of pyrite.

<<Min: 155 - 156 8% Min: Pyrite>>

<<Min: 156 - 156.6 5% Min: Pyrite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
148.50	150.00	1.50	B00233537	14.6	0.44	-0.01	0.31	0.14
150.00	151.50	1.50	B00233538	4.2	0.025	-0.01	0.05	0.04
151.50	153.00	1.50	B00233539	13.4	0.102	0.01	0.21	0.42
153.00	153.86	0.86	B00233541	110	0.81	0.08	1.71	6.55
153.86	154.35	0.49	B00233542	112	0.33	0.59	0.67	10.5
154.35	155.00	0.65	B00233543	112	2.06	3.74	0.21	11.5
155.00	156.00	1.00	B00233544	0.5	0.02	-0.01	-0.01	0.03
156.00	156.60	0.60	B00233545	0.7	0.009	0.02	-0.01	0.06



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-322

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 156.4 - 159.2 2% Min: Pyrite>> <<Alt: 155 - 156 Weak (Alt) Chlorite>> trace to very weak minor blebs and stringers. <<Alt: 155 - 156.6 Strong (Alt) Muscovite>> <<Struc: 155.2 - 156.9 Moderate (Alt) dominant foliation>> <<Struc: 156 - 158 Moderate (Alt) Fault>> gougy shears at 30-60 deg to CA.			156.60	157.40	0.80	B00233546	2.4	0.02	0.02	0.02	0.27
156.60 157.40 MDSc Carbonaceous dominant mudstone 156.6 - 157.4: very poor recovery, contacts determined by measuring from blocks on either side.											
<<Min: 156.6 - 157.4 2% Min: Pyrite>> <<Min: 156.6 - 157.4 4% Min: Pyrrhotite>> <<Alt: 156.6 - 157.4 Moderate (Alt) Silicification>> <<Alt: 156.6 - 157.4 Weak-Moderate (Alt) Muscovite>>			157.40	158.00	0.60	B00233547	-0.3	-0.005	-0.01	-0.01	-0.01
157.40 179.66 RHYv Rhyolite volcaniclastic 157.4 - 179.66: 157.4-161.1; silic bands and rare curdy texture. Rare blue qtz eyes starting at 173. Locally muscovite altered and sulphidized (py+po). Lapilli texture (real lapilli or pseudo lapilli due to alteration?) increases below 161.0 m.											
<<Min: 157.4 - 160.6 3% Min: Calcite>> <<Min: 159.2 - 161.1 2% Min: Pyrite>> and as foliaform stringers <<Min: 159.3 - 161.1 1% Min: Pyrrhotite>> <<Min: 160.6 - 166 8% Min: Calcite>> <<Min: 161.1 - 167 1% Min: Pyrrhotite>> <<Min: 166 - 175.2 5% Min: Calcite>> <<Min: 167 - 170.2 2% Min: Pyrrhotite>> <<Min: 170 - 172.5 8% Min: Pyrite>> <<Min: 172.5 - 173 5% Min: Pyrite>> <<Min: 173 - 187 3% Min: Pyrite>> <<Alt: 160.5 - 161.1 Weak-Moderate (Alt) Chlorite>> <<Alt: 161.1 - 169 Trace (Alt) Chlorite>> <<Alt: 169 - 170.4 Weak-Moderate (Alt) Chlorite>> <<Alt: 169.8 - 173.5 Weak-Moderate (Alt) Cordierite>> <<Alt: 170.4 - 173.5 Weak-Moderate (Alt) Chlorite>> <<Alt: 173.5 - 189.6 Weak (Alt) Chlorite>> <<Vein: 160.2 - 160.3 50% Quartz-Tourmaline>> cross cutting qtz-chlorite vein, original tourmaline altered? <<Struc: 158 - 160 Moderate (Alt) dominant foliation>>			158.00	159.50	1.50	B00233548	0.6	0.008	-0.01	-0.01	0.01
			159.50	161.00	1.50	B00233549	0.4	-0.005	-0.01	-0.01	0.04
			170.00	171.00	1.00	B00233551	0.4	0.009	-0.01	-0.01	0.01
			171.00	172.00	1.00	B00233552	0.8	0.014	-0.01	-0.01	-0.01
			172.00	173.00	1.00	B00233553	0.5	0.006	-0.01	-0.01	0.01



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-322

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<div><<Struc: 159.8 - 160 Weak-Moderate (Alt) Fault>> gouge zone and crushed core</div> <div><<Struc: 160.1 - 160.2 Moderate (Alt) Vein>> Qtz-tour vein cross cutting foliation</div> <div><<Struc: 160.5 - 161 Moderate (Alt) Foliation>></div> <div><<Struc: 161 - 170 Moderate (Alt) dominant foliation>></div> <div><<Struc: 161 - 195 Moderate (Alt) dominant foliation>></div> <div><<Struc: 167.66 - 167.76 Weak-Moderate (Alt) Fault>> gouge zone parallel to foliation</div> <div><<Struc: 170 - 172 Moderate (Alt) dominant foliation>></div> <div><<Struc: 172 - 178 Moderate (Alt) dominant foliation>></div> <div><<Struc: 179 - 179.66 Moderate-Strong (Alt) Fault>> gouge zone, contacts at 35 & 45 deg top CA, approx parallel to steeper foliation.</div> <div><div>179.66197.00RHYvlLapilli tuff</div><div>179.66 - 197: Similar to lower section of previous unit but qtz eyes increase, lapilli texture more pronounced although locally alteration may result in pseudo lapilli texture. Blebbly qtz folia from 181-190 m with blue qtz eyes.</div></div> <div><<Min: 179.66 - 190.7 5% Min: Calcite>></div> <div><<Min: 187 - 197 2% Min: Pyrite>></div> <div><<Min: 190.7 - 194.2 8% Min: Calcite>></div> <div><<Min: 191.4 - 194.9 1% Min: Pyrrhotite>></div> <div><<Min: 194.2 - 197 3% Min: Calcite>></div> <div><<Alt: 189.6 - 195 Weak-Moderate (Alt) Chlorite>></div> <div><<Alt: 195 - 196 Trace (Alt) Chlorite>></div> <div><<Struc: 180 - 183 Moderate (Alt) dominant foliation>></div> <div><<Struc: 183 - 184 Moderate (Alt) dominant foliation>></div> <div><<Struc: 184 - 184.5 Moderate (Alt) dominant foliation>></div> <div><<Struc: 184.5 - 185.5 Moderate (Alt) dominant foliation>></div> <div><<Struc: 186.1 - 187 Weak-Moderate (Alt) Fault>> minor gougy zones cross cutting and near parallel to foliation</div> <div><<Struc: 187 - 189.6 Moderate (Alt) dominant foliation>></div> <div><<Struc: 196 - 197 Moderate (Alt) dominant foliation>></div>											
<div>End of Hole @ 197</div>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-323

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Florent Pons
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Florent Pons	Date Logging Start:	12-Nov-15
UTM Easting	414944.7	Core Size:	HQ3	Azimuth:	305	Date Logging Complete:	15-Nov-15
UTM Northing:	6814996	Casing Pulled?:	Yes	Dip:	-55	Drill Company:	Geotech
UTM Elev. (m):	1386.777	Casing Depth (m):	28.5	Length (m):	229.8	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	11-Nov-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK camp	Drill Completed:	15-Nov-15
Local Elev. (m):						Purpose:	Resource Definition
Comments:						Parent Hole:	

The hole K15-323 was drilled from the same pad as holes K15-314 and K15-319. The target was to get structural informations about potential East fault in this area and also confirmed the K15-319's ore intercepts. Hole collared into thick MAFI unit, which was expected to host the Krakatoa lens, which was missing in this hole (along with the upper lens). The first 97 m are characterized by alternation of MAFi and RHY(cw) intervals before encountered a thick RHYi unit, aphanitic, strongly SI, which hosted two massive sulphide lenses at 108.6 m (OA,OB, ~4m of thickness) and the second at 147.35m (OI, ~3.4m of thickness). The East fault was encountered at 171.43m, marked by ~ 10 m of fault breccia/gouge interval, comprising polygenetic fragments (RHY/MDS/MXSX, RHY dominant). The remainder of hole was fine grained RHYv(a,l) with portions of pervasive chlorite alteration associated with disseminated biotite.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-55	304.76	0	304.76	APS	Florent Pons	11-Nov-15		<input checked="" type="checkbox"/>	
36	-53.5	286.7	22.5	309.2	ReflexEVS	Florent Pons	11-Nov-15	5864	<input checked="" type="checkbox"/>	
66	-54.1	284	22.5	306.5	ReflexEVS	Florent Pons	11-Nov-15	5794	<input checked="" type="checkbox"/>	
96	-55	282.8	22.5	305.3	ReflexEVS	Florent Pons	11-Nov-15	5780	<input checked="" type="checkbox"/>	
126	-54.6	296.4	22.5	318.9	ReflexEVS	Florent Pons	12-Nov-15		<input type="checkbox"/>	No mag for this test
156	-54.1	282.3	22.5	304.8	ReflexEVS	Florent Pons	13-Nov-15	5722	<input checked="" type="checkbox"/>	
183	-54.2	284.4	22.5	306.9	ReflexEVS	Florent Pons	14-Nov-15	5788	<input checked="" type="checkbox"/>	
213	-52.6	283.2	22.5	305.7	ReflexEVS	Florent Pons	14-Nov-15	5777	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	27.00	OVBN									
27.00	85.65	MAFi									
		Overburden									
		Mafic Intrusions (primarily footwall mafic intrusion)									
		green									
		CG									
27 - 85.65: Green, heterogeneous texture. Characterized by Large chlorite clots (>20%), centimetric size, distributed within fine/medium grained matrix (CI altered). Probably pyroxene phenocrystals totally chlorite altered, gabbroic unit?. After 35 m, foliation increasing, the CI clots become flattered/stretched associated with BI alteration (flakes).											
<<Min: 27 - 49.1 1% Min: Calcite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-323

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
		<<Min: 27 - 85.65 0.1% Min: Pyrite>> Rare trace of py disseminated.									
		<<Min: 49.1 - 85.65 5% Min: Calcite>> small blebs disseminated wihtin matrix. Thin veinlets.									
		<<Alt: 27 - 85.65 Moderate (Alt) Chlorite>> Also occuring as large clots matrix distributed.									
		<<Alt: 51 - 65.3 Weak (Alt) Biotite>> Occuring as small flattered flakes/clots.									
		<<Alt: 66.35 - 70.9 Moderate (Alt) Biotite>> Occuring as small flattered flakes/clots.									
		<<Alt: 80.55 - 85.65 Moderate (Alt) Biotite>> Occuring as small flattered flakes/clots.									
		<<Vein: 38.25 - 40.9 Calcite>> Interval comprising multiple calcite veinlets, irregular oriented, fracture filling. Interval weak/moderately brecciated.									
		<<Struc: 38 - 39.7 Moderate (Alt) Fault>> Interval fractured, comprising fault gouge/breccia.									
		<<Struc: 63 - 63.01 Moderate (Alt) dominant foliation>>									
		<<Struc: 68.5 - 68.51 Moderate (Alt) dominant foliation>>									
		<<Struc: 81 - 81.01 Moderate (Alt) dominant foliation>>									
		85.65 87.00 RHYcw Curdy textured-flow banded (flows, subvolcanics)									
		85.65 - 87: Interval of RHYcw, flow banded texture marked siliceous bands, concordant. Associated with strong Si.									
		<<Min: 85.65 - 87 2% Min: Pyrite>> Occuring as thin stringers and also disseminated within the matrix.									
		<<Min: 85.65 - 89.7 2% Min: Calcite>>									
		<<Struc: 86 - 86.01 Weak (Alt) Foliation>>									
		87.00 89.70 RHY undifferentiated rhyolite									
		87 - 89.7: Grey/greenish, fine grained, homogeneous. Moderate to strongly silica altered. Could be RHYi.									
		<<Min: 87 - 93.42 1% Min: Pyrite>>									
		89.70 90.15 MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
		89.7 - 90.15: Short interval of MAFi, Bi altered.									
		<<Min: 89.7 - 90.15 6% Min: Calcite>>									
		<<Alt: 89.7 - 90.15 Moderate (Alt) Chlorite>> Associated with MAFi.									
		<<Alt: 89.7 - 90.15 Moderate (Alt) Biotite>> Associated with MAFi.									
		90.15 93.42 RHYcw Curdy textured-flow banded (flows, subvolcanics)									
		90.15 - 93.42: grey to greenish, aphanitic to fine grained. Banded texture marked by siliceous/leucocratic bands, concordant, locally deformed. Matrix moderately Mu altered. Could be RHYi strongly foliated.									
		<<Min: 90.15 - 93.42 2% Min: Calcite>>									



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-323

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<div><<Min: 91.22 - 93.05 0.5% Min: Galena>> At the margins of Qtz veins.</div> <div><<Vein: 91.22 - 93.05 25% Quartz 35 deg. >> Group of grey qtz veins, subconcordant, 5-15 cm wide. GL/PY at the margins.</div> <div><<Struc: 90.15 - 90.25 Strong (Alt) Fault>> Fault gouge</div> <div><<Struc: 91 - 91.01 Moderate (Alt) Foliation>></div> <div><<Struc: 92.82 - 92.9 Strong (Alt) Fault>> Fault gouge</div>											
93.42	94.33	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)			MG					
93.42 - 94.33: Short interval of MAFi, Bi/Cl altered. Calcite blebs/veinlets distributed within matrix.											
<div><<Min: 93.42 - 94.33 2% Min: Pyrite>> Coarse grained, disseminated within Cl altered matrix.</div> <div><<Min: 93.42 - 108.7 3% Min: Calcite>> Also veinlets/fracture filling</div> <div><<Alt: 93.42 - 94.33 Weak (Alt) Chlorite>> MAFi</div>											
94.33	97.00	RHYcw	Curdy textured-flow banded (flows, subvolcanics)			FG					
94.33 - 97: grey to greenish, aphanitic to fine grained. Banded texture marked by siliceous/leucocratic bands, concordant, locally deformed. Matrix moderately Mu altered. Could be RHYi strongly foliated.											
<div><<Min: 94.33 - 104.15 2% Min: Pyrite>> Occuring as small aggregates, stringers/fracture filling.</div> <div><<Min: 94.33 - 104.15 0.5% Min: Galena>> Associated with py stringers.</div>											
97.00	108.60	RHYi	Aphanitic Rhyolite (intrusion) beige			VFG					
97 - 108.6: Unit of RHYi, grey to light grey, aphanitic to very fine grained, fractured unit and also locally micro cracked (consolidate), homogeneous texture. Locally banded texture marked by parallel leucocratic bands. Mostly, the texture is more massive, homogeneous, with aphanitic matrix. QE, mm, disseminated within matrix. Locally, interval marked by diffused hematite associated with albite alteration ?. Mineralized, 1-2 % of py, occurring as thin stringers, filling fractures and also disseminated. Locally crosscut by grey qtz veins.											
<div><<Min: 104.15 - 106.2 2% Min: Sphalerite>> Occuring as wisps/stringers and also associated with veinlets.</div> <div><<Min: 104.15 - 106.2 2% Min: Pyrite>> Occuring as wisps/stringers and also associated with veinlets.</div> <div><<Min: 106.2 - 108.6 0.5% Min: Sphalerite>></div> <div><<Min: 106.2 - 108.6 1% Min: Pyrite>> And also stringers.</div> <div><<Struc: 108 - 108.01 Weak (Alt) Foliation>></div>											
			104.15	105.50	1.35	B00232717	1.4	0.016	-0.01	0.01	0.03
			105.50	107.00	1.50	B00232718	2.1	0.015	-0.01	0.03	0.61
			107.00	108.00	1.00	B00232719	5	0.023	0.01	0.06	0.13
			108.00	108.60	0.60	B00232721	5.4	0.022	-0.01	0.08	0.36



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-323

From (m)		To (m)		Rocktype & Description										
108.60	109.25	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides											MCG
108.6 - 109.25: Massive sulphide, sharp upper contact, medium to coarse grained, weak laminated texture marked by Sp bands.														
<<Min: 108.6 - 109.25 4% Min: Sphalerite>> Fine/medium grained.														
<<Min: 108.6 - 109.25 1% Min: Galena>>														
<<Min: 108.6 - 110.1 70% Min: Pyrite>> Massive sulphide, OB/OA														
<<Struc: 108.6 - 108.61 Contact>> Upper contact of massive sulphide.														
109.25	111.90	OA	Magnetite bearing sulphides											MCG
109.25 - 111.9: Massive sulphide, medium to coarse grained, weak laminated texture marked by Mg bands (coarse grained). Crosscut by massive qtz vein, heavily mineralised (Py,Gl,Sp).														
<<Min: 109.25 - 110.1 3% Min: Sphalerite>> Occuring as thin bands.														
<<Min: 109.25 - 110.1 10% Min: Magnetite>> Coarse grained, Occuring as bands														
<<Min: 109.25 - 110.1 3% Min: Galena>>														
<<Min: 110.1 - 111 5% Min: Sphalerite>> Qtz vein associated.														
<<Min: 110.1 - 111 12% Min: Pyrite>> Large py aggregates within and at the Qtz vein margins.														
<<Min: 110.1 - 111 6% Min: Galena>> Qtz vein associated.														
<<Min: 111 - 111.3 1% Min: Sphalerite>>														
<<Min: 111 - 111.3 1% Min: Pyrite>>														
<<Min: 111.3 - 111.9 5% Min: Sphalerite>>														
<<Min: 111.3 - 111.9 8% Min: Magnetite>> Coarse grained, Occuring as bands														
<<Min: 111.3 - 111.9 6% Min: Galena>>														
<<Min: 111.3 - 112.95 70% Min: Pyrite>>														
<<Vein: 110.1 - 111 95% Quartz 50 deg. >> Massive grey qtz vein, heavily mineralised, large aggregate of Py associated with Gl and Sp. Subconcordant.														
111.90	112.95	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides											FMG
111.9 - 112.95: Massive sulphide, sharp lower contact, fine to medium grained, weak laminated texture marked by Sp bands.														
<<Min: 111.9 - 112.95 2% Min: Sphalerite>>														
<<Min: 111.9 - 112.95 2% Min: Galena>>														

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
108.60	109.25	0.65	B00232722	92.7	0.669	0.17	2.05	2.9

109.25	110.10	0.85	B00232723	161	0.86	0.14	4.17	5.38
--------	--------	------	-----------	-----	------	------	------	------

110.10	111.00	0.90	B00232724	64.5	0.348	0.06	1.28	1.26
111.00	111.90	0.90	B00232725	131	0.543	0.82	2.51	4.4

111.90	112.95	1.05	B00232726	258	0.589	0.04	5.22	9.86
--------	--------	------	-----------	-----	-------	------	------	------

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-323

From (m) To (m) Rocktype & Description

112.95 147.35 RHYi Aphanitic Rhyolite (intrusion) VFG

112.95 - 147.35: Unit of RHYi, grey/beige and pinkish (hematite), aphanitic to very fine grained, fractured unit and also locally micro cracked (consolidate), homogeneous texture. Locally banded texture marked by parallel leucocratic bands. Mostly, the texture is more massive, homogeneous, with aphanitic matrix. QE, mm, disseminated within matrix. Diffused hematite associated with moderate/strong albite alteration. Mineralized, 2-3 % of py, occurring as thin stringers, filling fractures and also disseminated. Locally crosscut by grey qtz veins.

<<Min: 112.95 - 115.05 1% Min: Pyrite>>

<<Min: 112.95 - 147.35 3% Min: Calcite>> Fracture filling

<<Min: 115.05 - 116.1 0.5% Min: Sphalerite>> Associated with qtz vein (margins)

<<Min: 115.05 - 116.1 1% Min: Galena>> Associated with qtz vein (margins)

<<Min: 116.1 - 144.8 3% Min: Pyrite>> 2-3 % of py, occurring as thin stringers, filling fractures and also disseminated

<<Min: 144.8 - 147.35 4% Min: Pyrite>> 2-3 % of py, occurring as thin stringers, filling fractures and also disseminated

<<Alt: 117 - 142.13 Moderate (Alt) Albite>> Pervasive/patchy alteration, moderate to strong, associated with diffused hematite.

<<Vein: 115.05 - 116.1 90% Quartz 50 deg. >> Massive irregular grey qtz vein, associated with GL and Sp at the margins.

<<Struc: 112.95 - 112.96 Contact>> Lower contact of massive sulphide.

<<Struc: 125.5 - 125.51 Moderate (Alt) Foliation>>

147.35 149.64 OI Heavily disseminated sulphides in host schist FMG

147.35 - 149.64: Interval of OI/OB, interval heavily mineralized, occurring as fine/medium grained bands (moderate laminated texture). Strongly Ca altered, fracture filling/breccia.

<<Min: 147.35 - 148.72 40% Min: Pyrite>> Occuring as fine/medium grained bands.

<<Min: 147.35 - 148.72 3% Min: Galena>>

<<Min: 147.35 - 148.72 0.5% Min: Chalcopryite>>

<<Min: 147.35 - 148.72 8% Min: Calcite>> Fracture filling and pervasive

<<Struc: 148.72 - 149.64 Strong (Alt) Fault>> Fault gouge.

149.64 150.75 OI Heavily disseminated sulphides in host schist CG

149.64 - 150.75: Interval of OI/OB, interval heavily mineralized, Coarse grained py disseminated. Strongly Ca altered, fracture filling/breccia. Sharp lower contact.

<<Min: 149.64 - 150.64 3% Min: Sphalerite>>

<<Min: 149.64 - 150.64 6% Min: Galena>>

<<Min: 149.64 - 150.64 1% Min: Chalcopryite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
112.95	114.00	1.05	B00232727	2.1	0.017	-0.01	0.03	0.03

114.00	115.05	1.05	B00232728	1.7	0.014	-0.01	0.02	0.03
115.05	116.10	1.05	B00232729	3	0.019	-0.01	0.05	0.06
116.10	117.00	0.90	B00232731	1.4	0.009	-0.01	0.02	0.02
143.00	144.50	1.50	B00232732	1.8	0.014	-0.01	0.01	-0.01
144.50	146.00	1.50	B00232733	3	0.012	-0.01	-0.01	0.01
146.00	147.35	1.35	B00232734	2.3	0.023	-0.01	0.01	-0.01

147.35	148.35	1.00	B00232735	28.7	0.43	-0.01	0.79	3.65
--------	--------	------	-----------	------	------	-------	------	------

148.35	148.72	0.37	B00232736	130	0.796	0.49	4.4	8.87
148.72	149.64	0.92	B00232737	7.9	0.023	0.05	0.1	0.24

149.64	150.75	1.11	B00232738	299	1.07	0.83	4.9	11.8
--------	--------	------	-----------	-----	------	------	-----	------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-323

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %	
<<Min: 149.64 - 150.75 40% Min: Pyrite>> Coarse grained.												
<<Min: 149.64 - 150.75 5% Min: Calcite>> Fracture filling and pervasive												
<<Min: 150.64 - 151.58 4% Min: Pyrite>> Large aggregates diss within matrix.												
150.75	158.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	FCG	150.75	152.00	1.25	B00232739	8.6	0.083	0.09	0.12	0.69
150.75 - 158: Light grey to greenish, strongly foliated and altered MAFI unit, fine to coarse grained. 150.75m to 154.4m, strong pervasive MU alteration, following by the overprinted CL. Moderate to strong Ca alteration (blebs/veinlets).												
<<Min: 150.75 - 158 7% Min: Calcite>> Blebs/stringers.												
<<Min: 151.58 - 158 1% Min: Pyrite>>												
<<Alt: 150.75 - 154.4 Strong (Alt) Muscovite>> MAFi altered												
<<Alt: 154.4 - 158 Moderate (Alt) Chlorite>> MAFi												
<<Vein: 153 - 154.4 60% Quartz>> Interval comprising irregular and deformed qtz+/-Ca veins, decimetric.												
<<Struc: 150.75 - 150.76 Contact>> Lower contact of massive sulphide (sharp).												
<<Struc: 150.75 - 150.93 Strong (Alt) Fault>> Fault gouge												
<<Struc: 154.4 - 155.35 Strong (Alt) Fault>> Fault gouge												
<<Struc: 156.5 - 156.51 Strong (Alt) Foliation>>												
158.00	170.25	RHY undifferentiated rhyolite light grey	FMG	152.00	153.00	1.00	B00232741	0.6	-0.005	0.02	0.02	0.03
158 - 170.25: Light grey, fine to medium grained, strongly foliated associated with strong MU alteration. Homogeneous unit, comprising locally siliceous bands, concordant. Could be RHY volcanoclastic, Ash?												
162-162.2m: Short MDS interval, bedding texture.												
<<Min: 158 - 169.38 0.5% Min: Pyrite>>												
<<Min: 158 - 169.38 1% Min: Pyrrhotite>>												
<<Min: 158 - 171.43 1% Min: Calcite>>												
<<Min: 169.38 - 170.25 3% Min: Pyrrhotite>> Also thin stringers												
<<Alt: 158 - 169.38 Strong (Alt) Muscovite>> Original alteration?												
<<Alt: 169.38 - 170.53 Strong (Alt) Chlorite>> Strong CL associated with MU? Py disseminated.												
<<Struc: 158 - 159.2 Strong (Alt) Fault>> Fault gouge												
<<Struc: 163 - 163.01 Strong (Alt) Foliation>>												
<<Struc: 166 - 166.01 Strong (Alt) Foliation>>												
170.25	171.43	MDS Carbonaceous Mudstone & Tuffaceous Mudstone	dark grey FG									
170.25 - 171.43: Mudstone unit, strongly fractured/foliated, MU altered. Comprising fault gouge.												

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-323

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<p><<Min: 170.25 - 170.52 7% Min: Pyrite>> Occuring as bands/aggregates and also disseminated. Associated with Cl alteration (original?)</p> <p><<Min: 170.25 - 170.52 2% Min: Pyrrhotite>> Associated with Cl alteration (original?)</p> <p><<Struc: 171 - 171.1 Strong (Alt) Foliation>></p> <p>171.43 181.65 FBX Fault Breccia</p> <p>171.43 - 181.65: Fault breccia interval, comprising polygenetic fragments (RHY/MDS/MXSX, RHY dominant) within MU/SR matrix, heterogeneous, cm size. Probably the East fault.</p> <p><<Vein: 179.65 - 181.3 30% Quartz>> Grey qtz veins, fractured/fragmented, centimetric, unmineralized.</p> <p><<Struc: 171.43 - 181.65 Intense (Alt) Fault>> Fault gouge. East fault</p> <p>181.65 187.45 RHYva Coarse grained to ash tuff grey FMG</p> <p>181.65 - 187.45: Greyish, fine to medium grained, homogeneous, foliated. Marked by Cl alteration, pervasive/patchy, and also MU in fracture surface. Very small QE distributed within matrix. Could be a fine grained ash tuff.</p> <p><<Min: 181.65 - 189.17 10% Min: Calcite>> Blebs/stringers/fracture filling</p> <p><<Min: 181.65 - 229.8 0.5% Min: Pyrite>> Interval weakly mineralised.</p> <p><<Alt: 181.65 - 187.45 Weak (Alt) Chlorite>> Pervasive/patchy</p> <p><<Struc: 182.5 - 182.51 Moderate (Alt) Foliation>></p> <p>187.45 189.17 MAFi Mafic Intrusions (primarily brown FG</p> <p>footwall mafic intrusion)</p> <p>187.45 - 189.17: Brownish, fine grained, homogeneous, Bi altered. Strongly Ca altered (pervasive/blebs/ deformed veinlets). Sharp contacts. Mafic intrusive?</p> <p><<Alt: 187.45 - 189.17 Moderate (Alt) Biotite>> Matrix altered (MAFi)</p> <p><<Struc: 189 - 189.01 Moderate (Alt) Foliation>></p> <p>189.17 229.80 RHYva Coarse grained to ash tuff grey FMG</p> <p>189.17 - 229.8: Greyish, fine to medium grained, heterogeneous, strongly foliated. Comprising multiple fault intervals/breccia (locally fault gouge). After 220m, Small BI porphyroblasts appears, disseminated within weak cl altered matrix. MU in fracture surface. < 5% of small QE (blue) distributed within matrix. The CL alteration is locally patchy, similar to fragment/clast Cl altered. Comprising irregular Qtz-Ca-TL vein/veinlet (trace). Probably fine grained ash tuff.</p> <p>198.75-201.7m: Qtz/Felspar crystal within matrix, subheudral, crystal tuff interval?</p> <p><<Min: 189.17 - 229.8 4% Min: Calcite>> Occuring as blebs/fracture filling and thin veinlets. Locally weakly pervasive.</p> <p><<Alt: 189.17 - 215.75 Strong (Alt) Muscovite>> Associated with intense foliation.</p> <p><<Alt: 220.82 - 229.8 Weak (Alt) Chlorite>> Original? Also patchy.</p> <p><<Alt: 220.82 - 229.8 Weak (Alt) Biotite>> Small BI porphyroblasts appears (flakes mm), disseminated within weak cl altered matrix</p>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-323

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Vein: 227 - 227.7 15% Tourmaline>> Group of thin QTZ-TL vein/veinlet, discordant, weakly folded.											
<<Struc: 189.35 - 195 Strong (Alt) Fault>> Interval fractured/brecciated. Comprising fault gouge.											
<<Struc: 197.85 - 215.75 Strong (Alt) Fault>> Interval fractured/brecciated. Comprising fault gouge.											
End of Hole @ 229.8											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-324

Prospect:	ABM	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Florent Pons
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Dillon Hume	Date Logging Start:	16-Nov-15
UTM Easting	415076	Core Size:	HQ3	Azimuth:	180.27	Date Logging Complete:	20-Nov-15
UTM Northing:	6815517	Casing Pulled?:	Yes	Dip:	-70	Drill Company:	Geotech
UTM Elev. (m):	1385.985	Casing Depth (m):	16.5	Length (m):	362	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	15-Nov-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK camp	Drill Completed:	20-Nov-15
Local Elev. (m):						Purpose:	Exploration
Comments:						Parent Hole:	

K15-324 targetted mafic hosted Krakatoa type mineralization beneath the main ABM deposit. No significant mineralization and alteration have been encountered in the footwall. After 305 m, remainder of hole was fine grained RHYv(a,l) with portions of pervasive chlorite alteration associated with biotite disseminated (porphyroblasts/flakes).

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-70	180.27	0	180.27	APS	Dillon Hume	15-Nov-15		<input checked="" type="checkbox"/>	
23	-70.1	159.3	22.5	181.8	ReflexEVS	Geotech	14-Nov-15	5760	<input checked="" type="checkbox"/>	
56	-70.1	163.9	22.5	186.4	ReflexEVS	Geotech	15-Nov-15	5742	<input checked="" type="checkbox"/>	
83	-69.4	161.9	22.5	184.4	ReflexEVS	Geotech	15-Nov-15	5879	<input checked="" type="checkbox"/>	
101	-69.5	160.4	22.5	182.9	ReflexEVS	Geotech	15-Nov-15	5382	<input checked="" type="checkbox"/>	Low MAG
125	-69.8	161.4	22.5	183.9	ReflexEVS	Geotech	15-Nov-15	5749	<input checked="" type="checkbox"/>	
155	-69.5	167.5	22.5	190	ReflexEVS	Geotech	16-Nov-15	5760	<input checked="" type="checkbox"/>	
176	-69.1	168.1	22.5	190.6	ReflexEVS	Geotech	16-Nov-15	5730	<input checked="" type="checkbox"/>	
203	-68.7	167.7	22.5	190.2	ReflexEVS	Geotech	16-Nov-15	5805	<input checked="" type="checkbox"/>	
230	-68.7	170.7	22.5	193.2	ReflexEVS	Geotech	17-Nov-15	5742	<input checked="" type="checkbox"/>	
254	-68.7	168.5	22.5	191	ReflexEVS	Geotech	17-Nov-15	5742	<input checked="" type="checkbox"/>	
278	-68.6	171.3	22.5	193.8	ReflexEVS	Geotech	18-Nov-15	5732	<input checked="" type="checkbox"/>	
308	-68.2	177.6	22.5	200.1	ReflexEVS	Geotech	18-Nov-15	5813	<input checked="" type="checkbox"/>	
332	-68.1	172	22.5	194.5	ReflexEVS	Geotech	18-Nov-15	5721	<input checked="" type="checkbox"/>	
356	-67.9	174.9	22.5	197.4	ReflexEVS	Geotech	19-Nov-15	5732	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	17.70	OVBN Overburden									
0 - 17.7: Casing at 16.5m.											



From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
17.70	18.95	RHYcw Curdy textured-flow banded (flows, subvolcanics) grey									
<p>17.7 - 18.95: Grey, moderately foliated, Mu altered (moderate) associated with weak chlorite alteration (pervasive). Comprising thin siliceous bands, deformed, moderately folded/dismembered, marked a banded texture. Probably RHYcw.</p> <p><<Min: 17.7 - 18.95 2% Min: Calcite>></p> <p><<Min: 17.7 - 30.4 1% Min: Pyrrhotite>> Disseminated, locally occurring as small wisps.</p>											
18.95	19.40	MAFi Mafic Intrusions (primarily footwall mafic intrusion) brown FG									
<p>18.95 - 19.4: Brownish, fine grained, homogeneous. Matrix moderately biotite altered, pervasive. Strong pervasive calcite, also occurring as thin bands/veinlets. Gradual/diffused contacts. MAFi?</p> <p><<Min: 18.95 - 19.4 8% Min: Calcite>> Pervasive and occurring as blebs/veinlets.</p> <p><<Alt: 18.95 - 19.4 Moderate (Alt) Biotite>> Matrix moderately Bi altered.</p>											
19.40	38.72	RHYvl Lapilli tuff light grey MCG									
<p>19.4 - 38.72: Light grey, fine to medium grained, homogeneous, moderately foliated. Comprising fragments/lapilli, cm size, siliceous, deformed, distributed within fine grained matrix (MU altered). 1-2 % of PO/Py disseminated. Volcanoclastic unit, probably RHYvl.</p> <p><<Min: 19.4 - 83 3% Min: Calcite>></p> <p><<Min: 30.4 - 38.72 2% Min: Pyrite>> Occuring as small wisps and folded/dismembered bands, also disseminated.</p> <p><<Min: 30.4 - 38.72 0.5% Min: Pyrrhotite>></p> <p><<Vein: 26.2 - 30.4 20% Quartz>> Interval of veining, grey qtz veins,boudinaged, strongly deformed, 2-20 m wide, margins chlorite altered.</p>											
38.72	40.43	RHYcw Curdy textured-flow banded (flows, subvolcanics) light grey									
<p>38.72 - 40.43: Light grey, characterized by siliceous bands, folded, locally dismembered, flow banded/curdy texture. Interval of RHYcw.</p> <p><<Min: 38.72 - 39.28 4% Min: Pyrite>> Occuring as deformed bands, coarse grained. Also wisps.</p> <p><<Min: 39.28 - 41.22 1% Min: Pyrite>> Also disseminated.</p> <p><<Min: 39.28 - 41.22 1% Min: Pyrrhotite>> Also disseminated.</p>											
40.43	64.85	RHYvl Lapilli tuff light grey MCG									
<p>40.43 - 64.85: Light grey, fine to medium grained, homogeneous, moderately foliated. Comprising fragments/lapilli, cm size, siliceous, deformed, distributed within fine grained matrix (MU altered). Locally banded texture marked by siliceous bands/stretched fragment, irregular and deformed. 1-2 % of PO/Py disseminated. Volcanoclastic unit, probably RHYvl.</p>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-324

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 41.22 - 42 0.5% Min: Sphalerite>> Small blebs/aggregate disseminated. <<Min: 41.22 - 42 5% Min: Pyrite>> Occuring as thin stringer/fracture filling. <<Min: 42 - 45.17 3% Min: Pyrite>> Occuring as thin stringers and disseminated. <<Min: 45.17 - 49 1% Min: Pyrite>> <<Min: 49 - 54.35 2% Min: Pyrite>> <<Min: 49 - 54.35 2% Min: Pyrrhotite>> <<Min: 54.35 - 62 3% Min: Pyrrhotite>> Also occuring as small wisps. <<Min: 62 - 73 2% Min: Pyrrhotite>> Occuring as thin stringers and also disseminated. <<Alt: 61.75 - 72 Moderate (Alt) Muscovite>> Moderate to strong MU original alteration. "shiny" fracture surface.											
64.85	84.10	RHYcw Curdy textured-flow banded light grey (flows, subvolcanics)	73.00	73.50	0.50	B00232744	1.2	-0.005	0.04	-0.01	0.19
64.85 - 84.1: Light grey, siliceous unit, characterized by siliceous bands, folded, locally dismembered, flow banded/curdy texture well developed. Moderate to strongly MU altered (original?). Blue QE distributed within the matrix, < 3%. 2 % of po disseminated and occuring as thin stringers/wisps. Interval of RHYcw.											
<<Min: 73 - 73.1 10% Min: Pyrite>> Fracture filling, associated with Qtz+Ca. <<Min: 73 - 73.1 10% Min: Pyrrhotite>> Fracture filling, associated with Qtz+Ca. <<Min: 73 - 73.1 5% Min: Chalcopyrite>> Fracture filling, associated with Qtz+Ca. <<Min: 73.1 - 77.45 2% Min: Pyrrhotite>> Occuring as thin stringers and also disseminated. <<Min: 77.45 - 84.1 0.5% Min: Pyrrhotite>> <<Alt: 83.9 - 85.4 Moderate (Alt) Cordierite>> Occuring as heterogeneous porphyroblats disseminated. <<Struc: 66 - 66.01 Strong (Alt) Foliation>> <<Struc: 76 - 76.01 Strong (Alt) Foliation>> <<Struc: 77.45 - 77.87 Strong (Alt) Fault>> Fault gouge interval, <<Struc: 80 - 80.01 Strong (Alt) Foliation>>											
84.10	84.88	OJ Heavily disseminated sulphides in proximal altered rock	84.10	84.88	0.78	B00232754	46.3	0.151	0.63	0.16	0.82
84.1 - 84.88: Interval of OJ, strong PO mineralisation, occuring as subparallel bands, laminated texture. Associated with Mu and CI alteration (original). <<Min: 84.1 - 84.88 15% Min: Pyrrhotite>> Occuring as subparallel bands <<Min: 84.1 - 84.88 2% Min: Chalcopyrite>> <<Struc: 84.1 - 84.11 Contact>> Sharp uuper contact of OJ <<Struc: 84.5 - 84.51 Strong (Alt) Foliation>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-324

From (m) To (m) Rocktype & Description

84.88 87.70 OG Chalcopyrite rich sulphides FMG

84.88 - 87.7: OG interval, 8-25 % of semi-massive Cp, associated with Po/Py/Sp/GL. < 5% of magnetite disseminated (coarse grained) Homogeneous texture, fine/medium grained, locally laminated marked by bands of mineralisation. Comprising calcite veinlets (fracture filling).

<<Min: 84.88 - 85.4 10% Min: Sphalerite>> as bands.

<<Min: 84.88 - 85.4 15% Min: Pyrite>>

<<Min: 84.88 - 85.4 20% Min: Pyrrhotite>>

<<Min: 84.88 - 85.4 10% Min: Galena>>

<<Min: 85.4 - 86.25 6% Min: Sphalerite>>

<<Min: 85.4 - 86.25 20% Min: Pyrite>>

<<Min: 85.4 - 86.25 25% Min: Pyrrhotite>>

<<Min: 85.4 - 86.25 2% Min: Galena>>

<<Min: 85.4 - 86.25 25% Min: Chalcopyrite>> 25-30 % of Cp, semi massive to massive

<<Min: 86.25 - 87.2 10% Min: Sphalerite>>

<<Min: 86.25 - 87.2 15% Min: Pyrite>>

<<Min: 86.25 - 87.2 20% Min: Pyrrhotite>>

<<Min: 86.25 - 87.2 20% Min: Chalcopyrite>>

<<Min: 87.2 - 88.8 8% Min: Pyrrhotite>> Associated with interval strongly cordierite altered.

<<Alt: 87.2 - 88.8 Weak (Alt) Muscovite>>

<<Alt: 87.2 - 88.8 Strong (Alt) Cordierite>> Large porphyroblasts.

87.70 88.80 RHY undifferentiated rhyolite FCG

87.7 - 88.8: Interval brecciated and altered by cordierite (large porphyroblasts), between 2 lenses of massive sulphide. 5-10 % of Po, patchy. Difficult to determinate the protolith.

88.80 89.15 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides FG

88.8 - 89.15: Massive sulphide Cp rich, ~ 10% of Cp (patchy). Fine grained.

<<Min: 88.8 - 89.15 5% Min: Sphalerite>>

<<Min: 88.8 - 89.15 75% Min: Pyrite>> OB

<<Min: 88.8 - 89.15 3% Min: Galena>>

<<Min: 88.8 - 89.15 10% Min: Chalcopyrite>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
84.88	85.40	0.52	B00232755	248	1.55	4.93	1.48	5.43

85.40	86.25	0.85	B00232756	255	2.24	7.32	1.18	3.37
86.25	86.90	0.65	B00232757	146	1.04	2.66	0.78	8.38
86.90	87.70	0.80	B00232758	157	1.39	5.4	0.25	3.83

87.70	88.20	0.50	B00232759	162	2.05	6.01	0.27	0.66
-------	-------	------	-----------	-----	------	------	------	------

88.20	88.80	0.60	B00232761	5.8	0.291	0.31	-0.01	0.05
88.80	89.15	0.35	B00232762	134	2.45	5.11	0.13	3.65



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-324

From (m) To (m) Rocktype & Description

89.15 93.48 RHY undifferentiated rhyolite light grey

89.15 - 93.48: Interval strongly foliated and Mu altered, locally banded texture seems conserved, marked by deformed siliceous bands. Could be RHYcw.

<<Min: 89.15 - 91.2 4% Min: Pyrite>> fine/medium grained, occurring as large bands.

<<Min: 91.2 - 93.48 1% Min: Pyrite>>

<<Alt: 89.15 - 90.85 Moderate (Alt) Silicification>> Associated with stron dolomite alteration.

<<Alt: 89.15 - 90.85 Moderate (Alt) Muscovite>>

<<Alt: 89.15 - 90.85 Moderate (Alt) Cordierite>> Large porphyroblasts.

<<Alt: 90.85 - 93.48 Strong (Alt) Muscovite>> Associated with strong foliation.

93.48 93.90 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides MG

93.48 - 93.9: Interval of massive sulphide, essentially composed by massive py with 2-3% of Sp disseminated. Sharp contacts

<<Min: 93.48 - 93.9 2% Min: Sphalerite>> OB

<<Min: 93.48 - 93.9 70% Min: Pyrite>> OB

<<Struc: 93.48 - 93.49 Contact>> Sharp upper contact of massive sulphide OB.

93.90 100.65 RHYcw Curdy textured-flow banded light grey (flows, subvolcanics)

93.9 - 100.65: Light grey, characterized by siliceous bands, folded, locally dismembered, flow banded/curdy texture locally developed. Strongly MU altered (original). Blue QE distributed within the matrix ? 3-4 % of py disseminated and occurring as thin stringers/wisps. RHYcw?.

<<Min: 93.9 - 100.65 4% Min: Pyrite>> 4-5%. Thin stringers/wisps, also disseminated.

<<Alt: 93.9 - 100.65 Strong (Alt) Muscovite>>

<<Vein: 93.9 - 96.15 15% Quartz>> Interval of veining, grey qtz veins, +/- dolomite, boudinaged, strongly deformed, 5-10 m wide.

100.65 106.10 OA Magnetite bearing sulphides FCG

100.65 - 106.1: Massive sulphide, OA, ~ 10 % of coarse grained magnetite, occurring as bands, marked laminated texture.

<<Min: 100.65 - 106.1 5% Min: Sphalerite>>

<<Min: 100.65 - 106.1 5% Min: Pyrrhotite>>

<<Min: 100.65 - 106.1 10% Min: Magnetite>> Occuring as bands

<<Min: 100.65 - 107.55 70% Min: Pyrite>> Fine grained

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
89.15	90.00	0.85	B00232763	387	4.68	1.03	0.03	0.18

90.00	91.50	1.50	B00232764	2.2	0.035	0.03	-0.01	0.04
91.50	93.00	1.50	B00232765	1.1	-0.005	-0.01	-0.01	0.03
93.00	93.48	0.48	B00232766	2.3	0.009	-0.01	0.02	0.07

93.48	93.90	0.42	B00232767	55.3	0.316	0.35	0.62	5.85
-------	-------	------	-----------	------	-------	------	------	------

93.90	95.00	1.10	B00232768	3.1	0.05	0.06	0.05	0.14
-------	-------	------	-----------	-----	------	------	------	------

95.00	96.50	1.50	B00232769	3.5	-0.005	-0.01	0.03	0.06
96.50	98.00	1.50	B00232771	0.9	-0.005	-0.01	-0.01	0.05
98.00	99.50	1.50	B00232772	0.7	-0.005	-0.01	-0.01	0.02

99.50	100.65	1.15	B00232773	8.8	0.145	0.15	0.03	0.06
100.65	101.30	0.65	B00232774	97.4	0.749	2.38	0.29	2.87

101.30	102.00	0.70	B00232775	67.7	0.818	1.03	0.64	2.28
102.00	103.00	1.00	B00232776	69.5	0.654	1.12	0.62	2.11
103.00	104.00	1.00	B00232777	48.5	0.786	0.66	0.33	2.47
104.00	105.00	1.00	B00232778	39.3	0.493	0.5	0.27	0.45



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-324
From (m) **To (m)** **Rocktype & Description**

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
105.00	106.00	1.00	B00232779	31.7	0.485	0.47	0.12	0.24
106.00	106.80	0.80	B00232781	34.8	1.12	0.38	0.3	0.6

106.10 106.80 OB **Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides**

FG

106.1 - 106.8: Homogeneous OB massive sulphide.

<<Min: 106.1 - 107.55 4% Min: Sphalerite>> Occuring as bands.

<<Min: 106.1 - 107.55 1% Min: Galena>>

<<Min: 106.1 - 107.55 1% Min: Chalcopryrite>>

106.80 107.28 OA **Magnetite bearing sulphides**

FCG

106.8 - 107.28: Massive sulphide, OA, ~ 6 % of coarse grained magnetite, occuring as bands, marked laminated texture.

<<Min: 106.8 - 107.55 6% Min: Magnetite>> Coarse grained, disseminated.

107.28 108.74 OB **Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides**

MG

107.28 - 108.74: OB interval, comprising fragments of Qtz-barite? Associated with Galena.

<<Min: 107.55 - 108.74 10% Min: Sphalerite>> Fine to medium grained.

<<Min: 107.55 - 108.74 60% Min: Pyrite>>

<<Min: 107.55 - 109 8% Min: Galena>> Medium grained.

<<Min: 107.55 - 109 1% Min: Chalcopryrite>>

<<Struc: 107.41 - 107.55 Moderate (Alt) Fault>> Open cavity, geode.

108.74 109.00 OA **Magnetite bearing sulphides**

FCG

108.74 - 109: Short OA interval.

<<Min: 108.74 - 109 5% Min: Sphalerite>>

<<Min: 108.74 - 109 70% Min: Pyrite>>

<<Min: 108.74 - 109 10% Min: Magnetite>> Occuring as bands

109.00 114.05 OB **Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides**

MG

109 - 114.05: Laminated texture marked by Sp bands. Comprising fragmented veins/fracture filling of qtz + barite?.

<<Min: 109 - 112 10% Min: Sphalerite>> Fine to medium grained, occuring as bands.

106.80	107.28	0.48	B00232782	48.6	0.697	0.38	0.34	3.48
--------	--------	------	-----------	------	-------	------	------	------

107.28	108.00	0.72	B00232783	131	1.63	0.28	2.37	9.65
--------	--------	------	-----------	-----	------	------	------	------

108.00	108.74	0.74	B00232784	223	2.32	0.33	1.67	6.37
--------	--------	------	-----------	-----	------	------	------	------

108.74	109.15	0.41	B00232785	141	1.83	0.59	1.54	8.08
--------	--------	------	-----------	-----	------	------	------	------

109.15	110.00	0.85	B00232786	381	4.71	0.17	4.24	13.3
--------	--------	------	-----------	-----	------	------	------	------

110.00	111.00	1.00	B00232787	254	3.41	0.19	2.23	8.01
--------	--------	------	-----------	-----	------	------	------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-324

From (m) To (m) Rocktype & Description

<<Min: 109 - 112 60% Min: Pyrite>>
 <<Min: 109 - 112 10% Min: Galena>> Medium grained, patchy.
 <<Min: 109 - 112 1% Min: Chalcopryrite>>
 <<Min: 112 - 113.12 5% Min: Sphalerite>> Occuring as bands
 <<Min: 112 - 113.12 70% Min: Pyrite>>
 <<Min: 112 - 113.12 5% Min: Galena>>
 <<Min: 113.12 - 114.05 15% Min: Sphalerite>> Occuring as bands, medium grained.
 <<Min: 113.12 - 114.05 8% Min: Galena>>
 <<Min: 113.12 - 114.05 1% Min: Chalcopryrite>>
 <<Min: 113.12 - 115.25 60% Min: Pyrite>> Medium grained

114.05 114.90 OA Magnetite bearing sulphides

MCG

114.05 - 114.9: Massive sulphide, OA, ~ 10 % of coarse grained magnetite, occuring as bands, marked laminated texture. Associated with strong GL and SP.

<<Min: 114.05 - 114.9 5% Min: Sphalerite>> Occuring as bands.
 <<Min: 114.05 - 114.9 10% Min: Magnetite>> Coarse grained, occuring as bands.
 <<Min: 114.05 - 114.9 8% Min: Galena>>

114.90 115.25 OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides

FMG

114.9 - 115.25: Laminated texture marked by Py bands. Comprising cordierite porphyroblasts.

<<Min: 114.9 - 115.25 4% Min: Sphalerite>>
 <<Min: 114.9 - 115.25 5% Min: Galena>>
 <<Alt: 115.1 - 115.75 Moderate (Alt) Cordierite>> Large porphyroblasts distributed within matrix

115.25 116.50 OJ Heavily disseminated sulphides in proximal altered rock

FG

115.25 - 116.5: Interval of strongly minerlized associated with strong original altereation (CL/CI/MU), banded texture. The protolith could be MAFi altered/foliated.

<<Min: 115.25 - 115.95 8% Min: Pyrrhotite>> Occuring as bands and stringers.
 <<Min: 115.25 - 115.95 1% Min: Chalcopryrite>>
 <<Min: 115.95 - 116.5 2% Min: Sphalerite>>
 <<Min: 115.95 - 116.5 8% Min: Pyrrhotite>> Occuring as bands and stringers.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
111.00	112.00	1.00	B00232788	276	2.67	0.19	2.72	9.59
112.00	113.00	1.00	B00232789	210	2.73	0.34	0.76	3.88
113.00	114.05	1.05	B00232791	349	3.65	0.54	3.14	12.3

114.05	114.90	0.85	B00232792	221	0.88	0.46	4.43	13.7
--------	--------	------	-----------	-----	------	------	------	------

114.90	115.25	0.35	B00232793	148	3.49	2.26	1.74	6.52
--------	--------	------	-----------	-----	------	------	------	------

115.25	115.75	0.50	B00232794	49.1	0.265	0.8	0.28	1.84
--------	--------	------	-----------	------	-------	-----	------	------

115.75	116.50	0.75	B00232795	26.3	0.065	0.19	0.66	3.25
--------	--------	------	-----------	------	-------	------	------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-324

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %									
<div><<Min: 115.95 - 116.5 5% Min: Galena>></div> <div><<Min: 115.95 - 116.5 2% Min: Chalcopyrite>></div> <div><<Alt: 115.25 - 115.75 Weak (Alt) Chlorite>> Thin concordant bands</div> <div><<Alt: 115.75 - 116.5 Strong (Alt) Chlorite>> Very thin grained, associated with mineralization.</div> <div><<Struc: 115.5 - 115.51 Strong (Alt) Foliation>></div> <div><div>116.50120.20RHYundifferentiated rhyoliteFMG</div><div>116.5 - 120.2: Interval of indifferentiated RHY, moderate to strongly by original/proximal alteration (CL/MU). Comprising deformed siliceous bands/fragments. Could be MAFi altered.</div></div> <div><<Min: 116.5 - 117.55 4% Min: Pyrrhotite>> Occuring as stringer/wisps.</div> <div><<Min: 117.55 - 118.45 2% Min: Pyrrhotite>> Wisps/stringers</div> <div><<Min: 117.55 - 118.45 0.5% Min: Chalcopyrite>> Associated with PO.</div> <div><<Min: 118.45 - 119.5 1% Min: Pyrite>></div> <div><<Min: 119.5 - 121.2 1% Min: Pyrrhotite>></div> <div><<Min: 119.5 - 121.2 0.5% Min: Chalcopyrite>></div> <div><<Alt: 116.5 - 117.55 Moderate (Alt) Muscovite>></div> <div><<Alt: 117.55 - 118.45 Moderate (Alt) Muscovite>></div> <div><<Alt: 117.55 - 118.45 Moderate (Alt) Chlorite>> Occuring as decimetric bands, mineralized.</div> <div><<Alt: 118.45 - 121.5 Strong (Alt) Muscovite>></div> <div><<Struc: 116.6 - 116.61 Strong (Alt) Foliation>></div> <div><div>120.20136.15MAFiMafic Intrusions (primarily footwall mafic intrusion)FCG</div><div>120.2 - 136.15: Light grey to greenish, strongly altered and foliated MAFi. Altered by original/proximal alteration, MU and CL, occuring as bands and pervasive associated with mineralization. Calcite altered, blebs/dismembered bands distributed within matrix.</div><div>128.08-129.15m: RHYcw interval? Banded texture marked by siliceous bands.</div><div>After 131m, unit locally crosscutted by short RHYi.</div></div> <div><<Min: 121.2 - 121.55 4% Min: Pyrite>> Associated with CL band</div> <div><<Min: 121.2 - 121.55 4% Min: Pyrrhotite>> Associated with CL band</div> <div><<Min: 121.2 - 121.55 1% Min: Chalcopyrite>></div> <div><<Min: 121.55 - 127.55 0.5% Min: Pyrite>> Coarse grained.</div> <div><<Min: 121.55 - 131 7% Min: Calcite>> Associated with MAFi, occuring as blebls/dismembered bands.</div> <div><<Min: 127.55 - 127.8 5% Min: Pyrite>> Coarse grained</div> <div><<Min: 127.55 - 127.8 3% Min: Pyrrhotite>> Coarse grained.</div> <div><<Min: 127.8 - 136.15 1% Min: Pyrite>> Occuring as wisp and thin stringers</div>												116.50	118.00	1.50	B00232796	3.4	0.009	0.04	0.06	0.69

118.00	119.50	1.50	B00232797	1.4	0.033	0.01	-0.01	0.19
119.50	120.20	0.70	B00232798	1.6	0.006	0.02	0.01	0.1

120.20	121.20	1.00	B00232799	1.3	-0.005	-0.01	-0.01	0.05
--------	--------	------	-----------	-----	--------	-------	-------	------

121.20	121.55	0.35	B00232801	29.2	0.059	0.4	0.48	2.28
121.55	123.00	1.45	B00232802	0.4	-0.005	-0.01	0.01	0.02



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-324

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<div><<Min: 133.5 - 136.15 4% Min: Calcite>></div> <div><<Alt: 121.5 - 121.55 Moderate (Alt) Muscovite>></div> <div><<Alt: 121.5 - 121.55 Moderate (Alt) Chlorite>> CL bands, original alteration, associated with PO/PY/CP.</div> <div><<Alt: 121.55 - 128.08 Moderate (Alt) Chlorite>> MAFi</div> <div><<Alt: 128.08 - 136.15 Moderate (Alt) Muscovite>> Shiny MU, pervasive alteration within MAFi unit.</div> <div><<Struc: 123 - 123.01 Moderate (Alt) Foliation>></div> <div><<Struc: 130 - 130.01 Moderate (Alt) Foliation>></div> <div><<Struc: 135.3 - 135.31 Moderate (Alt) Foliation>></div> <div><div>136.15156.12RHYiAphanitic Rhyolite (intrusion)light greyVFG</div><div>136.15 - 156.12: Unit of RHYi, grey/beige, aphanitic to very fine grained, fractured unit and also locally micro cracked (consolidate), homogeneous texture. Locally banded texture marked by parallel leucocratic bands. Mostly, the texture is more massive, homogeneous, with aphanitic matrix. Locally QE, mm, disseminated within matrix. Moderate/strong albite alteration, diffused. Mineralized, 2-3 % of py, occurring as thin stringers, filling fractures and also disseminated. Locally crosscut by grey qtz veins.</div><div><<Min: 136.15 - 144.15 2% Min: Sphalerite>> Occuring as stringers associated with py.</div><div><<Min: 136.15 - 144.15 2% Min: Pyrite>> Occuring as stringers associated with Sp</div><div><<Min: 136.15 - 158 2% Min: Calcite>></div><div><<Min: 144.15 - 145.32 2% Min: Sphalerite>> Aggregate</div><div><<Min: 144.15 - 145.32 2% Min: Chalcopyrite>> Aggregate</div><div><<Min: 145.32 - 151 2% Min: Pyrite>> Occuring as wisps/stringers and also disseminated.</div><div><<Min: 151 - 156.12 0.5% Min: Chalcopyrite>> Associated with discordant qtz veinlets.</div><div><<Min: 151 - 167.8 1% Min: Sphalerite>> Occuring as veinlets/fracture filling associated with Py. Also associated with qtz veinlets.</div><div><<Min: 151 - 167.8 1% Min: Pyrite>> Occuring as veinlets/fracture filling associated with Sp</div><div><<Alt: 136.15 - 146.15 Moderate (Alt) Albite>> Patchy/pervasive.</div><div><<Alt: 145.32 - 156.12 Moderate (Alt) Albite>> Moderate to strong pervasive/diffused, beige.</div><div><<Vein: 144.15 - 145.32 95% Quartz>> Massive grey quartz vein, metric, irregular oriented. Aggregates of Cp/Sp distributed within matrix and at the margins.</div><div><<Vein: 152.32 - 152.5 70% Quartz>> Regular grey qtz +/- Cal, 10-15 cm wide. Irregular oriented.</div><div><div>156.12158.24RHYvaCoarse grained to ash tufflight greyFMG</div><div>156.12 - 158.24: Light grey, fine to medium grained, homogeneous, strongly silica altered (pervasive). >10% of small QE within fine grained matrix. Also comprising mm porphyroblasts/blebs of calcite, locally thin bands. Could be fine/medium grained ash tuff</div><div><<Alt: 156.12 - 157.24 Strong (Alt) Silicification>> Strong pervasive SI alteration</div><div><<Alt: 157.24 - 161.6 Moderate (Alt) Albite>> RHYi</div></div></div>											



Project:
KZK
Hole Number:
K15-324

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
158.24	161.60	RHYi Aphanitic Rhyolite (intrusion) beige VFG									
158.24 - 161.6: Interval of RHYi, beige, aphanitic to very fine grained, homogeneous. "pepperc" texture at the upper and lower contacts, fragmented.											
161.60	166.70	RHYva Coarse grained to ash tuff light grey FMG									
161.6 - 166.7: Light grey, fine to medium grained, homogeneous, strongly silica altered (pervasive). >10% of small QE within fine grained matrix. Also comprising mm porphyroblasts/blebs of calcite, locally thin bands. Could be fine/medium grained ash tuff											
<<Alt: 161.6 - 166.7 Moderate (Alt) Silicification>>											
166.70	167.80	RHYi Aphanitic Rhyolite (intrusion) beige VFG									
166.7 - 167.8: Interval of RHYi, beige, aphanitic to very fine grained, homogeneous, albite ltered.											
<<Alt: 166.7 - 167.8 Moderate (Alt) Albite>>											
167.80	174.78	MAFi Mafic Intrusions (primarily footwall mafic intrusion) FCG									
167.8 - 174.78: Light grey to greenish, matrix fine grained, strongly altered and foliated MAFi. Altered byMu and CL alteration, occuring as bands and pervasive associated with mineralization (Py bands). Calcite altered, blebs/dismembered bands distributed within matrix.											
<<Min: 167.8 - 168.53 1% Min: Pyrite>>											
<<Min: 167.8 - 174.78 8% Min: Calcite>> Associated with MAFi											
<<Min: 168.53 - 171.4 3% Min: Sphalerite>> Associated with PY/GL, occuring as bands/veins.											
<<Min: 168.53 - 171.4 5% Min: Pyrite>> Associated with SP/GL, occuring as bands/veins.											
<<Min: 168.53 - 171.4 1% Min: Galena>> Associated with SP/PY, occuring as bands/veins.											
<<Min: 171.4 - 174.78 1% Min: Sphalerite>> Stringers associated with Py											
<<Min: 171.4 - 174.78 1% Min: Pyrite>> Stringers associated with Sp											
<<Alt: 167.8 - 174.78 Moderate (Alt) Chlorite>> MAFi											
<<Struc: 173 - 173.01 Moderate (Alt) Foliation>>											
174.78	181.65	RHYvl Lapilli tuff light grey CG									
174.78 - 181.65: Light grey, medium/coarse grained, homogeneous, moderately foliated. Comprising fragments/lapilli, cm size, siliceous, deformed, distributed within fine grained matrix (strongly MU altered, original alteration?). Locally banded texture marked by siliceous bands/stretched fragment, irregular and deformed. 1-2 % of PO/Py disseminated. Volcanoclastic unit, probably RHYvl.											
<<Min: 174.78 - 181.65 1% Min: Pyrrhotite>> Disseminated and wispy											
<<Min: 174.78 - 216.71 2% Min: Calcite>> Associated with qtz veinlets, blebs matrix distributed.											
<<Alt: 174.78 - 181.65 Moderate (Alt) Muscovite>> Original alteration?											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
181.65	190.36	RHYcw Curdy textured-flow banded (flows, subvolcanics) beige CG									
<p>181.65 - 190.36: Light grey, characterized by siliceous bands, folded, locally dismembered, flow banded/curdy texture well developed. Moderate to strongly MU altered (original?). 1-2 % of po disseminated and occurring as thin stringers/wisps. Interval of RHYcw.</p> <p><<Min: 181.65 - 184.2 2% Min: Pyrrhotite>></p> <p><<Min: 184.2 - 187.68 1% Min: Pyrrhotite>> Also disseminated.</p> <p><<Alt: 181.65 - 187.68 Strong (Alt) Muscovite>> Original alteration?</p> <p><<Struc: 182 - 182.01 Strong (Alt) Foliation>></p> <p><<Struc: 187.1 - 187.8 Strong (Alt) Fault>> Fault gouge</p>											
190.36	261.20	RHYvl Lapilli tuff dark grey MCG									
<p>190.36 - 261.2: Dark grey, medium/coarse grained, +/- homogeneous, moderately foliated. Comprising fragments/lapilli, heterogeneous, cm size, siliceous, deformed, distributed within fine/medium grained matrix (Moderate CL/ MU altered). Weak banded texture marked by thin MU bands. Locally crosscut by qtz veins, cm to dm wide. Also comprising short interval of MAFi intrusive. 1-2 % of PO disseminated. Volcanoclastic unit, probably RHYvl. Could be RHYva with lapilli.</p> <p><<Min: 191.1 - 195.4 3% Min: Pyrrhotite>> Small wisps/disseminated within matrix.</p> <p><<Min: 195.4 - 201 2% Min: Pyrrhotite>> Occuring as small wisps and stringers</p> <p><<Min: 195.4 - 201 2% Min: Pyrite>> Occuring as small wisps and stringers</p> <p><<Min: 201 - 216.2 3% Min: Pyrrhotite>> Small wisps/disseminated within matrix.</p> <p><<Min: 216.2 - 220.9 0.5% Min: Pyrite>></p> <p><<Min: 216.71 - 264.88 1% Min: Calcite>> Trace of calcite.</p> <p><<Min: 220.9 - 225 2% Min: Pyrrhotite>> Small wisps/disseminated within matrix.</p> <p><<Min: 225 - 247.3 0.5% Min: Pyrrhotite>></p> <p><<Min: 247.3 - 248.45 1% Min: Pyrrhotite>></p> <p><<Min: 248.45 - 250.42 4% Min: Pyrite>> Occuring as thin bands/wisps, locally stringers.</p> <p><<Min: 250.42 - 253 1% Min: Pyrrhotite>></p> <p><<Min: 253 - 253.55 4% Min: Pyrrhotite>> Associated with Qtz-TL.</p> <p><<Min: 253 - 253.55 2% Min: Pyrite>> Associated with Qtz-TL.</p> <p><<Min: 253.55 - 257 1% Min: Pyrrhotite>></p> <p><<Min: 257 - 260 4% Min: Pyrrhotite>> Disseminated and thin wisps/stringers</p> <p><<Min: 260 - 261.2 0.5% Min: Pyrite>></p> <p><<Alt: 216 - 220.9 Moderate (Alt) Chlorite>> Associated with interval of veining (quartz)</p> <p><<Alt: 221.8 - 249.55 Moderate (Alt) Silicification>> Moderate to strong silica alteration, pervasive.</p>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-324

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 225.9 - 241.75 Moderate (Alt) Muscovite>> Moderate MU, shiny, fracture surface. Marked a weak banded texture.											
<<Alt: 260 - 261.2 Moderate (Alt) Muscovite>> Interval moderately MU altered.											
<<Vein: 190.36 - 191.1 Quartz-Tourmaline>> Massive qtz-TL vein, brecciated, >50 % of TL, at the contact between RHYcw and RHYvl.											
<<Vein: 198.9 - 200.83 30% Quartz 70 deg. >> Interval of grey qtz veins, 4-40 cm wide, +/- regular and concordant.											
<<Vein: 204 - 204.65 95% Quartz>> Irregular massive qtz vein,light grey, decimetric, deformed.											
<<Vein: 212.7 - 212.85 80% Quartz 50 deg. >> Massive qtz vein, chlorite at the margins.											
<<Vein: 214.75 - 220.9 20% Quartz>> Interval comprising multiple qtz veins, deformed, locally associated with TL at the margins. 1-2% PO											
<<Vein: 223.2 - 223.4 90% Quartz>> Massive grey qtz vein, deformed.											
<<Vein: 223.7 - 223.9 15% Quartz-Tourmaline 25 deg. >> Qtz-TL vein, 3 cm wide, discordant.											
<<Vein: 253 - 253.55 20% Quartz-Tourmaline>> Interval comprising group of Qtz-TL veins, 2-3 cm wide, irregular oriented, associated with strong silica alteration.											
<<Struc: 197 - 197.01 Moderate (Alt) Foliation>>											
<<Struc: 200.2 - 200.21 Moderate (Alt) Foliation>>											
<<Struc: 214 - 214.01 Weak (Alt) Foliation>>											
<<Struc: 223.1 - 223.2 Strong (Alt) Fault>> Fault gouge											
<<Struc: 224 - 224.01 Weak (Alt) Foliation>>											
<<Struc: 234 - 234.01 Moderate (Alt) Foliation>>											
<<Struc: 238.5 - 238.7 Strong (Alt) Fault>> Fault gouge											
<<Struc: 255.45 - 257 Weak (Alt) Fault>> Interval comprising multiple short fault gouge.											
261.20 280.18 RHYva Coarse grained to ash tuff medium grey MCG											
261.2 - 280.18: Medium/dark grey, medium/coarse grained, +/- homogeneous, moderately foliated. Locally comprising fragments/lapilli,< 5-10%, heterogeneous, cm size, siliceous, deformed, distributed within fine/medium grained matrix (Moderate CL/ MU altered). Locally crosscut by qtz veins, cm to dm wide. 0.5-2 % of PO/PY disseminated. Volcanoclastic unit, probably RHYva with lapilli.											
<<Min: 261.2 - 264.88 0.5% Min: Pyrite>>											
<<Min: 261.2 - 264.88 4% Min: Pyrrhotite>> Disseminated and thin wisps/stringers											
<<Min: 264.88 - 266 0.1% Min: Pyrite>>											
<<Min: 264.88 - 266 0.1% Min: Pyrrhotite>>											
<<Min: 264.88 - 266 7% Min: Calcite>> Pervasive											
<<Min: 266 - 271.3 0.5% Min: Pyrite>>											
<<Min: 266 - 271.3 3% Min: Pyrrhotite>> Disseminated and thin wisps/stringers											
<<Min: 266 - 274.3 3% Min: Calcite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-324

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 271.3 - 272.4 1% Min: Pyrrhotite>>											
<<Min: 272.4 - 273.55 1% Min: Pyrite>> Disseminated and thin wisps/stringers											
<<Min: 272.4 - 273.55 2% Min: Pyrrhotite>> Disseminated and thin wisps/stringers											
<<Min: 273.55 - 278.45 0.5% Min: Pyrite>>											
<<Min: 273.55 - 278.45 1% Min: Pyrrhotite>> Also thin stringers											
<<Min: 274.3 - 282.8 1% Min: Calcite>>											
<<Min: 278.45 - 280.18 0.5% Min: Pyrrhotite>>											
<<Alt: 264.88 - 266 Weak (Alt) Muscovite>> Sericite/Mu pervasive bands. Associated with pervasive CA.											
<<Alt: 271.55 - 273.55 Moderate (Alt) Silicification>> Siliceous bands/diffused qtz veins? Associated with PY/PO											
<<Vein: 263.17 - 263.38 85% Quartz 80 deg. >> Qtz vein, subconcordant, dm, associated with fine PO disseminated at the margins.											
<<Vein: 264.1 - 264.72 30% Quartz 80 deg. >> Group of qtz veins, subconcordant, cm to dm, associated with fine PO disseminated at the margins (CL)											
<<Vein: 268.15 - 270.75 5% Quartz-Tourmaline>> Thin Qtz-TL veins, irregular oriented, 2-3 cm wide.											
<<Vein: 271.55 - 273.55 15% Quartz 75 deg. >> Interval compriing siliceous bands/diffused qtz veins, subconcordant, deformed, dismembered. Associated with PO/PY											
<<Struc: 266 - 266.01 Weak (Alt) Foliation>>											
280.18	283.50	RHYvl Lapilli tuff	light grey	MCG							
280.18 - 283.5: Light grey to beige, medium/coarse grained, moderately foliated. Weakly silica altered. Comprising fragments/lapilli, cm size, siliceous (albite altered?), deformed, distributed within fine grained matrix (MU altered). Weak banded texture marked by siliceous bands/stretched fragment. 1-2 % of Py disseminated/stringers. Volcanoclastic unit, probably RHYvl.											
<<Min: 280.18 - 282.6 2% Min: Pyrite>> Also thin stringers.											
<<Min: 282.6 - 302.7 2% Min: Pyrrhotite>> Thin wisps discordant with foliation, ~ 80 ac.											
<<Min: 282.8 - 291.7 5% Min: Calcite>> Occuring as small clots/veinlets and also locally pervasive											
<<Alt: 280.18 - 283.85 Weak (Alt) Silicification>> Occuring as diffused bands, thin, irregular, deformed/dismembered.											
<<Alt: 280.18 - 283.85 Weak (Alt) Muscovite>> Occuring as diffused bands, thin, irregular, deformed/dismembered. Diffused albite?											
283.50	291.67	RHYva Coarse grained to ash tuff	medium grey	MCG							
283.5 - 291.67: Medium/dark grey, medium/coarse grained, +/- homogeneous, moderately foliated. Weakly silica altered. Locally comprising fragments/lapilli,< 5-10%, heterogeneous, cm size, siliceous, deformed, distributed within fine/medium grained matrix (Moderate CL/ MU altered). Locally crosscutted by qtz veins, cm to dm wide. 0.5-2 % of PO/PY disseminated. Volcanoclastic unit, probably RHYva with lapilli.											
<<Vein: 290.36 - 290.5 90% Quartz 75 deg. >> Regular grey qtz vein, gouge at the margins.											
<<Struc: 286 - 286.01 Moderate (Alt) Foliation>>											
<<Struc: 290.25 - 290.5 Moderate (Alt) Fault>> Fault gouge at the margins of grey qtz vein.											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
291.67	298.75	RHYvx Quartz and/or feldspar crystal medium grey CG tuff									
<p>291.67 - 298.75: Light/medium grey, coarse grained, moderately foliated. Comprising fragments/lapilli, cm size, siliceous (Qtz), deformed, distributed within fine grained matrix (CL/MU altered). Characterized by > 5 % of feldspar/quartz crystals, subhedral, beige, cm size, disseminated within matrix. Blue QE were observed. Volcanoclastic unit, probably RHYvx (lpl).</p> <p><<Min: 291.7 - 298.5 2% Min: Calcite>></p> <p><<Min: 298.5 - 305.15 6% Min: Calcite>> Occuring as small clots/veinlets and also locally pervasive</p> <p><<Vein: 294.4 - 294.5 90% Quartz 85 deg. >> Regular grey qtz vein, subconcordant.</p> <p><<Struc: 295.7 - 295.85 Strong (Alt) Fault>> Fault gouge</p> <p><<Struc: 298 - 298.3 Strong (Alt) Fault>> Fault gouge</p>											
298.75	302.70	RHYva Coarse grained to ash tuff medium grey FMG									
<p>298.75 - 302.7: Medium grey, fine grained, homogeneous, moderately foliated. Matrix weakly CL/ MU altered and also Si after 300.43m. Locally crosscut by qtz veins, cm wide. 0.5-2 % of PO/PY disseminated. Volcanoclastic unit, probably RHYva unit.</p> <p><<Alt: 299.55 - 362 Weak (Alt) Biotite>> Large interval, small homogeneous biotite clots/flakes distributed within matrix, ~ 10 %, <2 mm.</p> <p><<Alt: 300.43 - 302.05 Moderate (Alt) Silicification>> Moderate(+) si alteration.</p> <p><<Vein: 301.15 - 302.28 8% Quartz 80 deg. >> Interval comprising qtz-+/-ca vein, 1-4 cm wide, deformed, subconcordant</p>											
302.70	305.15	MAFi Mafic Intrusions (primarily green-brown FCG footwall mafic intrusion)									
<p>302.7 - 305.15: Light to dark grey, matrix fine grained, moderately altered and foliated MAFi. Altered by BI and CL (weak, pervasive) alteration, BI occurring as small clots/porphyroblasts, mm. Calcite altered, blebs/dismembered bands distributed within matrix.</p> <p><<Min: 302.7 - 314.5 0.5% Min: Pyrrhotite>> Weak PO, locally disseminated.</p>											
305.15	326.40	RHYvl Lapilli tuff grey CG									
<p>305.15 - 326.4: Greyish, coarse grained, massive unit. Comprising clasts/lapilli, strongly SI, stretched/flattered within foliation, mm to cm size, locally pebble size. Fine grained matrix, weak to (locally) strongly silica altered also weak CL. Characterized by >10% of mm porphyroblasts of biotite disseminated (clots/flakes). Comprising qtz-ca-+/-Cl veins. Beginning of gneissic texture? Could be metamorphosed lapilli tuff or sedimentary unit?</p> <p><<Min: 305.15 - 326.4 3% Min: Calcite>> Also associated with qtz veins/veinlets.</p> <p><<Min: 314.5 - 317.3 1% Min: Pyrrhotite>></p> <p><<Min: 317.3 - 318.9 2% Min: Pyrrhotite>> Locally small aggregate</p> <p><<Min: 318.8 - 323.3 0.1% Min: Pyrite>></p> <p><<Min: 318.8 - 323.3 0.5% Min: Pyrrhotite>></p>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-324

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<p><<Min: 323.3 - 326.4 0.1% Min: Pyrite>></p> <p><<Min: 323.3 - 326.4 2% Min: Pyrrhotite>> Locally small aggregate</p> <p><<Alt: 320.15 - 325.5 Moderate (Alt) Silicification>> Moderate to strong SI pervasive.</p> <p><<Alt: 325.5 - 326.4 Strong (Alt) Silicification>> Strong SI pervasive.</p> <p><<Vein: 307.25 - 307.85 70% Quartz-Tourmaline>> Interval of Qtz-TL veins, 3-25 cm wide, thin TL band at the selvages. Deformed and irregular oriented.</p> <p><<Vein: 312.05 - 312.1 80% Quartz-Carbonate 85 deg. >> Regular qtz-ca vein, 5 cm wide, trace PO.</p> <p><<Vein: 316.7 - 318.12 20% Quartz-Carbonate>> Interval comprising massive Qtz-Ca+/-CL veins, deformed and folded, cm to dm size. Margins CL altered</p> <p><<Vein: 322.3 - 323.3 50% Quartz-Carbonate>> Interval comprising massive Qtz-Ca+/-CL veins, deformed and folded, dm size. Margins CL altered</p> <p><<Struc: 311 - 311.01 Moderate (Alt) Foliation>></p> <p>326.40 332.20 MAFi Mafic Intrusions (primarily grey-green FCG </p>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-324

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<p><<Min: 342.47 - 347.42 10% Min: Calcite>> Pervasive and occurring as blebs/veinlets.</p> <p><<Alt: 342.47 - 347.42 Moderate (Alt) Chlorite>> MAFI associated.</p> <p><<Alt: 342.47 - 347.42 Moderate (Alt) Biotite>> Occuring as small to large pervasive bands and also porphyroblasts matrix distributed.</p> <p><<Vein: 343.68 - 351.65 15% Quartz-Chlorite-Carbonate>> Interval comprising multiple Qtz-Ca-/-CL veins, deformed and folded, locally dismembered, cm to dm size. Margins CL altered.</p>											
347.42	356.00	RHYvl Lapilli tuff									
<p>347.42 - 356: Greyish, coarse grained. Comprising clasts/lapilli, strongly SI, stretched/flattered within foliation, mm to cm size, pebble size. Fine grained matrix, weakly silica altered and also weak CI/MU. Characterized by >10% of mm porphyroblasts of biotite disseminated (clots/flakes). Comprising Qtz-Ca-/-CL veins. Could be lapilli tuff or sedimentary unit?</p>											
<p><<Min: 347.42 - 356 5% Min: Calcite>> Blebs/veins/veinlets and locally pervasive (FD)</p> <p><<Min: 352 - 362 0.1% Min: Pyrite>></p>											
356.00	358.15	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<p>356 - 358.15: Green to brownish, matrix fine grained, moderately altered and foliated MAFi. Altered by BI and CL (moderate, pervasive) alteration, biotite occurring as small clots/porphyroblasts disseminated and pervasive bands, mm. Calcite altered, blebs/dismembered bands distributed within matrix.</p>											
<p><<Min: 356 - 358.65 10% Min: Calcite>> Pervasive and occurring as blebs/veinlets.</p> <p><<Alt: 356 - 356.4 Moderate (Alt) Biotite>> MAFI</p> <p><<Alt: 357.1 - 358.6 Moderate (Alt) Muscovite>> Associated with strong foliation</p>											
358.15	360.97	RHYvl Lapilli tuff									
<p>358.15 - 360.97: RHYvl unit, grey, moderately foliated, fine to coarse grained. Weakly CL/MU altered, pervasive and bands (CL). Comprising siliceous (+ Ca) clasts/lapilli. Patchy Ca alteration. Could be RHYva with lapilli.</p>											
<p><<Min: 358.65 - 360.97 4% Min: Calcite>></p>											
360.97	362.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<p>360.97 - 362: Green to greyish, matrix fine grained, moderately altered and foliated MAFi. Altered by BI and CL (moderate, pervasive) alteration, biotite occurring as small clots/porphyroblasts disseminated and pervasive bands, mm. Calcite altered, blebs/dismembered bands distributed within matrix and also patchy.</p>											
<p><<Min: 360.97 - 362 10% Min: Calcite>> Pervasive and occurring as blebs/veinlets.</p> <p><<Alt: 360.97 - 362 Moderate (Alt) Chlorite>> MAFi</p> <p><<Struc: 361 - 361.01 Weak (Alt) Foliation>></p>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-324

From (m) To (m)

Rocktype & Description

From (m)

To (m)

Width

Sample

Ag PPM

Au PPM

Cu %

Pb %

Zn %

End of Hole @ 362

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-325

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	David Nuttal
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Florent Pons	Date Logging Start:	17-Nov-15
UTM Easting	415158	Core Size:	HQ3	Azimuth:	178.94	Date Logging Complete:	24-Nov-15
UTM Northing:	6815051	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1406.21	Casing Depth (m):	6	Length (m):	404.1	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	15-Nov-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	23-Nov-15
Local Elev. (m):						Purpose:	Exploration
Comments:						Parent Hole:	

K15-325 was drilled to test the Fault Creek fault as well as explore for any down-dropped mineralization.

K15-325 encountered a felsic rock package from 6-85.9 m, consisting of volcanoclastic and coherent rhyolites, BI+CA schists, and aphanitic rhyolite. Below this unit is strongly faulted rhyolite from 85.9-119.3 m. From 119.3-135 a moderately faulted and locally altered block of CL+BI+CA schist occurs (MAFi). Below the MAFi an intense fault zone occurs to a depth of 164.6 m, consisting of a polymictic gouge-supported fault breccia. The package of rocks on the opposite side of the fault consist of intercalated mafic intrusions and felsic volcanoclastics. Calcite, pyrite, pyrrhotite, and minor sphalerite mineralization are pervasive throughout the felsic rock units on the south side of the fault. Chlorite alteration is weak and patchy through nearly all rock units south of the fault. Two zones of heavily disseminated sulphides occur from 319m to 320m (PY,PO,SP,GL) and from 398.16m to 399.26m (PY,SP). This hole appears to show signs of being in proximity to more mineralization.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	156.44	22.5	178.94	APS	Dillon Hume	15-Nov-15		<input checked="" type="checkbox"/>	
26	-59.8	155.8	22.5	178.3	APS	Geotech	15-Nov-15	5796	<input checked="" type="checkbox"/>	
59	-59.8	157.2	22.5	179.7	APS	Geotech	16-Nov-15	5779	<input checked="" type="checkbox"/>	
90	-59.9	154.9	22.5	177.4	APS	Geotech	19-Nov-15	5767	<input checked="" type="checkbox"/>	
120	-60.2	157.5	22.5	180	APS	Geotech	19-Nov-15	5770	<input checked="" type="checkbox"/>	
150	-61.8	154.9	22.5	177.4	APS	Geotech	19-Nov-15	5765	<input checked="" type="checkbox"/>	
180	-62.3	153.2	22.5	175.7	APS	Geotech	19-Nov-15	5764	<input checked="" type="checkbox"/>	
210	-62.4	154.4	22.5	176.9	APS	Geotech	19-Nov-15	5714	<input checked="" type="checkbox"/>	
230	-61.9	155.9	22.5	178.4	APS	Geotech	19-Nov-15	5769	<input checked="" type="checkbox"/>	
271	-59.4	156.8	22.5	179.3	APS	Geotech	20-Nov-15	5769	<input checked="" type="checkbox"/>	
302	-56.8	156.9	22.5	179.4	APS	Geotech	21-Nov-15	5768	<input checked="" type="checkbox"/>	
332	-55.3	161.9	22.5	184.4	APS	Geotech	21-Nov-15	5711	<input checked="" type="checkbox"/>	
392	-51.6	156.4	22.5	178.9	APS	Geotech	22-Nov-15	5769	<input checked="" type="checkbox"/>	Hole survey missing for 360m mark! Deviation of 3.8 degrees between 330m and 390m depth. Spurious data?

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-325

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
6.00	8.40	RHYvl Lapilli tuff									
6 - 8.4: Calcareous lpl and disseminated subhedral BI in grey fine grained ash matrix											
<<Min: 6 - 8.4 5% Min: Calcite>>											
<<Min: 6 - 41 0.5% Min: Pyrite>>											
8.40	10.60	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
8.4 - 10.6: BI+CA schist with ~0-15% gey ash tuff material. (Metapelite?)											
<<Min: 8.4 - 10.6 10% Min: Calcite>>											
10.60	20.30	RHYvl Lapilli tuff									
10.6 - 20.3: Calcareous and rhyolitic lpl in fine grained ash matrix, with disseminated subhedral BI.											
<<Min: 10.6 - 22.7 5% Min: Calcite>>											
<<Vein: 20.2 - 20.3 80% Quartz>> Massive QZ vein											
20.30	22.70	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
20.3 - 22.7: Silica-banded rhyolite											
22.70	24.90	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
22.7 - 24.9: BI+CA schist with local grey ash material. (Metapelite?)											
<<Min: 22.7 - 24.9 10% Min: Calcite>>											
<<Struc: 24.8 - 25 Weak (Alt) Fault>> Tightly spaced cleavage with higher oxidation than surrounding rock											
24.90	38.00	RHYvl Lapilli tuff									
24.9 - 38: Variable from calcareous-lpl with disseminated BI in grey ash matrix to siliceous-lpl in grey ash matrix. Upper portion of the unit (24.9-31 m) is dominated by the calcareous-lpl+BI tuff, and the lower portion (31-38 m) is dominated by the siliceous-lpl tuff.											
<<Min: 24.9 - 41 5% Min: Calcite>>											
38.00	41.00	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
38 - 41: Silica-banded to curdy rhyolite											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-325

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
41.00	50.80	RHYi Aphanitic Rhyolite (intrusion)									
41 - 50.8: Grey to pink glassy, aphanitic, rhyolite with anastomosing fractures/cleavages.											
<<Min: 41 - 50.8 2% Min: Pyrite>>											
<<Min: 41 - 50.8 2% Min: Calcite>>											
<<Vein: 41.3 - 42.3 100% Quartz>> Massive QZ vein											
50.80	51.50	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
50.8 - 51.5: BI+CA schist with moderate amounts of fine grained grey ash material. (Metapelite?)											
<<Min: 50.8 - 51.5 15% Min: Calcite>>											
<<Min: 50.8 - 85.9 1% Min: Pyrite>>											
<<Min: 50.8 - 85.9 0.5% Min: Pyrrhotite>>											
51.50	52.30	RHYc Rhyolite coherent volcanics									
51.5 - 52.3: Curdy to silica-banded rhyolite											
<<Min: 51.5 - 52.3 10% Min: Calcite>>											
52.30	53.50	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
52.3 - 53.5: BI+CA schist. (Metapelite?)											
<<Min: 52.3 - 53.5 10% Min: Calcite>>											
53.50	55.40	RHYc Rhyolite coherent volcanics									
53.5 - 55.4: Silica-banded to aphanitic/massive rhyolite.											
<<Min: 53.5 - 55.4 5% Min: Calcite>>											
55.40	56.80	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
55.4 - 56.8: BI+CA schist with medium grained CA amygdules/porphyroblasts.											
<<Min: 55.4 - 56.8 15% Min: Calcite>>											
56.80	65.70	RHYi Aphanitic Rhyolite (intrusion)									
56.8 - 65.7: Pink to grey massive aphanitic rhyolite											
<<Min: 56.8 - 65.7 3% Min: Calcite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-325

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
65.70	73.90	RHYvl Lapilli tuff									
65.7 - 73.9: Siliceous lpl in medium grey ash matrix											
<<Min: 65.7 - 73.9 5% Min: Calcite>>											
<<Struc: 72.25 - 72.6 Weak (Alt) Fault>> Fracture zone with minor fault gouge											
73.90	76.40	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
73.9 - 76.4: Silica banded rhyolite											
<<Min: 73.9 - 85.9 2% Min: Calcite>>											
<<Vein: 73.9 - 74 80% Quartz>> Massive QZ vein											
76.40	85.90	RHYvl Lapilli tuff									
76.4 - 85.9: Siliceous lpl in medium grey ash matrix											
<<Struc: 80.3 - 80.8 Moderate (Alt) Fault>> Highly fractured with fault gouge											
<<Struc: 83.8 - 83.9 Weak (Alt) Fault>> Fractured and fault gouge zone											
85.90	119.30	RHY undifferentiated rhyolite									
85.9 - 119.3: Highly faulted rhyolite clasts and minor sulphide clasts within sericite (?) gogue matrix. Locally the unit is coherent (not faulted).											
<<Min: 85.9 - 119.3 2% Min: Pyrite>> Clasts with heavily disseminated PY in fault zone, as well as blebs of PY in non-faulted portion of unit.											
<<Min: 85.9 - 119.3 1% Min: Calcite>>											
<<Min: 93.42 - 207.2 2% Min: Pyrrhotite>>											
<<Alt: 85.9 - 119.3 Strong (Alt) Muscovite>> Fault related (?)											
<<Alt: 95.83 - 207.2 Trace (Alt) Chlorite>> locally within lapilli											
<<Struc: 85.9 - 101.3 Strong (Alt) Fault>> Highly faulted rhyolite clasts and minor sulphide clasts within sericite (?) gogue matrix.											
<<Struc: 107 - 110.5 Strong (Alt) Fault>> Highly faulted with local gouge-supported breccia											
<<Struc: 116 - 119 Strong (Alt) Fault>> Highly faulted with local gouge-supported breccia											
119.30	135.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
119.3 - 135: CL+BI+CA schist. Locally faulted and/or bleached/altered. Appears to be a block within a larger fault zone. May correlate with less faulted block from K15-310.											
<<Min: 119.3 - 135 10% Min: Calcite>>											
<<Alt: 119.3 - 125.2 Strong (Alt) Chlorite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-325

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
		<<Alt: 119.3 - 125.2 Moderate (Alt) Biotite>>									
		<<Alt: 125.2 - 125.9 Strong (Alt) Muscovite>> Fault related (?)									
		<<Alt: 125.9 - 129.9 Strong (Alt) Chlorite>>									
		<<Alt: 125.9 - 129.9 Moderate (Alt) Biotite>>									
		<<Alt: 129.9 - 130.8 Strong (Alt) Muscovite>> Fault related (?)									
		<<Alt: 130.8 - 133.5 Strong (Alt) Chlorite>>									
		<<Alt: 130.8 - 133.5 Moderate (Alt) Biotite>>									
		<<Alt: 133.5 - 134.4 Strong (Alt) Muscovite>> Fault related (?)									
		<<Alt: 134.4 - 135 Strong (Alt) Chlorite>>									
		<<Alt: 134.4 - 135 Moderate (Alt) Biotite>>									
		<<Vein: 122.35 - 122.5 80% Calcite>> Massive QZ+CA vein									
		<<Struc: 125.2 - 126.1 Weak (Alt) Fault>> Minor fault surfaces and alteration associated with them									
		<<Struc: 129.9 - 130.8 Strong (Alt) Fault>> Local fault gouge breccia to ductile shearing of MAFi, with associated MU-alteration.									
		<<Struc: 133.5 - 134.4 Strong (Alt) Fault>> Local fault gouge breccia to ductile shearing of MAFi, with associated MU-alteration.									
		<<Struc: 134.4 - 164.6 Intense (Alt) Fault>> Intensely faulted unit. Polymictic clasts supported in gouge matrix.									
		135.00 164.60 FBX Fault Breccia									
		135 - 164.6: Gouge-supported fault breccia, with clasts consisting of RHY,QZ-vein, MAF, MDS, and MSXS, and gouge consisting of sericite, quartz (?), chlorite, and argillitic material.									
		<<Min: 135 - 164.6 2% Min: Pyrite>> Clasts of massive PY within fault zone									
		<<Min: 135 - 164.6 5% Min: Calcite>> Clasts of CA-bearing rocks									
		<<Alt: 135 - 207.2 Moderate (Alt) Muscovite>>									
		<<Vein: 148.3 - 148.7 100% Quartz>> Clasts of massive QZ vein within fault									
		164.60 173.30 RHYv Rhyolite volcanoclastic									
		164.6 - 173.3: QZ-MS coarse-grained, fisile, felsic volcanoclastic rock (interval is pervasive with minor faults).									
		<<Min: 164.6 - 169.2 3% Min: Calcite>>									
		<<Min: 164.6 - 186.93 1% Min: Pyrite>>									
		<<Min: 169.2 - 193.42 5% Min: Calcite>>									
		<<Struc: 164.6 - 169 Weak (Alt) Fault>> Interval of several minor faults spaced less than 50cm apart									
		<<Struc: 170 - 173.3 Moderate (Alt) Fault>> Faulted interval with only small portions (all less than 30cm) of coherent rock.									

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
173.30	179.20	FBX Fault Breccia									
173.3 - 179.2: Gouge-supported (pebble, sand and clay) fault breccia, with clasts of RHY, QZ and MDS. Matrix is of similar composition to clasts.											
<<Struc: 173.3 - 179.2 Intense (Alt) Fault>> Polymictic fault zone with gravel, sand and clay gouge. Fault breccia											
179.20	193.42	RHYv Rhyolite volcanoclastic									
179.2 - 193.42: QZ-MU-MS-PY coarse-grained to lapilli felsic volcanoclastic rock. Local high concentration of PY (~5% FD) from 186.9 - 189.69m)											
<<Min: 186.93 - 189.69 5% Min: Pyrite>> Local high concentration of finely disseminated pyrite.											
<<Min: 189.69 - 209 1% Min: Pyrite>>											
<<Struc: 179.2 - 191.33 Weak (Alt) Fault>> Interval adjacent to high intensity fault up-hole. Interval pervasively contains foliation parallel, minor faults spaced less than 50cm apart. Fault gouge is pebble-sand-clay sized. All faults are less than 10cm wide.											
193.42	195.83	MDSr Rhyolite tuff dominant medium grey FG mudstone									
193.42 - 195.83: Thinly laminated (micaceous laminae are thinly spaced), fissile, carbon/argillitic, carbonate and pyrrhotite bearing felsic volcanoclastic tuff.											
<<Min: 193.42 - 202.03 3% Min: Calcite>>											
<<Struc: 195.62 - 195.71 Weak (Alt) Fault>> Minor fault, foliation parallel with gravel-clay gouge.											
195.83	207.20	RHYv Rhyolite volcanoclastic									
195.83 - 207.2: QZ-MS-MU coarse grained felsic volcanoclastic rock with finely disseminated carbonate and QZ-BI-PY-CL-CB lapilli. Cl and MU are considered as overprinted alteration. Pyrrhotite is present as wisps and clots ~1-2%.											
<<Min: 202.03 - 202.21 15% Min: Calcite>>											
<<Min: 202.21 - 209 5% Min: Calcite>>											
<<Struc: 199.9 - 199.9 Foliation>>											
<<Struc: 204.9 - 205.03 Weak (Alt) Fault>> Minor fault, foliation parallel with gravel-clay gouge.											
207.20	226.78	RHYv Lapilli tuff									
207.2 - 226.78: Qz-MS volcanoclastic rock with BI-CL-PY-CB lapilli. Calcite is finely disseminated pervasively throughout interval. Foliation is sub-perpendicular to core-axis. Rock is dark brown-green due to concentration of BI-CL-PY.											
<<Min: 207.2 - 226.78 1% Min: Pyrrhotite>>											
<<Min: 209 - 226.78 8% Min: Calcite>>											
<<Min: 209 - 238.01 2% Min: Pyrite>>											
<<Alt: 207.2 - 226.78 Weak (Alt) Muscovite>>											
<<Alt: 207.2 - 226.78 Weak (Alt) Chlorite>>											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 207.2 - 226.78 Moderate (Alt) Biotite>>											
<<Alt: 221 - 222 Strong (Alt) Muscovite>> Intensity decreases from qz vein (221.44-221.55)											
<<Vein: 217.24 - 218.12 Quartz-Biotite-Sulphides>> Qz-tourmaline vein; perpendicular to foliation. Hair-line veins branch off from main vein and tourmaline mineralization occupies dominant rock foliation.											
<<Vein: 221.44 - 221.55 Quartz>> White quartz vein, sub-parallel to foliation. Muscovite concentration increases towards quartz vein.											
<<Struc: 208.95 - 208.95 dominant foliation>>											
<<Struc: 213.46 - 213.51 Weak (Alt) Fault>> Minor fault, foliation parallel with gravel-clay gouge.											
<<Struc: 216 - 216 dominant foliation>>											
<<Struc: 220.5 - 220.5 dominant foliation>>											
<<Struc: 223.8 - 223.8 dominant foliation>>											
226.78 229.35 MAFI Mafic Intrusions (primarily melanocratic footwall mafic intrusion)											
226.78 - 229.35: BI-CL-CB fine-grained mafic shist with thin, foliation parallel calcite bands.											
<<Min: 226.78 - 229.35 12% Min: Calcite>>											
<<Alt: 226.78 - 229.35 Moderate (Alt) Chlorite>>											
<<Alt: 226.78 - 229.35 Strong (Alt) Biotite>>											
<<Vein: 226.93 - 227.07 Quartz>> Translucent to white QZ-MU-PY-PO vein, sub-parallel to foliation.											
<<Struc: 227.3 - 227.3 dominant foliation>>											
229.35 243.30 RHYvl Lapilli tuff											
229.35 - 243.3: Qz-MS volcanoclastic rock with BI-CL-PY-CB lapilli. Calcite is finely disseminated pervasively throughout interval. Foliation is sub-perpendicular to core-axis. Rock is dark brown-green due to concentration of BI-CL-PY.											
<<Min: 229.35 - 250 5% Min: Calcite>>											
<<Min: 238.01 - 245 0.25% Min: Pyrrhotite>>											
<<Min: 238.01 - 250 1% Min: Pyrite>>											
<<Alt: 229.35 - 240 Weak (Alt) Chlorite>>											
<<Alt: 229.35 - 240 Moderate (Alt) Biotite>>											
<<Alt: 229.35 - 250 Weak (Alt) Muscovite>>											
<<Vein: 235.28 - 235.34 Quartz>> White-translucent quartz, pyrite, tourmaline vein; discordant to foliation.											
<<Vein: 237.35 - 237.44 Quartz>> White QZ-MU vein. Muscovite concentration/intensity increases towards vein within RHYvl host unit.											
<<Vein: 242.48 - 243.3 Quartz>> Massive white quartz vein											
<<Struc: 232.95 - 232.95 dominant foliation>>											
<<Struc: 235.45 - 235.5 Weak (Alt) Fault>> Minor fault, foliation parallel with clay gouge.											



From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 238.9 - 238.9 dominant foliation>>											
<<Struc: 241.7 - 241.7 dominant foliation>>											
243.30 250.03 RHYvl Lapilli tuff											
243.3 - 250.03: Siliceous Quartz-eye bearing volcanoclastic QZ-MU schist with lapilli sized quartz-rich sub-rounded to round clasts set in fine-grained siliceous matrix.											
<<Min: 250 - 283.78 5% Min: Pyrite>>											
<<Min: 250 - 288.7 3% Min: Calcite>>											
<<Alt: 250 - 255 Moderate (Alt) Silicification>>											
<<Alt: 250 - 255 Moderate (Alt) Muscovite>>											
<<Struc: 246.17 - 246.4 Weak (Alt) Fault>>											
250.03 283.78 RHYi Aphanitic Rhyolite (intrusion)											
250.03 - 283.78: Siliceous/Albitized, Quartz-eye bearing RHYi with white lapilli sized quartz rich sub-rounded clasts pervasive through interval. RHYi rock unit exhibits potential to be intense silicification/albitization alteration of adjacent RHYvl rather than being a coherent body intrusive body of rhyolite. Fractures are pervasive and infilled with quartz and a high concentration of pyrite. (some pyrite grains exhibit a nucleus pyrite grain from which additional pyrite grew around the nucleus).											
<<Alt: 255 - 275 Strong (Alt) Silicification>>											
<<Alt: 255 - 288.77 Weak (Alt) Muscovite>>											
<<Alt: 275 - 283.78 Moderate (Alt) Silicification>>											
<<Struc: 253.8 - 253.8 dominant foliation>>											
<<Struc: 270.3 - 270.5 Weak (Alt) Fault>> Minor fault with clay to sand gouge.											
283.78 288.77 RHYvl Lapilli tuff											
283.78 - 288.77: Medium gray, siliceous quartz-eye bearing QZ-MU schist with trachitic, white, lapilli sized quartz-rich rounded clasts pervasive through unit.											
<<Min: 283.78 - 288.77 2% Min: Pyrite>>											
<<Min: 288.7 - 291.2 12% Min: Calcite>>											
<<Struc: 284.2 - 284.2 dominant foliation>>											
<<Struc: 286.11 - 286.19 Weak (Alt) Fault>> minor fault with clay-sand gouge.											
<<Struc: 287.1 - 287.1 dominant foliation>>											
288.77 291.92 MAFi Mafic Intrusions (primarily black footwall mafic intrusion)											
288.77 - 291.92: Melanocratic, coarse-grained, inequigranular BI-CA-MS schist. Abundant carbonate porphyroblasts as well as carbonate bands and trachytic biotite. Finely disseminated pyrite <1mm grains.											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-325

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 288.77 - 291.92 1% Min: Pyrite>>											
<<Min: 291.2 - 308.14 5% Min: Calcite>>											
<<Alt: 288.77 - 291.92 Trace (Alt) Chlorite>>											
<<Alt: 288.77 - 291.92 Strong (Alt) Biotite>>											
291.92	295.19	RHYvl Lapilli tuff									
medium grey											
291.92 - 295.19: Medium grey, quartz-eye bearing siliceous, QZ-MU-CB felsic volcanoclastic PY-bearing schist. White, lapilli-sized rounded QZ-CB clasts set in fine-grained MU-MS-CB matrix.											
<<Min: 291.92 - 303 0.5% Min: Pyrite>>											
<<Alt: 291.92 - 295.19 Weak (Alt) Muscovite>>											
295.19	297.63	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
295.19 - 297.63: Dark-grey to black, fine-grained, calcite banded, BI-CB mafic schist. Ankerite or lucoxene porphyroblasts and fine-grained margins.											
<<Alt: 295.19 - 297.63 Trace (Alt) Chlorite>>											
<<Alt: 295.19 - 297.63 Moderate (Alt) Biotite>>											
297.63	308.14	RHYvl Lapilli tuff									
medium grey											
297.63 - 308.14: Medium grey, quartz-eye bearing siliceous, QZ-MU-CB felsic volcanoclastic PY-bearing schist. White, lapilli-sized rounded QZ-CB clasts set in fine-grained MU-MS-CB matrix.											
<<Min: 303 - 308.7 3% Min: Pyrite>>											
<<Alt: 297.63 - 308.14 Weak (Alt) Muscovite>>											
<<Struc: 301.6 - 301.6 dominant foliation>>											
<<Struc: 304.65 - 304.9 Weak (Alt) Fault>> Minor fault zone, brittle fractures, foliation parallel.											
<<Struc: 305.43 - 306.82 Moderate (Alt) Fault>> approximately 1m wide faulted zone. Rocks exhibit brittle deformation, pervasive foliation parallel fractures spaced <10cm apart with clay-sand gouge.											
308.14	308.63	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
308.14 - 308.63: Medium grey to grey-purple with thin white carbonate bands, very fine-grained MS-CB-BI-PY-CL Mafic schist.											
<<Min: 308.14 - 308.68 10% Min: Calcite>>											
<<Alt: 308.14 - 308.75 Trace (Alt) Chlorite>>											
<<Alt: 308.14 - 308.75 Weak (Alt) Biotite>>											

Project:
KZK
Hole Number:
K15-325

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
308.63	311.45	RHYc Rhyolite coherant volcanics light grey									
308.63 - 311.45: Light to medium grey, pyrite-quartz veins, well foliated, coherent, felsic, quartz-eye bearing QZ-MS-MU schist.											
<<Min: 308.68 - 311.45 2% Min: Calcite>>											
<<Min: 308.7 - 311.45 5% Min: Pyrite>>											
<<Alt: 308.75 - 311.45 Weak (Alt) Muscovite>>											
<<Struc: 309.5 - 309.5 dominant foliation>>											
311.45	315.39	MAFi Mafic Intrusions (primarily black footwall mafic intrusion)									
311.45 - 315.39: Melanocratic, coarse-grained, inequigranular BI-CA-MS schist. Abundant carbonate porphyroblasts as well as carbonate bands and trachytic biotite. 4-5% disseminated pyrite 0.5-1mm grains.											
<<Min: 311.45 - 313.7 1% Min: Pyrite>>											
<<Min: 311.45 - 315.4 15% Min: Calcite>>											
<<Min: 311.45 - 319.17 1% Min: Pyrrhotite>>											
<<Min: 313.7 - 314.8 3% Min: Pyrite>>											
<<Min: 314.8 - 319.17 2% Min: Pyrite>>											
<<Alt: 311.45 - 315.4 Weak (Alt) Chlorite>>											
<<Alt: 311.45 - 315.4 Strong (Alt) Biotite>>											
315.39	317.03	RHYva Coarse grained to ash tuff medium grey									
315.39 - 317.03: Medium greenish-grey, fine grained, quartz-eye/pyrite bearing, calcite banded, apheriic volvaniclastic, felsic, QZ-MU-MS-CB schist.											
<<Min: 315.4 - 317.03 6% Min: Calcite>>											
<<Alt: 315.4 - 317.03 Weak (Alt) Muscovite>>											
<<Struc: 316.45 - 316.45 dominant foliation>>											
317.03	318.00	MAFi Mafic Intrusions (primarily black FG footwall mafic intrusion)									
317.03 - 318: Medium grey to grey-purple with thin white carbonate bands, very fine-grained MS-CB-BI-PY-CL Mafic schist.											
<<Min: 317.03 - 320.1 15% Min: Calcite>>											
<<Alt: 317.03 - 319.17 Strong (Alt) Biotite>>											
<<Alt: 317.03 - 328.14 Weak (Alt) Chlorite>>											
<<Vein: 317.6 - 317.95 Quartz>> Massive white quartz-carbonate vein, foliation parallel.											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-325
From (m) To (m) Rocktype & Description
318.00 323.50 RHYv Rhyolite volcanoclastic
grey-green

<<Min: 319.17 - 320 1% Min: Pyrite>>

<<Min: 319.17 - 320 8% Min: Pyrrhotite>>

<<Min: 319.17 - 328.14 1% Min: Sphalerite>>

<<Min: 319.17 - 328.14 0.5% Min: Galena>>

<<Min: 320 - 328.14 3% Min: Pyrite>>

<<Min: 320 - 328.14 3% Min: Pyrrhotite>>

<<Min: 320.1 - 328.14 5% Min: Calcite>>

<<Alt: 319.17 - 328.14 Trace (Alt) Muscovite>>

<<Struc: 321.4 - 321.46 Weak (Alt) Fault>>

<<Struc: 322.7 - 322.7 dominant foliation>>

323.50 328.14 RHYv Rhyolite volcanoclastic
grey-green

323.5 - 328.14: Chloritic/Biotitic, siliceous, felsic QZ-MS schist. Locally mineralized by foliation parallel carbonate bands hosting PY-PO-SP-GL sulphides. Quartz-eyes present.

328.14 333.21 MAFi Mafic Intrusions (primarily footwall mafic intrusion)
salt + pepper MCG

328.14 - 333.21: Black to salt and pepper colored, well foliated, BI-CA-CL mafic shist. Pervasive finely disseminated, banded and phenocrystic calcite. Disseminated pyrite and pyrrhotite.

<<Min: 328.14 - 333.21 15% Min: Calcite>>

<<Min: 328.14 - 337.47 1% Min: Pyrite>>

<<Min: 328.14 - 337.47 1% Min: Pyrrhotite>>

<<Alt: 328.14 - 333.21 Moderate (Alt) Biotite>>

333.21 349.80 RHYv Rhyolite volcanoclastic
grey-green

333.21 - 349.8: Grey-green chloritic altered felsic volcanoclastic QZ-MU schist. PY-PO-SP-CB veins are pervasive.

<<Min: 333.21 - 333.47 10% Min: Calcite>>

<<Min: 333.47 - 349.8 8% Min: Calcite>>

<<Min: 337.47 - 349.8 1% Min: Sphalerite>>

<<Min: 337.47 - 349.8 5% Min: Pyrite>>

<<Min: 337.47 - 349.8 3% Min: Pyrrhotite>>

<<Alt: 333.21 - 349.8 Weak (Alt) Muscovite>>

<<Alt: 337.47 - 378.5 Trace (Alt) Chlorite>>

<<Struc: 340.67 - 340.67 dominant foliation>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
318.87	319.87	1.00	B00233328	6.6	-0.005	0.01	0.57	0.6
319.87	320.87	1.00	B00233329	0.6	-0.005	-0.01	-0.01	-0.01
320.87	322.00	1.13	B00233331	0.3	-0.005	-0.01	-0.01	-0.01
322.00	323.50	1.50	B00233332	0.6	-0.005	-0.01	0.03	0.05

323.50	325.00	1.50	B00233333	0.6	-0.005	-0.01	-0.01	0.19
--------	--------	------	-----------	-----	--------	-------	-------	------

337.47	338.97	1.50	B00233334	0.5	-0.005	-0.01	-0.01	-0.01
--------	--------	------	-----------	-----	--------	-------	-------	-------

338.97	340.47	1.50	B00233335	0.8	0.006	-0.01	-0.01	-0.01
340.47	341.97	1.50	B00233336	0.8	-0.005	-0.01	0.02	0.05
341.97	343.47	1.50	B00233337	-0.3	-0.005	-0.01	-0.01	-0.01
343.47	344.97	1.50	B00233338	0.6	-0.005	-0.01	0.02	0.02
344.97	346.47	1.50	B00233339	0.5	-0.005	-0.01	-0.01	0.12
346.47	347.97	1.50	B00233341	0.4	-0.005	-0.01	-0.01	0.03
347.97	349.47	1.50	B00233342	0.7	-0.005	-0.01	0.01	0.03

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-325

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
349.80	360.93	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
349.8 - 360.93: Salt and pepper coloured, coarse-grained BI-rich mafic schist with finely disseminated and banded calcite.											
<<Min: 349.8 - 360.93 2% Min: Pyrite>>											
<<Min: 349.8 - 360.93 20% Min: Calcite>>											
<<Min: 349.8 - 379.67 1% Min: Pyrrhotite>>											
<<Alt: 349.8 - 360.93 Moderate (Alt) Biotite>>											
<<Vein: 350.3 - 350.4 Quartz>> Massive quartz-carbonate vein, foliation parallel.											
<<Vein: 355.7 - 355.87 Quartz>> Massive quartz-carbonate vein, parallel to foliation.											
<<Struc: 350.1 - 350.1 dominant foliation>>											
<<Struc: 360.65 - 360.93 Weak (Alt) Fault>>											
360.93	378.50	RHYvl Lapilli tuff									
360.93 - 378.5: Grey, quartz-eye bearing felsic volcanoclastic QZ-MU schist. Isolated lenses of foliation parallel replacement style mineralization is host to CB-PY-PO-SP +/-GL (found locally).											
<<Min: 360.93 - 378.5 0.5% Min: Sphalerite>>											
<<Min: 360.93 - 378.5 5% Min: Pyrite>>											
<<Min: 360.93 - 378.5 10% Min: Calcite>>											
<<Alt: 360.93 - 378.5 Weak (Alt) Muscovite>>											
<<Vein: 365.47 - 365.53 Quartz>> Massive quartz carbonate vein parallel with foliation.											
<<Struc: 366.63 - 366.72 Weak (Alt) Fault>>											
<<Struc: 367.95 - 367.95 dominant foliation>>											
<<Struc: 377.1 - 377.1 dominant foliation>>											
378.50	379.67	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
378.5 - 379.67: Salt and pepper coloured, coarse-grained BI-rich mafic schist with finely disseminated and banded calcite.											
<<Min: 378.5 - 379.67 1% Min: Pyrite>>											
<<Min: 378.5 - 379.67 15% Min: Calcite>>											
<<Alt: 378.5 - 379.67 Weak (Alt) Chlorite>>											
<<Alt: 378.5 - 379.67 Moderate (Alt) Biotite>>											
379.67	382.86	RHYvl Lapilli tuff									
<<Min: 379.67 - 382.86 0.5% Min: Sphalerite>>											
<<Min: 379.67 - 382.86 5% Min: Pyrite>>											

363.00	364.50	1.50	B00233343	0.4	0.007	-0.01	0.01	0.06
--------	--------	------	-----------	-----	-------	-------	------	------

364.50	366.00	1.50	B00233344	1.3	-0.005	0.01	0.06	0.18
366.00	367.50	1.50	B00233345	-0.3	-0.005	-0.01	-0.01	0.02
367.50	369.00	1.50	B00233346	0.5	-0.005	-0.01	0.01	0.02
369.00	370.50	1.50	B00233347	0.4	0.006	-0.01	-0.01	0.01
370.50	372.00	1.50	B00233348	1	0.006	-0.01	0.04	0.1
372.00	373.50	1.50	B00233349	0.6	0.006	-0.01	0.02	0.04
373.50	375.00	1.50	B00233351	0.4	-0.005	-0.01	-0.01	0.02
375.00	376.50	1.50	B00233352	-0.3	-0.005	-0.01	-0.01	0.01

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-325

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<div><<Min: 379.67 - 382.86 8% Min: Calcite>></div> <div><<Alt: 379.67 - 380.5 Moderate (Alt) Muscovite>></div> <div><<Alt: 380.5 - 382 Moderate-Strong (Alt) Muscovite>> Intensity high proximal to massive quartz vein</div> <div><<Alt: 382 - 382.86 Moderate (Alt) Muscovite>></div> <div><<Vein: 381 - 381.26 Quartz>> Massive quartz-carbonate, pyrite bearing vein. Muscovite alteration intensifies proximal to vein.</div>											
382.86	385.42	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)			green					
<div><<Min: 382.86 - 385.42 0.5% Min: Pyrite>></div> <div><<Min: 382.86 - 385.42 15% Min: Calcite>></div> <div><<Alt: 382.86 - 385.42 Moderate (Alt) Chlorite>></div>											
385.42	393.53	RHYvl	Lapilli tuff			grey-green					
385.42 - 393.53: Grey, QZ-MU-CB-PY well foliated ductilely deformed volcanoclastic felsic schist.											
<div><<Min: 385.42 - 393.54 7% Min: Pyrite>></div> <div><<Min: 385.42 - 393.54 5% Min: Calcite>></div> <div><<Alt: 385.42 - 393.54 Weak (Alt) Muscovite>></div> <div><<Alt: 385.42 - 393.54 Trace (Alt) Chlorite>></div> <div><<Struc: 390.2 - 390.2 dominant foliation>></div> <div><<Struc: 392.3 - 392.5 Weak (Alt) Fault>></div>											
393.53	394.21	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)			green					
393.53 - 394.21: Salt and pepper coloured, coarse-grained BI-rich mafic schist with finely disseminated and banded calcite.											
<div><<Min: 393.54 - 394.21 1% Min: Pyrite>></div> <div><<Min: 393.54 - 394.21 0.5% Min: Pyrrhotite>></div> <div><<Min: 393.54 - 398.16 15% Min: Calcite>></div> <div><<Alt: 393.54 - 394.21 Weak (Alt) Chlorite>></div>											
394.21	396.27	RHYvl	Lapilli tuff			medium grey					
394.21 - 396.27: Grey, QZ-MU-CB-PY well foliated ductilely deformed volcanoclastic felsic schist.											
<div><<Min: 394.21 - 396.27 5% Min: Pyrite>></div> <div><<Min: 394.21 - 396.27 1% Min: Pyrrhotite>></div> <div><<Alt: 394.21 - 396.27 Moderate (Alt) Muscovite>></div>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-325

From (m) To (m) Rocktype & Description

<<Struc: 394.95 - 394.95 dominant foliation>>

**396.27 397.74 MAFi Mafic Intrusions (primarily green
footwall mafic intrusion)**

396.27 - 397.74: Salt and pepper coloured, coarse-grained BI-rich mafic schist with finely disseminated and banded calcite.

<<Min: 396.27 - 397.74 1% Min: Pyrite>>

<<Min: 396.27 - 397.74 1% Min: Pyrrhotite>>

<<Alt: 396.27 - 397.74 Weak (Alt) Chlorite>>

<<Alt: 396.27 - 397.74 Moderate (Alt) Biotite>>

<<Vein: 396.85 - 397.12 Quartz>> Massive foliation parallel quartz-carbonate-sericite vein.

397.74 398.16 RHYvl Lapilli tuff medium grey

397.74 - 398.16: Grey, QZ-MU-CB-PY well foliated ductilely deformed volcanoclastic felsic schist.

<<Min: 397.74 - 398.16 5% Min: Pyrite>>

<<Alt: 397.74 - 401.56 Moderate (Alt) Muscovite>> Marked increase in muscovite

**398.16 399.26 OI Heavily disseminated salt + pepper
sulphides in host schist**

398.16 - 399.26: Massive calcite vein with ~20%PY, 2-3%SP

<<Min: 398.16 - 399.18 2% Min: Sphalerite>>

<<Min: 398.16 - 399.18 80% Min: Calcite>>

<<Min: 398.16 - 399.26 20% Min: Pyrite>>

<<Min: 399.18 - 401.56 8% Min: Calcite>>

<<Vein: 398.16 - 399.18 Calcite>> PY20%, SP2%

399.26 401.56 RHYvl Lapilli tuff medium grey

399.26 - 401.56: Grey, QZ-MU-CB-PY well foliated ductilely deformed volcanoclastic felsic schist.

<<Min: 399.26 - 401.56 5% Min: Pyrite>>

<<Struc: 399.26 - 399.26 dominant foliation>> Spurious? Large dip direction change

<<Struc: 401.4 - 401.4 dominant foliation>> Spurious? Large dip direction change

**401.56 403.22 MAFi Mafic Intrusions (primarily green
footwall mafic intrusion)**

401.56 - 403.22: Salt and pepper coloured, coarse-grained BI-rich mafic schist with finely disseminated and banded calcite.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
----------	--------	-------	--------	--------	--------	------	------	------

396.64	397.74	1.10	B00233353	0.4	-0.005	-0.01	-0.01	0.01
--------	--------	------	-----------	-----	--------	-------	-------	------

397.74	398.16	0.42	B00233354	-0.3	-0.005	-0.01	-0.01	-0.01
--------	--------	------	-----------	------	--------	-------	-------	-------

398.16	399.26	1.10	B00233355	0.7	0.017	-0.01	0.03	0.02
--------	--------	------	-----------	-----	-------	-------	------	------

399.26	400.76	1.50	B00233356	-0.3	0.006	-0.01	-0.01	-0.01
--------	--------	------	-----------	------	-------	-------	-------	-------

400.76	401.56	0.80	B00233357	-0.3	-0.005	-0.01	-0.01	-0.01
--------	--------	------	-----------	------	--------	-------	-------	-------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-325

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 401.56 - 403.22 1% Min: Pyrite>>											
<<Min: 401.56 - 403.22 1% Min: Pyrrhotite>>											
<<Min: 401.56 - 403.22 15% Min: Calcite>>											
<<Alt: 401.56 - 403.22 Weak (Alt) Chlorite>>											
<<Alt: 401.56 - 403.22 Weak (Alt) Biotite>>											
<<Struc: 402.39 - 402.44 Weak (Alt) Fault>>											
403.22	404.10	RHYvl Lapilli tuff									
cream											
403.22 - 404.1: Grey, QZ-MU-CB-PY well foliated ductilely deformed volcanoclastic felsic schist.											
<<Min: 403.22 - 404.1 1% Min: Pyrite>>											
<<Min: 403.22 - 404.1 3% Min: Calcite>>											
<<Alt: 403.22 - 404.1 Weak (Alt) Muscovite>>											
End of Hole @ 404.1											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-326

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Roger Hulstein	Date Logging Start:	17-Nov-15
UTM Easting	415245.4	Core Size:	NQ3	Azimuth:	179.87	Date Logging Complete:	25-Nov-15
UTM Northing:	6815347.2	Casing Pulled?:	Yes	Dip:	-66	Drill Company:	Geotech
UTM Elev. (m):	1442.119	Casing Depth (m):	21	Length (m):	443	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	15-Nov-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	24-Nov-15
Local Elev. (m):						Purpose:	Exploration
Comments:						Parent Hole:	

K15-326 was drilled to test the extension of the Krakatoa lens on the east side of the deposit. The objective was to pass through the mafic unit where K15-282, K15-277 and historical hole K97-173 were stopped.

The upper units are made up of mudstone and mafic tuff followed by volcanoclastic rhyolite intruded by aphanitic and narrow mafic dykes.

First mineralization zone (OB and OI domains) is intersected from 295.4m to 298.00m. The second lens (OB domain from 308.45m to 313.44m) sits on the top of chlorite-biotite-calcite poor mafic sill. The third sulfide lens (1.56m of OA domains over 2.53m) is observed at the bottom of this unit at 379.94m. The lower units consist of volcanoclastic rhyolite.

The hanging-wall shows strong muscovite alteration from 278.05m to 295.43m. Similar alteration is seen from 382.66m to 395.75m underneath the Krakatoa lens.

The hole ends at 443.00m on weakly muscovite altered volcanoclastic rhyolite.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-66	179.87	0	179.87	APS	Roger Hulstein	15-Nov-15		<input checked="" type="checkbox"/>	
35	-64.5	278.8	22.5	301.3	ReflexEVS	Geotech	17-Nov-15	3626	<input type="checkbox"/>	
65	-64.7	65.8	22.5	88.3	ReflexEVS	Geotech	17-Nov-15	3861	<input type="checkbox"/>	
95	-63.5	160.5	22.5	183	ReflexEVS	Geotech	17-Nov-15	5756	<input checked="" type="checkbox"/>	
125	-63.4	162.9	22.5	185.4	ReflexEVS	Geotech	18-Nov-15	5736	<input checked="" type="checkbox"/>	
155	-62.4	164.4	22.5	186.9	ReflexEVS	Geotech	18-Nov-15	5752	<input checked="" type="checkbox"/>	
188	-62.3	164.1	22.5	186.6	ReflexEVS	Geotech	19-Nov-15	5738	<input checked="" type="checkbox"/>	
218	-61.7	167.2	22.5	189.7	ReflexEVS	Geotech	20-Nov-15	5745	<input checked="" type="checkbox"/>	
245	-61	167	22.5	189.5	ReflexEVS	Geotech	20-Nov-15	5746	<input checked="" type="checkbox"/>	
269	-61.2	167	22.5	189.5	ReflexEVS	Geotech	20-Nov-15	5750	<input checked="" type="checkbox"/>	
296	-60	168.8	22.5	191.3	ReflexEVS	Geotech	21-Nov-15	5747	<input checked="" type="checkbox"/>	
317	-59.8	165.9	22.5	188.4	ReflexEVS	Geotech	21-Nov-15	5751	<input checked="" type="checkbox"/>	
347	-60.1	170.4	22.5	192.9	ReflexEVS	Geotech	22-Nov-15	5739	<input checked="" type="checkbox"/>	
377	-59.9	170.9	22.5	193.4	ReflexEVS	Geotech	22-Nov-15	5780	<input checked="" type="checkbox"/>	
395	-59.7	171.2	22.5	193.7	ReflexEVS	Geotech	23-Nov-15	5814	<input checked="" type="checkbox"/>	
419	-59.5	174.5	22.5	197	ReflexEVS	Geotech	23-Nov-15	5755	<input checked="" type="checkbox"/>	
443	-59.2	174.8	22.5	197.3	ReflexEVS	Geotech	24-Nov-15	5734	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	21.00	OVBN	Overburden									
21.00	28.80	MDU	carbonaceous mudstone	light grey								
			upper sequence									
21 - 28.8: Dominantly mudstone with MAFt layers chloritized (or MAFi intruding an unconsolidated mudstone). CA veinlets and in matrix, locally folded. <<Min: 21 - 62 0.5% Min: Pyrrhotite>> <<Min: 21 - 78 15% Min: Calcite>> And in matrix when associated with MAFt. <<Min: 21 - 191.37 0.1% Min: Pyrite>> <<Alt: 21 - 94.3 Moderate (Alt) Chlorite>> Associated with dykes. <<Vein: 21 - 92 Calcite>> CA veinlets.												
28.80	30.37	MAFt	Mafic Volcaniclastics	grey-green								
28.8 - 30.37: Chloritized, calcite in matrix. Could be MAFi but regarding to the texture it is probably tuffaceous. Mixed with MDS locally, calcite veinlets crenulated. <<Vein: 28.8 - 51.04 Quartz-Carbonate>> QZ/CA veins mostly associated with MAFt.												
30.37	38.00	MDU	carbonaceous mudstone	black								
			upper sequence									
30.37 - 38: Calcite veinlets, strong foliation.												
38.00	42.83	MAFt	Mafic Volcaniclastics	grey-green								
38 - 42.83: Chloritized, CA veined. Sharpe contacts, could be MAFi dyke.												
42.83	46.86	MDU	carbonaceous mudstone	black								
			upper sequence									
42.83 - 46.86: Calcite veinlets, locally sheared.												
<<Struc: 43.8 - 44.5 Moderate (Alt) Shear>> Brecciated, sheared, minor.												
46.86	51.04	MAFt	Mafic Volcaniclastics	grey-green								
46.86 - 51.04: Local massive QZ-CA veins.												
<<Struc: 47 - 50 Weak (Alt) Fault>> Multiple narrow fault gouge zones, minor.												
51.04	69.88	MDU	carbonaceous mudstone	black								
			upper sequence									
51.04 - 69.88: Strong foliation, CA in foliation, locally folded/crenulated. Minor Dyke (MAFi). QZ/CA veins.												



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-326

From (m)		To (m)		Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 62 - 92 1% Min: Pyrrhotite>> And veinlets. Elongated crosscutting a primary foliation.														
<<Struc: 55 - 55.01 dominant foliation>> Average.														
69.88	72.10	MAFt	Mafic Volcaniclastics	grey-green										
69.88 - 72.1: Chloritized, CA veinlets and in matrix.														
72.10	78.90	MDU	carbonaceous mudstone upper sequence	black										
72.1 - 78.9: CA veinlets foliation oriented. Locally moderately sheared.														
<<Min: 78 - 94 3% Min: Calcite>>														
<<Vein: 78 - 94 Quartz-Carbonate>> QZ/CA veins, 10 to 30 cm wide, associated with lithology changes.														
<<Struc: 72.24 - 73 Weak (Alt) Fault>> Fault gouge.														
78.90	80.32	RHY	undifferentiated rhyolite	grey-green										
78.9 - 80.32: Silicic banded. Progressive contact with MDS. Could be flow or interpreted as MDSw.														
80.32	85.13	MDU	carbonaceous mudstone upper sequence	black										
80.32 - 85.13: Locally silicic banded. 2 foliations.														
85.13	86.56	MAFt	Mafic Volcaniclastics	grey-green										
85.13 - 86.56: CA veinlets.														
86.56	87.97	MDU	carbonaceous mudstone upper sequence	black										
86.56 - 87.97: QZ-CA vein.														
87.97	90.40	MDSw	Coherent rhyolite flow with carbonaceous content	grey										
87.97 - 90.4: Could be RHYcw with progressive contact. Local QZ/TML rich, QZ veins. Silicic banded.														
<<Alt: 87.97 - 116 Weak (Alt) Muscovite>>														
90.40	92.00	MDU	carbonaceous mudstone upper sequence	black										
90.4 - 92: CA in foliation and fracture filled.														



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-326

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
92.00	109.04	RHYvl Lapilli tuff									
grey-green 92 - 109.04: Chlorite replacing lapilli. Thin foliation. Maybe dyke from 100.70m to 101.55m (AK/CL rich with chill margin at lower and upper contact-intermediate composition). Few BI patch. <<Min: 92 - 154 0.5% Min: Pyrrhotite>> Locally concentrated. <<Min: 94 - 181 1% Min: Calcite>> Or replacement. <<Alt: 94.3 - 109 Weak (Alt) Chlorite>> <<Struc: 92 - 116 Weak (Alt) Fault>> Multiple narrow fault gouge zones (2 to 10 cm wide) and minor folding. Accentuated by MU composition. Minor <<Struc: 100 - 100.01 dominant foliation>> Average.											
109.04	112.70	RHYva Coarse grained to ash tuff									
grey-green 109.04 - 112.7: Locally MU altered (greenish color), banded with PO.											
112.70	115.15	RHYvl Lapilli tuff									
grey-green 112.7 - 115.15: Moderately MU altered.											
115.15	129.77	RHYva Coarse grained to ash tuff									
grey-green 115.15 - 129.77: Dark color due to CL/BI (?). Few lapilli aggregated. <<Vein: 127.54 - 127.95 Quartz>> QZ vein, few CL. <<Struc: 120 - 120.01 dominant foliation>> Average.											
129.77	133.07	RHYi Aphanitic Rhyolite (intrusion)									
beige 129.77 - 133.07: Stockwork texture at upper contact. PY and probably TML veinlets. Could be albitization.											
133.07	133.90	RHY undifferentiated rhyolite									
grey-green 133.07 - 133.9: Foliated. PY in foliation.											
133.90	139.00	RHYi Aphanitic Rhyolite (intrusion)									
beige 133.9 - 139: Classified as RHYi because of aphanitic texture. Interval including large massive QZ vein, fractured, brittle, might be strongly silicified RHY. <<Alt: 133.9 - 139 Strong (Alt) Silicification>> Log as RHYi regarding to the texture. Large QZ veins containing schist, few CL. <<Vein: 135.23 - 137.22 Quartz-Carbonate>> QZ-CA vein surrounded by SI alteration, containing schist and few CL. Brittle. <<Struc: 138.8 - 139.25 Moderate (Alt) Fault>> Lower contact between silicified zone and RHY. Fault gouge.											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-326

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
139.00	140.17	RHYvl Lapilli tuff									
139 - 140.17: Silicic banded.											
140.17	143.18	RHYi Aphanitic Rhyolite (intrusion)									
140.17 - 143.18: Albitization?											
<<Alt: 142.64 - 143.18 Moderate (Alt) Silicification>> Could be albitization.											
143.18	149.59	RHYvl Lapilli tuff									
143.18 - 149.59: Silicic banded at upper contact. Locally planar thin lamination. Few BI porphyroblasts.											
<<Alt: 143.18 - 236 Weak (Alt) Muscovite>> Locally moderate.											
149.59	150.05	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
149.59 - 150.05: Unaltered AK, BI, soft matrix.											
<<Struc: 150 - 150.05 Weak (Alt) Fault>> At lower contact between MAFi dyke and RHYvl.											
150.05	153.75	RHYvl Lapilli tuff									
<<Alt: 150.05 - 153.75 Moderate (Alt) Chlorite>>											
153.75	156.28	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
153.75 - 156.28: Could be volcanoclastic. CA veinlets. 2 foliations observed.											
<<Min: 154 - 161.46 1% Min: Pyrrhotite>> Eloganted in the foliation.											
156.28	157.14	RHYva Coarse grained to ash tuff									
157.14	159.40	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
157.14 - 159.4: Could be MAFi. Gradual contact.											
159.40	160.49	RHYva Coarse grained to ash tuff									
159.4 - 160.49: Few BI											
160.49	161.46	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
161.46	167.03	RHYvl Lapilli tuff									
161.46 - 167.03: Few BI.											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-326

From (m)		To (m)	Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<div><<Min: 161.46 - 244 0.5% Min: Pyrrhotite>></div> <div><<Struc: 163.2 - 163.8 Foliation>></div> <div><<Struc: 163.2 - 163.8 dominant foliation>> Mid strained lapilli.</div> <div><div>167.03173.57</div><div>RHYundifferentiated rhyolite</div><div>grey-green</div></div> <div>167.03 - 173.57: Silicic bands, probably RHYvl. Locally silicified (RHYi?).</div> <div><<Alt: 171 - 173.57 Moderate (Alt) Silicification>> Could be albitization</div> <div><<Vein: 168.5 - 168.51 Undifferentiated/Unknown/Other>> Late fracture, brown mineral filled. Bleaching halo over 1 cm on each side.</div> <div><<Vein: 173.2 - 173.47 Quartz>> QZ vein.</div> <div><div>173.57182.40</div><div>RHYvlLapilli tuff</div><div>grey-green</div></div> <div>173.57 - 182.4: Silicified. BI locally aggregated, could be narrow dyke or MAFi enclave.</div> <div><<Min: 181 - 191.37 3% Min: Calcite>> and lapilli replacement.</div> <div><<Alt: 174.15 - 175.35 Weak (Alt) Chlorite>> Associated with fault/shear zone.</div> <div><<Alt: 176.83 - 181.37 Moderate (Alt) Silicification>></div> <div><<Struc: 174.59 - 176 Moderate (Alt) Fault>> and sheared. CL/MU, QZ/CA.</div> <div><<Struc: 176.5 - 176.51 dominant foliation>></div> <div><<Struc: 176.8 - 177.1 Weak (Alt) Fault>> Evidence of micro-faulting (truncated shallow angle veinlets).</div> <div><div>182.40188.17</div><div>RHYundifferentiated rhyolite</div><div>grey-green</div></div> <div>182.4 - 188.17: Silicic bands. Locally glassy. Few minor faults (gouge).</div> <div><<Alt: 182.76 - 186.07 Moderate (Alt) Silicification>></div> <div><<Struc: 187 - 187.4 Weak (Alt) Fault>> Fault gouge containing QZ vein relic.</div> <div><div>188.17191.17</div><div>RHYvlLapilli tuff</div><div>grey-green</div></div> <div>188.17 - 191.17: Progressive lower contact with silicified unit.</div> <div><<Alt: 190.43 - 206.84 Moderate (Alt) Silicification>> Locally strong. Log as RHYi but could be albitization.</div> <div><<Struc: 189 - 189.01 dominant foliation>></div> <div><div>191.17206.84</div><div>RHYiAphanitic Rhyolite (intrusion)</div><div>beige</div></div> <div>191.17 - 206.84: Classified as RHYi due to aphanitic texture. Albite and/or silicic alteration (?). Gradual upper contact, texture preserved on the edge. Fractured, MU/PY filling. PY disseminated. Interval including massive QZ vein from 200m to 201.60m. Folded at lower contact. Sericite alteration banded .</div> <div><<Min: 191.37 - 234 0.5% Min: Pyrite>> And few veinlets.</div> <div><<Vein: 200 - 201.65 Quartz>> QZ vein.</div>													



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-326

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
206.84	208.23	RHYv Rhyolite volcanoclastic									
<<Min: 206.84 - 257 3% Min: Calcite>>											
208.23	210.18	RHYvx Quartz and/or feldspar crystal tuff									
208.23 - 210.18: Feldspar shaped phenos up to 1 cm long. Lapillitic.											
210.18	216.03	RHYv Rhyolite volcanoclastic									
210.18 - 216.03: Interval including sorting sequence from 212.47m to 213.18m showing sharp contacts.											
<<Struc: 214 - 218 Weak (Alt) Fault>> Multiple minor faults with clay gouge.											
216.03	243.70	RHYva Coarse grained to ash tuff									
216.03 - 243.7: Massive QZ vein intruding fine grain layer (ash?) containing QZ eyes-or chill margin-from 224.80m to 226.69m. Narrow MAFi (BI/CA) from 223.88m to 224.28m, euhedral PY at upper contact.											
<<Min: 234 - 244 1% Min: Pyrite>> Small patch or deformed stringers.											
<<Alt: 236 - 257 Weak (Alt) Muscovite>>											
<<Vein: 224.8 - 225.8 Quartz-Carbonate>> QZ vein, CA/CL and talc patch.											
<<Struc: 224.5 - 224.8 Weak (Alt) Shear>> Minor shear zone containing sandy/clay gouge.											
<<Struc: 233.55 - 233.65 Weak (Alt) Fault>> Minor fault.											
243.70	272.45	RHY undifferentiated rhyolite									
243.7 - 272.45: PY patch, PO disseminated, blurry texture. Dark sericite or carbonaceous composition from 253.80m to 256.26m..											
<<Min: 244 - 260.1 5% Min: Pyrite>> Deformed veins or patch, associated with QZ, dark color.											
<<Min: 244 - 278 2% Min: Pyrrhotite>> Elongated, foliation oriented.											
<<Min: 260.1 - 278 1% Min: Pyrite>>											
<<Alt: 257 - 278.05 Moderate (Alt) Muscovite>>											
<<Struc: 252.2 - 255.2 Weak (Alt) Fault>> Multiple minor fault showing clay gouge.											
<<Struc: 261.55 - 263 Moderate (Alt) Fault>> Breccia gouge.											
<<Struc: 270.2 - 272 Strong (Alt) Fault>> Core loss. Considered as strong regarding to the recovery, the size of the interval and the clay composition.											
272.45	276.80	RHY undifferentiated rhyolite									
272.45 - 276.8: Interpreted as high density of strained lapilli but could be flow banded.											
<<Struc: 276.5 - 276.8 Weak (Alt) Fault>> Fault gouge.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-326

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
276.80	277.50	MDS	Carbonaceous dominant mudstone	black							
276.8 - 277.5: PY in foliation.											
277.50	285.69	RHY	undifferentiated rhyolite	grey-green							
277.5 - 285.69: Flow texture but probably due to QZ vein proximity. PY/dark QZ stringers, wavy, locally crenulated.											
<<Min: 278 - 284.56 5% Min: Pyrite>> Stringers and disseminated.											
<<Min: 278 - 284.56 0.1% Min: Pyrrhotite>>											
<<Min: 284.56 - 295.48 2% Min: Pyrite>> Elongated, foliation oriented.											
<<Alt: 278.05 - 295.48 Strong (Alt) Muscovite>>											
<<Vein: 277.5 - 278 Quartz>> QZ.											
<<Vein: 282.3 - 282.9 Quartz>> QZ.											
285.69	295.43	RHYc	Rhyolite coherent volcanics	grey-green							
285.69 - 295.43: Silicic bands. Could be flow. PY disseminated and stringers. Texture obscured at proximity of MxSx											
<<Struc: 286.9 - 286.91 dominant foliation>>											
<<Struc: 292.5 - 292.51 dominant foliation>>											
295.43	296.03	OB	Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	FMG							
295.43 - 296.03: Semi-massive. 30 to 40 percent of sulfide.											
<<Min: 295.48 - 296.03 3% Min: Sphalerite>>											
<<Min: 295.48 - 296.03 60% Min: Pyrite>>											
<<Min: 295.48 - 296.03 0.1% Min: Chalcopyrite>>											
<<Min: 295.48 - 296.03 5% Min: Calcite>> In OB.											
<<Min: 295.48 - 298 0.5% Min: Galena>>											
<<Struc: 295.5 - 295.51 dominant foliation>> Lamination in MxSx.											
296.03	298.00	OI	Heavily disseminated sulphides in host schist	FMG							
296.03 - 298: Black chlorite.											
<<Min: 296.03 - 298 5% Min: Sphalerite>>											
<<Min: 296.03 - 298 30% Min: Pyrite>>											

291.00	292.50	1.50	B00233554	3.7	0.028	0.02	0.02	0.01
--------	--------	------	-----------	-----	-------	------	------	------

292.50	294.00	1.50	B00233555	4.4	0.033	0.02	-0.01	0.12
294.00	295.43	1.43	B00233556	4.7	0.023	0.01	0.06	0.09
295.43	296.03	0.60	B00233557	244	0.93	0.12	4.89	6.87

296.03	297.04	1.01	B00233558	58.7	0.476	0.41	0.69	3.12
--------	--------	------	-----------	------	-------	------	------	------

297.04	298.00	0.96	B00233559	103	0.729	0.51	0.96	6.74
--------	--------	------	-----------	-----	-------	------	------	------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-326

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 296.03 - 298 0.5% Min: Chalcopryite>>											
<<Min: 296.03 - 298 0.1% Min: Arsenopyrite>>											
<<Alt: 296.03 - 298 Moderate (Alt) Chlorite>> Black chlorite.											
298.00	308.56	RHYc Rhyolite coherant volcanics grey-green	298.00	299.50	1.50	B00233561	2.8	0.019	0.01	0.03	0.4
298 - 308.56: Silicic bands. Strongly MU altered.											
<<Min: 298 - 308.56 2% Min: Pyrite>>			299.50	301.00	1.50	B00233562	0.4	-0.005	-0.01	-0.01	-0.01
<<Alt: 298 - 308.56 Strong (Alt) Muscovite>>			301.00	302.50	1.50	B00233563	0.7	0.007	-0.01	-0.01	-0.01
<<Struc: 298 - 305 Moderate (Alt) Fault>> Multiple fault up to 30cm gouge in strongly MU altered RHY locally sheared.			302.50	304.00	1.50	B00233564	0.6	0.008	-0.01	-0.01	-0.01
<<Struc: 305 - 308.1 Strong (Alt) Fault>> Intensity estimated according to poor recovery and fault gouge.			304.00	305.00	1.00	B00233565	0.3	-0.005	-0.01	-0.01	-0.01
			305.00	308.00	3.00	B00233566	0.5	-0.005	-0.01	0.02	-0.01
			308.00	308.56	0.56	B00233567	19.4	0.012	-0.01	0.01	0.01
308.56	311.40	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	308.56	309.60	1.04	B00233568	303	3.77	0.46	3.61	8.95
308.56 - 311.4: PO at upper contact,black CL. CA/CL patch. CA in matrix, maybe BA. QZ patch.											
<<Min: 308.56 - 311.4 5% Min: Sphalerite>>			309.60	310.20	0.60	B00233569	212	1.69	0.15	3.57	8.84
<<Min: 308.56 - 311.4 3% Min: Pyrrhotite>> Patch at upper contact.			310.20	311.40	1.20	B00233572	232	1.63	0.02	4.1	5.38
<<Min: 308.56 - 311.4 1% Min: Galena>>											
<<Min: 308.56 - 311.4 0.1% Min: Chalcopryite>>											
<<Min: 308.56 - 313.44 10% Min: Calcite>> In matrix and patch.											
311.40	313.44	OB Wispy laminate, fine buckshot textured, non-magnetite bearing sulphides	311.40	312.00	0.60	B00233573	409	2.17	0.04	7.06	11.3
311.4 - 313.44: CA, maybe Ba in matrix. CA/CL patch, locally laminated, MAFi texture (?).											
<<Min: 311.4 - 312 20% Min: Sphalerite>>			312.00	312.63	0.63	B00233574	247	9.08	0.24	2.6	6.9
<<Min: 311.4 - 312 2% Min: Galena>>			312.63	313.44	0.81	B00233575	248	3.49	0.24	3.94	8.54
<<Min: 311.4 - 312 0.1% Min: Chalcopryite>> Associated with CL bands.											
<<Min: 312 - 312.44 3% Min: Galena>>											
<<Min: 312 - 313.44 10% Min: Sphalerite>>											
<<Min: 312 - 313.44 0.1% Min: Chalcopryite>>											
<<Struc: 313.15 - 313.16 Foliation>> Lamination in MxSx, could be relic of original foliation.											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-326

From (m) To (m) Rocktype & Description

313.44 379.94 MAFi Mafic Intrusions (primarily footwall mafic intrusion) green

313.44 - 379.94: Bleached, weakly foliated, low CA content from 318.00m.

<<Min: 313.44 - 318 10% Min: Calcite>>

<<Min: 313.44 - 379.94 0.1% Min: Pyrite>> Pseudo-euhedral.

<<Min: 318 - 375 1% Min: Calcite>>

<<Min: 375 - 380.03 10% Min: Calcite>>

<<Alt: 313.44 - 379.94 Strong (Alt) Chlorite>>

<<Vein: 319.2 - 319.22 Calcite 35 deg. >> CA vein, part of a set of 3 veins. Alpha angle average of the 3.

<<Vein: 321.89 - 322.37 Calcite>> Massive CA vein.

<<Vein: 334.35 - 334.45 Calcite>> QZ/CA vein or patch containing BI.

<<Struc: 317.29 - 317.3 dominant foliation>>

<<Struc: 319.2 - 319.22 Vein>> CA vein, Set of 3 veins.

<<Struc: 325.91 - 325.92 dominant foliation>>

<<Struc: 331.83 - 331.84 dominant foliation>>

<<Struc: 342.47 - 342.48 dominant foliation>>

<<Struc: 352.98 - 352.99 dominant foliation>>

<<Struc: 370.06 - 370.07 Vein>> CA veinlet.

<<Struc: 372.26 - 372.26 Vein>> CA veinlet.

379.94 380.71 OA Magnetite bearing sulphides

FMG

379.94 - 380.71: CA in matrix over 10cm at upper contact.

<<Min: 379.94 - 380.77 10% Min: Sphalerite>>

<<Min: 379.94 - 380.77 70% Min: Pyrite>>

<<Min: 379.94 - 380.77 10% Min: Magnetite>>

<<Min: 379.94 - 380.77 3% Min: Galena>>

<<Min: 379.94 - 380.77 0.5% Min: Chalcopyrite>>

380.71 381.68 RHY undifferentiated rhyolite grey-green

380.71 - 381.68: CL clots (mineral replacement). Few xlt (felspar ?) locally aggregated.

<<Min: 380.77 - 381.68 2% Min: Pyrite>> Elongated.

<<Min: 380.77 - 381.68 0.5% Min: Chalcopyrite>> Veinlets at contact.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
313.44	314.00	0.56	B00233576	10	0.155	-0.01	0.15	0.16

314.00	315.50	1.50	B00233577	9.8	0.053	0.02	0.15	0.15
315.50	317.00	1.50	B00233578	3.8	0.02	-0.01	0.05	0.07
317.00	318.50	1.50	B00233579	3.2	0.016	-0.01	0.05	0.07
375.50	377.00	1.50	B00233581	2.2	-0.005	-0.01	0.04	0.06
377.00	378.50	1.50	B00233582	1.5	-0.005	-0.01	0.03	0.05
378.50	379.94	1.44	B00233583	4.2	0.011	-0.01	0.09	0.11

379.94	380.71	0.77	B00233584	80	0.274	0.3	2.24	11.1
--------	--------	------	-----------	----	-------	-----	------	------

380.71	381.68	0.97	B00233585	3	0.028	0.05	0.04	0.14
--------	--------	------	-----------	---	-------	------	------	------

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-326

From (m) To (m) Rocktype & Description

381.68 382.47 OA Magnetite bearing sulphides

FG

381.68 - 382.47: Fine grain PY in matrix, coarser in lamination associated with SP and at upper contact.

<<Min: 381.68 - 382.47 25% Min: Sphalerite>>

<<Min: 381.68 - 382.47 50% Min: Pyrite>>

<<Min: 381.68 - 382.47 10% Min: Magnetite>>

<<Min: 381.68 - 382.47 1% Min: Galena>>

<<Min: 381.68 - 382.47 0.5% Min: Chalcopryrite>>

382.47 395.00 RHYv Rhyolite volcaniclastic grey-green

<<Min: 382.47 - 387.54 2% Min: Pyrite>> And aggregated in dark QZ patch.

<<Min: 382.47 - 443 0.1% Min: Calcite>> Or locally associated with MAFi dyke.

<<Min: 387.54 - 443 1% Min: Pyrite>>

<<Min: 387.54 - 443 3% Min: Pyrrhotite>> Veinlets in foliation.

<<Alt: 382.66 - 429.75 Moderate (Alt) Muscovite>> Could be original. Locally moderate.

<<Struc: 384.5 - 388 Moderate (Alt) Fault>> Multiple faults, fault gouge up to 30cm, accentuated by strong MU alteration and strong foliation.

395.00 395.80 MAFi Mafic Intrusions (primarily footwall mafic intrusion) grey-brown

395 - 395.8: CA in matrix, locally chloritized. PO veinlets at upper and lower contact. Foliated. QZ vein crosscutting the unit. Specks of tourmaline.

395.80 443.00 RHYv Rhyolite volcaniclastic grey-green

395.8 - 443: Lapilli ghosts partially altered CL. PY veinlets, strong MU alteration fading out from 429.75m. Specks of tourmaline. E.O.H.

<<Alt: 429.75 - 443 Weak (Alt) Muscovite>>

<<Vein: 436.49 - 436.9 Quartz>> Massive QZ vein.

<<Vein: 439.15 - 439.39 Quartz-Tourmaline-Sulphide>> QZ vein with TML and PY.

<<Struc: 404 - 417 Weak (Alt) Fault>> Multiples minor faults, strong MU.

End of Hole @ 443

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
381.68	382.47	0.79	B00233586	44	0.429	1.13	0.09	8

382.47	384.00	1.53	B00233587	1	-0.005	0.02	0.01	0.03
384.00	385.50	1.50	B00233588	1	0.01	0.01	0.02	0.11
385.50	387.00	1.50	B00233589	0.5	0.009	-0.01	-0.01	0.03

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-327

Prospect:	Santorini	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Florent Pons
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Florent Pons	Date Logging Start:	20-Nov-15
UTM Easting	414638.9	Core Size:	HQ3	Azimuth:	194.48	Date Logging Complete:	24-Nov-15
UTM Northing:	6815180	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1442.89	Casing Depth (m):	7.5	Length (m):	221	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	19-Nov-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK camp	Drill Completed:	22-Nov-15
Local Elev. (m):						Purpose:	Exploration
Comments:						Parent Hole:	

K15-327 was drilled to target the Santorini geophysical anomaly. Total planned depth was ~ 250 m and the hole was shut down at 221m. Hole was collared in fine grained RHYvl followed by alternation of volcanoclastic unit and mafic intrusive/sill intervals, characterized by a moderate chlorite alteration, which occurring as very fine grained bands and also pervasive, usually associated with Po/Sp/Cpy mineralization. The hole intercepted two narrows intervals of OJ (Cpy/GL/Sp rich) at 63.5m (~50cm) and 83m (~1m) hosted within volcanoclastic rhyolite, these intervals were also intensely chlorite altered and contained patchy cordierite porphyroblasts. Interestingly between 183.5 to 214.35m, we intercepted unit of oligomictic, clasts supported, pebble to cobble sized volcanic metaconglomerate. It's difficult to be totally confident for this protolith due to alteration/foliation intensity.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	194.48	0	194.48	APS	Florent Pons	19-Nov-15		<input checked="" type="checkbox"/>	
26	-59.2	173.5	22.5	196	ReflexEVS	Geotech	20-Nov-15	5761	<input checked="" type="checkbox"/>	
53	-59.5	172.7	22.5	195.2	ReflexEVS	Geotech	20-Nov-15	5742	<input checked="" type="checkbox"/>	
74	-59.6	172.4	22.5	194.9	ReflexEVS	Geotech	21-Nov-15	5775	<input checked="" type="checkbox"/>	
101	-59.6	171.9	22.5	194.4	ReflexEVS	Geotech	21-Nov-15	5741	<input checked="" type="checkbox"/>	
125	-59.8	174	22.5	196.5	ReflexEVS	Geotech	21-Nov-15	5724	<input checked="" type="checkbox"/>	
152	-59.9	172.6	22.5	195.1	ReflexEVS	Geotech	21-Nov-15	5747	<input checked="" type="checkbox"/>	
176	-59.7	173.4	22.5	195.9	ReflexEVS	Geotech	22-Nov-15	5775	<input checked="" type="checkbox"/>	
200	-59.5	174.5	22.5	197	ReflexEVS	Geotech	22-Nov-15	5772	<input checked="" type="checkbox"/>	
221	-59.7	175.7	22.5	198.2	ReflexEVS	Geotech	22-Nov-15	5728	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	6.65	OVBN Overburden									
0 - 6.65: Casing at 7.5 m											

Project:
KZK
Hole Number:
K15-327

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
6.65	10.05	RHYv Rhyolite volcanoclastic									
FMG											
6.65 - 10.05: Light grey/greenish, fine to medium grained matrix, moderately foliated. Comprising siliceous bands, mm to cm wide, irregular and locally dismembered. Could be lapilli/clast strongly stretched/flattered, pebble size. Moderately MU/SI altered. Probably volcanoclastic interval.											
<<Min: 6.65 - 7.65 2% Min: Pyrite>> Finely disseminated and also thin stringers.											
<<Min: 6.65 - 9.3 4% Min: Calcite>> Associated with siliceous bands and qtz veinlets, blebs.											
<<Min: 7.65 - 10.05 0.5% Min: Pyrite>>											
<<Min: 9.3 - 11.2 12% Min: Calcite>> +/- pervasive/patchy											
<<Alt: 6.65 - 10.05 Moderate (Alt) Silicification>> Occuring as concordant siliceous bands associated with diffuse fuschite (weak).											
<<Alt: 6.65 - 10.05 Weak (Alt) Muscovite>> Weak to moderate MU alteration, fracture surface.											
10.05	38.55	MAFi Mafic Intrusions (primarily green-brown footwall mafic intrusion)									
FCG											
10.05 - 38.55: Green to brownish, massive, coarse grained, weak/moderately foliated. Comprising BI/CL clots distributed within matrix, cm size, moderately flattered. "gabbroic" texture. CL clots Could be mafic phenocrystal relics (pyroxene/amphibole?). BI occuring as small disseminated clots/flakes, more concentrate at the margins of the unit. Weakly Ca altered, occuring as blebs/patchy and locally pervasive. Trace of mineralization (PO).											
<<Min: 10.05 - 38.55 0.1% Min: Pyrite>>											
<<Min: 11.2 - 25.6 3% Min: Calcite>> Mainly fracture filling/thin veinlets, and also isolated blebs.											
<<Min: 25.6 - 37.5 2% Min: Calcite>> Weakly calcite altered.											
<<Min: 37.5 - 38.55 6% Min: Calcite>> MAFi. Blebs/veinlets											
<<Alt: 10.05 - 13 Moderate (Alt) Biotite>> Small/medium sized Bi clots/flakes, distributed within the matrix.											
<<Alt: 10.05 - 39 Moderate (Alt) Chlorite>> Pervasive and also occuring as altered clots.											
<<Alt: 13 - 36.42 Weak (Alt) Biotite>> small/medium sized Bi clots/flakes, distributed within the matrix.											
<<Alt: 36.42 - 38.55 Strong (Alt) Biotite>> small/medium sized Bi clots/flakes, distributed within the matrix.											
<<Vein: 23 - 23.22 30% Calcite>> Vesicular calcite veins, 3-5 cm wide, irregular oriented.											
<<Vein: 25.45 - 25.52 80% Calcite 75 deg. >> Regular calcite +/- qtz vein, 5 cm wide, discordant.											
<<Struc: 32 - 32.01 Weak (Alt) Foliation>>											
38.55	48.35	RHYva Coarse grained to ash tuff green									
FG											
38.55 - 48.35: Light grey/greenish, fine grained, homogeneous, moderately foliated. <10 % of mm qtz grains distributed within MU altered fine grained matrix. Locally crosscut by deformed qtz veins. Probably fine grained ash tuff.											
<<Min: 38.55 - 39.55 1% Min: Sphalerite>> Disseminated within veins.											
<<Min: 38.55 - 39.55 1% Min: Pyrite>> Aggregate within Qtz veins.											
<<Min: 38.55 - 39.55 2% Min: Pyrrhotite>> Aggregate within Qtz veins.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-327

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 38.55 - 48.35 3% Min: Calcite>> Blebs/fracture filling. <<Min: 39.55 - 40.65 1% Min: Sphalerite>> Occuring as thin veinlets/stringers associated with py. <<Min: 39.55 - 40.65 1% Min: Pyrite>> Occuring as thin veinlets/stringers associated with sp <<Min: 40.65 - 48.35 1% Min: Pyrite>> Thin stringers. <<Alt: 38.55 - 49.18 Moderate (Alt) Muscovite>> <<Vein: 38.55 - 39.55 30% Quartz>> Interval comprising deformed and dismembered qtz veins, 1-10 cm wide. Associated with PO/PY/SP aggregates. <<Vein: 44.3 - 44.35 95% Quartz 80 deg. >> Regular grey qtz vein, +/- Ca, seems "boudinaged". <<Struc: 47 - 47.01 Moderate (Alt) Foliation>>											
48.35	62.56	MAFi Mafic Intrusions (primarily green FCG footwall mafic intrusion)	62.00	62.56	0.56	B00232803	27.8	0.051	0.58	0.19	1.42
48.35 - 62.56: Green to brownish, massive, coarse grained, weak/moderately foliated. Comprising BI/CL clots distributed within matrix, cm size, moderately flattered. . CL clots could be mafic phenocrystal relics (pyroxene/amphibole?). At the top of unit, strong Si alteration interval associated with diffuse fuschite and Sp stringers. BI occuring as small disseminated clots/flakes, more concentrate at the margins of the unit. Moderately Ca altered, occuring as blebs/veinlets/patchy and locally pervasive. Trace of mineralization (PO). <<Min: 48.35 - 49 5% Min: Sphalerite>> Occuring as thin concordant bands/stringers/fracture filling? Associated with diffuse SI/fuschite. <<Min: 48.35 - 49 3% Min: Pyrite>> Occuring as thin concordant bands/stringers/fracture filling? Associated with diffuse SI/fuschite. <<Min: 48.35 - 62.56 6% Min: Calcite>> <<Min: 49 - 50.07 1% Min: Pyrite>> <<Min: 50.07 - 50.5 0.1% Min: Pyrite>> <<Min: 50.5 - 51.32 4% Min: Sphalerite>> Occuring as thin concordant bands/stringers/fracture filling? Associated with diffuse SI/fuschite. <<Min: 50.5 - 51.32 1% Min: Pyrite>> Occuring as thin concordant bands/stringers/fracture filling? Associated with diffuse SI/fuschite. <<Min: 51.32 - 54 0.5% Min: Pyrrhotite>> disseminated aggregate locally associated with Cpy. <<Min: 51.32 - 54 0.1% Min: Chalcopyrite>> Associated with PO aggregate. <<Min: 54 - 62.56 0.1% Min: Pyrrhotite>> <<Alt: 48.35 - 49.18 Moderate (Alt) Silicification>> Occuring as concordant bands <<Alt: 49.35 - 50.07 Strong (Alt) Biotite>> MAFi <<Alt: 50.07 - 51.32 Moderate (Alt) Silicification>> Occuring as concordant siliceous bands associated with diffuse fuschite (moderate). <<Alt: 51.32 - 54 Moderate (Alt) Biotite>> small/medium sized Bi clots/flakes, distributed within the matrix. <<Alt: 51.32 - 62.56 Moderate (Alt) Chlorite>> MAFi											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-327

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 62 - 62.01 Moderate (Alt) Foliation>>											
62.56	65.25	RHY undifferentiated rhyolite green FMG	62.56	63.00	0.44	B00232804	2.4	-0.005	0.03	0.02	0.04
62.56 - 65.25: Green, fine to medium grained, matrix strongly CI altered. Moderately foliated. CL alteration (proximal/original?) occurring as pervasive bands (also pervasive), very fine grained, associated with significant Po/Sp/Cpy mineralization. Trace of blue QE distributed. Comprising deformed/dismembered calcite bands, subconcordant.											
<<Min: 62.56 - 63 3% Min: Sphalerite>> Occuring as bands/stringers locally associated with Cp.											
<<Min: 62.56 - 63 2% Min: Pyrrhotite>> Occuring as fine grained bands/stringers associated with Cp.											
<<Min: 62.56 - 63 3% Min: Chalcopyrite>> Occuring as bands/stringers associated with Sp/Po.											
<<Min: 62.56 - 95 2% Min: Calcite>> Also thin veinlets.											
<<Min: 63 - 64.45 0.5% Min: Sphalerite>> Thin subconcordant stringers associated with CI bands.											
<<Min: 63 - 64.45 1% Min: Pyrrhotite>> Thin subconcordant stringers locally associated with Sp											
<<Min: 64.45 - 65.25 1% Min: Sphalerite>> Thin stringers, locally Cp associated.											
<<Min: 64.45 - 65.25 2% Min: Pyrrhotite>> Cp trace associated.											
<<Min: 64.45 - 65.25 1% Min: Chalcopyrite>> Associated with Po/Sp bands.											
<<Alt: 62.56 - 65.25 Moderate (Alt) Chlorite>> CL alteration (proximal/original?) occurring as pervasive bands (also pervasive), very fine grained, associated with significant Po/Sp/Cpy mineralization.											
65.25	65.75	OJ Heavily disseminated green CG sulphides in proximal altered rock	65.25	65.75	0.50	B00232807	84.2	0.119	1.64	3.46	7.46
65.25 - 65.75: Interval of OJ, strongly chlorite altered (original), Strongly mineralized (Cpy/GL/Sp rich). Mineralization occurring as bands/aggregate/patchy.											
<<Min: 65.25 - 66.25 1% Min: Pyrrhotite>>											
<<Alt: 65.25 - 65.75 Strong (Alt) Chlorite>> Strong/intense chlorite alteration associated with strong mineralization. OJ											
<<Struc: 65.5 - 65.51 Vein>> Mineralization bands											
65.75	68.30	RHY undifferentiated rhyolite green FCG	65.75	66.25	0.50	B00232808	1.8	-0.005	0.02	0.07	0.14
65.75 - 68.3: Green, fine to medium grained, matrix strongly CI altered (original). Moderately foliated. CL alteration occurring as large pervasive bands (also pervasive), very fine grained, associated with significant Po/Sp/Cpy mineralization, could be OJ unit. Locally we observe siliceous clasts/lapilli? Relics. Comprising deformed/dismembered calcite bands, subconcordant.											
<<Min: 66.25 - 68 4% Min: Sphalerite>> Occuring as bands, subconcordant											
<<Min: 66.25 - 68 2% Min: Pyrrhotite>>											
<<Min: 66.25 - 68 4% Min: Galena>> Associated with Sp/Cp bands											
<<Min: 66.25 - 68 4% Min: Chalcopyrite>> Associated with Sp/Gl bands											
<<Min: 68 - 76 1% Min: Sphalerite>> Occuring as thin bands.											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-327

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 68 - 76 2% Min: Pyrrhotite>> <<Min: 68 - 76 1% Min: Galena>> Associated with Sp bands <<Min: 68 - 76 0.1% Min: Chalcopryite>> Locally associated with Sp. <<Alt: 65.75 - 66.25 Moderate (Alt) Chlorite>> Original? <<Alt: 66.25 - 68.3 Strong (Alt) Chlorite>> Strong/intense chlorite alteration associated with moderate/strong mineralization.											
68.30	83.00	RHYv Rhyolite volcanoclastic grey CG	68.30	69.50	1.20	B00232813	1.9	-0.005	0.02	0.03	0.34
68.3 - 83: Greyish, medium/coarse grained, +/- homogeneous, weak to moderately MU altered (shiny on fracture surface, original?). Moderately foliated. Weak pervasive chlorite alteration, strong after 80.47m. Blue QE locally disseminated. Comprising siliceous dismembered bands or clast/lapilli, within fine/medium grained matrix. Weakly Sp/Po/Cp mineralized.											
74.7-77.2m: Thin carbonaceous bands appears, MDS? 78.2-80.47m: Moderate banded texture marked by siliceous bands, weak curdy texture, RHYcw interval?											
<<Min: 76 - 81.87 0.5% Min: Pyrrhotite>> <<Min: 81.87 - 83 0.5% Min: Sphalerite>> <<Min: 81.87 - 83 4% Min: Pyrrhotite>> Patchy/fracture filing <<Min: 81.87 - 83 1% Min: Chalcopryite>> Associated with po <<Alt: 68.3 - 80.47 Weak (Alt) Chlorite>> Original? <<Alt: 68.3 - 81 Moderate (Alt) Muscovite>> shiny on fracture surface, original? <<Alt: 80.47 - 81.87 Moderate (Alt) Chlorite>> <<Alt: 81.47 - 83 Weak (Alt) Cordierite>> Cordierite porphyroblasts appear, distributed within Cl matrix altered. <<Alt: 81.87 - 84.4 Strong (Alt) Chlorite>> Strong/intense chlorite alteration associated with moderate/strong mineralization. <<Vein: 77.4 - 81.1 25% Quartz 80 deg. >> Interval comprising multiple massive grey qtz veins. +/- calcite. Margins CL altered, deformed. Unmineralized. <<Struc: 70 - 70.01 Moderate (Alt) Foliation>>											
83.00	84.05	OJ Heavily disseminated green FCG	83.00	83.70	0.70	B00232826	47.5	0.03	0.09	0.22	4.7
83 - 84.05: Interval of OJ, strongly chlorite altered (original) associated with cordierite porphyroblasts, Strongly mineralized (Cpy/GL/Sp rich). Mineralization occurring as bands/aggregate/fracture filling.											
<<Min: 83 - 83.7 2% Min: Chalcopryite>> Associated with PO/Sp <<Min: 83 - 84.05 6% Min: Sphalerite>> Fracture filling/stringers associated with Cp <<Min: 83 - 84.05 6% Min: Pyrrhotite>> Fracture filling/ aggregate <<Min: 83 - 84.05 4% Min: Galena>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-327

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 83.7 - 84.05 6% Min: Chalcopryite>> Fracture filling/aggregate.											
<<Alt: 83 - 84.05 Moderate (Alt) Cordierite>> Cordierite porphyroblasts, mm to cm, distributed within Cl matrix altered.											
84.05	89.33	RHYv Rhyolite volcanoclastic green FCG	84.05	85.00	0.95	B00232828	2.4	-0.005	0.03	-0.01	0.5
84.05 - 89.33: Green, fine to medium grained, matrix strongly Cl altered (original) and weakly MU altered. Moderately foliated. CL alteration occurring as large pervasive bands (also pervasive), very fine grained, associated with Po/Sp/Cpy mineralization. Locally we observe siliceous fragments/clasts/lapilli relics?. Comprising deformed/dismembered calcite bands, subconcordant.											
<<Min: 84.05 - 86 2% Min: Sphalerite>> Occuring as bands/stringers			85.00	86.00	1.00	B00232829	3.3	0.015	0.06	0.02	0.38
<<Min: 84.05 - 86 1% Min: Pyrrhotite>> Stringers			86.00	87.05	1.05	B00232831	1	-0.005	-0.01	-0.01	0.06
<<Min: 84.05 - 86 0.5% Min: Galena>>			87.05	88.50	1.45	B00232832	-0.3	-0.005	-0.01	-0.01	0.02
<<Min: 84.05 - 86 0.5% Min: Chalcopryite>>			88.50	89.33	0.83	B00232833	-0.3	-0.005	-0.01	-0.01	0.05
<<Min: 86 - 89.07 0.5% Min: Pyrrhotite>>											
<<Min: 89.07 - 90.1 2% Min: Pyrrhotite>>											
<<Alt: 84.05 - 87.05 Moderate (Alt) Chlorite>> Occuring as bands/pervasive, associated with Sp/Po stringers.											
<<Alt: 87.05 - 90.1 Weak (Alt) Muscovite>> Original?											
<<Alt: 87.05 - 90.1 Weak (Alt) Chlorite>>											
<<Vein: 89.15 - 91.85 30% Quartz-Carbonate 75 deg. >> Interval comprising multiple qtz-dol/Ak veins/veinlets, strongly deformed/dismembered.											
<<Struc: 85 - 85.01 Moderate (Alt) Foliation>>											
89.33	91.85	MAFi Mafic Intrusions (primarily green FMG footwall mafic intrusion)	89.33	90.10	0.77	B00232834	-0.3	-0.005	0.01	-0.01	0.04
89.33 - 91.85: Green, fine to medium grained, strongly chlorite altered (original) associated with Po/Cp mineralization. Comprising >15 % of qtz-dol/cal veinlets/veins, strongly deformed and dismembered. Could be RHYv strongly altered, difficult to determinate.											
<<Min: 90.1 - 91.85 0.5% Min: Sphalerite>> Stringers			90.10	91.00	0.90	B00232835	6.8	0.095	0.69	-0.01	0.09
<<Min: 90.1 - 91.85 4% Min: Pyrrhotite>> Stringers and patchy			91.00	91.85	0.85	B00232836	5	0.043	0.38	0.02	0.11
<<Min: 90.1 - 91.85 3% Min: Chalcopryite>> Associated with Po/Sp											
<<Alt: 90.1 - 91.85 Strong (Alt) Chlorite>> MAFi. Original chlorite alteration associated with Po/Sp/Cp mineralisation.											
91.85	101.36	RHYvl Lapilli tuff grey-green CG	91.85	92.58	0.73	B00232837	2.1	-0.005	-0.01	0.02	0.07
91.85 - 101.36: Grey to greenish, coarse grained, heterogeneous. Moderately MU altered, "shiny" fracture surface. Weakly chlorite altered. Moderately to strongly foliated. Comprising fragments/clasts/lapilli, gravel to pebble size, siliceous, deformed/folded and locally stretched/flattered. Locally banded/curdy texture, RHYcw intervals? Trace of QE within matrix. Crosscut by qtz-dol/cal veins, cm to dm.											
<<Min: 91.85 - 92.58 0.5% Min: Pyrite>>			92.58	93.05	0.47	B00232838	2.2	0.007	0.02	0.03	0.1
<<Min: 92.05 - 93.05 2% Min: Pyrrhotite>>			93.05	94.25	1.20	B00232839	0.3	-0.005	-0.01	-0.01	0.02

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-327

From (m) To (m) Rocktype & Description

<<Min: 92.58 - 93.05 3% Min: Pyrite>> Coarse grained.

<<Min: 93.05 - 101.05 1% Min: Pyrrhotite>>

<<Min: 95 - 124.6 1% Min: Calcite>> Weak Ca altered.

<<Min: 101.05 - 103.2 4% Min: Pyrite>> medium/coarse grained.

<<Min: 101.05 - 103.2 1% Min: Pyrrhotite>>

<<Alt: 91.85 - 103.2 Moderate (Alt) Muscovite>> 2-3 intensity. Original? Shiny fracture surface.

<<Vein: 92.68 - 92.92 60% Quartz-Carbonate>> Qtz-dol- +/-Ak veins, >10 cm wide, deformed.

101.36 102.55 RHYcw Curdy textured-flow banded grey CG
(flows, subvolcanics)

101.36 - 102.55: Grey to greenish, coarse grained, heterogeneous. Moderately MU altered, "shiny" fracture surface. Weakly chlorite altered. Moderately foliated. Banded/curdy texture, marked by siliceous bands, deformed/folded and sometime dismembered, RHYcw intervals? Could be RHYvl with >40 % of clasts/lapilli pebble size.

102.55 112.77 RHY undifferentiated rhyolite grey-green FCG

102.55 - 112.77: Grey to greenish, fine to coarse grained, heterogeneous texture. Weak to moderately CL altered (Original alteration?), weakly MU altered. Locally comprising deformed/flattered fragments/clasts or lapilli? Distributed within matrix, mm to cm size, could be dismembered siliceous bands. After 107.75m, Moderate to strong CL alteration (original?) associated with weak cordierite (porphyroblast). It's difficult to determinate the protolith due to alteration intensity.

<<Min: 103.2 - 104.3 5% Min: Pyrrhotite>> Occuring as bands/stringers with trace of Cp.

<<Min: 103.2 - 104.3 0.1% Min: Chalcopyrite>> Associated with Po.

<<Min: 104.3 - 104.8 2% Min: Pyrrhotite>>

<<Min: 104.8 - 104.93 2% Min: Sphalerite>> Associated with Po band.

<<Min: 104.8 - 104.93 7% Min: Pyrrhotite>> Occuring as semi-massive band, 2 cm wide

<<Min: 104.8 - 104.93 4% Min: Galena>> Associated with Po band.

<<Min: 104.93 - 105.47 1% Min: Pyrrhotite>>

<<Min: 105.47 - 107.75 2% Min: Pyrrhotite>> Also thin veinlets

<<Min: 105.47 - 108.15 0.1% Min: Chalcopyrite>> Associated with Po.

<<Min: 108.15 - 109 6% Min: Sphalerite>> Occuring as thin veinlets.

<<Min: 108.15 - 109 1% Min: Chalcopyrite>> Disseminated/patchy

<<Min: 109 - 112.77 2% Min: Sphalerite>> Bands

<<Min: 109 - 112.77 1% Min: Pyrrhotite>>

<<Min: 109 - 112.77 0.5% Min: Chalcopyrite>>

<<Alt: 103.2 - 107.75 Weak (Alt) Chlorite>> Occuring as interstitial bands.

<<Alt: 107.75 - 112.77 Strong (Alt) Chlorite>> Occuring as pervasive bands, associated with Sp/Po stringers.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
94.25	95.15	0.90	B00232841	0.3	-0.005	-0.01	0.02	0.02
95.15	96.60	1.45	B00232842	-0.3	-0.005	-0.01	-0.01	0.02
96.60	98.00	1.40	B00232843	-0.3	-0.005	-0.01	-0.01	0.04
98.00	99.00	1.00	B00232844	0.5	-0.005	-0.01	-0.01	0.01
99.00	99.80	0.80	B00232845	0.6	-0.005	-0.01	0.01	0.05
99.80	101.36	1.56	B00232846	0.7	-0.005	-0.01	0.02	0.04
101.36	102.55	1.19	B00232847	0.5	0.005	-0.01	0.03	0.05

102.55	103.20	0.65	B00232848	2.5	0.006	0.03	0.2	0.55
--------	--------	------	-----------	-----	-------	------	-----	------

103.20	104.30	1.10	B00232849	5.7	-0.005	0.06	0.04	0.79
104.30	105.00	0.70	B00232851	5.2	-0.005	0.02	0.1	0.2
105.00	105.47	0.47	B00232852	0.7	-0.005	-0.01	0.01	0.05
105.47	106.50	1.03	B00232853	0.9	-0.005	0.02	0.02	0.05
106.50	107.75	1.25	B00232854	-0.3	-0.005	-0.01	-0.01	0.01
107.75	108.15	0.40	B00232855	0.9	-0.005	-0.01	-0.01	0.05
108.15	109.00	0.85	B00232856	8.7	0.021	0.07	0.07	1.83
109.00	110.00	1.00	B00232857	2.7	0.008	0.02	0.02	0.16
110.00	111.50	1.50	B00232858	0.6	-0.005	-0.01	-0.01	0.12
111.50	112.77	1.27	B00232859	5.2	-0.005	0.01	0.04	0.42



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-327

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<p><<Alt: 107.75 - 112.77 Weak (Alt) Cordierite>> Small cordierite porphyroblats distributed within matrix.</p> <p><<Alt: 109.2 - 112.77 Weak (Alt) Muscovite>> Original? Shiny on fracture surface.</p> <p><<Struc: 104 - 104.01 Moderate (Alt) Foliation>></p> <p><<Struc: 108 - 108.01 Strong (Alt) Foliation>></p> <p>112.77 126.45 RHY undifferentiated rhyolite grey-green FCG</p> <p>112.77 - 126.45: Grey to greenish, fine to coarse grained, heterogeneous texture. Weak to moderately CL altered (Original alteration?), weak/moderately MU altered. Comprising deformed fragments/clasts/lapilli or siliceous bands affected by 2 foliation, moderately crenulated, RHYc ? ~ 4-5 % of blue QE. After 119.5 m, strong original CL alteration associated with PO disseminated. It's difficult to be confident for the protolith due to alteration intensity.</p> <p><<Min: 112.77 - 119.5 0.5% Min: Pyrrhotite>></p> <p><<Min: 119.5 - 122.15 0.5% Min: Pyrite>></p> <p><<Min: 119.5 - 122.15 2% Min: Pyrrhotite>> Associated with chlorite interval</p> <p><<Min: 122.15 - 124.6 0.5% Min: Pyrrhotite>></p> <p><<Min: 124.6 - 126.45 0.5% Min: Pyrite>> Associated with qtz-ca-Cl veins.</p> <p><<Min: 124.6 - 126.45 3% Min: Calcite>></p> <p><<Min: 124.6 - 137.15 1% Min: Pyrrhotite>> Matrix disseminated and at the margins of Qtz veins.</p> <p><<Alt: 112.77 - 119.5 Moderate (Alt) Muscovite>> Original? Shiny on fracture surface.</p> <p><<Alt: 112.77 - 119.5 Weak (Alt) Chlorite>> Occuring as thin pervasive bands.</p> <p><<Alt: 119.5 - 123.9 Strong (Alt) Chlorite>> Strong pervasive chlorite associated with PO disseminated.</p> <p><<Alt: 123.9 - 135.68 Moderate (Alt) Chlorite>> Original alteration? Associated with Biotite porphyroblats.</p> <p><<Vein: 120.85 - 123 8% Quartz-Carbonate>> Interval comprising qtz-+/-dol/ca, strongly deformed/boudinaged, margins strongly chlorite altered.</p> <p><<Vein: 124.6 - 125.57 40% Quartz-Carbonate 80 deg. >> Multiple qtz-cal veins, 2-15 cm wide, strongly deformed, subconcordant, margins strongly CL altered.</p>			112.77	114.00	1.23	B00232861	3.6	0.009	-0.01	0.05	0.19
			114.00	115.50	1.50	B00232862	2.2	-0.005	-0.01	0.02	0.05
			119.50	120.85	1.35	B00232863	0.7	-0.005	0.02	-0.01	0.03
			120.85	122.15	1.30	B00232864	1.3	-0.005	0.04	0.01	0.09
			122.15	123.00	0.85	B00232865	-0.3	-0.005	0.01	-0.01	0.02
			123.00	123.90	0.90	B00232866	0.3	-0.005	-0.01	-0.01	0.06
<p>126.45 127.03 MAFi Mafic Intrusions (primarily grey-green FG</p> <p>footwall mafic intrusion)</p> <p>126.45 - 127.03: Short interval of fine grained MAFi, matrix chlorite altered comprising small biotite porphyroblasts/flakes. Sharp upper and lower contact. Strong calcite, occuring as small blebs and concordant veinlets.</p> <p><<Min: 126.45 - 127.03 5% Min: Calcite>></p> <p><<Alt: 126.45 - 144 Weak (Alt) Biotite>> Small biotite porphyroblats/flakes, mm size, distributed within the matrix.</p> <p>127.03 137.75 RHYv Rhyolite volcaniclastic green FCG</p> <p>127.03 - 137.75: greenish, fine to coarse grained, massive unit. Comprising clasts/lapilli, siliceous, deformed/flattered, affected by 2 foliation, mm to cm (pebble size) size. Fine grained matrix, moderate CL altered. Characterized by ~10% of mm porphyroblasts of biotite disseminated (clots/flakes). Comprising qtz-ca-+/-Cl veins/veinlets. Could be volcanoclastic unit (VI?) or sedimentary unit. It's difficult to be confident for the protolith due to alteration intensity.</p>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-327

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<div><<Min: 127.03 - 135.68 3% Min: Calcite>></div> <div><<Min: 135.68 - 141.5 2% Min: Calcite>></div> <div><<Min: 137.35 - 137.75 3% Min: Pyrite>> Also occurring as bands.</div> <div><<Alt: 137.15 - 140 Moderate (Alt) Muscovite>> Associated with fault interval and strong foliation.</div> <div><<Struc: 131.5 - 131.51 Moderate (Alt) dominant foliation>></div> <div><div>137.75145.15RHYvaCoarse grained to ash tuffgreyFCG</div><div>137.75 - 145.15: Grey to greenish, fine grained, +/- homogeneous, moderately altered and foliated. Characterized by ~10% of mm porphyroblasts of biotite disseminated (clots/flakes), locally occurring as bands. Fine grained matrix MU altered. Trace of blue QE disseminated. Could be volcanoclastic (Ash fine grained?) unit or sedimentary unit. It's difficult to be confident for the protolith due to alteration intensity.</div></div> <div><<Min: 137.75 - 140.5 1% Min: Pyrrhotite>></div> <div><<Min: 140.5 - 142 3% Min: Pyrrhotite>> Fracture filling/disseminated.</div> <div><<Min: 140.5 - 142 2% Min: Chalcopyrite>> Fracture filling and locally disseminated. Also within the qtz-carbonate veins.</div> <div><<Min: 141.5 - 146.45 8% Min: Calcite>> Blebs/veinlets and also pervasive</div> <div><<Min: 142 - 142.45 0.5% Min: Pyrrhotite>></div> <div><<Min: 142.45 - 142.7 2% Min: Pyrrhotite>> Associated with chlorite bands.</div> <div><<Min: 142.45 - 142.7 0.1% Min: Chalcopyrite>></div> <div><<Min: 142.7 - 143.05 10% Min: Sphalerite>> Semi massive band, 2-3 cm wide.</div> <div><<Min: 142.7 - 143.05 5% Min: Galena>> Bands, associated with Sp/Cp. CL pervasive.</div> <div><<Min: 142.7 - 143.05 2% Min: Chalcopyrite>></div> <div><<Min: 143.05 - 146.45 1% Min: Pyrrhotite>></div> <div><<Alt: 140 - 143.6 Moderate (Alt) Muscovite>></div> <div><<Alt: 140.5 - 143.05 Weak (Alt) Chlorite>> Thin bands of chlorite, concordant, associated with mineralization (GL,SP,CP)</div> <div><<Vein: 140.05 - 142 Quartz-Carbonate 85 deg. >> subconcordant qtz-carbonate veins, 2-5 cm, associated with Cp (fracture filling)</div> <div><<Struc: 138.4 - 140 Moderate (Alt) Fault>> Interval comprising multiple fault gouge, 1-12 cm wide, irregular oriented.</div> <div><div>145.15146.45MAFiMafic Intrusions (primarily greenFCG footwall mafic intrusion)</div><div>145.15 - 146.45: Short interval of fine grained MAFi, matrix chlorite altered comprising small biotite porphyroblasts/flakes. Diffuse upper and lower contact. Strong calcite, occurring as small blebs and concordant veinlets, also pervasive.</div></div>											
140.50	141.20	0.70	B00232867	7.1	0.025	0.37	0.02	0.04			
141.20	142.00	0.80	B00232868	1.5	-0.005	0.04	-0.01	0.05			
142.00	142.70	0.70	B00232869	4.3	0.008	0.08	0.06	0.18			
142.70	143.05	0.35	B00232871	50.8	0.047	0.3	0.95	4.75			



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-327

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
146.45	147.32	RHYv Rhyolite volcaniclastic grey FCG									
146.45 - 147.32: Grey, fine to coarse grained. From 147 to 147.2m, banded texture marked by siliceous (leucocrate) bands, could be pebble size lapilli interval or silica alteration.											
<<Min: 146.45 - 147 0.5% Min: Pyrrhotite>>											
<<Min: 146.45 - 150.6 4% Min: Calcite>>											
<<Min: 147 - 147.32 1% Min: Pyrite>>											
147.32	147.62	MAFi Mafic Intrusions (primarily footwall mafic intrusion) grey-brown FMG									
147.32 - 147.62: Short interval of fine grained MAFi, matrix Bi altered. Sharp upper and lower contacts. Strong calcite, occurring as small blebs and concordant veinlets, also pervasive.											
<<Min: 147.32 - 147.62 2% Min: Pyrrhotite>>											
147.62	150.60	RHYvl Lapilli tuff grey FCG									
147.62 - 150.6: Grey, matrix fine/medium grained, heterogeneous, weak to moderately MU altered. Volcanoclastic unit, alternation of fine/medium grained sequence and pebble size lapilli/clast (very siliceous, banded texture), sorting?											
<<Min: 147.62 - 148.36 2% Min: Pyrite>> Coarse grained											
<<Min: 148.36 - 153 2% Min: Pyrrhotite>>											
150.60	153.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion) grey-brown FMG									
150.6 - 153: Interval of fine grained MAFi, matrix Bi altered. Sharp upper and lower contacts. Strong calcite, occurring as small blebs and concordant veinlets, also pervasive.											
<<Min: 150.6 - 153 8% Min: Calcite>> Pervasive/blebs/veinlets.											
<<Struc: 152 - 152.01 Weak (Alt) Foliation>>											
153.00	183.50	RHYv Rhyolite volcaniclastic grey-green MCG	153.00	153.50	0.50	B00232872	1.8	-0.005	0.01	0.04	0.22
153 - 183.5: Dark grey to greenish, medium to coarse grained (heterometric), heterogene texture, moderately chlorite altered (pervasie/patchy). Weakly Bi altered, occurring as thin bands/stringers and also weakly pervasive. Small mm QE (grey) distributed, Unit is comprising heterogeneous siliceous fragment/clast/lapilli? We also observe some chlorite patch, flattered within foliation, similar to mafic clats altered. Polymectic RHYvl? Sedimentary uni?											
181.5-183.5m: Interval comprising thin carbonaceous bands?											
<<Min: 153 - 153.2 2% Min: Sphalerite>> Stringers											
<<Min: 153 - 153.2 2% Min: Pyrrhotite>>											
<<Min: 153 - 153.2 0.5% Min: Chalcopyrite>>											
<<Min: 153 - 166.2 3% Min: Calcite>> Also thin veinlets/veins											
<<Min: 153.2 - 167.6 2% Min: Pyrrhotite>> Finely disseminated within the matrix.											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-327

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %	
<<Min: 166.2 - 167.45	12% Min: Calcite>>	Pervasive										
<<Min: 167.45 - 170.2	5% Min: Calcite>>											
<<Min: 167.6 - 183.5	0.1% Min: Pyrite>>	Locally on fracture surface.										
<<Min: 167.6 - 191.6	0.5% Min: Pyrrhotite>>											
<<Min: 170.2 - 183.5	1% Min: Calcite>>	Trace.										
<<Alt: 153 - 174.95	Moderate (Alt) Chlorite>>	Patchy (mafic altered clast?) and also pervasive.										
<<Alt: 166.26 - 167.23	Weak (Alt) Cordierite>>	Cordierite porphyroblats? No well developped.										
<<Alt: 174.95 - 181.4	Moderate (Alt) Chlorite>>	Patchy/pervasive and also occuring as bands, fine grained. Original alt process?										
<<Vein: 169 - 169.4	6% Tourmaline 15 deg. >>	Discordant tourmaline vein, +/- calcite, 2 cm wide.										
<<Struc: 162 - 162.01	Moderate (Alt) Foliation>>											
<<Struc: 171.15 - 180	Strong (Alt) Fault>>	Fault gouge										
<<Struc: 176 - 176.01	Moderate (Alt) Foliation>>											
<<Struc: 182 - 182.2	Strong (Alt) Foliation>>											
183.50	214.35	RHYv Rhyolite volcaniclastic	FCG	196.85	197.50	0.65	B00232873	12.2	0.009	0.08	0.26	0.82
183.5 - 214.35: Grey to greenish, heterogene, strongly foliated, weak to moderately altered (MU/CL). Severals blue QE distributed within matrix. This unit looks like an strongly foliated volcanic agglomerate, clasts supported, polygenetic, pebble to cobble size. The clats are strongly stretched/flattered within foliation, altered Mu and CL, marked a weak "ribbon/banded" texture. Could be alteration bands. Locally comprising CL bands (original alt process?) associated with mineralization (mainly PO) . It's difficult to be confident for the protolith due to alteration/foliation intensity.												
<<Min: 183.5 - 214.35	3% Min: Calcite>>	Associated with veins/veinlets, and disseminated blebs.	197.50	199.00	1.50	B00232874	-0.3	0.007	-0.01	-0.01	0.01	
<<Min: 191.6 - 192	2% Min: Pyrrhotite>>	Disseminated within Qtz-TI vein.	199.00	199.86	0.86	B00232875	0.6	-0.005	0.05	-0.01	0.02	
<<Min: 192 - 196.85	0.5% Min: Pyrrhotite>>		199.86	201.00	1.14	B00232876	0.5	0.013	0.02	-0.01	0.01	
<<Min: 196.85 - 197.5	6% Min: Pyrrhotite>>	Wisps/thin stringers and also disseminated.	201.00	201.75	0.75	B00232877	0.3	-0.005	-0.01	-0.01	0.01	
<<Min: 197.5 - 199.55	3% Min: Pyrrhotite>>		201.75	203.00	1.25	B00232878	1.9	0.005	0.03	0.04	0.28	
<<Min: 199.55 - 199.86	3% Min: Pyrite>>	At the margins of tml vein.	203.00	204.00	1.00	B00232879	2.6	0.01	0.03	0.03	0.25	
<<Min: 199.55 - 199.86	8% Min: Pyrrhotite>>	At the margins of tml vein.	204.00	204.70	0.70	B00232881	0.7	0.024	0.01	-0.01	0.02	
<<Min: 199.55 - 199.86	1% Min: Chalcopyrite>>	Associated with Po.										
<<Min: 199.86 - 201.75	1% Min: Pyrrhotite>>											
<<Min: 201.75 - 204.7	2% Min: Pyrrhotite>>	Wisps and disseminated										
<<Min: 201.75 - 204.7	0.5% Min: Chalcopyrite>>	Associated with PO.										
<<Min: 204.7 - 214.35	1% Min: Pyrrhotite>>											
<<Alt: 183.5 - 196.85	Weak (Alt) Chlorite>>											
<<Alt: 196.85 - 197.5	Strong (Alt) Chlorite>>	Interval strongly chlorite altered, fine grained, assoicated with 5-6% of Po.										
<<Alt: 197.5 - 213.11	Weak (Alt) Chlorite>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-327

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 211.75 - 221 Weak (Alt) Muscovite>> <<Vein: 191.6 - 192 6% Tourmaline 15 deg. >> Regular qtz-Tl vein, 2 cm wide, associated with PO. <<Vein: 193.45 - 193.65 80% Quartz 80 deg. >> massive and deformed qtz vein, subconcordant. <<Vein: 195.35 - 195.5 70% Quartz>> Deformed qtz vein, strong MU at the margins. <<Vein: 199.55 - 199.86 10% Tourmaline 25 deg. >> Tourmaline vein, deformed, dismembered, discordant, " step" vein affected by second foliation. Associated with strong PO/py and trace of Cp. <<Vein: 205.48 - 205.8 70% Quartz>> Massive qtz vein, deformed and irregular. Margins chlorite altered. <<Struc: 210 - 210.01 Strong (Alt) Foliation>>											
214.35	221.00	RHYvl Lapilli tuff									
					light grey						
						FCG					
214.35 - 221: Light grey, fine to coarse grained, massive unit, weak/moderately foliated and MU altered. Comprising siliceous clasts/lapilli, weakly flattened with foliation, cm size. Blue QE are distributed within matrix.											
<<Min: 214.35 - 221 0.1% Min: Pyrrhotite>> <<Min: 214.35 - 221 0.5% Min: Calcite>> <<Vein: 219.35 - 219.75 60% Quartz-Carbonate>> Irregular/deformed qtz+/-carbonate vein, Margins MU altered. <<Vein: 220.4 - 220.83 60% Quartz-Carbonate>> irregular/deformed qtz+/-carbonate vein, Margins MU altered. <<Struc: 216.8 - 219.2 Weak (Alt) Fault>> Interval comprising few short faults gouge, 2-4 cm wide.											
End of Hole @ 221											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-328

Prospect:	Santorini	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Florent Pons
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Florent Pons	Date Logging Start:	24-Nov-15
UTM Easting	414678	Core Size:	HQ3	Azimuth:	194.8	Date Logging Complete:	27-Nov-15
UTM Northing:	6815205	Casing Pulled?:	Yes	Dip:	-60	Drill Company:	Geotech
UTM Elev. (m):	1429.195	Casing Depth (m):	7	Length (m):	236	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	23-Nov-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK camp	Drill Completed:	26-Nov-15
Local Elev. (m):						Purpose:	Exploration
Comments:						Parent Hole:	

K15-328 was drilled to target the Santorini geophysical anomaly. Total planned depth was ~ 250 m and the hole was shut down at 236m. Hole was collared in fine grained RHYvl followed by alternation of volcanoclastic unit and mafic intrusive/sill intervals, characterized by a moderate chlorite alteration, which occurring as very fine grained bands and also pervasive, usually associated with Po/Sp/Cpy mineralization. We intercepted two narrows intervals of OJ (Cpy/GL/Sp rich) at 80.75m (~15cm) and 84.67m (~85cm) hosted within volcanoclastic rhyolite, these intervals were also intensely chlorite altered and contained patchy cordierite porphyroblasts. Interestingly between 197.3 to 232.1m, we intercepted unit of oligomictic, clasts supported, pebble to cobble sized volcanic metaconglomerate. It's difficult to be totally confident for this protolith due to alteration/foliation intensity.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-60	194.8	0	194.8	APS	Florent Pons	23-Nov-15		<input checked="" type="checkbox"/>	
50	-60.2	171.2	22.5	193.7	APS	Florent Pons	23-Nov-15	5743	<input checked="" type="checkbox"/>	
77	-60.3	171.2	22.5	193.7	APS	Florent Pons	23-Nov-15	5739	<input checked="" type="checkbox"/>	
101	-60.4	173.1	22.5	195.6	APS	Florent Pons	24-Nov-15	5775	<input checked="" type="checkbox"/>	
125	-60.4	174.3	22.5	196.8	APS	Florent Pons	24-Nov-15	5731	<input checked="" type="checkbox"/>	
152	-60	173.3	22.5	195.8	APS	Florent Pons	24-Nov-15	5734	<input checked="" type="checkbox"/>	
173	-60	176	22.5	198.5	APS	Florent Pons	25-Nov-15	5724	<input checked="" type="checkbox"/>	
203	-59.9	176	22.5	198.5	APS	Florent Pons	26-Nov-15	5722	<input checked="" type="checkbox"/>	
224	-59.7	174.9	22.5	197.4	APS	Florent Pons	26-Nov-15	5728	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	9.78	OVBN Overburden									
0 - 9.78: Casing at 7m											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-328

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
9.78	13.10	RHYvl Lapilli tuff beige FCG									
<p>9.78 - 13.1: Beige to light grey/greenish, fine to coarse grained matrix, moderately foliated (planar cleavage). Comprising siliceous fragment/lapilli, mm to cm size, stretched and flattered within foliation, and locally appears as dismembered bands. Could be volcanoclastic unit, lapilli tuff. Moderately MU/SI altered.</p> <p>13.1-13.58m: RHYi intrusive or intense silica alteration band.</p> <p><<Min: 9.78 - 13.1 1% Min: Pyrite>></p> <p><<Min: 9.78 - 15.5 2% Min: Calcite>></p>											
13.10	13.58	RHYi Aphanitic Rhyolite (intrusion) grey VFG									
<p>13.1 - 13.58: Grey, aphanitic to very fine grained, homogeneous, +/- sharp upper and lower contacts. Intensively siliceous. Could be RHYi intrusive or Intense silica alteration band.</p> <p><<Alt: 13.1 - 13.58 Intense (Alt) Silicification>> Associated with RHYi intrusion?</p>											
13.58	19.80	RHYvl Lapilli tuff grey-green FCG									
<p>13.58 - 19.8: Beige to light grey/greenish, fine to coarse grained matrix, moderately foliated (planar cleavage). Comprising siliceous fragment/lapilli, mm to cm size, stretched and flattered within foliation, and locally appears as dismembered bands. Could be volcanoclastic unit, lapilli tuff. Moderately MU/SI altered.</p> <p>13.1-13.58m: RHYi intrusive (clast?) or intense silica alteration band. Calcite alteration increases from 15.5m to MAFi contact.</p> <p><<Min: 13.58 - 13.9 0.5% Min: Pyrite>></p> <p><<Min: 13.9 - 17.25 2% Min: Pyrite>></p> <p><<Min: 15.5 - 19.8 6% Min: Calcite>> Occuring as thin veinlets and disseminated blebs.</p> <p><<Min: 17.25 - 19.8 3% Min: Pyrrhotite>> Occuring as thin stringers.</p> <p><<Alt: 14.2 - 19.8 Moderate (Alt) Muscovite>> "shiny" fracture surface.</p> <p><<Struc: 15 - 15.01 Moderate (Alt) Foliation>></p>											
19.80	36.35	MAFi Mafic Intrusions (primarily footwall mafic intrusion) green FCG									
<p>19.8 - 36.35: Green to brownish, massive, coarse grained, weak/moderately foliated. Comprising BI/CL clots distributed within matrix, cm size, moderately flattered. "gabbroic" texture marked by large CL clots, which could be mafic phenocrystal relics (pyroxene/amphibole?). BI occuring as small disseminated clots/flakes, more concentrate at the margins of the unit. Weakly Ca altered, occuring as blebs/patchy and locally pervasive. Trace of mineralization (PO).</p> <p><<Min: 19.8 - 22.75 12% Min: Calcite>> Pervasive/blebs and associated with massive qtz-calcite veins.</p> <p><<Min: 19.8 - 36.35 0.5% Min: Pyrrhotite>> Trace of PO.</p> <p><<Min: 22.75 - 35.2 1% Min: Calcite>> Trace.</p> <p><<Min: 35.2 - 42 5% Min: Calcite>> Occuring as thin veinlets and disseminated blebs.</p> <p><<Alt: 19.8 - 23 Moderate (Alt) Biotite>> Small/medium sized Bi clots/flakes, distributed within the matrix.</p> <p><<Alt: 19.8 - 36.35 Moderate (Alt) Chlorite>> Pervasive and also occuring as altered clots.</p>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-328

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 35.2 - 36.35 Moderate (Alt) Biotite>> Small/medium sized Bi clots/flakes, distributed within the matrix.											
<<Vein: 21.05 - 21.55 45% Quartz-Carbonate>> Interval comprising irregular/deformed/boudinaged qtz-calcite veins.											
<<Vein: 22.42 - 22.75 70% Quartz-Carbonate>> 2 massive qtz-calcite veins, deformed, discordant.											
<<Struc: 23 - 23.01 Moderate (Alt) Foliation>>											
36.35	57.67	RHYva Coarse grained to ash tuff light grey FMG	38.90	40.00	1.10	B00232882	0.6	-0.005	-0.01	-0.01	0.41
36.35 - 57.67: Light grey/greenish, fine grained, homogeneous, moderately foliated. <10 % of mm qtz grains distributed within MU altered fine grained matrix. Locally siliceous fragment/lapilli, marked weak banded texture. Probably fine grained ash tuff (dominant) with lapilli.											
56-57.67m: Weak diffuse fuschite alteration.											
<<Min: 36.35 - 38.9 3% Min: Pyrrhotite>>			40.00	41.50	1.50	B00232883	-0.3	-0.005	-0.01	-0.01	-0.01
<<Min: 38.9 - 45.88 1% Min: Sphalerite>> Occuring as thin deformed stringers, associated with PY.			41.50	43.00	1.50	B00232884	-0.3	-0.005	-0.01	-0.01	0.02
<<Min: 38.9 - 45.88 1% Min: Pyrite>> Occuring as thin deformed stringers, associated with Sp.			43.00	44.00	1.00	B00232885	-0.3	-0.005	0.01	-0.01	0.06
<<Min: 42 - 57.67 3% Min: Calcite>> Occuring as thin veinlets and disseminated blebs.			44.00	44.88	0.88	B00232886	0.5	-0.005	-0.01	-0.01	0.05
<<Min: 45.88 - 50.05 3% Min: Sphalerite>> Occuring as thin deformed stringers/bands, associated with Py.			44.88	46.00	1.12	B00232887	0.5	-0.005	-0.01	-0.01	0.33
<<Min: 45.88 - 50.05 2% Min: Pyrite>> Occuring as thin deformed stringers, associated with Sp. Fine grained			46.00	47.50	1.50	B00232888	1.1	-0.005	-0.01	-0.01	0.04
<<Min: 50.05 - 56 1% Min: Sphalerite>>			47.50	49.00	1.50	B00232889	0.6	-0.005	-0.01	-0.01	0.39
<<Min: 50.05 - 56 1% Min: Pyrite>>			49.00	50.05	1.05	B00232891	0.7	-0.005	-0.01	-0.01	0.51
<<Min: 56 - 56.25 4% Min: Sphalerite>> Fracture filling/stringers.			50.05	51.00	0.95	B00232892	0.4	-0.005	-0.01	-0.01	0.03
<<Min: 56.25 - 57.67 0.5% Min: Pyrite>>			51.00	52.00	1.00	B00232893	0.4	-0.005	-0.01	-0.01	0.05
<<Min: 56.67 - 57.8 12% Min: Calcite>> Occuring as thin veinlets and very small blebs distributed.			52.00	53.50	1.50	B00232894	-0.3	-0.005	-0.01	-0.01	-0.01
<<Alt: 56 - 56.25 Intense (Alt) Silicification>> Associated with RHYi (clast?)			53.50	55.00	1.50	B00232895	-0.3	-0.005	-0.01	-0.01	-0.01
<<Vein: 53.05 - 53.32 80% Quartz>> Irregular/deformed qtz vein, Mu fracture filling.			55.00	56.00	1.00	B00232896	-0.3	-0.005	-0.01	-0.01	-0.01
<<Struc: 41 - 41.01 Weak (Alt) Foliation>>			56.00	56.67	0.67	B00232897	0.5	-0.005	-0.01	-0.01	0.79
<<Struc: 44 - 44.01 Moderate (Alt) Foliation>>			56.67	57.80	1.13	B00232898	-0.3	-0.005	-0.01	-0.01	0.05
<<Struc: 49 - 49.01 Moderate (Alt) Foliation>>											
<<Struc: 56 - 56.01 Moderate (Alt) Foliation>>											
57.67	57.88	MAFi Mafic Intrusions (primarily black MCG footwall mafic intrusion)	57.80	58.74	0.94	B00232899	-0.3	-0.005	-0.01	-0.01	0.08
57.67 - 57.88: Black, medium to coarse grained, homogeneous, strongly BI/calcite altered. Sharp upper and lower contacts. MAFi											
<<Min: 57.67 - 57.88 0.1% Min: Pyrite>>											
<<Min: 57.8 - 58.3 3% Min: Calcite>>											
<<Alt: 57.67 - 57.88 Strong (Alt) Biotite>> Small/medium sized Bi clots/flakes.											
<<Struc: 57.67 - 57.68 Contact>> Upper contact of MAFi											

From (m)			To (m)			Rocktype & Description			From (m)			To (m)			Width			Sample			Ag PPM			Au PPM			Cu %			Pb %			Zn %								
57.88			58.74			RHYva			Coarse grained to ash tuff																																
<p>57.88 - 58.74: Light grey/greenish, fine grained, homogeneous, moderately foliated. <10 % of mm qtz grains distributed within MU altered fine grained matrix. Locally siliceous fragment/lapilli, marked weak banded texture. Probably fine grained ash tuff (dominant) with lapilli. Py disseminated.</p> <p><<Min: 57.88 - 58.7 5% Min: Pyrite>> Coarse grained, subheudral crystals.</p> <p><<Min: 58.3 - 58.79 10% Min: Calcite>></p> <p><<Min: 58.7 - 59.82 4% Min: Sphalerite>> Occuring as veinlets/bands/stringers.</p> <p><<Min: 58.7 - 59.82 3% Min: Pyrite>></p>																																									
58.74			59.82			RHYi			Aphanitic Rhyolite (intrusion)			VFG			58.74			59.82			1.08			B00232901			0.6			0.023			-0.01			-0.01			0.56		
<p>58.74 - 59.82: Siliceous interval marked by deformed/folded bands, very fine grained. Similar to flow banding texture, clasts within ash tuff? Sharp contacts. Could be RHYi intrusive or intense silica alteration. Interval comprising Sp/Py bands.</p> <p><<Min: 58.79 - 59.82 3% Min: Calcite>></p>																																									
59.82			66.47			MAFi			Mafic Intrusions (primarily green footwall mafic intrusion)			FCG			59.82			60.20			0.38			B00232902			1.1			0.008			0.01			-0.01			0.05		
<p>59.82 - 66.47: Green to brownish, massive, coarse grained, weak/moderately foliated. Comprising BI/CL clots distributed within matrix, cm size, moderately flattened. "gabbroic" texture marked by large CL clots, which could be mafic phenocrystal relics (pyroxene/amphibole?). BI occuring as small disseminated clots/flakes, more concentrate at the margins of the unit. Moderate/strongly Ca altered, occuring as blebs/patchy and locally pervasive. Trace of mineralization (Py).</p> <p><<Min: 59.82 - 60.15 3% Min: Pyrite>> At the margins of qtz-cal vein.</p> <p><<Min: 59.82 - 60.15 3% Min: Pyrrhotite>> At the margins of qtz-cal vein.</p> <p><<Min: 59.82 - 60.15 30% Min: Calcite>> Qtz-cal veins, dm.</p> <p><<Min: 60.15 - 61.3 12% Min: Calcite>> Occuring as thin veinlets and disseminated blebs.</p> <p><<Min: 60.15 - 64.45 1% Min: Pyrite>></p> <p><<Min: 60.15 - 64.45 1% Min: Pyrrhotite>></p> <p><<Min: 61.3 - 66.47 6% Min: Calcite>> Occuring as thin veinlets and disseminated blebs.</p> <p><<Min: 64.45 - 66.47 2% Min: Pyrite>></p> <p><<Min: 64.45 - 66.47 2% Min: Pyrrhotite>></p> <p><<Alt: 59.82 - 66.47 Moderate (Alt) Chlorite>> MAFi</p> <p><<Alt: 59.82 - 66.47 Moderate (Alt) Biotite>> Small/medium sized Bi clots/flakes, distributed within the matrix. Also thin stringers.</p> <p><<Struc: 62 - 62.01 Moderate (Alt) Foliation>></p>																																									
60.20			61.50									60.20			61.50			1.30			B00232903			-0.3			-0.005			-0.01			-0.01			0.02					
61.50			63.00									61.50			63.00			1.50			B00232904			-0.3			-0.005			-0.01			-0.01			0.01					
63.00			64.45									63.00			64.45			1.45			B00232905			-0.3			-0.005			-0.01			-0.01			0.01					
64.45			65.50									64.45			65.50			1.05			B00232906			-0.3			-0.005			-0.01			-0.01			0.02					
65.50			66.47									65.50			66.47			0.97			B00232907			0.4			-0.005			-0.01			-0.01			0.02					



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-328

From (m) To (m) Rocktype & Description

66.47 80.75 RHYv Rhyolite volcanoclastic grey-green MCG

66.47 - 80.75: Greyish/greenish, medium/coarse grained, +/- homogeneous, weak to moderately MU altered (shiny on fracture surface, original?). From 66.47m to 63.2m strong original chlorite associated with Sp/Py mineralization, become weak after. Unit moderately foliated. Comprising siliceous dismembered bands or/and flattered clast/lapilli, within medium grained matrix. Weakly Sp/Po/mineralized.

<<Min: 66.47 - 67 2% Min: Sphalerite>> Occuring as stringers

<<Min: 66.47 - 67 1% Min: Pyrite>>

<<Min: 66.47 - 69 2% Min: Calcite>>

<<Min: 67 - 69 1% Min: Sphalerite>> Occuring as stringers

<<Min: 67 - 69 1% Min: Pyrrhotite>> Also thin stringers

<<Min: 69 - 78.45 0.5% Min: Sphalerite>> Aggregate/blebs at the margins of qtz veins.

<<Min: 69 - 78.45 0.5% Min: Pyrrhotite>>

<<Min: 69 - 106 1% Min: Calcite>> Trace

<<Min: 78.45 - 80.75 1% Min: Sphalerite>> Occuring as stringers, associated with chlorite bands

<<Min: 78.45 - 80.75 1% Min: Galena>> Associated with chlorite bands.

<<Min: 78.45 - 80.75 0.5% Min: Chalcopyrite>> Associated with Cp.

<<Alt: 66.47 - 67 Strong (Alt) Chlorite>> Strong chlorite alteration associated with Sp/Py

<<Alt: 67 - 68.2 Moderate (Alt) Chlorite>> Occuring as irregular bands, subconcordant.

<<Alt: 78.45 - 80.75 Moderate (Alt) Chlorite>> Occuring as irregular bands, subconcordant.

<<Vein: 74.5 - 74.7 80% Quartz>> irregular qtz vein, ~ 20 cm wide, discordant, trace of Sp.

<<Vein: 76.65 - 77.72 10% Quartz 70 deg. >> 2 irregular qtz vein, ~ 10 cm wide, discordant to subconcordant, trace of Sp.

<<Struc: 75 - 75.01 Moderate (Alt) Foliation>>

80.75 80.90 OJ Heavily disseminated sulphides in proximal altered rock CG

80.75 - 80.9: Short interval of OJ, strongly chlorite altered (original), Strongly mineralized (Cpy/GL/Sp rich). Mineralization occurring as bands/aggregate/patchy.

<<Min: 80.75 - 80.9 6% Min: Sphalerite>>

<<Min: 80.75 - 80.9 10% Min: Galena>>

<<Min: 80.75 - 80.9 3% Min: Chalcopyrite>>

<<Min: 80.75 - 80.9 3% Min: Arsenopyrite>> Coarse grained

<<Alt: 80.75 - 81.08 Intense (Alt) Chlorite>> Occuring as irregular bands, subconcordant.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
66.47	67.00	0.53	B00232908	12.4	0.014	0.09	0.21	1.01

67.00	68.50	1.50	B00232909	2.5	-0.005	0.02	0.04	0.29
68.50	70.00	1.50	B00232911	2.6	-0.005	0.05	0.08	0.47
70.00	71.00	1.00	B00232912	0.3	-0.005	-0.01	0.02	0.04
71.00	72.50	1.50	B00232913	-0.3	0.006	-0.01	0.01	0.05
72.50	74.00	1.50	B00232914	1	-0.005	0.01	0.05	0.16
74.00	75.50	1.50	B00232915	-0.3	-0.005	-0.01	-0.01	0.02
75.50	77.00	1.50	B00232916	0.6	-0.005	-0.01	-0.01	0.06
77.00	78.45	1.45	B00232917	0.4	-0.005	-0.01	-0.01	0.31
78.45	80.00	1.55	B00232918	1.7	-0.005	0.01	0.02	0.72
80.00	80.75	0.75	B00232919	8.9	0.007	0.04	0.19	0.57

80.75	81.10	0.35	B00232921	12.3	0.022	0.07	0.52	1.87
-------	-------	------	-----------	------	-------	------	------	------



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-328
From (m) To (m) Rocktype & Description
80.90 84.67 RHYv Rhyolite volcaniclastic green

80.9 - 84.67: Greyish/greenish, medium/coarse grained, +/- homogeneous, moderately to strongly MU altered, strongly foliated. Comprising siliceous dismembered bands or/and flattered clast/lapilli, within medium grained matrix. Weakly Sp/Po/mineralized.

<<Min: 80.9 - 81.1 3% Min: Sphalerite>>

<<Min: 81.1 - 84.67 2% Min: Sphalerite>> Occuring as stringers and aggregate within massive qtz vein.

<<Alt: 81.08 - 84.67 Moderate (Alt) Muscovite>>

<<Vein: 81.05 - 81.3 30% Tourmaline 80 deg. >> 2 tourmaline veins/bands, occuring as fine grained band.

<<Vein: 82.25 - 84 95% Quartz>> Large massive milky qtz vein, comprising Sp/Po aggregates.

<<Struc: 82.05 - 82.18 Strong (Alt) Fault>> Fault gouge

84.67 85.50 OJ Heavily disseminated sulphides in proximal altered rock CG

84.67 - 85.5: Interval of OJ, strongly chlorite altered (original), Strongly mineralized (Cpy/GL/Sp rich). Mineralization occuring as bands/aggregate/patchy.

<<Min: 84.67 - 85.5 5% Min: Sphalerite>> Associated with intense chlorite alteration.

<<Min: 84.67 - 85.5 3% Min: Pyrrhotite>> Associated with intense chlorite alteration.

<<Min: 84.67 - 85.5 5% Min: Galena>> Associated with intense chlorite alteration.

<<Min: 84.67 - 85.5 2% Min: Chalcopyrite>> Associated with intense chlorite alteration.

<<Alt: 84.67 - 85.5 Intense (Alt) Chlorite>>

85.50 115.80 RHYv Rhyolite volcaniclastic light grey CG

85.5 - 115.8: Light grey to greenish, coarse grained, heterogeneous. Moderately MU altered, "shiny" fracture surface. Weakly chlorite altered. Moderately to strongly foliated. Comprising fragments/clasts/lapilli, gravel to pebble size, siliceous, deformed/folded and locally stretched/flattered. Trace of QE within matrix.

<<Min: 85.5 - 91.27 2% Min: Pyrrhotite>>

<<Min: 85.5 - 91.27 5% Min: Pyrite>> Coarse grained, subheudral crystal.

<<Min: 85.5 - 91.27 0.5% Min: Galena>>

<<Min: 91.27 - 91.4 4% Min: Galena>>

<<Min: 91.27 - 91.4 5% Min: Pyrrhotite>> Band

<<Min: 91.27 - 91.4 8% Min: Pyrite>> Band

<<Min: 91.4 - 102.3 0.5% Min: Galena>> Associated with mineralization bands.

<<Min: 91.4 - 102.3 3% Min: Pyrrhotite>> Locally occuring as bands

<<Min: 91.4 - 102.3 5% Min: Pyrite>> Locally occuring as bands

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
81.10	81.50	0.40	B00232922	1.1	-0.005	-0.01	0.02	0.27

81.50	82.05	0.55	B00232923	0.5	-0.005	-0.01	0.01	0.09
82.05	83.23	1.18	B00232924	-0.3	-0.005	-0.01	-0.01	0.02
83.23	84.00	0.77	B00232925	-0.3	-0.005	-0.01	-0.01	0.53
84.00	84.67	0.67	B00232926	-0.3	-0.005	-0.01	-0.01	0.03

84.67	85.50	0.83	B00232927	8.1	0.025	0.15	0.06	2.62
-------	-------	------	-----------	-----	-------	------	------	------

85.50	86.20	0.70	B00232928	1.6	-0.005	0.01	0.01	0.16
-------	-------	------	-----------	-----	--------	------	------	------

86.20	87.50	1.30	B00232929	-0.3	0.006	-0.01	-0.01	0.04
87.50	89.00	1.50	B00232931	0.3	0.006	-0.01	0.01	0.02
89.00	90.50	1.50	B00232932	0.4	0.008	-0.01	-0.01	0.05
90.50	91.27	0.77	B00232933	0.6	0.008	-0.01	0.03	0.12
91.27	91.70	0.43	B00232934	5.2	0.012	0.02	0.18	0.86
91.70	93.00	1.30	B00232935	0.6	0.01	-0.01	0.02	0.06
93.00	94.50	1.50	B00232936	2.2	0.012	-0.01	0.11	0.19
94.50	96.00	1.50	B00232937	0.5	0.005	-0.01	0.02	0.23
96.00	97.50	1.50	B00232938	0.4	-0.005	-0.01	0.01	0.03

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-328

From (m)	To (m)	Rocktype & Description
<<Min: 91.4 - 102.3	1% Min: Sphalerite>>	Associated with mineralization bands.
<<Min: 102.3 - 109.03	4% Min: Pyrrhotite>>	Occuring as deformed bands associated with Py, also disseminated within matrix (coarse grained).
<<Min: 102.3 - 109.03	6% Min: Pyrite>>	Occuring as deformed bands, also disseminated within matrix (coarse grained).
<<Min: 102.3 - 109.03	1% Min: Sphalerite>>	Trace of thin Sp stringers.
<<Min: 106 - 109	4% Min: Calcite>>	
<<Min: 109 - 115.8	3% Min: Calcite>>	Blebs disseminated.
<<Min: 110.03 - 111.52	1% Min: Pyrite>>	
<<Min: 111.52 - 111.65	1% Min: Chalcopryite>>	
<<Min: 111.52 - 111.65	5% Min: Galena>>	Associated with Po/Sp band
<<Min: 111.52 - 111.65	40% Min: Pyrrhotite>>	Occuring as band.
<<Min: 111.52 - 111.65	5% Min: Sphalerite>>	Occuring as band.
<<Min: 112.7 - 112.83	2% Min: Chalcopryite>>	
<<Min: 112.7 - 112.83	55% Min: Pyrrhotite>>	Occuring as semi massive band
<<Min: 112.83 - 113.58	0.5% Min: Chalcopryite>>	Associated with Po aggregate
<<Min: 112.83 - 113.58	3% Min: Pyrrhotite>>	Aggregate
<<Min: 113.58 - 113.73	2% Min: Pyrrhotite>>	
<<Min: 113.73 - 113.81	1% Min: Chalcopryite>>	
<<Min: 113.73 - 113.81	5% Min: Galena>>	Associated with PO band.
<<Min: 113.73 - 113.81	40% Min: Pyrrhotite>>	Occuring as semi massive band
<<Min: 113.81 - 116.66	2% Min: Pyrrhotite>>	
<<Min: 113.81 - 116.66	0.5% Min: Chalcopryite>>	ssociated with PO
<<Alt: 86.2 - 87	Moderate (Alt) Silicification>>	
<<Alt: 105.5 - 106.9	Weak (Alt) Cordierite>>	Small porphyroblasts subrounded. Original?
<<Alt: 106.1 - 121.73	Weak (Alt) Chlorite>>	Original alt process?
<<Vein: 85.5 - 86.2	40% Quartz-Carbonate>>	Deformed and dismembered qtz-carbonate veins.
<<Vein: 109.03 - 109.5	30% Tourmaline 20 deg. >>	Discordant qtz-Tl vein,
<<Vein: 112.9 - 113.58	25% Quartz>>	Interval comprising irregular and strongly deformed qtz veins, asociated with weak tourmaline. Po aggregates disseminated.
<<Struc: 93 - 93.01	Vein>>	Mineralization bands
<<Struc: 112.5 - 112.51	Moderate (Alt) Foliation>>	
<<Struc: 112.83 - 112.84	Contact>>	Band of semi massive sulphide

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
97.50	99.00	1.50	B00232939	0.4	0.005	0.02	0.01	0.03
99.00	100.50	1.50	B00232941	0.6	0.006	-0.01	0.02	0.08
100.50	101.50	1.00	B00232942	0.4	-0.005	-0.01	-0.01	0.02
101.50	102.30	0.80	B00232943	0.3	0.007	-0.01	-0.01	0.02
102.30	103.50	1.20	B00232944	0.5	0.007	-0.01	0.02	0.03
103.50	105.00	1.50	B00232945	0.4	-0.005	-0.01	0.02	0.07
105.00	106.10	1.10	B00232946	1	0.005	-0.01	0.04	0.12
106.10	107.50	1.40	B00232947	0.5	0.006	-0.01	0.01	0.1
107.50	109.00	1.50	B00232948	1	-0.005	0.01	0.03	0.11
109.00	110.50	1.50	B00232949	0.8	-0.005	0.01	0.02	0.15
110.50	111.52	1.02	B00232951	0.8	-0.005	-0.01	-0.01	0.24
111.52	111.92	0.40	B00232952	5.8	-0.005	0.09	0.1	1.28
111.92	112.55	0.63	B00232953	1.4	-0.005	-0.01	0.06	0.1
112.55	112.90	0.35	B00232954	7.1	0.007	0.15	0.17	0.63
112.90	113.58	0.68	B00232955	1.2	-0.005	0.03	0.02	0.02
113.58	114.00	0.42	B00232956	6.6	0.007	0.06	0.34	0.34
114.00	115.00	1.00	B00232957	1.3	-0.005	0.01	0.02	0.22
115.00	115.80	0.80	B00232958	1	-0.005	0.01	0.01	0.08



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-328

From (m)	To (m)	Rocktype & Description			
115.80	116.66	MAFi	Mafic Intrusions (primarily footwall mafic intrusion)	dark grey	FG
115.8 - 116.66: Interval of fine grained MAFi, matrix Bi altered. Sharp lower contact. Strong pervasive calcite. Could be sediment or ash tuff.					
<<Min: 115.8 - 116.66 12% Min: Calcite>> Pervasive, blebs and thin veinlets.					
116.66	121.73	RHYv	Rhyolite volcanoclastic	green	CG
116.66 - 121.73: Light grey to greenish, coarse grained, heterogeneous. Moderately MU altered, "shiny" fracture surface. Weakly to moderate chlorite altered. Moderately foliated. Comprising fragments/clasts/lapilli, gravel to pebble size, siliceous, deformed/folded and locally stretched/flattered. Trace of QE within matrix.					
<<Min: 116.66 - 121.73 1% Min: Pyrrhotite>>					
<<Min: 116.66 - 138.12 2% Min: Calcite>> Disseminated blebs and veins associated.					
<<Vein: 116.66 - 117.35 20% Quartz>> 2 qtz-chlorite veins, 10 cm wide, diffuse margins. Po/Py fracture filling.					
<<Vein: 120.95 - 121.72 25% Quartz-Carbonate>> interval comprising qtz-carbonate veins, strongly deformed/boudinaged. Discordant.					
121.73	134.50	RHY	undifferentiated rhyolite	green	FMG
121.73 - 134.5: Green, fine to coarse grained, strongly chlorite altered (original alt process?) associated with Sp/Cpy/Po (bands/stringers). Strongly foliated. Pervasive chlorite and also occurring as bands. Comprising ~ 10 % of subconcordant qtz-cal veins/veinlets, deformed/dismembered. Chlorite schist.					
<<Min: 121.73 - 127.25 1% Min: Galena>> Associated with Sp stringers.					
<<Min: 121.73 - 127.25 3% Min: Pyrrhotite>> Also occurring as thin stringers.					
<<Min: 121.73 - 127.25 1% Min: Sphalerite>> Also occurring as thin stringers. Locally associated with Gl and Cpy					
<<Min: 121.73 - 127.25 0.5% Min: Chalcopryite>> Associated with Sp					
<<Min: 127.25 - 128.55 1% Min: Galena>> Associated with Sp stringers.					
<<Min: 127.25 - 128.55 1% Min: Pyrite>>					
<<Min: 127.25 - 128.55 4% Min: Sphalerite>> Thin stringers associated with Gl					
<<Min: 128.55 - 130.97 1% Min: Sphalerite>> Stringers					
<<Min: 128.55 - 130.97 1% Min: Pyrite>>					
<<Min: 130.97 - 131.6 1% Min: Galena>>					
<<Min: 130.97 - 131.6 3% Min: Pyrite>> Associated with intense chlorite alteration					
<<Min: 130.97 - 131.6 2% Min: Sphalerite>> Thin stringers/bands					
<<Min: 130.97 - 131.6 3% Min: Chalcopryite>> Associated with intense chlorite alteration					
<<Min: 131.6 - 133.85 1% Min: Pyrrhotite>>					
<<Min: 131.6 - 133.85 1% Min: Pyrite>>					
<<Min: 133.85 - 134.5 1% Min: Pyrite>>					

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
115.80	116.66	0.86	B00232959	0.5	-0.005	0.02	-0.01	0.02
116.66	118.00	1.34	B00232961	-0.3	-0.005	0.01	-0.01	0.01
118.00	119.00	1.00	B00232962	-0.3	-0.005	-0.01	-0.01	0.01
119.00	120.50	1.50	B00232963	-0.3	-0.005	-0.01	-0.01	-0.01
120.50	121.73	1.23	B00232964	0.5	-0.005	-0.01	-0.01	0.01
121.73	123.00	1.27	B00232965	0.8	0.006	0.02	-0.01	0.06
123.00	124.50	1.50	B00232966	0.5	-0.005	-0.01	-0.01	0.03
124.50	126.00	1.50	B00232967	5.9	-0.005	0.02	0.06	0.42
126.00	127.25	1.25	B00232968	0.8	-0.005	-0.01	-0.01	0.05
127.25	128.55	1.30	B00232969	2.3	-0.005	0.04	-0.01	0.39
128.55	129.80	1.25	B00232971	1.2	-0.005	-0.01	-0.01	0.1
129.80	130.97	1.17	B00232972	2.4	-0.005	0.01	-0.01	0.13
130.97	131.60	0.63	B00232973	13.4	0.03	0.39	0.02	1.66
131.60	133.00	1.40	B00232974	1.9	-0.005	-0.01	0.01	0.07
133.00	133.85	0.85	B00232975	0.4	-0.005	-0.01	-0.01	0.03
133.85	134.50	0.65	B00232976	10.5	0.02	0.39	0.04	0.13



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-328

From (m)			To (m)			Rocktype & Description			From (m)			To (m)			Width			Sample			Ag PPM			Au PPM			Cu %			Pb %			Zn %											
<<Min: 133.85 - 134.5			3% Min: Chalcopryite>>			Fracture filling																																						
<<Min: 133.85 - 134.5			3% Min: Pyrrhotite>>																																									
<<Alt: 121.73 - 134.5			Strong (Alt) Chlorite>>			Strong Chlorite alteration associated with mineralization.																																						
134.50			138.12			RHYv			Rhyolite volcaniclastic			grey			CG			134.50			136.00			1.50			B00232977			-0.3			-0.005			-0.01			-0.01			0.01		
134.5 - 138.12: grey, coarse grained, massive unit. Comprising clasts/lapilli, siliceous, deformed/flattered, locally affected by 2 foliation, mm to cm (pebble size) size. Moderately CL altered. Characterized by ~10% of mm porphyroblasts of biotite disseminated (clots/flakes). Comprising qtz-ca-+/-Cl veins/veinlets. Probably volcanoclastic unit (VI?).																																												
<<Min: 134.5 - 143.55			1% Min: Pyrite>>			disseminated/wispy												136.00			137.00			1.00			B00232978			0.5			-0.005			-0.01			-0.01			0.01		
<<Min: 134.5 - 143.55			0.5% Min: Pyrrhotite>>			disseminated/wispy												137.00			138.12			1.12			B00232979			-0.3			-0.005			-0.01			-0.01			0.02		
<<Alt: 134.5 - 145			Moderate (Alt) Chlorite>>			Original alt process? Weak to moderate chlorite alteration (pervasive)																																						
<<Alt: 136 - 160			Weak (Alt) Biotite>>			Small biotite porphyroblats/flakes, mm size, distributed within the matrix.																																						
138.12			138.65			MAFi			Mafic Intrusions (primarily			grey			FMG																													
									footwall mafic intrusion)																																			
138.12 - 138.65: Short interval of fine grained MAFi, matrix chlorite altered comprising small biotite porphyroblasts/flakes. Diffuse upper and lower contact. Strong calcite, occuring as small blebs and concordant veinlets, also pervasive.																																												
<<Min: 138.12 - 138.65			12% Min: Calcite>>			Occuring as thin veinlets and disseminated blebs. Also pervasive																																						
138.65			140.55			RHYv			Rhyolite volcaniclastic			grey			CG																													
138.65 - 140.55: grey, coarse grained, massive unit. Comprising clasts/lapilli, siliceous, deformed/flattered, locally affected by 2 foliation, mm to cm (pebble size) size. Moderately CL altered. Characterized by ~10% of mm porphyroblasts of biotite disseminated (clots/flakes). Comprising qtz-ca-+/-Cl veins/veinlets. Probably volcanoclastic unit (VI?).																																												
<<Min: 138.65 - 140.55			0.5% Min: Calcite>>																																									
140.55			141.20			MAFi			Mafic Intrusions (primarily			grey			FMG																													
									footwall mafic intrusion)																																			
140.55 - 141.2: Short interval of fine grained MAFi, matrix chlorite altered comprising small biotite porphyroblasts/flakes. Diffuse upper and lower contact. Strong calcite, occuring as small blebs and concordant veinlets, also pervasive.																																												
<<Min: 140.55 - 141.2			12% Min: Calcite>>			Occuring as thin veinlets and disseminated blebs. Also pervasive																																						
141.20			150.35			RHYv			Rhyolite volcaniclastic			grey			CG																													
141.2 - 150.35: grey, coarse grained, massive unit. Comprising clasts/lapilli, siliceous, deformed/flattered, locally affected by 2 foliation, mm to cm (gravel to pebble size). Moderately CL and weakly Si altered. Characterized by >10% of mm porphyroblasts of biotite disseminated (clots/flakes). Comprising qtz-ca-+/-Cl veins/veinlets.From 148.6 to 150.35m, medium grained ash? Bedding texture marked by alternation of ash tuff and lapilli sequence. Probably volcanoclastic unit (VI?).																																												
<<Min: 141.2 - 162.45			1% Min: Calcite>>			Trace.																																						
<<Min: 143.55 - 162.45			0.5% Min: Pyrite>>																																									

Project:
KZK
Hole Number:
K15-328

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 143.55 - 162.45 0.5% Min: Pyrrhotite>>											
150.35	151.90	RHYcw Curdy textured-flow banded (flows, subvolcanics) cream FG									
150.35 - 151.9: Interval marked by "flow banded" texture, marked by siliceous (leucocratic) bands/clasts, concordant, locally dismembered? Seems intercalated by moderate/coarse grained tuff, bedding. Could be clasts/lapilli supported sequence (over 80 %) or Silica alteration? No sharp contacts, no strong evidence for RHYcw.											
<<Alt: 150.35 - 151.9 Strong (Alt) Silicification>> Occuring as bands. Banded texture											
151.90	162.45	RHYv Rhyolite volcanoclastic grey CG									
151.9 - 162.45: grey, coarse grained, massive unit. Comprising clasts/lapilli, siliceous, deformed/flattered, locally affected by 2 foliation, mm to cm (gravel to pebble size) size. Moderately CL and weakly Si altered. Characterized by >10% of mm porphyroblasts of biotite disseminated (clots/flakes). Comprising qtz-ca-/-Cl veins/veinlets. From 148.6 to 150.35m, medium grained ash? Bedding texture marked by alternation of fine/medium grained ash tuff and lapilli sequence. Probably volcanoclastic unit (VI?).											
<<Vein: 158.3 - 158.6 40% Quartz>> Irregular and deformed qtz veins, "boudinaged" texture, centimetric.											
<<Struc: 152 - 152.01 Moderate (Alt) Foliation>>											
<<Struc: 161.05 - 161.3 Strong (Alt) Fault>> Fault gouge											
162.45	164.45	MAFi Mafic Intrusions (primarily footwall mafic intrusion) dark grey FMG									
162.45 - 164.45: Dark grey, fine to medium grained, strongly calcite altered (pervasive). Matrix biotite altered, pervasive. Could be mafic intrusive.											
<<Min: 162.45 - 164.45 3% Min: Pyrite>> Very thin wisps/stringers.											
<<Min: 162.45 - 164.45 3% Min: Pyrrhotite>> Very thin wisps/stringers.											
<<Min: 162.45 - 164.45 10% Min: Calcite>> MAFi associated.											
164.45	168.12	RHYva Coarse grained to ash tuff grey FCG									
164.45 - 168.12: Grey, fine grained, bedding texture marked by lapillitic/clastic sequence. Blue QE are distributed within matrix. Unit moderately/strobogly factured.											
<<Min: 164.45 - 168.12 1% Min: Pyrrhotite>> Disseminated											
<<Min: 164.45 - 168.12 2% Min: Calcite>>											
<<Alt: 167.2 - 168.12 Intense (Alt) Silicification>> Pervasive. Associated with siliceous bands/lapillis?											
<<Struc: 165.7 - 167.2 Moderate (Alt) Fault>> Interval comprising multiple minor fault gouge. Moderately fractured.											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
168.12	170.37	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<p>168.12 - 170.37: Dark grey, fine to medium grained, strongly calcite altered (pervasive). Matrix biotite altered, pervasive. Could be mafic intrusive.</p> <p><<Min: 168.12 - 170.37 5% Min: Pyrrhotite>> Disseminated</p> <p><<Min: 168.12 - 170.37 10% Min: Calcite>> MAFi associated.</p> <p><<Alt: 168.12 - 170.37 Moderate (Alt) Biotite>> Pervasive and porphyroblasts/flakes. Associated with MAFi interval.</p> <p><<Vein: 168.12 - 169.2 40% Quartz-Carbonate>> Interval comprising multiple qtz-carbonate veins, strongly deformed, decimetric size, Po at the margins.</p> <p><<Struc: 170 - 170.01 Moderate (Alt) Foliation>></p>											
170.37	176.00	RHYva Coarse grained to ash tuff									
<p>170.37 - 176: Grey, fine grained, weak/moderately chlorite altered (pervasive). ~ 5 % of small crystals/porphyroblasts distributed with matrix, could be felspar relics. Comprising interval of lapilli/clasts, pebble size, with sorting well conserved. This intervals occurring as bands with "flow banded" texture. Blue QE disseminated.</p> <p><<Min: 170.37 - 174.33 3% Min: Pyrrhotite>></p> <p><<Min: 170.37 - 182.48 4% Min: Calcite>> Also thin veinlets</p> <p><<Min: 174.33 - 177.65 2% Min: Pyrrhotite>> Wisps/disseminated.</p> <p><<Min: 174.33 - 182.48 1% Min: Pyrite>></p> <p><<Alt: 172.4 - 173.1 Strong (Alt) Silicification>> Pervasive. Associated with siliceous bands/lapillis?</p> <p><<Vein: 171.3 - 173.45 5% Quartz 80 deg. >> Multiple qtz veins, associated with carbonate (weak), subconcordant, deformed, 1-5 cm wide.</p>											
176.00	182.48	RHYv Rhyolite volcanoclastic									
<p>176 - 182.48: Grey to brownish, heterogene, strongly foliated, weak to moderately altered (MU/CL/bi). This unit looks like an strongly foliated volcanic agglomerate, clasts supported, polygenetic, pebble to cobble size. The clats are strongly stretched/flattered within foliation, altered Mu and CL, marked a weak "ribbon/banded" texture. Could be alteration bands within volcanoclastic RHY. It's difficult to be confident for the protolith (agglomerate) due to alteration/foliation intensity.</p> <p><<Alt: 176 - 182.48 Weak (Alt) Chlorite>></p> <p><<Alt: 177.6 - 182.48 Weak (Alt) Biotite>> Also occurring as bands.</p>											
182.48	183.65	RHYva Coarse grained to ash tuff									
<p>182.48 - 183.65: Brownish, fine to medium grained, bedding texture marked by thin fine grained beds. Ash tuffaceous interval. Gradual contacts.</p> <p><<Min: 182.48 - 183.65 3% Min: Pyrite>></p> <p><<Min: 182.48 - 183.65 12% Min: Calcite>> Disseminated within fine grained RHYva,</p> <p><<Alt: 182.48 - 183.65 Moderate (Alt) Biotite>> Associated with fine grained ash tuff.</p>											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Vein: 182.87 - 183.15 60% Quartz>> deformed qtz-carb-Cl veins, crosscut by tourmaline veinlet.											
<<Struc: 182.5 - 182.51 >>											
183.65	197.30	RHYv Rhyolite volcanoclastic	grey-green	FCG							
183.65 - 197.3: Grey to brownish, heterogene, strongly foliated, weak to moderately altered (MU/CL/bi). This unit looks like an strongly foliated volcanoclastic unit, clasts supported, polygenetic, pebble size. The clats are strongly stretched/flattered within foliation, altered Mu and CL. Could be alteration bands within volcanoclastic RHY.											
<<Min: 183.65 - 184.75 1% Min: Pyrite>>											
<<Min: 183.65 - 188 4% Min: Calcite>>											
<<Min: 183.65 - 222.7 1% Min: Calcite>> Locally associated with veins/veinlets											
<<Min: 184.75 - 185.26 2% Min: Pyrite>> At the margins of tourmaline veins.											
<<Min: 185.26 - 212.82 0.5% Min: Pyrite>>											
<<Alt: 183.65 - 197.3 Moderate (Alt) Chlorite>>											
<<Vein: 184.75 - 185.26 15% Tourmaline>> Multiple thin tourmaline veinlets, as bands, fracture filling. Associated with py. Discordant, irregular oriented.											
<<Struc: 185.7 - 185.71 Moderate (Alt) Foliation>>											
<<Struc: 192 - 192.01 Moderate (Alt) Foliation>>											
197.30	222.70	RHYv Rhyolite volcanoclastic	grey-green	FCG							
197.3 - 222.7: Grey to greenish, heterogene, strongly foliated, weak to moderately altered (MU/CL). Severals blue QE distributed within matrix. This unit looks like an strongly foliated volcanic agglomerate, clasts supported, polygenetic, mostly siliceous, pebble to cobble size. The clats are strongly stretched/flattered within foliation, altered Mu and CL, marked a weak 'ribbon/banded' texture. Could be alteration bands. Locally comprising CL bands (original alt process?) associated with mineralization (mainly PO) . It's difficult to be confident for the protolith due to alteration/foliation intensity.											
217.8-219.3m: "banded/curdy" texture marked by siliceous clats/lapillis.											
<<Min: 206 - 212.82 0.1% Min: Pyrrhotite>>											
<<Min: 212.82 - 214.6 2% Min: Pyrrhotite>> Associated with chlorite bands.											
<<Min: 214.6 - 221.55 1% Min: Pyrrhotite>> Disseminated, usually associated with chlorite bands.											
<<Min: 221.55 - 222.7 2% Min: Pyrrhotite>> Disseminated within matrix, small wisps.											
<<Alt: 197.3 - 232.1 Weak (Alt) Chlorite>> Weak/moderate. Thin subconcordant bands, clasts altered? Locally patchy. Weak "ribbon" texture.											
<<Alt: 197.3 - 236 Weak (Alt) Muscovite>> Pervasive/bands. Marked a weak "ribbon" texture with CL alteration. Shiny fracture surface.											
<<Vein: 201.45 - 220.9 25% Quartz 75 deg. >> Interval comprising multiple deformed qtz veins, 2-10 cmwide.											
<<Vein: 211.15 - 212.45 15% Quartz>> Group of deformed/folded qtz veiins, dismembered, 2-5 cm wide.											
<<Struc: 209 - 209.01 Strong (Alt) Foliation>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-328

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
222.70	223.25	MAFi									
		Mafic Intrusions (primarily footwall mafic intrusion)									
		grey									
		FG									
<p>222.7 - 223.25: Grey/brownish, fine grained, homogeneous. Strongly calcite altered (pervasive). >5% of Po disseminated. Could be mafic intrusive.</p> <p><<Min: 222.7 - 223.25 5% Min: Pyrrhotite>> Patchy/wisps and finely disseminated within MAFi interval?</p> <p><<Min: 222.7 - 223.25 12% Min: Calcite>> Finely disseminated/pervasive.</p>											
223.25	232.10	RHYv									
		Rhyolite volcanoclastic									
		grey-green									
		FCG									
<p>223.25 - 232.1: Grey to greenish, heterogeneous, strongly foliated, weak to moderately altered (MU/CL). Several blue QE distributed within matrix. This unit looks like an strongly foliated volcanic agglomerate, clasts supported, polygenetic, mostly siliceous, pebble to cobble size. The clasts are strongly stretched/flattened within foliation, altered Mu and CL, marked a weak "ribbon/banded" texture. Could be alteration bands. Locally comprising CL bands (original alt process?) associated with mineralization (mainly PO) . It's difficult to be confident for the protolith due to alteration/foliation intensity.</p> <p><<Min: 223.25 - 225.52 2% Min: Pyrrhotite>> Disseminated within matrix, small wisps.</p> <p><<Min: 223.25 - 229 1% Min: Calcite>></p> <p><<Min: 225.52 - 229.15 1% Min: Pyrrhotite>></p> <p><<Min: 229 - 232 3% Min: Calcite>></p> <p><<Min: 229.15 - 229.42 2% Min: Pyrrhotite>> Associated with TL vein.</p> <p><<Min: 229.42 - 236 0.5% Min: Pyrrhotite>> Trace.</p> <p><<Min: 232 - 236 1% Min: Calcite>></p> <p><<Vein: 225.52 - 225.7 70% Quartz 80 deg. >> irregular qtz vein, +/- dolomite, diffuse margins (chlorite altered)</p> <p><<Vein: 229.15 - 229.42 30% Tourmaline 35 deg. >> Discordant qtz-tourmaline vein, ~35 ac, diffuse margins (TL altered). 2 % po</p> <p><<Struc: 228 - 228.01 Strong (Alt) Foliation>></p>											
232.10	236.00	RHYvl									
		Lapilli tuff									
		beige									
		FCG									
<p>232.1 - 236: Beige to light grey, fine to coarse grained, massive unit, weak/moderately foliated and MU altered. Comprising siliceous clasts/lapilli, weakly flattened with foliation, cm size. Blue QE are distributed within matrix. Trace of disseminated Po.</p> <p><<Vein: 235 - 235.4 40% Quartz 20 deg. >> Discordant regular qtz vein, tourmaline at the selvages and fracture filling . 3-4 cm wide.</p> <p><<Struc: 233.68 - 233.78 Moderate (Alt) Fault>> Minor fault.</p>											
End of Hole @ 236											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-329

Prospect:	FCZ	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	David Nuttal
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	David Nuttal	Date Logging Start:	24-Nov-15
UTM Easting	414801	Core Size:	HQ3	Azimuth:	180.29	Date Logging Complete:	26-Nov-15
UTM Northing:	6814638	Casing Pulled?:	Yes	Dip:	-55	Drill Company:	Geotech
UTM Elev. (m):	1422.38	Casing Depth (m):	6.5	Length (m):	200	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	23-Nov-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	25-Nov-15
Local Elev. (m):						Purpose:	Exploration
Comments:						Parent Hole:	

The objective of drill hole K15-329 (KX15-FC1) was to explore for mineralization (exploration) based on the Fault Creek VTEM anomaly south of the Fault Creek fault trace. The hole is composed of a thick package of felsic volcanoclastic rocks; dominantly RHYva/RHYvl. Narrow mafic dikes intersect the felsic volcanics between 74m to 92m depth. Moderate to intense chloritic alteration is observed from 117.73m to 162m depth and weak chloritic alteration is patchy down to 200m. Weak OJ-type mineralization (intense chlorite alteration accompanied by CP-SP-GL-PY-PO) is observed from 152.25m to 152.69m and from 158m to 161m. Muscovite mineralization is weak to moderate through to the bottom of the hole; intensity increases proximal to faults and quartz veins. Average of dominant beta angles point NNE. Average of dominant alpha angles dip 70 degrees. *NOTE WORTHY INFORMATION: intervals 117.73m - 126.58m, 152m - 153m and 158m - 161m are suspected to be failed MXSX lenses, proximal to stringer zones, distal extensions of MXSX, or indicators of proximity to strong hydrothermal activity.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-55	180.29	0	180.29	APS	David Nuttal	23-Nov-15		<input checked="" type="checkbox"/>	
29	-55.2	157.1	22.5	179.6	APS	David Nuttal	24-Nov-15	5744	<input checked="" type="checkbox"/>	
56	-55.6	157.4	22.5	179.9	APS	David Nuttal	24-Nov-15	5736	<input checked="" type="checkbox"/>	
89	-55.8	157.6	22.5	180.1	APS	David Nuttal	24-Nov-15	5736	<input checked="" type="checkbox"/>	
119	-55.4	22	22.5	44.5	APS	David Nuttal	25-Nov-15	3986	<input type="checkbox"/>	
149	-56.1	157.9	22.5	180.4	APS	David Nuttal	25-Nov-15	5760	<input checked="" type="checkbox"/>	
179	-56.2	158.9	22.5	181.4	APS	David Nuttal	25-Nov-15	5736	<input checked="" type="checkbox"/>	
200	-55.9	159.7	22.5	182.2	APS	David Nuttal	25-Nov-15	5741	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	6.50	CASN Casing									
6.50	14.00	OVBN Overburden									
14.00	26.00	RHYv Rhyolite volcanoclastic			light grey	FMG					
14 - 26: Light grey, fine grained, PY bearing (~3-5%), well foliated, QZ-MU-PY felsic volcanoclastic rock. Quartz-rich, lapilli-sized domains present.											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-329

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Min: 14 - 26 3% Min: Pyrite>> <<Min: 14 - 29.29 0.5% Min: Calcite>> <<Min: 14 - 49.11 0.5% Min: Pyrrhotite>> <<Alt: 14 - 42.8 Weak (Alt) Muscovite>> <<Struc: 17 - 17.08 Weak (Alt) Fault>> <<Struc: 19.06 - 19.24 Weak (Alt) Fault>> <<Struc: 21.13 - 21.36 Weak (Alt) Fault>> <<Struc: 23.89 - 23.92 Weak (Alt) Fault>> <<Struc: 25.02 - 25.1 Weak (Alt) Fault>>											
26.00	35.66	RHYvl Lapilli tuff									
26 - 35.66: Light grey, QZ-MU volcanoclastic, well foliated, felsic lapilli tuff. PY ~3%											
<<Min: 26 - 49.74 5% Min: Pyrite>> <<Min: 29.29 - 44.5 1% Min: Calcite>> <<Alt: 29.15 - 31.4 Trace (Alt) Chlorite>> <<Struc: 29.79 - 29.95 Weak (Alt) Fault>> <<Struc: 31.42 - 31.42 dominant foliation>> <<Struc: 31.55 - 31.55 dominant foliation>> <<Struc: 33.22 - 33.3 Weak (Alt) Fault>> <<Struc: 35.25 - 35.25 dominant foliation>> Spurious? Or second foliation?											
35.66	36.68	RHYc Rhyolite coherent volcanics									
35.66 - 36.68: Leucocratic, siliceous, felsic QZ-MU coherent volcanic rock with wide foliation domains. PY mineralization (3%) along foliation planes.											
<<Struc: 36.15 - 36.28 Weak (Alt) Fault>>											
36.68	43.95	RHYvl Lapilli tuff									
36.68 - 43.95: Light grey, well foliated, siliceous, coarse-grained to lapilli bearing, felsic, volcanoclastic rock. Blebs, lenses and pods of PY mineralization ~3%.											
<<Alt: 42.8 - 43.5 Strong (Alt) Muscovite>> Intensity increases towards quartz vein 43.06m-43.4m <<Alt: 43.5 - 73.6 Moderate (Alt) Muscovite>> <<Vein: 43.06 - 43.4 Quartz>> Massive foliation parallel quartz vein <<Struc: 37.46 - 37.61 Weak (Alt) Fault>> <<Struc: 37.81 - 38.78 Weak (Alt) Fault>> <<Struc: 39.2 - 39.3 Weak (Alt) Fault>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-329

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 39.6 - 39.9 Weak (Alt) Fault>>											
<<Struc: 40.14 - 40.26 Weak (Alt) Fault>>											
<<Struc: 43.8 - 43.8 dominant foliation>>											
43.95	49.11	RHYvl Lapilli tuff	grey			CG					
43.95 - 49.11: Grey, well foliated, coarse-grained to lapilli bearing felsic, volcanoclastic rock. PY occurs in lenses and pods (~3-5%), PO is disseminated as foliation parallel clots (~2%). Blue, subrounded to tear-drop shaped, millimeter sized, quartz-eyes present. Narrow, foliation parallel, calcite banded, fine-grained mafic intrusion present at 44.6m to 44.8m. Chlorite alteration (intensity 2) and coarse grained PY from 44.8m to 45.3m.											
<<Min: 44.5 - 54 5% Min: Calcite>>											
<<Alt: 44.9 - 49.74 Weak (Alt) Chlorite>>											
49.11	49.74	RHYc Rhyolite coherant volcanics	cream			CG					
49.11 - 49.74: Cream colored, siliceous, coarse-grained, felsic coherent, volcanic. Foliation parallel PO band at 49.38m.											
<<Min: 49.11 - 49.74 2% Min: Pyrrhotite>>											
49.74	53.37	RHYvl Lapilli tuff	grey								
49.74 - 53.37: Grey, felsic, lapilli bearing QZ-MU volcanoclastic. QE-bearing.											
<<Min: 49.74 - 54.1 3% Min: Pyrite>>											
53.37	54.00	RHYc Rhyolite coherant volcanics	cream			CG					
53.37 - 54: QZ-MU felsic coherent volcanic. Minor chlorite alteration along foliations.											
54.00	73.61	RHYv Rhyolite volcanoclastic	grey								
54 - 73.61: Grey, well foliated, QZ-MU volcanoclastic. Finely disseminated pyrite occurs through most of the the interval (~5%). Texturally appears both well bedded and also convoluted. Lapilli sized QZ-rich domains are present though do not dominate the rock type at any part of the interval. Suspected fine-grained-coarse-grained ash or tuff.											
<<Min: 54 - 70 1% Min: Calcite>>											
<<Min: 54.1 - 73.61 5% Min: Pyrite>> Also finely disseminated											
<<Min: 70 - 73.61 5% Min: Calcite>>											
<<Struc: 59.82 - 60.46 Weak (Alt) Fault>>											
<<Struc: 60.62 - 61 Weak (Alt) Fault>>											
<<Struc: 61.23 - 61.62 Weak (Alt) Fault>>											
<<Struc: 61.9 - 62.24 Weak (Alt) Fault>>											
<<Struc: 63.1 - 63.22 Weak (Alt) Fault>>											
<<Struc: 66.38 - 66.55 Weak (Alt) Fault>>											
<<Struc: 66.93 - 67 Weak (Alt) Fault>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-329

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 67.2 - 68.2 Moderate (Alt) Fault>>											
<<Struc: 69.28 - 69.34 Weak (Alt) Fault>>											
<<Struc: 69.48 - 69.52 Weak (Alt) Fault>>											
<<Struc: 72.6 - 72.65 Weak (Alt) Fault>>											
73.61	74.67	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	melanocratic								
<<Min: 73.61 - 74.67 0.5% Min: Pyrite>>											
<<Min: 73.61 - 74.67 0.5% Min: Pyrrhotite>>											
<<Min: 73.61 - 74.67 10% Min: Calcite>>											
<<Struc: 73.86 - 73.95 Weak (Alt) Fault>>											
74.67	81.40	RHYv Rhyolite volcaniclastic	grey								
74.67 - 81.4: Grey, well foliated, siliceous, PY banded, QZ-MU volcaniclastic rock. Quartz-eyes present. Some lapilli sized clasts (does not dominate rock type)											
<<Min: 74.67 - 81.4 5% Min: Calcite>>											
<<Min: 74.67 - 85.17 5% Min: Pyrite>>											
<<Alt: 74.67 - 85.17 Moderate (Alt) Muscovite>>											
<<Alt: 81 - 82 Trace (Alt) Chlorite>>											
<<Struc: 78.27 - 78.32 Weak (Alt) Fault>>											
<<Struc: 81.04 - 81.14 Weak (Alt) Fault>>											
81.40	85.17	RHYvi Lapilli tuff	grey								
81.4 - 85.17: Grey, well foliated, PY banded, carbonate bearing, quartz-eye bearing, felsic, QZ-MU lapilli volcaniclastic rock.											
<<Min: 81.4 - 85.17 8% Min: Calcite>>											
85.17	86.33	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	melanocratic								
85.17 - 86.33: Melanocratic, well foliated, fine grained BI-CB mafic intrusive.											
<<Min: 85.17 - 86.33 20% Min: Calcite>>											
<<Min: 85.17 - 91.32 1% Min: Pyrite>>											
<<Min: 85.17 - 130.3 0.5% Min: Pyrrhotite>>											
<<Alt: 85.17 - 86.33 Weak (Alt) Biotite>>											
<<Struc: 86.19 - 86.33 Weak (Alt) Fault>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-329

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
86.33	90.33	RHYvl Lapilli tuff									
grey CG 86.33 - 90.33: Grey to grey-green, coarse-grained to lapilli QZ-MU volcanoclastic rock bearing disseminated calcite/carbonate, and lens/poded PY <<Min: 86.33 - 90.33 8% Min: Calcite>> <<Alt: 86.33 - 90.33 Weak (Alt) Muscovite>> <<Struc: 88.37 - 88.52 Weak (Alt) Fault>> <<Struc: 88.67 - 88.8 Weak (Alt) Fault>> <<Struc: 88.98 - 89.28 Weak (Alt) Fault>>											
90.33	91.32	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
melanocratic 90.33 - 91.32: Melanocratic, well foliated, fine grained BI-CB mafic intrusive. <<Min: 90.33 - 91.32 20% Min: Calcite>> <<Alt: 90.33 - 91.32 Weak (Alt) Biotite>>											
91.32	111.05	RHYvl Lapilli tuff									
grey CG 91.32 - 111.05: Grey, well foliated, lapilli + quartz-eye bearing volcanoclastic rock. QZ-mu. <<Min: 91.32 - 111.05 8% Min: Calcite>> <<Min: 91.32 - 114.6 5% Min: Pyrite>> <<Alt: 91.32 - 128.72 Weak (Alt) Muscovite>> <<Vein: 91.32 - 91.48 Quartz>> maqssive quartz-carbonate vein; foliation parallel <<Struc: 95.05 - 95.05 dominant foliation>> <<Struc: 98.54 - 98.54 dominant foliation>> <<Struc: 98.83 - 98.83 dominant foliation>> <<Struc: 101.32 - 101.38 Weak (Alt) Fault>> <<Struc: 102.18 - 102.22 Weak (Alt) Fault>> <<Struc: 102.28 - 102.32 Weak (Alt) Fault>> <<Struc: 106.82 - 106.82 dominant foliation>>											
111.05	112.68	RHYc Rhyolite coherant volcanics									
cream 111.05 - 112.68: Leucocratic, coherent volcanic rock. Abundant pyrite mineralization along foliation planes. <<Min: 111.05 - 117.73 5% Min: Calcite>>											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-329

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
112.68	117.73	RHYva Coarse grained to ash tuff grey FG									
112.68 - 117.73: Grey, fine grained to medium grained PY-CB bearing, QZ-MU volcanoclastic rock. Quartz-eyes sporadically present.											
<<Min: 114.6 - 115.21 20% Min: Pyrite>> OI ?											
<<Min: 115.21 - 130.3 1% Min: Pyrite>>											
117.73	126.58	RHYva Coarse grained to ash tuff grey-green FG									
117.73 - 126.58: Grey-green fine grained, well foliated, calcite bearing, chloritic, fine-grained volcanoclastic rock.											
<<Min: 117.73 - 128.72 3% Min: Calcite>>											
<<Alt: 117.73 - 126.58 Moderate (Alt) Chlorite>>											
<<Vein: 117.73 - 117.85 Quartz>> Massive foliation parallel quartz-carbonate-chlorite vein.											
<<Struc: 124.8 - 124.8 dominant foliation>>											
126.58	128.72	RHYva Coarse grained to ash tuff light grey MCG									
126.58 - 128.72: Light grey, medium to coarse grained felsic volcanoclastic tuff. ~5% pyrite in lenses/pods.											
128.72	130.30	MAFi Mafic Intrusions (primarily green footwall mafic intrusion)									
128.72 - 130.3: Green, iniquigranular, (calcite) porphyroblastic mafic CL-BI-CA intrusive with fine-grained margins.											
<<Min: 128.72 - 130.3 12% Min: Calcite>>											
<<Alt: 128.72 - 130.3 Moderate (Alt) Chlorite>>											
130.30	132.77	RHY undifferentiated rhyolite light grey									
130.3 - 132.77: white to light grey, siliceous, pyrite bearing, felsic rock. Suspected to be silicified RHYva											
<<Min: 130.3 - 134.17 5% Min: Pyrite>>											
<<Min: 130.3 - 145 2% Min: Calcite>>											
<<Alt: 130.3 - 132.77 Moderate (Alt) Silicification>> intensity increases towards fault											
<<Alt: 130.3 - 152.25 Moderate (Alt) Muscovite>>											
<<Struc: 130.85 - 130.85 dominant foliation>>											
<<Struc: 130.9 - 130.9 Foliation>>											
<<Struc: 131.08 - 131.36 Weak (Alt) Fault>>											
132.77	134.17	RHYvl Lapilli tuff grey-green									
132.77 - 134.17: grey-green, chloritic, well foliated, matrix supported, felsic lapilli tuff.											
<<Alt: 132.77 - 134.17 Weak (Alt) Chlorite>>											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-329

From (m)		To (m)	Rocktype & Description		From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 132.77 - 179 Trace (Alt) Biotite>>													
<<Struc: 133.23 - 133.23 dominant foliation>>													
<<Struc: 133.6 - 133.6 dominant foliation>>													
134.17	145.00	RHYva	Coarse grained to ash tuff	grey-green	FG								
134.17 - 145: grey-green, chloritic, fine-grained, felsic, volcaniclastic ash-tuff.													
<<Min: 134.17 - 158 2% Min: Pyrite>>													
<<Min: 134.17 - 158 1% Min: Pyrrhotite>>													
<<Alt: 134.17 - 152.25 Moderate (Alt) Chlorite>>													
<<Struc: 140.05 - 140.05 dominant foliation>>													
<<Struc: 142.8 - 142.8 dominant foliation>>													
145.00	152.25	RHYvl	Lapilli tuff	grey-green									
145 - 152.25: grey-green, chloritic, quartz-eye bearing, well foliated, matrix supported, felsic, volcaniclastic lapilli tuff. Lapilli are carbonate rich. Wispy foliation parallel PY/PO.													
<<Min: 145 - 152.69 3% Min: Calcite>>													
<<Struc: 145.75 - 145.75 dominant foliation>>													
<<Struc: 151 - 151 dominant foliation>>													
152.25	152.69	OJ	Heavilly disseminated sulphides in proximal altered rock	green	FG								
152.25 - 152.69: Green, strongly chloritic, fine-grained, CP/PY/PO bearing felsic, ash-tuff. Mineralization is weak at best, though shows the characteristics of a chloritic stringer mineralization. Potential failed intercept?													
<<Min: 152.25 - 152.69 1% Min: Chalcopyrite>>													
<<Alt: 152.25 - 153 Strong (Alt) Chlorite>>													
152.69	158.00	RHYv	Rhyolite volcaniclastic	grey-green									
152.69 - 158: Grey-green, chloritic, calcite/quartz-eye bearing, matrix supported volcaniclastic tuff. Matrix appears to be ash, clasts are of various sizes and are composed of QZ-CL-CB.													
<<Min: 152.69 - 158 5% Min: Calcite>>													
<<Alt: 153 - 158 Moderate (Alt) Muscovite>>													
<<Alt: 153 - 158 Moderate (Alt) Chlorite>>													
<<Struc: 154.8 - 154.8 dominant foliation>>													
<<Struc: 157.4 - 157.4 dominant foliation>>													

149.25	150.75	1.50	B00233358	0.3	-0.005	-0.01	-0.01	0.02
--------	--------	------	-----------	-----	--------	-------	-------	------

150.75	152.25	1.50	B00233359	0.3	-0.005	-0.01	-0.01	0.03
--------	--------	------	-----------	-----	--------	-------	-------	------

152.25	152.69	0.44	B00233361	3.5	0.017	0.1	0.09	0.4
--------	--------	------	-----------	-----	-------	-----	------	-----

152.69	153.50	0.81	B00233362	0.6	-0.005	-0.01	-0.01	0.06
--------	--------	------	-----------	-----	--------	-------	-------	------

153.50	155.00	1.50	B00233363	0.5	-0.005	-0.01	-0.01	0.04
155.00	156.50	1.50	B00233364	0.8	-0.005	-0.01	-0.01	0.06
156.50	158.00	1.50	B00233365	0.9	-0.005	-0.01	0.01	0.02



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-329
From (m) **To (m)** **Rocktype & Description**

158.00 161.00 OJ Heavily disseminated green FG
sulphides in proximal altered
rock

158 - 161: Dark green, massive chlorite rock with calcite pods/lenses occurring with mineralization of CP/SP/GL/PO/PY.
Potential missed stringer zone mineralization?

<<Min: 158 - 160 3% Min: Pyrite>>

<<Min: 158 - 160 0.25% Min: Galena>>

<<Min: 158 - 161 8% Min: Calcite>>

<<Min: 158 - 163 2% Min: Sphalerite>>

<<Min: 158 - 163 2% Min: Chalcopryrite>>

<<Min: 158 - 200 0.5% Min: Pyrrhotite>>

<<Min: 160 - 169.67 4% Min: Pyrite>>

<<Alt: 158 - 161 Strong (Alt) Chlorite>>

<<Vein: 159.38 - 159.42 Quartz>> Massive quartz-carbonate vein.

161.00 169.67 RHYv Rhyolite volcanoclastic grey CG

161 - 169.67: Grey, matrix supported volcanoclastic tuff. Trace chlorite alteration locally. Clasts vary in size from coarse-grained to lapilli. Some crystals present as well.

<<Min: 161 - 192 5% Min: Calcite>>

<<Alt: 161 - 161.8 Weak (Alt) Chlorite>>

<<Alt: 161 - 200 Moderate (Alt) Muscovite>>

<<Alt: 161.8 - 169.67 Trace (Alt) Chlorite>>

<<Struc: 169.47 - 169.47 dominant foliation>>

169.67 179.00 RHYva Coarse grained to ash tuff grey-green FG

169.67 - 179: Grey-green fine-grained chloritic, well foliated, carbonate bearing, felsic, ash-tuff. Sporadic crystal and lapilli clasts present; stretched along foliation.

<<Min: 169.67 - 179 3% Min: Pyrite>>

<<Alt: 169.67 - 170.8 Weak (Alt) Chlorite>>

<<Alt: 170.8 - 174.2 Moderate (Alt) Chlorite>>

<<Alt: 174.2 - 200 Weak (Alt) Chlorite>> OP?

<<Vein: 171.49 - 171.54 Quartz>> Massive foliation parallel quartz-carbonate vein.

<<Struc: 170.62 - 170.68 Weak (Alt) Fault>>

<<Struc: 177.75 - 177.81 Weak (Alt) Fault>>

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
158.00	159.00	1.00	B00233366	8	0.015	0.2	0.05	0.88

159.00	160.00	1.00	B00233367	4.4	0.02	0.18	0.08	0.53
160.00	161.00	1.00	B00233368	2.2	0.006	0.07	0.03	0.29

161.00	162.50	1.50	B00233369	1.3	-0.005	0.02	-0.01	0.06
--------	--------	------	-----------	-----	--------	------	-------	------

162.50	164.00	1.50	B00233371	1	-0.005	0.01	0.06	0.18
164.00	165.50	1.50	B00233372	1.1	-0.005	0.02	0.01	0.44

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-329

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
179.00	200.00	RHYvl Lapilli tuff									
grey-green											
179 - 200: Grey-green, chloritic-biotitic, (ash) matrix supported, felsic, lapilli/crystal tuff											
<<Min: 179 - 200 1% Min: Pyrite>>											
<<Min: 192 - 200 8% Min: Calcite>>											
<<Alt: 179 - 200 Moderate (Alt) Biotite>>											
<<Struc: 182.1 - 182.1 dominant foliation>>											
<<Struc: 193.7 - 193.7 dominant foliation>>											
<<Struc: 197.08 - 197.08 dominant foliation>>											
End of Hole @ 200											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-330

Prospect:	ABM	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Geotech	Date Logging Start:	30-Nov-15
UTM Easting	414932	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	01-Dec-15
UTM Northing:	6818702	Casing Pulled?:	Yes	Dip:	-90	Drill Company:	Geotech
UTM Elev. (m):	1349.79	Casing Depth (m):	21	Length (m):	50.95	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	25-Nov-15
Local Northing:		Cemented?:	SP	Core Storage Loc.:	KZK Camp	Drill Completed:	30-Nov-15
Local Elev. (m):						Purpose:	Geotech
Comments:						Parent Hole:	

K15-330 is a geotechnical hole including packer testing in bedrock (2 tests at 10ft interval followed by tests at 20ft interval thereafter) and thermistor install. It is located 300m upstream on the East, site D abutment. The tests were conducted by Piedsold Engineering. The hole consists in graphitic mudstone and CL altered mafic tuff interbedded and fractured. The upper units shows vuggy texture, moderate oxidation, locally filled with clay/sand suggesting open fractures and surface water circulation. The hole ends at 50.95m on CL altered carbonaceous mudstone where a narrow coarse grain/pebble size clast interval, medium strained, possibly polygenic, is observed. This unit could be interpreted as a detritic sequence.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-90	0	0	0	APS	Geotech	25-Nov-15		<input checked="" type="checkbox"/>	
50	-88.4	176.1	22.5	198.6	ReflexEVS	Geotech	30-Nov-15	5758	<input checked="" type="checkbox"/>	One survey.

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	10.00	OVBN Overburden									
0 - 10: Hieratic boulders.											
10.00	12.95	SED undifferentiated Sediment	light grey	MG							
10 - 12.95: Thin foliation. Moderate to strong oxidation, limonite. Foliation locally deformed, fractured.											
<<Min: 10 - 40.15 1% Min: Calcite>>											
<<Min: 10 - 50.95 0.1% Min: Pyrrhotite>>											
<<Struc: 10 - 20 Moderate (Alt) Fault>> Open fractures, sand/or clay infilling. Water circulation from surface (weathering).											
12.95	13.45	MAFt Mafic Volcaniclastics	green	FG							
12.95 - 13.45: Chloritized, CA in veinlets and matrix, partially oxidized.											
<<Alt: 12.95 - 42.27 Weak (Alt) Chlorite>> In mafic tuff, lithology controlled.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-330

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
13.45	23.80	SED undifferentiated Sediment light grey MG									
13.45 - 23.8: Thin foliation. Strongly fractured sand infilling. Strong oxidation. Progressive lower contact. Could be tuffaceous.											
<<Struc: 20 - 42.27 Weak (Alt) Fault>> Multiple narrow faults and rubber zone.											
<<Struc: 20.7 - 20.71 dominant foliation>>											
23.80	26.00	MAFt Mafic Volcaniclastics green FG									
23.8 - 26: Chloritized. Partially oxidized.											
26.00	37.10	MDS Carbonaceous Mudstone & Tuffaceous Mudstone black									
26 - 37.1: Strongly graphitic and sericitized. Locally vuggy texture. BI/CA discontinuous veinlets.											
<<Min: 26.95 - 37.1 1% Min: Pyrite>> Associated with PY/BI veinlets.											
<<Struc: 30.4 - 30.41 dominant foliation>>											
37.10	37.43	MAFt Mafic Volcaniclastics beige									
37.1 - 37.43: Muscovite rich, PY elongated could be BI replacement. Sharp contact suggesting hieratic block (sliding).											
<<Min: 37.1 - 37.43 3% Min: Pyrite>> Elongated, foliation oriented.											
37.43	40.15	MDS Carbonaceous Mudstone & Tuffaceous Mudstone black									
37.43 - 40.15: Fault at upper contact, clay gouge.											
<<Min: 37.43 - 40.15 1% Min: Pyrite>> Associated with CA/BI.											
<<Struc: 38.05 - 38.06 dominant foliation>>											
40.15	42.27	MAFt Mafic Volcaniclastics green FG									
40.15 - 42.27: Strongly graphitic. CA veining, fractured. Specks of BI.											
<<Min: 40.15 - 42.27 10% Min: Calcite>> and in matrix.											
42.27	50.95	MAFta Coarse grained to ash tuff grey-green									
42.27 - 50.95: Lapillitic from 42.70m to 48.05m, rare QE possibly polygenic clasts (detritic sequence). Moderately CL altered from 46.00m to 50.95m, texture obscured but texture seems to be the same. E.O.H.											
<<Min: 42.47 - 50.95 0.5% Min: Pyrite>>											
<<Alt: 46 - 50.95 Moderate (Alt) Chlorite>> Could be overprinting.											
<<Vein: 50.17 - 50.35 Quartz-Pyrrhotite>> Massive QZ, weak fractured, containing PY.											
<<Struc: 42.27 - 42.94 Moderate (Alt) Fault>> Fault gouge/clay, at contact between mafic tuff and graphitic mudstone.											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-330

From (m) To (m)

Rocktype & Description

From (m)

To (m)

Width

Sample

Ag PPM

Au PPM

Cu %

Pb %

Zn %

End of Hole @ 50.95

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-331

Prospect:	ABM	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Geotech	Date Logging Start:	29-Nov-15
UTM Easting	415347	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	30-Nov-15
UTM Northing:	6816415	Casing Pulled?:	Yes	Dip:	-90	Drill Company:	Geotech
UTM Elev. (m):	1386.57	Casing Depth (m):	12	Length (m):	32	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	27-Nov-15
Local Northing:		Cemented?:	SP	Core Storage Loc.:	KZK Camp	Drill Completed:	28-Nov-15
Local Elev. (m):						Purpose:	Geotech
Comments:						Parent Hole:	

K15-331/KP15-I is a geotechnical hole located at the toe of the PAC waste dump, including SPT in unfrozen soil (5 ft interval) and packer test in bedrock (30 feet interval) and thermistor installation. The lithology consists in mafic tuff interbedded with carbonaceous argillite/ash units showing CA veinlets. PO/CA discontinuous veinlets are observed from 26.00m to 32.00m, few PY and CP trace. The hole ends at 32.00m on a graphitic mudstone. Nine Standard Penetration Tests were done from 0.60m to 10.95m as well as packer tests and thermistor install.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-90	0	0	0	APS	Geotech	27-Nov-15		<input checked="" type="checkbox"/>	Vertical hole.
30	-89.5	198.6	22.5	221.1	ReflexEVS	Geotech	28-Nov-15	3444	<input checked="" type="checkbox"/>	Low magnetic field. Dip declination (0.5 degree) acceptable.

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	13.50	OVBN Overburden									
0 - 13.5: 9 SPT. Semi-intact samples.											
13.50	13.95	MDU carbonaceous mudstone upper sequence									
13.5 - 13.95: Calcite veining. PO,BI laminated.											
<<Min: 13.5 - 26 2% Min: Pyrrhotite>> Elongated, locally patch, or associated with CA/BI veinlets.											
<<Min: 13.5 - 32 0.5% Min: Pyrite>>											
<<Min: 13.5 - 32 0.1% Min: Chalcopryite>> Observed at 26.30m in PY/PO/CA patch.											
<<Min: 13.5 - 32 10% Min: Calcite>> And in matrix in sediment.											
<<Alt: 13.5 - 32 Weak (Alt) Chlorite>> Associated with MAFf (lithology controlled).											
13.95	14.84	RHYv Rhyolite volcanoclastic									
13.95 - 14.84: PO elongated. Locally silicified. CA veining.											
FMG											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-331

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
14.84	15.60	MDU carbonaceous mudstone upper sequence									
14.84 - 15.6: Mixed with tuff.BI patch, CA veinlets.											
15.60	16.56	MDU carbonaceous mudstone upper sequence									
15.6 - 16.56: Argillite. CA veinlets.											
16.56	18.53	MAFt Mafic Volcaniclastics									
16.56 - 18.53: Chloritized. Interbedded with argillite at lower contact. PO disseminated..											
<<Struc: 17.45 - 17.56 Vein>> CA veinlet.											
18.53	19.70	MDU carbonaceous mudstone upper sequence									
18.53 - 19.7: CA veinlets and in matrix.											
<<Struc: 19.35 - 19.36 dominant foliation>>											
19.70	22.49	MAFt Mafic Volcaniclastics									
19.7 - 22.49: Chloritized. Gradual upper contact.											
<<Struc: 21.2 - 21.21 dominant foliation>>											
<<Struc: 21.3 - 21.31 dominant foliation>>											
22.49	24.18	MDU carbonaceous mudstone upper sequence									
22.49 - 24.18: Interbedded with tuff. Primary foliation (could be diagenetic) folded mostly visible ash tuff, possibly sliding.											
<<Struc: 22.86 - 22.88 Contact>> Contact between mudstone bed and pelitic or ash bed.											
24.18	25.10	MAFt Mafic Volcaniclastics									
24.18 - 25.1: Interval including massive QZ vein from 25.54m to 25.10m. Chloritized.											
<<Vein: 24.54 - 25.1 Quartz-Carbonate>> QZ fractured, CA infilled.											
25.10	32.00	MDU carbonaceous mudstone upper sequence									
25.1 - 32: Argillite/probably ash interbedded or peiltic sequeense. Mafic bed at upper contact. BI veinlets foliation oriented. At 26.30, 5cm CA patch associated with PO/PY and CP trace. EOH.											
<<Min: 26 - 32 3% Min: Pyrrhotite>> With CA and/or PY.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-331

From (m) To (m)

Rocktype & Description

From (m)

To (m)

Width

Sample

Ag PPM

Au PPM

Cu %

Pb %

Zn %

End of Hole @ 32

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-332

Prospect:	FCZ	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Florent Pons
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Florent Pons	Date Logging Start:	27-Nov-15
UTM Easting	414797	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	29-Nov-15
UTM Northing:	6814638	Casing Pulled?:	Yes	Dip:	-83	Drill Company:	Geotech
UTM Elev. (m):	1422.285	Casing Depth (m):	9	Length (m):	182	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	26-Nov-15
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	28-Nov-15
Local Elev. (m):						Purpose:	Exploration
Comments:						Parent Hole:	

The objective of drill hole K15-332 (KX15-FC2) was to explore for mineralization based on the Fault Creek VTEM anomaly south of the Fault Creek fault trace. The hole is composed of a thick package of felsic volcanoclastic rocks; dominantly RHYva/RHYvl. Weak OJ-type mineralization (intense chlorite alteration accompanied by weak CP-SP-GL -PO) is observed from 170m to 171.2m and from 174.15m to 174.83m. Muscovite mineralization is weak to moderate through to the bottom of the hole. After 171.2 m, remainder of hole was laminated sedimentary unit, fine to coarse grained, locally BI altered, the bedding and sorting are very well conserved. We observe similar sequences at some place in the hole. It's common to see this unit described as MAFI (biotite altered, strong calcite associated and sharp contacts).

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-83	179.86	0	179.86	APS	Florent Pons	26-Nov-15		<input checked="" type="checkbox"/>	
26	-81.5	159.6	22.5	182.1	ReflexEVS	Geotech	26-Nov-15	5747	<input checked="" type="checkbox"/>	
50	-81.2	155.5	22.5	178	ReflexEVS	Geotech	27-Nov-15	5757	<input checked="" type="checkbox"/>	
74	-80.7	157.3	22.5	179.8	ReflexEVS	Geotech	27-Nov-15	5746	<input checked="" type="checkbox"/>	
101	-80.4	158.7	22.5	181.2	ReflexEVS	Geotech	27-Nov-15	5742	<input checked="" type="checkbox"/>	
125	-80	159.1	22.5	181.6	ReflexEVS	Geotech	28-Nov-15	5747	<input checked="" type="checkbox"/>	
152	-79.2	159.3	22.5	181.8	ReflexEVS	Geotech	28-Nov-15	5730	<input checked="" type="checkbox"/>	
179	-78.5	161.5	22.5	184	ReflexEVS	Geotech	28-Nov-15	5725	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	10.00	OVBN Overburden									
0 - 10: Casing at 9m.											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-332

From (m) To (m) Rocktype & Description

10.00 32.12 RHYv Rhyolite volcanoclastic light grey MCG

10 - 32.12: Light grey, medium to coarse grained, massive, +/- homogeneous. Interval moderately fractured. Moderate to strong pervasive MU alteration, original alt process? We observe some siliceous lapillis relics distributed within matrix. Trace to 2% of small subhedral porphyroblasts of tourmaline within matrix. 2-4% of py, disseminated/patchy, also occurring as deformed bands. Volcanoclastic rhyolite unit.

<<Min: 10 - 18 4% Min: Pyrite>> Disseminated Py (medium grained), occurring as bands and patchy.

<<Min: 10 - 35.55 0.5% Min: Pyrrhotite>> Matrix disseminated.

<<Min: 18 - 25.8 3% Min: Pyrite>> Disseminated Py (medium grained), occurring as bands and patchy.

<<Min: 25.8 - 35.55 2% Min: Pyrite>>

<<Alt: 10 - 61 Moderate (Alt) Muscovite>> Original alt process? "shiny" fracture surface.

<<Struc: 16.3 - 16.31 Moderate (Alt) Foliation>>

<<Struc: 24.05 - 24.1 Strong (Alt) Fault>> Fault gouge

<<Struc: 31.45 - 31.6 Strong (Alt) Fault>> Fault gouge

<<Struc: 32.1 - 32.11 Strong (Alt) Foliation>>

32.12 38.05 RHYvl Lapilli tuff light grey FCG

32.12 - 38.05: Light grey, fine to coarse grained, massive. Interval moderately fractured. Moderate to strong pervasive MU alteration, original alt process? We observe some siliceous lapillis distributed within matrix, > 25 %, oriented with foliation, gravel to pebble size.. Trace to 2% of small subhedral porphyroblasts of tourmaline within matrix. 1-2% of py, disseminated/patchy, also occurring as deformed bands.

<<Min: 35.55 - 50 4% Min: Pyrite>> Occuring as bands and patchy. 3-4%.

<<Min: 35.55 - 50 1% Min: Pyrrhotite>> Disseminated and small wisps.

<<Struc: 38 - 38.01 Strong (Alt) Foliation>>

38.05 52.25 RHYv Rhyolite volcanoclastic light grey MCG

38.05 - 52.25: Light grey, medium to coarse grained, massive, +/- homogeneous. Interval moderate to locally strongly fractured. Moderate to strong pervasive MU alteration, original alt process? We observe some siliceous lapillis relics distributed within matrix. Trace to 2% of small subhedral porphyroblasts of tourmaline within matrix. 2-4% of py, disseminated/patchy, also occurring as deformed bands. Volcanoclastic rhyolite unit.

<<Min: 50 - 52.25 5% Min: Pyrite>> Occuring as bands and patchy associated with Po. 4-5%

<<Min: 50 - 58.95 2% Min: Pyrrhotite>> Occuring as bands and patchy associated with Py.

<<Vein: 44.4 - 46.35 5% Tourmaline 30 deg. >> 2 tourmaline veins, 1-2 cm wide, discordant.

<<Vein: 51.75 - 52 30% Quartz 40 deg. >> Regular qtz vein, trace of tourmaline, 3-4 cm wide, discordant.

<<Struc: 48 - 49.8 Moderate (Alt) Fault>> Interval fractured comprising fault gouge. Poor recovery.

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
17.00	18.00	1.00	B00232981	-0.3	-0.005	-0.01	-0.01	0.01

18.00	19.00	1.00	B00232982	-0.3	-0.005	-0.01	-0.01	-0.01
19.00	20.00	1.00	B00232983	-0.3	-0.005	-0.01	-0.01	-0.01

50.00	51.00	1.00	B00232984	-0.3	-0.005	-0.01	-0.01	0.01
-------	-------	------	-----------	------	--------	-------	-------	------

51.00	52.25	1.25	B00232985	0.6	-0.005	-0.01	-0.01	0.01
-------	-------	------	-----------	-----	--------	-------	-------	------



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-332

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
52.25	66.33	RHYv Lapilli tuff									
<p>light grey MCG</p> <p>52.25 - 66.33: Light grey, fine to coarse grained, massive. Interval moderately fractured. Moderate to strong pervasive MU alteration, original alt process? We observe some siliceous lapillis distributed within matrix, > 10 %, oriented with foliation, gravel to pebble size. Between 54.45m to 57.45m, Patchy chlorite, occurring as oriented dismembered bands, clasts/lapillis altered? Trace to 2% of small subhedral porphyroblasts of tourmaline within matrix. 1-2% of py, disseminated/patchy, also as occurring as deformed bands.</p> <p><<Min: 52.25 - 65.85 2% Min: Pyrite>> Bands of disseminated py within fault interval</p> <p><<Min: 65.85 - 72 5% Min: Pyrite>> Finely disseminated, bands/stringers.</p> <p><<Alt: 54.45 - 54.45 Weak (Alt) Chlorite>> Patchy chlorite, occurring as oriented dismembered bands, clasts/lapillis altered?</p> <p><<Alt: 61 - 66.33 Strong (Alt) Muscovite>> Associated with fault interval.</p> <p><<Struc: 58.95 - 60.1 Intense (Alt) Fault>> Fault gouge, fracture filling by sand/clay.</p> <p><<Struc: 61 - 66.33 Strong (Alt) Fault>> Fault interval, intensely foliated associated with strong/intense MU alteration. Comprising faults gouge</p>											
66.33	96.00	RHYv Rhyolite volcanoclastic									
<p>light grey FCG</p> <p>66.33 - 96: Light grey, medium to coarse grained, massive. Interval moderate to locally strongly foliated. Moderate to strong pervasive MU alteration, original alt process? We observe some siliceous lapillis relics distributed within matrix. 2-4% of py, disseminated/patchy, also as deformed bands/stringers. Volcanoclastic rhyolite unit.</p> <p>81.43-83m: Lapillitic sequence, pebble size.</p> <p>83.5-84.65m: fine/medium grained ash/sediment, weakly laminated. Could be MAFI?</p>											
			66.33	67.50	1.17	B00232986	-0.3	-0.005	-0.01	-0.01	-0.01
<p><<Min: 70.9 - 90.24 3% Min: Calcite>></p> <p><<Min: 72 - 79.88 3% Min: Pyrite>> Occuring as bands and patchy. 3-4%.</p> <p><<Min: 79.88 - 80.8 5% Min: Pyrite>> Occuring as bands and patchy. 5%.</p> <p><<Min: 80.8 - 83.5 4% Min: Pyrite>> Occuring as bands and patchy. 3-4%.</p> <p><<Min: 83.5 - 84.65 3% Min: Pyrrhotite>> Disseminated within fine grained ash/sediment or MAFI?</p> <p><<Min: 84.65 - 90.24 4% Min: Pyrite>> Occuring as subconcordant bands and patchy. 3-4%.</p> <p><<Min: 90.24 - 90.55 4% Min: Sphalerite>> Mineralization associated with qtz-ca veinlets/veins.</p> <p><<Min: 90.24 - 90.55 3% Min: Pyrite>> Mineralization associated with qtz-ca veinlets/veins.</p> <p><<Min: 90.24 - 90.55 2% Min: Galena>> Mineralization associated with qtz-ca veinlets/veins.</p> <p><<Min: 90.24 - 96 4% Min: Calcite>> Veinlets/blebs</p> <p><<Min: 90.55 - 103.6 2% Min: Pyrite>> Occuring as stringers/bands. Usually associated with qtz-ca veinlets.</p> <p><<Min: 90.55 - 103.6 2% Min: Pyrrhotite>> Occuring as stringers/bands. Usually associated with qtz-ca veinlets.</p> <p><<Alt: 66.33 - 91.4 Moderate (Alt) Muscovite>> Original alt process? "shiny" fracture surface.</p> <p><<Alt: 91.4 - 103.6 Weak (Alt) Muscovite>></p> <p><<Vein: 70.17 - 70.42 80% Quartz>> irregular and deformed qtz vein, discordant, ~ 20 cm wide.</p> <p><<Vein: 84.65 - 85 75% Quartz 80 deg. >> Massive qtz vein, regular, 80 ac.</p>											
			67.50	69.00	1.50	B00232987	-0.3	-0.005	-0.01	-0.01	-0.01
			69.00	70.50	1.50	B00232988	-0.3	-0.005	-0.01	-0.01	-0.01
			70.50	72.00	1.50	B00232989	-0.3	-0.005	-0.01	-0.01	0.01
			90.24	90.70	0.46	B00232991	10.7	-0.005	-0.01	0.23	0.37
			90.70	92.00	1.30	B00232992	0.8	-0.005	-0.01	-0.01	0.04
			92.00	93.00	1.00	B00232993	-0.3	-0.005	-0.01	-0.01	-0.01



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-332

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Vein: 86.55 - 86.65 80% Quartz-Carbonate 75 deg. >> massive qtz-carbonate vein. Subconcordant. <<Vein: 89.7 - 90.2 50% Quartz 15 deg. >> massive qtz vein, regular, discordant, 15-20 ac. <<Vein: 95 - 95.3 80% Quartz 45 deg. >> Massive discordant qtz vein, regular. 1% po disseminated within vein. <<Vein: 95.9 - 96 70% Quartz>> Irregular and fractured qtz-tourmaline vein, 5 cm wide. <<Struc: 95 - 95.01 Moderate (Alt) Foliation>>											
96.00	99.70	RHYva Coarse grained to ash tuff									
light grey FCG 96 - 99.7: Light grey, fine to coarse grained, weak/moderately foliated, weakly altered. Laminated sedimentary/ash unit, bedding marked by alternation of short fine and coarse grained beds, mm to cm, comprising locally lapillitic intervals (sorted, pebble size). Moderately calcite altered (pervasive). Trace of blue QE. Py/Po as stringers/bands.											
<<Min: 96 - 99.7 12% Min: Calcite>> Pervasive/blebs and also veinlets.											
99.70	103.60	RHYvi Lapilli tuff									
light grey CG 99.7 - 103.6: Light grey, medium to coarse grained, massive. Interval weak to moderately foliated. Moderate MU alteration, pervasive. Comprising siliceous lapillis/clasts, pebble size, distributed within matrix. Sorting locally well conserved. 2-4% of py, disseminated/patchy, also as deformed bands/stringers. Lapillitic rhyolite unit. 105.4-106.45m: Medium grained, BI altered (pervasive), laminated/bedded texture, gradual contacts. Sedimentary sequence? Could be MAFi.											
<<Min: 99.7 - 105.4 5% Min: Calcite>> Associated with veinlets/veins and also disseminated blebs											
103.60	119.70	RHYva Coarse grained to ash tuff									
light grey MCG 103.6 - 119.7: Light grey, medium/coarse grained, +/- homogeneous, massive. Interval weak to moderately foliated. Weak/moderate MU alteration, pervasive. 2-3% of py, disseminated/patchy, also as deformed bands/stringers. Coarse grained ash unit. 105.4-106.45m: Medium grained, BI altered (pervasive), laminated/bedded texture, gradual contacts. Sedimentary sequence? Could be MAFi.											
<<Min: 103.6 - 109.36 1% Min: Pyrrhotite>>											
<<Min: 105.4 - 106.45 12% Min: Calcite>> Pervasive/blebs and also veinlets.											
<<Min: 106.45 - 119.7 2% Min: Calcite>>											
<<Min: 109.36 - 110.55 5% Min: Pyrite>> Finely dessinminated, occuring as large bands.											
<<Min: 110.55 - 111.27 2% Min: Pyrite>>											
<<Min: 111.27 - 111.72 12% Min: Pyrite>> Finely dessinminated, occuring as large band.											
<<Min: 111.72 - 113.75 5% Min: Pyrite>> Finely dessinminated, occuring as bands.											
<<Min: 113.75 - 119.15 2% Min: Pyrite>>											
<<Min: 119.15 - 124.12 2% Min: Pyrite>> Occuring as stringers/bands											
<<Min: 119.15 - 124.12 2% Min: Pyrrhotite>> Occuring as stringers/bands											
<<Vein: 104.15 - 106.35 20% Quartz>> Interval of veining, irregular and deformed qtz veins, 5-10 cm wide, associated with weak carbonate.											

109.36	110.55	1.19	B00232994	-0.3	-0.005	-0.01	-0.01	0.01
--------	--------	------	-----------	------	--------	-------	-------	------

110.55	111.27	0.72	B00232995	-0.3	-0.005	-0.01	-0.01	0.01
111.27	111.72	0.45	B00232996	-0.3	-0.005	-0.01	-0.01	-0.01



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-332

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 104 - 104.01 Moderate (Alt) Foliation>>											
<<Struc: 116 - 116.01 Moderate (Alt) Foliation>>											
119.70	121.10	SED undifferentiated Sediment brown FCG									
119.7 - 121.1: Brownish, fine to coarse grained, weakly biotite altered (pervasive/flakes). Bedded/laminated texture marked by alternation of thin parallel beds, fine to coarse grained, cm to dm. Sorting well conserved. Strongly calcite altered (pervasive). Sedimentary sequence? Usually logged as MAFi unit.											
<<Min: 119.7 - 121.1 12% Min: Calcite>> Pervasive											
<<Alt: 119.7 - 121.1 Moderate (Alt) Biotite>> Associated with sedimentary interval.											
<<Struc: 120 - 120.01 >>											
121.10	137.70	RHYv Rhyolite volcanoclastic light grey CG									
121.1 - 137.7: Light grey, coarse grained, heterogeneous. Interval moderate to locally strongly foliated. Moderate to strong pervasive MU alteration, original alt process? We locally observe some siliceous lapillis relics distributed within matrix. Unit is characterized by laminated/bedded texture well conserved. Disseminated blue QE. Trace of disseminated porphyroblasts of BI (subhedral). 2-4% of py, disseminated/patchy, also as deformed bands/stringers. Volcanoclastic rhyolite unit.											
<<Min: 121.1 - 126.15 5% Min: Calcite>>											
<<Min: 124.12 - 128 0.5% Min: Pyrite>>											
<<Min: 124.12 - 128 1% Min: Pyrrhotite>>											
<<Min: 126.15 - 140.77 2% Min: Calcite>>											
<<Min: 128 - 138.6 3% Min: Pyrite>> Occuring as bands											
<<Min: 131 - 140.77 1% Min: Pyrrhotite>> 1-2 % po.											
<<Alt: 121.1 - 126.15 Moderate (Alt) Muscovite>> Original alt process?											
<<Alt: 126.15 - 128 Moderate (Alt) Chlorite>> Moderate to strong chlorite alteration.											
<<Alt: 128 - 132.2 Moderate (Alt) Muscovite>> Original alt process?											
<<Vein: 123.45 - 124.12 50% Quartz>> Interval of veining, comprising irregular qtz veins, subconcordant to discordant, 1-5 cm wide.											
<<Vein: 131.32 - 138.08 15% Quartz-Carbonate>> Interval comprising multiple qtz-carbonate veins, 1-3 cm wide, strongly deformed/folded and locally dismembered.											
137.70	138.08	MAFi Mafic Intrusions (primarily green MG footwall mafic intrusion)									
137.7 - 138.08: Green, medium grained, homogeneous, matrix chlorite altered. Strongly calcite altered. Sharp contacts. Probably MAFI											

Project:

KZK

Hole Number:

K15-332

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
138.08	140.77	RHYva Coarse grained to ash tuff light grey CG									
138.08 - 140.77: Light grey, coarse grained, +/- homogeneous, massive. Interval weak to moderately foliated. Weak/moderate MU alteration, pervasive. 1-2% of py, disseminated/patchy, also as deformed bands/stringers. Disseminated blue QE. Coarse grained ash unit.											
140.77	142.46	MAFi Mafic Intrusions (primarily footwall mafic intrusion) green FCG									
140.77 - 142.46: Green, medium grained, homogeneous, matrix chlorite altered. Strongly calcite altered. Sharp contacts. Probably MAFI. Could be sedimentary unit ("bedding" at the margins)											
<<Min: 140.77 - 142.46 10% Min: Calcite>> Occuring as bands within MAFI.											
<<Min: 140.77 - 143.85 2% Min: Pyrrhotite>> Wisps/stringers and disseminated.											
142.46	145.10	RHYva Coarse grained to ash tuff light grey CG									
142.46 - 145.1: Light grey, coarse grained, +/- homogeneous, massive. Interval weak to moderately foliated. Weak/moderate MU alteration, pervasive. 1-2% of py, disseminated/patchy, also as deformed bands/stringers. Coarse grained ash unit.											
<<Min: 142.46 - 145.1 8% Min: Calcite>> Associated with massive QTz-carbonate vein											
<<Min: 143.85 - 145.1 3% Min: Pyrrhotite>> Associated with TL/BI with massive qtz-carbonate vein.											
<<Vein: 143.85 - 145.1 95% Quartz-Carbonate>> Large irregular qtz-dolomite vein, associated with tourmaline and biotite at the margins as large aggregates/fracture filling. Vein strongly deformed. 3 % of Po, aggregate/fracture filling.											
145.10	171.20	RHYv Rhyolite volcanoclastic green MG	169.00	170.00	1.00	B00232997	0.9	-0.005	-0.01	-0.01	0.26
145.1 - 171.2: Green, massive unit, fine to medium grained, homogeneous, weak/moderately foliate. Matrix strongly chlorite altered (pervasive), comprising some bands intensely altered (Original alt process?). The protolith seems to be a massive mafic intrusive but the matrix is weakly siliceous (clasts relics, trace of QE), could be volcanoclastic sequence intensely chlorite altered (?).											
<<Min: 145.1 - 169 0.5% Min: Pyrite>>											
<<Min: 145.1 - 169 1% Min: Pyrrhotite>>											
<<Min: 145.1 - 174.83 2% Min: Calcite>>											
<<Min: 169 - 170 1% Min: Sphalerite>> Thin veinlets/stringers.											
<<Min: 170 - 171.2 1% Min: Sphalerite>> Stringers.											
<<Min: 170 - 171.2 2% Min: Pyrrhotite>> Disseminated/wisps.											
<<Min: 170 - 171.2 1% Min: Chalcopyrite>> Disseminated/wisps.											
<<Alt: 145.1 - 170 Moderate (Alt) Chlorite>> Associated with MAFI.											
<<Alt: 170 - 171.2 Strong (Alt) Chlorite>> Original, associated with mineralization.											
<<Vein: 146.7 - 147.05 90% Quartz>> irregular oriented qtz vein, massive, decimetric, margins chlorite altered.											
<<Vein: 165.55 - 165.67 70% Quartz-Carbonate>> irregular qtz-carbonate vein, discordant and deformed.											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-332

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Struc: 159 - 159.01 Weak (Alt) Foliation>>											
<<Struc: 165.5 - 165.51 Moderate (Alt) Foliation>>											
171.20	182.00	SED undifferentiated Sediment grey-brown FCG	174.15	174.83	0.68	B00232999	12.5	0.036	0.68	0.06	0.64
<p>171.2 - 182: Grey to brownish, fine to coarse grained, weakly biotite altered (pervasive/flakes). Bedded/laminated texture well conserved, marked by alternation of thin parallel beds, fine to coarse grained, cm to dm. Also comprising fine grained ash tuff sequence? Sorting locally well conserved. Strongly calcite altered (pervasive). Sedimentary sequence? Usually logged as MAFi unit (unit BI/calcite altered).</p> <p><<Min: 171.2 - 174.15 0.5% Min: Sphalerite>> Thin stringer</p> <p><<Min: 171.2 - 174.15 1% Min: Pyrrhotite>></p> <p><<Min: 174.15 - 174.83 2% Min: Sphalerite>> Thin stringers</p> <p><<Min: 174.15 - 174.83 3% Min: Pyrrhotite>></p> <p><<Min: 174.15 - 174.83 0.5% Min: Galena>></p> <p><<Min: 174.15 - 174.83 3% Min: Chalcopryite>> Occuring as small wisps/stringers. Also disseminated</p> <p><<Min: 174.83 - 177.45 0.5% Min: Pyrrhotite>></p> <p><<Min: 174.83 - 182 5% Min: Calcite>> Associated with sediment.</p> <p><<Min: 177.45 - 182 1% Min: Pyrrhotite>> Coarse grained.</p> <p><<Alt: 174.15 - 174.83 Intense (Alt) Chlorite>> Associated with Cpy/Sp/Gl/Po.</p> <p><<Vein: 177.45 - 180.64 40% Quartz 55 deg. >> Interval comprising multiple massive qtz veins, associated with weak tourmaline at the margins. Subconcordant, deformed.</p> <p><<Struc: 173.3 - 173.31 Moderate (Alt) Foliation>></p> <p><<Struc: 175.4 - 175.41 >> Bedding very well conserved.</p> <p><<Struc: 180 - 180.01 >></p>											
End of Hole @ 182											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-333

Prospect:	ABM	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Geotech	Date Logging Start:	01-Dec-15
UTM Easting	415045	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	01-Dec-15
UTM Northing:	6816220	Casing Pulled?:	Yes	Dip:	-90	Drill Company:	Geotech
UTM Elev. (m):	1381.05	Casing Depth (m):	9	Length (m):	71	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	29-Nov-15
Local Northing:		Cemented?:	SP	Core Storage Loc.:	KZK Camp	Drill Completed:	01-Dec-15
Local Elev. (m):						Purpose:	Geotech
Comments:						Parent Hole:	

K15-333/KP15-J is located on Geona Creek, downstream of the designed pit. SPT were operated (6ft interval over the unfrozen soil) as well as packer testing (in bedrock, 30ft interval). The hole is made up of mafic unit -marked by BI porphyroblasts patch-tuff or sedimentary sequence from volcanic rocks (detritic origin). The bottom shows deformations and obscured foliation which could suggest volcanic flows. Trace of PY and PO were observed, A thermistor have been installed.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-90	0	0	0	APS	Geotech	29-Nov-15		<input checked="" type="checkbox"/>	Vertical hole. No Reflex survey.

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	8.00	OVBN Overburden									
8.00	17.90	SED undifferentiated Sediment									
8 - 17.9: CL/BI mafic units interbedded with sedimentary sequence locally graphitic. BI porphyroblasts, laminated..											
<<Min: 8 - 51.5 0.1% Min: Pyrrhotite>>											
<<Min: 8 - 71 0.1% Min: Pyrite>>											
<<Min: 8 - 71 10% Min: Calcite>> Average. Irregular repartition.											
<<Alt: 8 - 54.74 Moderate (Alt) Biotite>>											
<<Struc: 17.26 - 17.27 dominant foliation>>											
17.90	71.00	MAFta Coarse grained to ash tuff									
17.9 - 71: Patch of BI porphyroblasts, locally bleached. One to five centimeter gradual sedimentary sequences observed. Could be detritic units made up of mafic composition grains. From 21.64m to 22.24, vein or dyke (maybe aplitic surrounded by QZ vein) altering the mafic unit (bleaching and BI replaced by Fe-carbonate. From 51.50m to 71.00m, foliation obscured and wavy. Could be sliding or lava flows. CA veining. E.O.H.											
<<Min: 51.5 - 71 0.5% Min: Pyrrhotite>>											
<<Alt: 17.9 - 71 Strong (Alt) Chlorite>>											



GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-333

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<<Alt: 51.5 - 71 Weak (Alt) Biotite>> and patch.											
<<Vein: 23.26 - 23.42 Quartz 37 deg. >> QZ vein surrounded by alteration halo. Alpha angle at lower contact.											
<<Vein: 67.25 - 67.37 Quartz>> QZ vein.											
<<Struc: 21.5 - 22.24 Weak (Alt) Contact>> Broken zone, altered-related to aplitic dyke (?).											
<<Struc: 33.63 - 33.64 dominant foliation>>											
<<Struc: 48.02 - 48.03 dominant foliation>>											
End of Hole @ 71											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-334

Prospect:	ABM	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Geotech	Date Logging Start:	05-Dec-15
UTM Easting	414775	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	05-Dec-15
UTM Northing:	6818845	Casing Pulled?:	Yes	Dip:	-90	Drill Company:	Geotech
UTM Elev. (m):	1319.47	Casing Depth (m):	18	Length (m):	50.5	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	01-Dec-15
Local Northing:		Cemented?:	SP	Core Storage Loc.:	KZK Camp	Drill Completed:	05-Dec-15
Local Elev. (m):						Purpose:	Geotech
Comments:						Parent Hole:	

K15-334/KP15-A is a geotechnical hole (upstream of site D creek) including SPT in unfrozen soil (interval feet), packer testing in the bedrock (10 feet interval for the two first, 20 feet thereafter). The top of the hole consists in 18.10 metres of soil and overburden followed mafic unit up to 35.50m and a mudstone. This last unit is CA veined until 41.83m then shows a vuggy texture probably due to a quasi total decalcification. From top to bottom, the rock is strongly fractured, clay and sand infilling are observed. Piesold Engineering operated 5 SPT and 7 packer testing. They encountered issues due to artesian groundwater and subterranean pressure gas, probably carbon dioxide. Therefore the piezometer could not be installed.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-90	0	0	0	APS	Geotech	01-Dec-15		<input checked="" type="checkbox"/>	No Reflex Survey.

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	18.10	OVBN Overburden									
0 - 18.1: Casing at 18.00. Five SPT over the unfrozen soil. Organic material up to 1.80m, A and B horizon. Grey and brown clay until 14.80m, weathered fracture unidentified rocks up to 18.10m but might be bleached by groundwater fluctuation mafic unit.											
18.10	35.50	MAFta Coarse grained to ash tuff green									
18.1 - 35.5: Could be CL altered gabbro. BI fading out at lower contact, replaced by beige mineral reacting with HCL, dolomite or AK (?). Weak foliation.											
<<Alt: 18.1 - 28 Strong (Alt) Chlorite>>											
<<Alt: 28 - 35.5 Moderate (Alt) Chlorite>> Bleached at lower contact.											
<<Struc: 18.65 - 27.2 Moderate (Alt) Fault>> Highly fractured, locally disaggregated.											
35.50	41.83	MDS Carbonaceous Mudstone & dark grey Tuffaceous Mudstone									
35.5 - 41.83: CA veinlets, folded and/or crenulated. Could be MDU. Locally BI veinlets (fracture filling). From 36.10m to 37.00m, probably ash layer (felsic)..											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-334

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %									
<<Min: 36.1 - 37 0.1% Min: Pyrite>>																				
<<Struc: 37 - 38.1 Moderate (Alt) Fault>> Brittle, highly broken zone. Two clay/sandy zone suggesting open fracture infilling.																				
41.83	50.50	MDS	Carbonaceous Mudstone & black Tuffaceous Mudstone																	
41.83 - 50.5: Vuggy texture, decalcification quasi complete. E.O.H.																				
<<Alt: 44 - 50.5 Weak (Alt) Chlorite>>																				
<<Struc: 46 - 46.4 Weak (Alt) Fault>> Fault gouge, black clay and sand.																				
End of Hole @ 50.5																				

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-335

Prospect:	ABM	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Geotech	Date Logging Start:	03-Dec-15
UTM Easting	414694	Core Size:	HQ3	Azimuth:	180	Date Logging Complete:	03-Dec-15
UTM Northing:	6817330	Casing Pulled?:	Yes	Dip:	-90	Drill Company:	Geotech
UTM Elev. (m):	1418.45	Casing Depth (m):	3	Length (m):	32.33	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	02-Dec-15
Local Northing:		Cemented?:	SP	Core Storage Loc.:	KZK Camp	Drill Completed:	03-Dec-15
Local Elev. (m):						Purpose:	Geotech
Comments:						Parent Hole:	

K15-335/KP15-H, located at the mill site, is a geotechnical hole including SPT in the unfrozen soil, packer testing in bedrock every 30 feet interval and thermistor install. The geology consists in sedimentary units, probably from volcanic origin, and rhyolitic ash tuff. Weak trace of oxidation, increasing at 26.60m, are observed in the fractures as well as a narrow CL altered zone (from 26.60m to 27.72m). The hole ends at 32.33m on a graphitic, CA veined, thinly laminated sedimentary unit.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-90	0	0	0	APS	Geotech	02-Dec-15		<input checked="" type="checkbox"/>	
32	-88	199.6	22.5	222.1	ReflexEVS	Geotech	02-Dec-15	5388	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	2.50	CASN Casing									
0 - 2.5: Overburden. SPT from 1.20m to 1.59m.											
2.50	19.99	SED undifferentiated Sediment	light grey	FMG							
2.5 - 19.99: Graphitic (specks), CA in matrix fading out when CL alteration increases, weakly foliation. Probably tuffaceous.											
<<Min: 2.5 - 8.86 5% Min: Calcite>>											
<<Min: 2.5 - 23.85 0.5% Min: Pyrite>> and in veinlets, few patch in RHYva.											
<<Min: 2.5 - 23.85 1% Min: Pyrrhotite>>											
<<Min: 2.5 - 23.85 0.1% Min: Chalcopryrite>> Observed at 20.25m. Very few.											
<<Min: 8.86 - 12.37 1% Min: Calcite>>											
<<Min: 12.37 - 15.6 15% Min: Calcite>> and matrix.											
<<Min: 15.6 - 23.85 5% Min: Calcite>>											
<<Alt: 8.86 - 12.37 Weak (Alt) Chlorite>>											
<<Vein: 19.5 - 19.56 Calcium carbonate/Carbonate>> Carbonate veins, brecciated.											



GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-335

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
19.99	23.85	RHYva Coarse grained to ash tuff									
<<Min: 23.84 - 32.33 2% Min: Calcite>> and few patch.											
23.85	32.33	SED undifferentiated Sediment									
23.85 - 32.33: Thin foliation, CA veinlets. E.O.H.											
<<Min: 23.85 - 32.33 1% Min: Pyrite>> Thin veinlets, fracture infilling.											
<<Min: 23.85 - 32.33 0.5% Min: Pyrrhotite>>											
<<Alt: 26.6 - 27.72 Moderate (Alt) Chlorite>> Moderate to strong, associated with QZ veins.											
<<Vein: 27.37 - 27.7 Quartz-Iron oxide>> 2 QZ veins (5cm wide) in CL altered zone. Trace of oxidation											
<<Struc: 26.6 - 32.33 Weak (Alt) Fault>> Oxidized fractures and rubble zones.											
<<Struc: 31.3 - 32.33 Weak (Alt) Fault>> Fractures with oxidation trace along the core axis.											
End of Hole @ 32.33											

GeoSpark Logger ~ Drill Log

Project:
KZK
Hole Number:
K15-336

Prospect:	ABM	Hole Type:	DD	Survey Type:	APS-Lidar	Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Geotech	Date Logging Start:	08-Dec-15
UTM Easting	414792	Core Size:	HQ3	Azimuth:	0	Date Logging Complete:	09-Dec-15
UTM Northing:	6819017	Casing Pulled?:	Yes	Dip:	-90	Drill Company:	Geotech
UTM Elev. (m):	1317.5	Casing Depth (m):	18	Length (m):	50.5	Drill Rig:	Hydracore
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	05-Dec-15
Local Northing:		Cemented?:	SP	Core Storage Loc.:	KZK Camp	Drill Completed:	08-Dec-15
Local Elev. (m):						Purpose:	Geotech
Comments:						Parent Hole:	

K15-336/KP15-B (centerline site D creek) is a geotechnical including SPT in unfrozen soil (5 feet interval) and packer testing (2 test at 10 feet interval on top, 20 feet interval thereafter) conducted by Knight Piesold Consulting as well as a thermistor install. The geology is made up of 18 m of salty alluvium followed by CL altered mafic ash tuff and graphitic mudstone interbedded showing CA veining in the foliation. Trace of decalcification are observed and tow narrow fault gouge zone. The hole ends at 50.50m on a dominant mudstone unit mixed with ash tuff.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-90	0	0	0	APS	Geotech	12-Jun-15		<input checked="" type="checkbox"/>	No downhole survey.

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
0.00	18.00	CASN Casing									
0 - 18: Soil (A and B horizon) followed by alluvium silt. Few boulders.											
18.00	39.37	MAFta Coarse grained to ash tuff green									
18 - 39.37: Progressive lower contact. Interbedded with graphitic mudstone. Feldspar clasts. From 34.70m to 35.33m, ash bed.											
<<Min: 18 - 50.5 0.5% Min: Pyrite>>											
<<Min: 18 - 50.5 0.1% Min: Pyrrhotite>>											
<<Alt: 18 - 39.47 Moderate (Alt) Chlorite>> In mafic tuff.											
<<Struc: 20.6 - 20.61 dominant foliation>>											
<<Struc: 29 - 29.01 dominant foliation>>											
<<Struc: 31 - 33.5 Weak (Alt) Fault>> 3 fault gouge zones, 10 cm wide, clay infilling. Broken zone.											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K15-336

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
39.37	41.13	MDS Carbonaceous Mudstone & Tuffaceous Mudstone									
39.37 - 41.13: Thin foliation, CA veinlets, few PY along the foliation.											
<<Struc: 39.4 - 39.41 dominant foliation>>											
41.13	44.33	MAFta Coarse grained to ash tuff									
41.13 - 44.33: CA veinlets. Sharp upper contact, progressive lower contact. Feldspar clasts.											
<<Alt: 41.13 - 44.33 Moderate (Alt) Chlorite>> In mafic tuff.											
<<Vein: 43.8 - 50.4 Calcite>> CA veining in foliation. Locally vuggy texture.											
44.33	50.50	MDS Carbonaceous Mudstone & Tuffaceous Mudstone									
44.33 - 50.5: Dominantly graphitic mudstone mixed with mafic tuff, CA veined. Locally vuggy texture (decalcification). E.O.H.											
<<Alt: 44.33 - 50.5 Weak (Alt) Chlorite>> In mafic tuff.											
<<Struc: 48.1 - 48.3 Weak (Alt) Fault>> Sandy clay fault gouge.											
<<Struc: 48.4 - 48.41 dominant foliation>>											
End of Hole @ 50.5											