

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K16-362

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Alicia Vainio	
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	6/16/2016	
UTM Easting	415019.128	Core Size:	HQ3	Azimuth:	331.9	Date Logging Complete:	6/22/2016	
UTM Northing:	6815368.347	Casing Pulled?:	Yes	Dip:	-52	Drill Company:	Hytech	
UTM Elev. (m):	1384.204	Casing Depth (m):	24	Length (m):	165	Drill Rig:	Tech 5000	
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	6/10/2016	
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	6/11/2016	
Local Elev. (m):				Hole Completed?:	Completed	Purpose:	Metallurgical	
Comments:							Parent Hole:	

The purpose of K16-362 was to collect metallurgical samples of the up-dip portion of the ABM lens. The hole collared into bedrock at 22.72m; the hanging wall consisted of RHY and MDSt. Mineralization was first encountered at 60.28m, and continued to a depth of 89.08m; the lens consisted of alternating OA and OB, with small zones of OH, OF, and OJ. RHY continued to a depth of 146.91m, with OC mineralization encountered between 118.8-121.48m. Banded sulphides surrounded the lens, with mineralization visible from 118.16-122.92m. A MAFi sill occurred from 124.47-133.79m, with a zone of OJ (127.3-128.1m). RHYi was encountered at 146.91m, and ended at 152.88m where the second MAFi sill began.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-52	330.5	1.4	331.9	TN14	Roger Hulstein	6/10/2016		<input checked="" type="checkbox"/>	
5	-50.70827	330.83701	1.4	332.23701	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
10	-50.60722	331.25126	1.4	332.65126	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
15	-50.51076	331.12883	1.4	332.52883	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
20	-50.49012	330.99406	1.4	332.39406	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
25	-50.67234	330.94979	1.4	332.34979	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
30	-50.8951	330.70625	1.4	332.10625	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
35	-51.20281	330.51321	1.4	331.91321	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
36	-51.1	310.6	22.1	332.7	ReflexEZS	Hytech	6/10/2016	5868	<input type="checkbox"/>	
40	-51.42946	330.56148	1.4	331.96148	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
45	-51.7026	330.43662	1.4	331.83662	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
50	-52.02647	330.43162	1.4	331.83162	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
55	-52.3508	330.39771	1.4	331.79771	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
60	-52.51195	330.29109	1.4	331.69109	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
60.01	-52.6	312.9	22.1	335	ReflexEZS	Hytech	6/11/2016	5080	<input type="checkbox"/>	
65	-52.66892	330.3093	1.4	331.7093	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
70	-52.71522	330.22466	1.4	331.62466	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
75	-52.84729	330.29909	1.4	331.69909	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
80	-52.94931	330.28763	1.4	331.68763	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
85	-53.04754	330.30646	1.4	331.70646	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
90	-53.22664	330.28022	1.4	331.68022	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
90.01	-53.5	305.1	22.1	327.2	ReflexEZS	Hytech	6/11/2016	5672	<input type="checkbox"/>	
95	-53.54291	330.17681	1.4	331.57681	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
100	-53.88084	329.96708	1.4	331.36708	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
105	-54.28137	329.84139	1.4	331.24139	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
110	-54.53798	329.5701	1.4	330.9701	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
114	-54.9	304.4	22.1	326.5	ReflexEZS	Hytech	6/11/2016	5760	<input type="checkbox"/>	
115	-54.75683	329.20226	1.4	330.60226	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
120	-55.04809	329.04219	1.4	330.44219	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
125	-55.22434	328.97244	1.4	330.37244	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
130	-55.30109	329.14299	1.4	330.54299	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
135	-55.28148	329.22333	1.4	330.62333	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
138	-55.6	308.6	22.1	330.7	ReflexEZS	Hytech	6/11/2016	5817	<input type="checkbox"/>	
140	-55.545	329.16808	1.4	330.56808	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
145	-55.72956	329.05178	1.4	330.45178	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
150	-55.9374	329.03189	1.4	330.43189	Gyro	Alicia Vainio	6/11/2016		<input checked="" type="checkbox"/>	100
162	-56.8	308.2	22.1	330.3	ReflexEZS	Hytech	6/11/2016	5804	<input type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
0.00	22.72	OVBN Overburden									
22.72	33.00	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
<<Min: 22.72 - 33 0.1% Min: Pyrite>>											
<<Min: 22.72 - 33 0.5% Min: Pyrrhotite>>											
<<Alt: 22.72 - 56.48 Moderate Muscovite>>											
<<Alt: 22.72 - 58.93 Trace Calcite>>											
<<Vein: 23.3 - 23.42 Quartz-Carbonate 43 deg. >> Quartz vein with patches of carbonate.											
<<Vein: 25.24 - 25.38 Quartz-Carbonate 35 deg. >> Fractured quartz vein with carbonate infill.											
<<Vein: 32.1 - 32.16 Quartz-Carbonate 35 deg. >> Quartz vein with carbonate-blebs.											
<<Struc: 25.59 - 25.6 dominant foliation>>											
<<Struc: 30.72 - 31.36 dominant foliation>>											
<<Struc: 32.89 - 32.9 dominant foliation>>											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
33.00	58.93	MDSt Rhyolite tuff dominant mudstone	50.80	52.00	1.20	D00004062	0.006	0.7	-0.01	0.01	0.02
<p>33 - 58.93: 4 main lenses of MDSc occur between 33.6-34.2m, 35.64-36.07m, 41.97-42.4m, and 54.72-55.02m. Chlorite-altered, cordierite porphyroblasts appear around 56.7m.</p> <p><<Min: 33 - 57.15 1% Min: Pyrite>></p> <p><<Min: 33 - 57.15 0.1% Min: Pyrrhotite>></p> <p><<Min: 57.15 - 58.93 1% Min: Sphalerite>></p> <p><<Min: 57.15 - 58.93 0.1% Min: Pyrite>></p> <p><<Min: 57.15 - 58.93 1% Min: Pyrrhotite>></p> <p><<Min: 57.15 - 58.93 0.1% Min: Galena>></p> <p><<Alt: 56.48 - 58.93 Weak Chlorite>> Chlorite alteration within cordierite.</p> <p><<Alt: 56.48 - 58.93 Moderate Cordierite>></p> <p><<Alt: 56.48 - 61.35 Strong Muscovite>> Localized zones with strong-intense sericite alteration.</p> <p><<Vein: 55.22 - 55.53 Quartz-Carbonate>> DEF quartz veins with patches of carbonate, and traces of pyrrhotite.</p> <p><<Vein: 56.36 - 56.39 Quartz-Carbonate 35 deg. >></p> <p><<Struc: 34.52 - 34.53 dominant foliation>></p> <p><<Struc: 43.25 - 43.26 dominant foliation>></p> <p><<Struc: 45.52 - 45.53 dominant foliation>></p>											
			52.00	53.70	1.70	D00004063	0.008	1	-0.01	0.02	-0.01
			53.70	55.00	1.30	D00004064	0.007	0.3	-0.01	-0.01	-0.01
			55.00	56.00	1.00	D00004065	0.008	2.4	-0.01	0.08	0.11
			56.00	57.50	1.50	D00004066	0.063	23.4	0.01	1.18	0.14
			57.50	58.93	1.43	D00004067	0.021	2.3	0.06	0.01	0.29
			58.93	60.28	1.35	D00004068	0.07	6.2	0.17	-0.01	1.86
58.93	60.28	RHY undifferentiated rhyolite	<p>58.93 - 60.28: Strongly-altered, carbonate-rich RHY with disseminated sulfides.</p> <p><<Min: 58.93 - 60.28 3% Min: Sphalerite>></p> <p><<Min: 58.93 - 60.28 1% Min: Pyrite>></p> <p><<Min: 58.93 - 60.28 0.1% Min: Pyrrhotite>></p> <p><<Min: 58.93 - 60.28 0.1% Min: Galena>></p> <p><<Min: 58.93 - 60.28 0.5% Min: Chalcopyrite>></p> <p><<Alt: 58.93 - 60.28 Strong Cordierite>> Localized zones with strong cordierite alteration.</p> <p><<Alt: 58.93 - 60.28 Moderate-Strong Calcite>></p> <p><<Alt: 58.93 - 62.5 Moderate Chlorite>></p> <p><<Vein: 58.93 - 60.85 Quartz-Carbonate-Sulphide 50 deg. >> Quartz-carbonate veins with minor sulfides.</p> <p><<Struc: 60.05 - 60.06 dominant foliation>></p>								

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
60.28	61.54	OJ Heavily disseminated sulphides and/or stringer style mineralization in proximal altered rock	60.28	61.00	0.72	D00004069	0.983	121	2.98	0.18	3.26
60.28 - 61.54: Banded sulfides within strongly-altered RHY host. Pyrrhotite-rich zone from 61.34-61.54m.											
<<Min: 60.28 - 61.35 6% Min: Sphalerite>> Patchy sphalerite, localized within pyrrhotite-rich zones.			61.00	61.54	0.54	D00004072	0.609	74.1	0.76	0.65	10.2
<<Min: 60.28 - 61.35 2% Min: Pyrite>> Disseminated-blebs of coarse-grained, sub-angular pyrite. Fine-grained, fracture infill.											
<<Min: 60.28 - 61.35 10% Min: Pyrrhotite>> Patchy-disseminated pyrrhotite. Most common around chalcopyrite-rich zones. Disseminated-lenses of pyrrhotite occur along foliation.											
<<Min: 60.28 - 61.35 0.1% Min: Galena>>											
<<Min: 60.28 - 61.35 3% Min: Chalcopyrite>> Patchy-disseminated chalcopyrite-pyrrhotite.											
<<Min: 61.35 - 61.54 15% Min: Sphalerite>> Semi-massive pyrite with disseminated sphalerite and pyrrhotite.											
<<Min: 61.35 - 61.54 40% Min: Pyrite>> Semi-massive pyrite with disseminated sphalerite and pyrrhotite.											
<<Min: 61.35 - 61.54 10% Min: Pyrrhotite>> Semi-massive pyrite with disseminated sphalerite and pyrrhotite.											
<<Alt: 60.28 - 78.73 Trace Calcite>>											
<<Alt: 61.35 - 62.5 Moderate Muscovite>> Sericite laminations within the banded OA.											
<<Struc: 60.28 - 60.29 Contact>> RHY-OJ CNT											
<<Struc: 61.34 - 61.35 Contact>> OJ-OF CNT											
61.54	62.50	OA Laminar or heavily disseminated magnetite bearing massive sulphide	61.54	62.50	0.96	D00004073	0.759	111	1.34	1.97	10.8
61.54 - 62.5: Banded sulfides and carbonate-rich gangue. Well-foliated, sericite alteration is visible at the end of the unit.											
<<Min: 61.54 - 62.5 1% Min: Sphalerite>> Semi-massive pyrite with bands of disseminated-blebby magnetite and pyrrhotite, +/- chalcopyrite and sphalerite.											
<<Min: 61.54 - 62.5 40% Min: Pyrite>> Semi-massive pyrite with bands of disseminated-blebby magnetite and pyrrhotite, +/- chalcopyrite and sphalerite.											
<<Min: 61.54 - 62.5 5% Min: Pyrrhotite>> Semi-massive pyrite with bands of disseminated-blebby magnetite and pyrrhotite, +/- chalcopyrite and sphalerite.											
<<Min: 61.54 - 62.5 20% Min: Magnetite>> Semi-massive pyrite with bands of disseminated-blebby magnetite and pyrrhotite, +/- chalcopyrite and sphalerite.											
<<Min: 61.54 - 62.5 2% Min: Chalcopyrite>> Semi-massive pyrite with bands of disseminated-blebby magnetite and pyrrhotite, +/- chalcopyrite and sphalerite.											
<<Struc: 61.88 - 61.89 dominant foliation>>											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
62.50	63.97	OB Wispy laminar, fine buckshot textured, massive sulphide with lesser magnetite	62.50	63.32	0.82	D00004074	0.762	131	0.17	1.24	8.07
62.5 - 63.97: Massive pyrite with disseminated sphalerite, chalcopyrite, and pyrrhotite. Carbonate gangue occurs within patches, and as fracture infill.											
<<Min: 62.5 - 63.32 10% Min: Sphalerite>> Disseminated-banded sphalerite, occasional FRA.			63.32	63.97	0.65	D00004075	0.296	108	0.16	1.09	11.6
<<Min: 62.5 - 63.32 50% Min: Pyrite>> Semi-massive to banded.											
<<Min: 62.5 - 63.32 1% Min: Pyrrhotite>> Disseminated within pyrite.											
<<Min: 62.5 - 63.32 0.5% Min: Magnetite>> Disseminated blebs.											
<<Min: 62.5 - 63.32 1% Min: Galena>> Disseminated blebs proximal to quartz and sphalerite.											
<<Min: 62.5 - 63.32 1% Min: Chalcopyrite>> Rare FRA.											
<<Min: 63.32 - 63.97 5% Min: Sphalerite>> Disseminated blebs.											
<<Min: 63.32 - 63.97 50% Min: Pyrite>> Semi-massive to banded.											
<<Min: 63.32 - 63.97 3% Min: Pyrrhotite>> Patchy-disseminated pyrrhotite, proximal to chalcopyrite.											
<<Min: 63.32 - 63.97 1% Min: Magnetite>> Subrounded, disseminated blebs.											
<<Min: 63.32 - 63.97 0.1% Min: Galena>>											
<<Min: 63.32 - 63.97 3% Min: Chalcopyrite>> Disseminated blebs to patches.											
63.97	65.45	OA Laminar or heavily disseminated magnetite bearing massive sulphide	63.97	64.71	0.74	D00004076	0.265	123	0.11	1.11	12.4
63.97 - 65.45: Banded pyrite and magnetite with disseminated sphalerite. Foliation is wavy, and sub-parallel TCA. Minor carbonate gangue occurs within patches, and as fracture infill.											
<<Min: 63.97 - 65.45 5% Min: Sphalerite>> Disseminated-banded sphalerite proximal to pyrite.			64.71	65.45	0.74	D00004077	0.207	72	0.11	0.68	7.69
<<Min: 63.97 - 65.45 30% Min: Pyrite>> Wispy-bands to semi-massive.											
<<Min: 63.97 - 65.45 1% Min: Pyrrhotite>>											
<<Min: 63.97 - 65.45 20% Min: Magnetite>> Disseminated blebs-banded magnetite.											
<<Min: 63.97 - 65.45 2% Min: Chalcopyrite>> Disseminated CP within PY.											
65.45	67.69	OB Wispy laminar, fine buckshot textured, massive sulphide with lesser magnetite	65.45	66.25	0.80	D00004078	0.22	46.9	0.22	0.35	8.87
65.45 - 67.69: Massive pyrite with disseminated-patchy pyrrhotite and sphalerite +/- magnetite, and subrounded clasts of silica gangue.											
<<Min: 65.45 - 67.69 15% Min: Sphalerite>> Disseminated blebs proximal to gangue; banding within PY-rich zones.			66.25	67.00	0.75	D00004079	0.305	66.3	0.62	0.37	8.68

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
<<Min: 65.45 - 67.69	40% Min: Pyrite>>	Semi-massive PY. Subrounded blebs of PY occur within silica gangue.	67.00	67.69	0.69	D00004081	0.855	131	2.1	0.39	10.4
<<Min: 65.45 - 67.69	15% Min: Pyrrhotite>>										
<<Min: 65.45 - 67.69	2% Min: Magnetite>>										
<<Min: 65.45 - 67.69	3% Min: Chalcopyrite>>	Proximal to PO.									
67.69	68.09	OJ Heavilly disseminated sulphides and/or stringer style mineralization in proximal altered rock	67.69	68.09	0.40	D00004082	0.839	212	2.86	0.92	8.5
67.69 - 68.09: Banded - patchy sulfides within an altered RHY host. Sulfides are pyrrhotite and chalcopyrite-dominant, and contain small-subrounded clasts of chlorite.											
<<Min: 67.69 - 68.09	5% Min: Sphalerite>>										
<<Min: 67.69 - 68.09	5% Min: Pyrite>>	Disseminated within PO and CP.									
<<Min: 67.69 - 68.09	25% Min: Pyrrhotite>>	Banded to patchy PO; disseminated blebs are visible within the CP.									
<<Min: 67.69 - 68.09	15% Min: Chalcopyrite>>	Patchy CP; net-like texture around chloritic-blebs.									
<<Min: 67.69 - 68.09	15% Min: Barite>>	BA lense with disseminated sulfides, and cm-size blebs.									
<<Alt: 67.69 - 68.09	Moderate-Strong Chlorite>>										
<<Struc: 67.78 - 67.79	dominant foliation>>										
68.09	69.83	OB Wispy laminar, fine buckshot textured, massive sulphide with lesser magnetite	68.09	69.00	0.91	D00004083	0.7	181	0.92	1.21	12.9
68.09 - 69.83: Massive pyrite with localized patches of sphalerite and disseminated magnetite.											
<<Min: 68.09 - 69.83	25% Min: Sphalerite>>										
<<Min: 68.09 - 69.83	60% Min: Pyrite>>	Massive to banded.									
<<Min: 68.09 - 69.83	5% Min: Pyrrhotite>>										
<<Min: 68.09 - 69.83	1% Min: Magnetite>>	Disseminated blebs.									
<<Min: 68.09 - 69.83	0.5% Min: Galena>>										
<<Min: 68.09 - 69.83	2% Min: Chalcopyrite>>										
<<Struc: 69.15 - 69.16	dominant foliation>>										
69.83	72.52	OA Laminar or heavilly disseminated magnetite bearing massive sulphide	69.83	70.83	1.00	D00004085	0.626	97.5	1.29	0.4	12.8
69.83 - 72.52: Banded (and disseminated) magnetite and pyrite. OA alternates with small lenses of pyrite-dominant OB; OB accounts for approx 35% of the unit.											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
<<Min: 69.83 - 72.52		3% Min: Sphalerite>>	70.83	71.60	0.77	D00004086	0.41	170	0.51	1.6	16.2
<<Min: 69.83 - 72.52		50% Min: Pyrite>> Semi-massive to banded.	71.60	72.52	0.92	D00004087	0.206	62.7	0.48	0.58	12.3
<<Min: 69.83 - 72.52		5% Min: Pyrrhotite>>									
<<Min: 69.83 - 72.52		25% Min: Magnetite>> Disseminated blebs to banded MG within PY.									
<<Min: 69.83 - 72.52		2% Min: Galena>> Disseminated GL proximal to silica gangue.									
<<Min: 69.83 - 72.52		5% Min: Chalcopyrite>> Disseminated CP proximal to PO.									
72.52	73.10	OF Pyrrhotite rich sulphides	72.52	73.10	0.58	D00004088	0.066	118	0.21	1.59	8.69
72.52 - 73.1: Massive pyrrhotite with patches of pyrite, and rare clasts of silicious gangue.											
<<Min: 72.52 - 73.1		10% Min: Pyrite>> Disseminated to patchy.									
<<Min: 72.52 - 73.1		80% Min: Pyrrhotite>>									
<<Min: 72.52 - 73.1		0.5% Min: Magnetite>> Disseminated blebs.									
<<Min: 72.52 - 73.1		0.5% Min: Galena>> Disseminated GL within gangue.									
<<Min: 72.52 - 73.1		0.1% Min: Chalcopyrite>>									
73.10	78.73	OA Laminar or heavilly disseminated magnetite bearing massive sulphide	73.10	74.00	0.90	D00004089	0.19	40.9	0.61	0.36	6.42
73.1 - 78.73: Banded-blebby pyrite and magnetite +/- sphalerite. Clasts of silica-gangue increase near the end of the unit.											
<<Min: 73.1 - 78.73		5% Min: Sphalerite>>	74.00	75.00	1.00	D00004092	0.226	94.4	0.44	1.53	7.61
<<Min: 73.1 - 78.73		50% Min: Pyrite>> Semi-massive PY with banded MG.	75.00	76.00	1.00	D00004093	0.15	38.8	0.46	0.31	5.19
<<Min: 73.1 - 78.73		10% Min: Pyrrhotite>> Patchy-banded.	76.00	77.00	1.00	D00004094	0.12	30.8	0.58	0.16	6.79
<<Min: 73.1 - 78.73		20% Min: Magnetite>> Banded MG blebs.	77.00	78.00	1.00	D00004095	0.162	34.8	0.47	0.2	8.58
<<Min: 73.1 - 78.73		1% Min: Galena>>	78.00	78.73	0.73	D00004096	0.299	76.3	0.8	0.88	5.98
<<Min: 73.1 - 78.73		2% Min: Chalcopyrite>> Patchy CP; most abundant within gangue.									
<<Struc: 74.56 - 74.57		dominant foliation>>									
<<Struc: 78.6 - 78.61		dominant foliation>>									
78.73	87.42	OB Wispy laminar, fine buckshot textured, massive sulphide with lesser magnetite	78.73	79.50	0.77	D00004097	0.358	109	0.15	1.62	5.51
78.73 - 87.42: Semi-massive-disseminated pyrite, with disseminated sphalerite, and rare magnetite-rich bands. Pyrite, sphalerite +/- galena, and carbonate fracture infill is common; vugs within cemented fractures are rare. Silica-carbonate-rich gangue is most abundant from 80.4- 86.4m.											
<<Min: 78.73 - 80.38		10% Min: Sphalerite>> Disseminated banding.	79.50	80.38	0.88	D00004098	2.61	236	0.2	1.81	9.25

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
<<Min: 78.73 - 80.38	50% Min: Pyrite>>	Semi-massive to banded.	80.38	81.50	1.12	D00004099	2.71	306	0.37	2.95	9.67
<<Min: 78.73 - 80.38	0.5% Min: Magnetite>>		81.50	82.50	1.00	D00004101	2.41	346	0.15	4.84	13.1
<<Min: 78.73 - 80.38	0.5% Min: Galena>>	Disseminated within gangue.	82.50	83.50	1.00	D00004102	2.84	406	0.3	4.68	14
<<Min: 78.73 - 80.38	1% Min: Barite>>	Subrounded blebs.	83.50	84.50	1.00	D00004103	3.43	415	0.37	4.47	6.81
<<Min: 80.38 - 86.5	10% Min: Sphalerite>>		84.50	85.50	1.00	D00004104	3.46	289	0.47	1.97	6.4
<<Min: 80.38 - 87.42	40% Min: Pyrite>>	Semi-massive to banded PY.	85.50	86.50	1.00	D00004105	4.21	348	0.52	2.2	9.33
<<Min: 80.38 - 87.42	0.5% Min: Pyrrhotite>>		86.50	87.42	0.92	D00004106	1.44	383	0.09	5.2	14.6
<<Min: 80.38 - 87.42	3% Min: Galena>>	Disseminated and FRA.									
<<Min: 80.38 - 87.42	1% Min: Chalcopyrite>>	Disseminated - patchy; proximal to gangue.									
<<Min: 80.38 - 87.42	5% Min: Barite>>	Blebs of BA within gangue.									
<<Min: 86.5 - 87.42	20% Min: Sphalerite>>	Sphalerite-rich banding.									
<<Alt: 78.73 - 89.08	Weak-Moderate Calcite>>	Calcite blebs and fracture infill.									
<<Vein: 84.37 - 84.38	Quartz-Carbonate 40 deg. >>	Carbonate-rich veinlet.									
87.42	89.08 OH	Fine grained, megascopically homogeneous massive pyrite	87.42	88.08	0.66	D00004107	3	299	0.61	2.19	4.94
87.42 - 89.08: Massive pyrite with disseminated sphalerite, and carbonate-rich gangue.											
<<Min: 87.42 - 89.08	3% Min: Sphalerite>>	Disseminated sphalerite within localized zones.	88.08	89.08	1.00	D00004108	1.47	306	0.3	2.29	7.63
<<Min: 87.42 - 89.08	85% Min: Pyrite>>	Massive PY with disseminated sphalerite, and carbonate gangue.									
<<Struc: 88.4 - 88.41	Foliation>>										
89.08	105.95 RHY	undifferentiated rhyolite	89.08	90.50	1.42	D00004109	0.016	13.9	-0.01	0.22	0.65
89.08 - 105.95: Undifferentiated RHY with strong muscovite, ankerite, and silica alteration; and silicic bands.											
<<Min: 89.08 - 98	0.1% Min: Arsenopyrite>>		90.50	92.00	1.50	D00004111	0.007	0.6	-0.01	-0.01	0.02
<<Min: 89.08 - 104.14	0.5% Min: Pyrite>>		92.00	93.50	1.50	D00004112	0.006	1.3	-0.01	0.01	0.04
<<Min: 104.14 - 105.95	2% Min: Pyrite>>	Banded-disseminated PY.	93.50	95.00	1.50	D00004113	0.008	-0.3	-0.01	-0.01	-0.01
<<Alt: 89.08 - 103.68	Weak Calcite>>	Disseminated calcite; patchy within quartz veins.	95.00	96.50	1.50	D00004114	0.009	-0.3	-0.01	-0.01	-0.01
<<Alt: 89.08 - 118.16	Strong Muscovite>>	Patchy-muscovite alteration within the OA.	96.50	98.00	1.50	D00004115	-0.005	0.4	-0.01	-0.01	0.02
<<Alt: 91 - 94.3	Weak-Moderate Ankerite>>	Disseminated, euhedral ankerite or dolomite?	101.00	102.50	1.50	D00004116	0.007	-0.3	-0.01	-0.01	-0.01
<<Alt: 94.3 - 96.5	Moderate-Strong Silicification>>	Silicification within RHY unit; decreasing intensity downhole.	102.50	104.00	1.50	D00004117	0.011	0.4	-0.01	-0.01	-0.01
<<Alt: 94.3 - 97.37	Trace Ankerite>>		104.00	105.00	1.00	D00004118	0.063	2.2	-0.01	0.02	0.02
<<Alt: 97.37 - 98.72	Weak Ankerite>>		105.00	105.95	0.95	D00004119	0.337	47.7	0.1	0.5	1.09
<<Alt: 103.68 - 124.47	Trace Calcite>>	Weak, disseminated calcite; patches occur within the quartz veins.									
<<Vein: 101.13 - 101.54	Quartz-Carbonate 40 deg. >>	Quartz vein with patchy-carbonate, and traces of pyrite.									

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
		<<Struc: 91.44 - 91.45 Foliation>> Ankerite banding. <<Struc: 93.74 - 93.75 Vein>> Unmineralized stringer. <<Struc: 94.5 - 94.51 dominant foliation>> <<Struc: 98.63 - 98.64 dominant foliation>> <<Struc: 102.37 - 102.38 dominant foliation>> <<Struc: 103.9 - 103.91 dominant foliation>>									
		105.95 107.22 OA Laminar or heavilly disseminated magnetite bearing massive sulphide	105.95	107.22	1.27	D00004121	1.15	83.9	0.61	0.96	6.62
		105.95 - 107.22: Semi-massive pyrite with disseminated magnetite, and carbonate-rich blebs. <<Min: 105.95 - 107.22 3% Min: Sphalerite>> <<Min: 105.95 - 107.22 65% Min: Pyrite>> Semi-massive to massive PY with disseminated-banded MG, and disseminated SP, PO, CP +/- GL. <<Min: 105.95 - 107.22 3% Min: Pyrrhotite>> <<Min: 105.95 - 107.22 8% Min: Magnetite>> Disseminated blebs-banded MG. <<Min: 105.95 - 107.22 0.1% Min: Galena>> Finely-disseminated within the massive PY. <<Min: 105.95 - 107.22 1% Min: Chalcocopyrite>> <<Min: 105.95 - 107.22 1% Min: Barite>> Localized blebs of BA proximal to gangue. <<Struc: 106.43 - 106.44 Foliation>> Mineralized banding within OA.									
		107.22 108.17 OI Heavilly disseminated sulphides in host schist	107.22	108.17	0.95	D00004122	0.413	29.9	0.46	0.26	0.88
		107.22 - 108.17: Disseminated - banded sulfides within muscovite-altered RHY. Pockets of sulfides are common within the quartz vein (107.84-108.17m). <<Min: 107.22 - 108.17 0.5% Min: Sphalerite>> Disseminated within the PY bands, and blebby within the quartz vein. <<Min: 107.22 - 108.17 3% Min: Pyrite>> Banded PY adjacent to OA. <<Min: 107.22 - 108.17 1% Min: Pyrrhotite>> Banded PO associated with the banded PY. Disseminated-blebs of PO are proximal to the CP, within the quartz vein. <<Min: 107.22 - 108.17 0.1% Min: Galena>> Trace GL within the quartz vein. <<Min: 107.22 - 108.17 2% Min: Chalcocopyrite>> Blebby-CP within the quartz vein. <<Vein: 107.84 - 108.17 Quartz-Carbonate-Sulphide 30 deg. >> Deformed-brecciated quartz vein with patchy-carbonate, and coarse-grained, blebby sulphides. Muscovite is visible on fractured surfaces. <<Struc: 107.48 - 107.49 Foliation>> Mineralized banding within OI.									

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
108.17	118.16	RHY undifferentiated rhyolite	108.17	109.50	1.33	D00004123	-0.005	0.8	-0.01	-0.01	0.05
108.17 - 118.16: Undifferentiated RHY with strong muscovite alteration, and silicic banding.											
<<Min: 108.17 - 118.16 0.5% Min: Pyrite>>											
<<Min: 108.17 - 118.16 0.1% Min: Pyrrhotite>> Disseminated throughout RHY; and within CP stringer.											
<<Min: 117.72 - 118.16 2% Min: Chalcocopyrite>> CP stringer.											
<<Vein: 117.77 - 117.78 Massive Sulphide/Sulphides undifferentiated 35 deg. >> Chalcocopyrite veinlet with disseminated pyrrhotite.											
<<Struc: 109.42 - 109.43 dominant foliation>>											
<<Struc: 114.3 - 114.31 dominant foliation>>											
118.16	118.80	OI Heavily disseminated sulphides in host schist	109.50	111.00	1.50	D00004124	-0.005	0.4	0.01	-0.01	0.01
118.16 - 118.8: Banded sulfides and silicic bands within heavily-altered RHY.											
<<Min: 118.16 - 118.8 6% Min: Sphalerite>> Disseminated-banded SP.											
<<Min: 118.16 - 118.8 3% Min: Pyrite>>											
<<Min: 118.16 - 118.8 15% Min: Pyrrhotite>>											
<<Min: 118.16 - 118.8 0.5% Min: Magnetite>>											
<<Min: 118.16 - 118.8 0.5% Min: Galena>>											
<<Min: 118.16 - 118.8 2% Min: Chalcocopyrite>>											
<<Alt: 118.16 - 118.8 Moderate-Strong Albite>>											
<<Alt: 118.16 - 121.48 Weak Muscovite>> Banded within OI; patchy-alteration within OC.											
<<Struc: 118.51 - 118.52 dominant foliation>> Mineralized banding within OI.											
118.80	121.48	OC Chalcocopyrite-pyrrhotite net textured sulphides	111.00	112.50	1.50	D00004125	-0.005	-0.3	-0.01	-0.01	0.01
118.8 - 121.48: Semi-massive, net-textured chalcocopyrite-dominant OC with clasts of quartz and barite. Sharp upper and lower contacts.											
<<Min: 118.8 - 121.48 2% Min: Sphalerite>>											
<<Min: 118.8 - 121.48 5% Min: Pyrite>> Localized zones of disseminated PY.											
<<Min: 118.8 - 121.48 10% Min: Pyrrhotite>> Net-textured CP + PO.											
<<Min: 118.8 - 121.48 0.5% Min: Galena>>											
<<Min: 118.8 - 121.48 30% Min: Chalcocopyrite>> Net-textured CP + PO.											
<<Min: 118.8 - 121.48 1% Min: Barite>> Isolated blebs of BA proximal to gangue.											
<<Struc: 118.8 - 118.81 Contact>> OI-OC upper contact.											
			112.50	114.00	1.50	D00004126	-0.005	-0.3	-0.01	-0.01	0.01
			114.00	115.50	1.50	D00004127	-0.005	-0.3	-0.01	-0.01	0.01
			115.50	117.00	1.50	D00004128	-0.005	-0.3	-0.01	-0.01	-0.01
			117.00	118.16	1.16	D00004129	0.009	3	0.11	-0.01	0.04
			118.16	118.80	0.64	D00004131	0.1	52.7	0.51	0.68	4
			118.80	119.70	0.90	D00004132	2.69	277	7.82	1.14	6.35
			119.70	120.60	0.90	D00004133	4.11	268	8.87	0.82	7.64
			120.60	121.48	0.88	D00004134	4.49	304	11.9	0.32	4.52

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
121.48	122.92	OI Heavily disseminated sulphides in host schist 121.48 - 122.92: Semi-massive - banded sulfide mineralization within altered RHY. Quartz veining is prominent from approx 122-122.45m; veins contain blebs of sulphides. <<Min: 121.48 - 122.92 2% Min: Sphalerite>> Localized within PY-rich zones. <<Min: 121.48 - 122.92 5% Min: Pyrite>> Disseminated-blebby PY. <<Min: 121.48 - 122.92 10% Min: Pyrrhotite>> Disseminated-banded PO within the schist host; blebs are visible within the quartz veins proximal to the CP. <<Min: 121.48 - 122.92 1% Min: Chalcopyrite>> Blebs of CP within the quartz veins. <<Alt: 121.48 - 124.47 Strong Muscovite>> <<Vein: 122.05 - 122.43 Quartz-Sulphide>> Fractured quartz vein with blebs of sulphides (~3%). <<Struc: 121.48 - 121.49 Contact>> OC-OI lower contact.	121.48	122.92	1.44	D00004135	0.19	75.8	0.27	1.24	3.9
122.92	124.47	RHY undifferentiated rhyolite 122.92 - 124.47: Undifferentiated RHY with muscovite and chlorite alteration. Quartz veining is common. Sulfide mineralization is patchy, and rare. <<Min: 122.92 - 124.47 0.1% Min: Sphalerite>> <<Min: 122.92 - 124.47 0.5% Min: Pyrite>> Disseminated PY; trace PY within stringers. <<Min: 122.92 - 124.47 0.5% Min: Pyrrhotite>> <<Min: 122.92 - 124.47 1% Min: Chalcopyrite>> CP stringer. <<Alt: 122.92 - 124.47 Moderate Chlorite>> <<Vein: 123.35 - 123.7 Quartz-Chlorite-Carbonate>> Quartz veins with patchy-carbonate, chlorite, and traces of sulphides. <<Vein: 123.78 - 124.45 Quartz>> Fractured quartz vein with traces of sulphides proximal to the upper and lower contacts. <<Struc: 123.23 - 123.24 dominant foliation>>	122.92	123.46	0.54	D00004136	0.071	18.3	0.71	0.03	0.12
123.46	124.47		123.46	124.47	1.01	D00004137	0.008	1.1	0.03	0.01	0.08
124.47	127.30	MAFi Mafic Intrusions (primarily footwall mafic intrusion) 124.47 - 127.3: Chlorite-sericite altered MAFi. Quartz veining is most prominent between 125.35-126m, followed with a sheared zone to the end of the unit. Could be a chlorite-altered RHY? <<Min: 124.47 - 127.3 0.5% Min: Sphalerite>> <<Min: 124.47 - 127.3 0.5% Min: Pyrite>> <<Alt: 124.47 - 128.1 Weak-Moderate Calcite>> Weak to moderate, pervasive calcite; more intense within quartz veins. <<Alt: 124.47 - 129.13 Strong Chlorite>>	124.47	125.90	1.43	D00004138	0.009	4.8	0.04	0.05	0.27
125.90	127.30		125.90	127.30	1.40	D00004139	-0.005	1.7	0.02	0.01	0.24

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
<<Alt: 124.47 - 131.52 Moderate-Strong Muscovite>> Patchy-alteration within the massive quartz vein. <<Vein: 124.86 - 124.95 Quartz-Carbonate 63 deg. >> Quartz vein with patchy-carbonate. <<Vein: 125.4 - 126 Quartz-Carbonate>> Brecciated quartz veins with patchy-carbonate. <<Struc: 124.75 - 124.76 dominant foliation>> <<Struc: 126 - 127.3 Weak-Moderate Shear>>											
127.30	128.10	OJ Heavilly disseminated sulphides and/or stringer style mineralization in proximal altered rock	127.30	128.10	0.80	D00004141	0.032	11.1	0.22	0.09	1.1
127.3 - 128.1: Disseminated-banded sulfide mineralization and patchy, carbonate-rich gangue within MAFi. <<Min: 127.3 - 128.1 5% Min: Pyrite>> Disseminated-banded PY. <<Min: 127.3 - 128.1 3% Min: Pyrrhotite>> Disseminated-banded blebs of PO. <<Min: 127.3 - 128.1 0.1% Min: Chalcopyrite>> <<Alt: 127.3 - 131.52 Moderate Biotite>> Biotite alteration with MAFi; FRA within quartz vein. <<Struc: 127.35 - 127.36 dominant foliation>> Mineralized banding within OJ.											
128.10	133.79	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	128.10	129.13	1.03	D00004142	-0.005	1.6	0.06	-0.01	0.19
128.1 - 133.79: Biotite and muscovite-altered MAFi; heavily-altered up to quartz vein (129.1-131.1m). The quartz vein contains patchy carbonate, and coarse-grained, blebs of sulfides. More quartz-veining occurs between 132.29-133.13m, followed by the more typical MAFi.											
<<Min: 128.1 - 146.91 1% Min: Pyrite>> Coarse-grained, disseminated blebs within quartz vein and MAFi. FRA within altered MAFi (128.1-129.13m). <<Min: 128.1 - 146.91 0.1% Min: Pyrrhotite>> <<Alt: 128.1 - 129.13 Trace Calcite>> <<Alt: 128.1 - 131.52 Strong Tourmaline>> Patchy-zones within the MAFi and the massive quartz vein. <<Alt: 129.13 - 133.79 Moderate Calcite>> Patchy-calcite within quartz veins; pervasive within MAFi. <<Alt: 131.52 - 133.79 Moderate-Strong Biotite>> Patchy-pervasive; more pervasive within the MAFi. FRA within the quartz vein. <<Vein: 129.1 - 131.1 Quartz-Tourmaline-Sulphide 43 deg. >> Massive quartz vein with a series of fractures, and rare brecciated clasts. Tourmaline and biotite FRA (< 10%) and patchy-carbonate. <<Vein: 131.16 - 131.54 Quartz-Carbonate-Sulphide>> Quartz-carbonate veins with coarse-grained pyrite. <<Vein: 132.29 - 133.13 Quartz-Carbonate-Sulphide>> Brecciated quartz-carbonate vein with biotite FRA. <<Struc: 129.14 - 129.15 Vein>> <<Struc: 131.78 - 131.79 dominant foliation>>			129.13	130.00	0.87	D00004143	-0.005	-0.3	-0.01	-0.01	0.01
			130.00	131.00	1.00	D00004144	-0.005	-0.3	-0.01	-0.01	-0.01
			131.00	132.29	1.29	D00004145	0.006	-0.3	-0.01	-0.01	0.05
			132.29	133.79	1.50	D00004146	0.006	0.3	0.01	-0.01	0.02

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
<<Struc: 133.23 - 133.24 Vein>> Quartz stringers. <<Struc: 133.59 - 133.6 dominant foliation>>											
133.79 146.91 RHY undifferentiated rhyolite			133.79	135.00	1.21	D00004147	0.005	-0.3	-0.01	-0.01	0.01
133.79 - 146.91: Undifferentiated RHY with med-strong muscovite alteration, and silicic banding. Quartz veining is common to approx 137.65m. RHYi lenses within the RHY begin to appear around 143m, and continue to 143.8m.											
<<Alt: 133.79 - 146.91 Strong Muscovite>>			135.00	136.50	1.50	D00004148	-0.005	2.1	-0.01	0.03	0.02
<<Alt: 133.79 - 146.91 Weak-Moderate Calcite>>			136.50	138.00	1.50	D00004149	0.009	0.3	-0.01	-0.01	0.01
<<Vein: 133.84 - 133.97 Quartz-Carbonate 50 deg. >> Quartz veins with patchy-carbonate.			146.00	146.91	0.91	D00004151	0.012	0.5	-0.01	-0.01	-0.01
<<Vein: 133.97 - 134.03 Calcite 43 deg. >>											
<<Vein: 135.15 - 135.25 Quartz-Carbonate 45 deg. >> Quartz vein with patchy-carbonate, and hairline fractures.											
<<Vein: 136.38 - 137.55 Quartz-Carbonate 40 deg. >> Series of DEF quartz-carbonate veins.											
<<Struc: 141.72 - 141.73 Foliation>> Pyrite banding.											
<<Struc: 143.73 - 143.74 dominant foliation>> Silicic banding.											
146.91 152.88 RHYi Aphanitic Rhyolite (intrusion)			146.91	148.40	1.49	D00004152	0.037	2.3	-0.01	0.04	0.14
146.91 - 152.88: Siliceous, aphanitic RHY with weak-mod muscovite alteration, disseminated sulfides and stringer mineralization. Gradational upper and lower contacts.											
<<Min: 146.91 - 152.88 2% Min: Sphalerite>> Disseminated-banded, and FRA within RHYi.			148.40	149.90	1.50	D00004153	0.037	3.2	-0.01	0.07	0.05
<<Min: 146.91 - 152.88 5% Min: Pyrite>> Disseminated-banded, and FRA within RHYi.			149.90	151.40	1.50	D00004154	0.081	4	-0.01	0.05	0.43
<<Min: 146.91 - 152.88 1% Min: Pyrrhotite>> Disseminated and FRA within RHYi.			151.40	152.88	1.48	D00004155	0.062	11.3	-0.01	0.12	0.43
<<Min: 146.91 - 152.88 1% Min: Galena>> Disseminated and FRA within RHYi.											
<<Alt: 146.91 - 148.85 Moderate Muscovite>>											
<<Alt: 146.91 - 152.88 Weak Calcite>>											
<<Alt: 148.85 - 152.33 Weak Muscovite>>											
<<Alt: 152.33 - 153 Moderate Muscovite>>											
<<Vein: 148.93 - 150.5 Massive Sulphide/Sulphides undifferentiated 15 deg. >> Sulphide stringers low angle TCA.											
<<Struc: 149.26 - 149.27 Vein>> Mineralized stringer.											
<<Struc: 152.51 - 152.52 dominant foliation>>											
152.88 165.00 MAFi Mafic Intrusions (primarily footwall mafic intrusion)			152.88	154.00	1.12	D00004156	0.045	0.7	-0.01	-0.01	0.01
152.88 - 165: Bleached within final 25cm.											
<<Min: 152.88 - 165 1% Min: Pyrite>>											
<<Min: 152.88 - 165 0.1% Min: Pyrrhotite>>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K16-362

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
<<Alt: 164.76 - 165 Moderate Muscovite>> Bleached MAFi. <<Struc: 154.39 - 154.4 dominant foliation>> <<Struc: 157.72 - 157.73 dominant foliation>> <<Struc: 160.64 - 160.65 dominant foliation>> <<Struc: 163.08 - 163.09 Vein>> Carbonate stringer.											
End of Hole @ 165											