

GeoSpark Logger ~ Drill Log

Project: KZK **Hole Number:** K16-366

Prospect:	ABM	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Rob Duncan	
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	6/22/2016	
UTM Easting:	414676.455	Core Size:	HQ3	Azimuth:	359.8	Date Logging Complete:	6/23/2016	
UTM Northing:	6815345.271	Casing Pulled?:	Yes	Dip:	-62.9	Drill Company:	Hytech	
UTM Elev. (m):	1424.284	Casing Depth (m):	9	Length (m):	90	Drill Rig:	Tech 5000	
Local Easting:		Stored?:	Yes	Claims Title:		Drill Started:	6/15/2016	
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	6/15/2016	
Local Elev. (m):				Hole Completed?:	Completed	Purpose:	Metallurgical	
Comments:							Parent Hole:	

K16-366 was designed to provide material for metallurgical testing from the up-dip portions of the ABM lens. The hole successfully intersected MXSX mineralization from beneath the OVBN @ 8.57m to 16.57m consisting of OB and OA ore types. Additional MXSX was intersected from 30.94 - 36.49m; 40.71 - 51.35m; 63.77 - 64.86m and 65.70 - 66.00m, all consisting of the OB ore type. A thick intersection of RHYi was intersected below mineralization and intrudes into possible RHYva. The upper contact of RHYi shows possible replacement by sulphides to form OI. RHYi also exhibits silica and carbonate filled vesicles including remnant crystal forms indicating exsolution of volatiles.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-62.9	358.4	1.4	359.8	TN14	Rob Duncan	6/15/2016		<input checked="" type="checkbox"/>	
15	-62.7	341.2	22.1	3.3	ReflexEZS	Hytech	6/15/2016	5905	<input checked="" type="checkbox"/>	
39	-63.7	341.1	22.1	3.2	ReflexEZS	Hytech	6/15/2016	5860	<input checked="" type="checkbox"/>	
63	-63.7	340.5	22.1	2.6	ReflexEZS	Hytech	6/15/2016	5755	<input checked="" type="checkbox"/>	
87	-64.3	341.1	22.1	3.2	ReflexEZS	Hytech	6/15/2016	5748	<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %	
0.00	8.57	OVBN Overburden										
8.57	10.46	OB Wispy laminar, fine buckshot textured, massive sulphide with lesser magnetite	FG	8.57	9.57	1.00	D00006001	2.12	314	0.48	4.38	12.5
8.57 - 10.46: recovered at the ovpn bedrock interface. Some oxidation												
<<Min: 8.57 - 10.46 13% Min: Sphalerite>>												
<<Min: 8.57 - 10.46 70% Min: Pyrite>>												
<<Min: 8.57 - 10.46 2% Min: Galena>>												
<<Min: 8.57 - 10.46 1% Min: Chalcopyrite>>												
				9.57	10.46	0.89	D00006002	1.48	170	0.14	1.95	5.32

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %	
<<Struc: 10 - 11 dominant foliation>>												
10.46	12.81	OA Laminar or heavily disseminated magnetite bearing massive sulphide	FG	10.46	11.46	1.00	D00006003	1.34	143	0.29	1.63	6.13
10.46 - 12.81: rubbly core. Poorly developed MG laminations												
<<Min: 10.46 - 12.81 10% Min: Sphalerite>>												
<<Min: 10.46 - 12.81 70% Min: Pyrite>>												
<<Min: 10.46 - 12.81 6% Min: Magnetite>> poor laminations												
<<Min: 10.46 - 12.81 2% Min: Galena>>												
<<Min: 10.46 - 12.81 2% Min: Chalcopyrite>>												
<<Struc: 12.8 - 13.1 Weak Fault>> rubble core												
12.81	16.57	OB Wispy laminar, fine buckshot textured, massive sulphide with lesser magnetite	FMG	12.81	13.81	1.00	D00006005	2.59	212	0.31	1.86	7.89
<<Min: 12.81 - 16.57 20% Min: Sphalerite>>												
<<Min: 12.81 - 16.57 50% Min: Pyrite>>												
<<Min: 12.81 - 16.57 3% Min: Galena>>												
<<Min: 12.81 - 16.57 1% Min: Chalcopyrite>>												
<<Struc: 14 - 15 dominant foliation>>												
<<Struc: 15 - 16 dominant foliation>>												
16.57	26.60	RHYv Rhyolite volcanoclastic		16.57	17.62	1.05	D00006009	0.172	25.1	0.07	0.13	0.57
16.57 - 26.6: intense MU alt on either end of large QV's, silic bands possible RHYcw24.09 - 24.39m												
<<Min: 17 - 17.3 1% Min: Sphalerite>>												
<<Min: 18.6 - 24.05 2% Min: Sphalerite>> associated with py												
<<Min: 18.6 - 24.05 8% Min: Pyrite>> cm scale bands/stringers												
<<Min: 18.6 - 24.05 0.5% Min: Galena>> associated with py												
<<Min: 26.1 - 26.6 3% Min: Pyrite>>												
<<Alt: 16.57 - 26.1 Moderate-Strong Muscovite>>												
<<Alt: 19.7 - 20 Moderate Cordierite>>												
<<Alt: 21 - 23 Weak-Moderate Calcite>>												
<<Alt: 24.49 - 24.9 Weak-Moderate Ankerite>> 3mm porphyroblasts												
<<Alt: 26.1 - 26.6 Intense Muscovite>>												

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
<<Vein: 16.7 - 18.61 100% Quartz 35 deg. >> massive white qtz vein trace sp <<Vein: 25 - 26.1 100% Quartz 35 deg. >> massive white qtzvein <<Struc: 21 - 24 dominant foliation>>											
26.60	30.94	RHYcw Curdy textured-flow banded (flows, subvolcanics)	26.60	28.00	1.40	D00006019	-0.005	-0.3	-0.01	-0.01	0.02
<<Min: 26.6 - 30.94 3% Min: Pyrite>> <<Min: 30.6 - 30.7 2% Min: Sphalerite>> blebs <<Min: 30.6 - 30.7 0.5% Min: Galena>> margin of sp blebs <<Alt: 26.6 - 30.94 Intense Muscovite>>			28.00	29.50	1.50	D00006021	0.034	2.1	-0.01	0.02	0.02
			29.50	30.94	1.44	D00006022	0.083	5.9	0.01	0.07	0.16
30.94	34.66	OB Wispy laminar, fine buckshot textured, massive sulphide with lesser magnetite	30.94	31.94	1.00	D00006023	1.94	183	0.29	3.42	8.82
30.94 - 34.66: short patches of FG pyritic and rare evidence of sulphide fragments <<Min: 30.94 - 34.66 20% Min: Sphalerite>> bands <<Min: 30.94 - 34.66 60% Min: Pyrite>> <<Min: 30.94 - 34.66 5% Min: Galena>> <<Min: 30.94 - 34.66 1% Min: Chalcopyrite>>			31.94	32.94	1.00	D00006024	3.34	156	0.47	2.04	9.72
			32.94	33.94	1.00	D00006025	2.94	172	0.27	3.13	8
			33.94	34.66	0.72	D00006026	1.7	146	0.14	3.57	10.5
34.66	36.49	OA Laminar or heavilly disseminated magnetite bearing massive sulphide	34.66	35.51	0.85	D00006027	1.61	105	0.22	2.44	10.3
34.66 - 36.49: 35.5 - 36.39 extremely well laminated MG. <<Min: 34.66 - 36.49 10% Min: Sphalerite>> <<Min: 34.66 - 36.49 15% Min: Magnetite>> laminations <<Min: 34.66 - 36.49 3% Min: Galena>> <<Min: 34.66 - 36.49 1% Min: Chalcopyrite>> <<Struc: 35 - 36.49 dominant foliation>>			35.51	36.49	0.98	D00006028	0.79	99.4	0.17	2.13	8.19
36.49	37.56	RHYvl Lapilli tuff	36.49	37.56	1.07	D00006029	0.787	108	0.28	0.04	0.36
<<Min: 36.49 - 37.56 1% Min: Pyrite>> <<Alt: 36.49 - 37.56 Moderate-Strong Muscovite>> <<Alt: 37.08 - 37.56 Moderate Calcite>> <<Vein: 36.85 - 36.93 100% Quartz 55 deg. >> massive white grey qtz vein <<Struc: 36.85 - 36.93 Vein>> cross cutting qtz vein											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
37.56	39.09	RHYcw Curdy textured-flow banded (flows, subvolcanics)	37.56	39.09	1.53	D00006031	0.099	10.8	0.02	0.12	0.32
<<Min: 37.56 - 39.09 3% Min: Pyrite>> in silica bands <<Alt: 37.56 - 39.09 Moderate-Strong Muscovite>>											
39.09	40.71	OI Heavily disseminated sulphides in host schist	39.09	40.00	0.91	D00006032	1.68	148	0.22	1.96	8.65
FMG 39.09 - 40.71: in host RHY, concentrates into near OB MXSX @ 39.37 - 39.72 m & 40.10 - 40.25m <<Min: 39.09 - 40.71 5% Min: Sphalerite>> <<Min: 39.09 - 40.71 35% Min: Pyrite>> <<Min: 39.09 - 40.71 1% Min: Galena>> <<Min: 39.09 - 40.71 1% Min: Chalcopyrite>> <<Alt: 39.09 - 40.71 Moderate-Strong Muscovite>>											
40.71	51.35	OB Wispy laminar, fine buckshot textured, massive sulphide with lesser magnetite	40.71	42.50	1.79	D00006034	1.97	234	0.54	4.22	11.3
FMG 40.71 - 51.35: increasing amount of gange and CA from 49 - 51.35m <<Min: 40.71 - 51.35 20% Min: Sphalerite>> <<Min: 40.71 - 51.35 55% Min: Pyrite>> <<Min: 40.71 - 51.35 5% Min: Galena>> <<Min: 40.71 - 51.35 1% Min: Chalcopyrite>> <<Alt: 49 - 51.35 Moderate Calcite>> <<Struc: 40.71 - 41.3 Weak Fault>> <<Struc: 43.5 - 47 dominant foliation>>											
			42.50	43.50	1.00	D00006035	0.984	131	0.18	3.76	11.4
			43.50	44.50	1.00	D00006036	1.54	175	0.41	3.19	7.64
			44.50	45.50	1.00	D00006037	1.5	144	0.46	3.72	7.65
			45.50	46.50	1.00	D00006038	1.48	108	0.43	2.39	9.06
			46.50	47.50	1.00	D00006039	2.49	210	0.76	4.61	12.3
			47.50	48.50	1.00	D00006041	1.3	145	0.44	5.61	16.3
			48.50	49.50	1.00	D00006042	1.24	211	0.29	8.13	14.6
			49.50	50.50	1.00	D00006043	1.82	216	0.59	3.25	6.06
			50.50	51.35	0.85	D00006044	0.43	85.7	0.09	2.65	4.78
			51.35	52.50	1.15	D00006045	0.101	15	0.05	0.16	0.83
51.35	62.33	RHYi Aphanitic Rhyolite (intrusion)	51.35	52.50	1.15	D00006045	0.101	15	0.05	0.16	0.83
<<Min: 51.35 - 62.33 1% Min: Sphalerite>> <<Min: 51.35 - 62.33 5% Min: Pyrite>> wispy stringer blebs in Rhyi, sp and gl associated <<Min: 51.35 - 62.33 0.5% Min: Galena>> <<Alt: 51.35 - 62.33 Weak Muscovite>> <<Struc: 54 - 62 dominant foliation>>											
			52.50	54.00	1.50	D00006046	0.014	0.6	-0.01	0.03	0.01
			54.00	55.50	1.50	D00006047	0.04	0.7	-0.01	0.02	0.02
			55.50	57.00	1.50	D00006048	0.047	2.8	-0.01	0.12	0.2
			57.00	58.50	1.50	D00006049	0.014	1.6	-0.01	0.06	0.1
			58.50	60.00	1.50	D00006051	0.01	-0.3	-0.01	0.01	0.08
			60.00	61.33	1.33	D00006052	0.009	0.3	-0.01	0.02	-0.01

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
62.33	63.77	OI Heavilly disseminated sulphides in host schist									
			61.33	62.33	1.00	D00006053	0.005	-0.3	-0.01	-0.01	0.01
			62.33	63.77	1.44	D00006054	0.029	1	-0.01	0.03	0.04
<p>62.33 - 63.77: Hosted with RHYcw or RHYi</p> <p><<Min: 62.33 - 63.77 5% Min: Sphalerite>></p> <p><<Min: 62.33 - 63.77 35% Min: Pyrite>></p> <p><<Min: 62.33 - 63.77 2% Min: Galena>></p> <p><<Alt: 62.33 - 63.77 Moderate Calcite>></p>											
63.77	64.86	OB Wispy laminar, fine buckshot textured, massive sulphide with lesser magnetite									
			63.77	64.86	1.09	D00006055	2.1	638	1.26	3.13	7.39
<p><<Min: 63.77 - 64.86 15% Min: Sphalerite>></p> <p><<Min: 63.77 - 64.86 60% Min: Pyrite>> slight buckshot</p> <p><<Min: 63.77 - 64.86 3% Min: Galena>></p> <p><<Min: 63.77 - 64.86 1% Min: Chalcopryite>></p> <p><<Alt: 63.77 - 64.86 Moderate-Strong Calcite>></p>											
64.86	65.70	RHY undifferentiated rhyolite									
			64.86	65.70	0.84	D00006056	0.146	9.8	0.11	0.19	0.34
<p>64.86 - 65.7: in fault zone, likely RHYcw</p> <p><<Min: 64.86 - 65.7 1% Min: Sphalerite>></p> <p><<Min: 64.86 - 65.7 3% Min: Pyrite>></p> <p><<Alt: 64.86 - 65.7 Moderate-Strong Muscovite>> and OP FLT related</p> <p><<Struc: 64.86 - 64.86 Contact>></p> <p><<Struc: 64.86 - 65.7 Moderate Fault>> healed gouge flz of RHYi or RHYcw</p>											
65.70	66.00	OB Wispy laminar, fine buckshot textured, massive sulphide with lesser magnetite									
			65.70	66.00	0.30	D00006057	1.6	564	1.71	2.59	6.42
<p><<Min: 65.7 - 66 15% Min: Sphalerite>></p> <p><<Min: 65.7 - 66 50% Min: Pyrite>></p> <p><<Min: 65.7 - 66 3% Min: Galena>></p> <p><<Min: 65.7 - 66 1% Min: Chalcopryite>></p> <p><<Alt: 65.7 - 66 Trace Calcite>></p> <p><<Struc: 65.7 - 66 dominant foliation>></p>											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
66.00	66.69	RHYcw Curdy textured-flow banded (flows, subvolcanics)	66.00	66.69	0.69	D00006058	0.047	14.5	0.07	0.31	0.57
66 - 66.69: hard to determine, in fault zone											
<<Min: 66 - 66.9 2% Min: Sphalerite>> with py in bands											
<<Min: 66 - 66.9 6% Min: Pyrite>>											
<<Min: 66 - 66.9 0.5% Min: Galena>> with py in bands											
<<Min: 66 - 66.9 1% Min: Chalcopyrite>> with py in bands											
<<Alt: 66 - 66.69 Moderate Muscovite>> and OP FLT related											
<<Alt: 66 - 66.69 Moderate Calcite>>											
<<Struc: 66 - 66 Contact>>											
<<Struc: 66 - 66.69 Moderate Fault>> as above											
66.69	68.48	RHYcw Curdy textured-flow banded (flows, subvolcanics)	66.69	67.50	0.81	D00006059	-0.005	0.7	-0.01	0.02	0.07
66.69 - 68.48: Silicified by underlying RHYi											
<<Min: 66.9 - 68.48 2% Min: Sphalerite>> with PY											
<<Min: 66.9 - 68.48 5% Min: Pyrite>> bands											
<<Alt: 66.69 - 68.48 Moderate-Strong Silicification>>											
<<Alt: 66.69 - 68.48 Weak-Moderate Muscovite>>											
<<Alt: 66.69 - 68.48 Weak-Moderate Calcite>>											
68.48	70.38	RHYi Aphanitic Rhyolite (intrusion)	68.48	69.48	1.00	D00006062	0.037	5.2	0.03	0.1	0.81
68.48 - 70.38: Looks to be narrower with SI RHYvl between											
<<Min: 68.48 - 69.8 1% Min: Sphalerite>> wit hpy											
<<Min: 68.48 - 69.8 3% Min: Pyrite>> bnads											
<<Min: 69.8 - 70.38 0.5% Min: Pyrite>>											
<<Alt: 68.48 - 70.38 Weak Muscovite>>											
<<Struc: 69 - 70 dominant foliation>>											
70.38	75.75	RHYvl Lapilli tuff	70.38	71.80	1.42	D00006064	0.006	1.6	-0.01	0.13	0.11
70.38 - 75.75: narrow intervals of RHYi @ 72.5 and 75. Possible pepperitic textures											
<<Min: 70.38 - 75.75 1% Min: Pyrite>>											
<<Alt: 70.38 - 75.75 Moderate-Strong Silicification>> from RHYi											
<<Alt: 72.5 - 74.5 Weak-Moderate Calcite>>											
71.80	73.30		71.80	73.30	1.50	D00006065	-0.005	0.5	-0.01	-0.01	0.01
73.30	74.50		73.30	74.50	1.20	D00006066	0.01	0.5	-0.01	-0.01	0.01
74.50	75.75		74.50	75.75	1.25	D00006067	-0.005	-0.3	-0.01	-0.01	-0.01

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
<<Struc: 72 - 76 dominant foliation>> 75.75 87.47 RHYi Aphanitic Rhyolite (intrusion) 75.75 - 87.47: pepperitic textures at 80.5 - 81m intruding into Ash? However, vesicles in RHYi and possible RHYva filled with quartz and carbonate crystal forms. Others filled with silica. Therefore, ash is probably not ash but a different tecture in RHYi. Pictures taken. <<Min: 79 - 87 1% Min: Pyrite>> <<Min: 79 - 87 0.5% Min: Pyrrhotite>> <<Min: 79 - 87 0.01% Min: Arsenopyrite>> <<Alt: 75.75 - 86 Weak Calcite>> within vesicles!! <<Alt: 75.75 - 87.47 Weak Muscovite>> <<Alt: 78 - 81 Moderate-Strong Silicification>> from RHYi <<Struc: 87 - 89 dominant foliation>> 87.47 88.49 RHYvi Lapilli tuff <<Alt: 87.47 - 88.49 Weak-Moderate Silicification>> from RHYi 88.49 90.00 RHYi Aphanitic Rhyolite (intrusion) <<Min: 88.49 - 90 0.5% Min: Pyrite>> End of Hole @ 90											
			75.75	77.00	1.25	D00006068	-0.005	-0.3	-0.01	-0.01	-0.01