

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 Cl 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	ReflexEZS	Geotech	23-Sep-15	5852	<input checked="" type="checkbox"/>	
50	-73.9	156.7	22.5	179.2	ReflexEZS	Geotech	23-Sep-15	5765	<input checked="" type="checkbox"/>	
80	-73.4	162.4	22.5	184.9	ReflexEZS	Geotech	23-Sep-15	5606	<input checked="" type="checkbox"/>	
110	-73	159.1	22.5	181.6	ReflexEZS	Geotech	24-Sep-15	6068	<input checked="" type="checkbox"/>	
140	-73	359.9	22.5	22.4	ReflexEZS	Geotech	24-Sep-15	5204	<input type="checkbox"/>	Values not accepted, low magnetic field
149	-72.8	167.9	22.5	190.4	ReflexEZS	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	OVBN Overburden									
14.70	16.80	RHYcw 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>>											

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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	MDSSt 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: Chalcopryrite>> <<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>>	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	93.00	OG Chalcopyrite rich sulphides 91.2 - 93: CP+PO+PY net texture with cg disseminated MG. (CP ~40%) <<Min: 91.2 - 93 40% Min: Chalcopryrite>> <<Min: 91.2 - 100 10% Min: Pyrrhotite>>	CG	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	

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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
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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 RHYi

<<Alt: 117 - 117.3 Strong (Alt) Muscovite>> alteration associated with RHYi

<<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
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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
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<<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											