

GeoSpark Logger ~ Drill Log

Project: KZK **Hole Number:** K16-410

Prospect:	Infrastructure	Hole Type:	DD	Survey Type:	GPS	Logged By:	Oscar Nielsen	
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Knight Piésold	Date Logging Start:	8/10/2016	
UTM Easting	416138	Core Size:	HQ3	Azimuth:	360	Date Logging Complete:	8/10/2016	
UTM Northing:	6816446	Casing Pulled?:	Yes	Dip:	-90	Drill Company:	Hytech	
UTM Elev. (m):	1474	Casing Depth (m):	6	Length (m):	31	Drill Rig:	Tech 5000	
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	8/8/2016	
Local Northing:		Cemented?:	THM	Core Storage Loc.:	KZK Camp	Drill Completed:	8/9/2016	
Local Elev. (m):				Hole Completed?:	Completed	Purpose:	Geotech	
Comments:							Parent Hole:	

This hole was drilled as part of a geotechnical investigation of the Class C storage facility that included Standard Penetration Tests (SPT's), Packer Testing and Thermistor installation. It intersected black mudstone of the Wind Lake Formation interbedded with thin mafic tuff units, followed by a thicker, possibly crystal bearing mafic tuff unit. It is possible that this lower unit is the uppermost portion of the KZK Formation however without additional context, it is difficult to make a positive determination.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-90	360	0	360	PLND-LiDAR	Knight Piésold	8/8/2016		<input checked="" type="checkbox"/>	Vertical hole

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
0.00	6.07	OVBN Overburden									
6.07	18.74	MDS Carbonaceous Mudstone & Tuffaceous Mudstone			black	VFG					
<p>6.07 - 18.74: Black argillaceous mudstone with streaks of white carbonate rich material. Thin (0.2-0.5 m) interbeds of medium grained mafic volcanoclastic material are present within this unit</p> <p><<Alt: 6.07 - 18.74 Moderate Calcite>> Carbonate is present throughout the unit, but is especially strong in the lighter patches of the rock</p> <p><<Vein: 8.87 - 10.2 90% Quartz-Carbonate>></p> <p><<Struc: 14.7 - 14.7 dominant foliation>> Foliation within the argillaceous mudstone</p>											
18.74	29.76	MAFt Mafic Volcaniclastics			grey-green	FMG					
<p>18.74 - 29.76: White granule sized clasts with angular, sometimes polygonal edges suggesting crystals? in a matrix of fine grey green ashy-tuffaceous material. The unit is predominantly massive with some zones of banding.</p> <p><<Min: 18.74 - 23.7 0.5% Min: Pyrrhotite>> Thin wisps of foliation parallel pyrrhotite</p> <p><<Alt: 18.74 - 29.26 Weak-Moderate Calcite>> Bands of carbonate rich material throughout</p> <p><<Alt: 29.26 - 31 Trace Calcite>> Weak, spotty carbonate material</p>											

GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K16-410

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
<p><<Vein: 21 - 21.25 99% Quartz-Carbonate>></p> <p>29.76 31.00 MAft Mafic Volcaniclastics grey-green FCG</p> <p>29.76 - 31: White, 2-10 mm rounded, but still vaguely polygonal clasts (possibly large, transported crystals or lapilli) in a matrix of fine tuffaceous, ashy material.</p> <p><<Min: 29.76 - 31 0.5% Min: Pyrite>> Thin wisps of foliation parallel pyrite</p> <p><<Struc: 29.85 - 29.85 dominant foliation>> Lapilli flattening plane</p> <p>End of Hole @ 31</p>											