

## GeoSpark Logger ~ Drill Log

Project: KZK Hole Number: K16-411

	Prospect:	Infrastructure	Hole Type:	DD	Survey Type:	GPS	Logged By:	Alicia Vainio
	Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Knight Piésold	Date Logging Start:	8/13/2016
	UTM Easting	415944	Core Size:	HQ3	Azimuth:	360	Date Logging Complete:	8/14/2016
	UTM Northing:	6816237	Casing Pulled?:	Yes	Dip:	-90	Drill Company:	Hytech
	UTM Elev. (m):	1448	Casing Depth (m):	0	Length (m):	34.1	Drill Rig:	Tech 5000
	Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	8/9/2016
Local Northing:			Cemented?:	THM	Core Storage Loc.:	KZK Camp	Drill Completed:	8/12/2016
	Local Elev. (m):				Hole Completed?:	Completed	Purpose:	Geotech
	Comments:						Parent Hole:	

K16-411 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. Bedrock was encountered at a depth of 18.2m consisting of carbonaceous mudstone, with mafic volcaniclastics of the Wind Lake Formation.

## 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	8/9/2016		<b>✓</b>	Vertical hole

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %	ı
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0.00 18.20 OVBN Overburden

18.20 21.35 MDS Carbonaceous Mudstone & Tuffaceous Mudstone

18.2 - 21.35: Dark grey, fine-grained, carbonaceous mudstone.

<<Min: 18.2 - 21.35 0.1% Min: Pyrite>>

<<Alt: 18.2 - 21.35 Trace Calcite>>

<<Struc: 18.5 - 21.44 Trace Fault>> Rubble zone; poor recovery.

21.35 26.75 MAFt Mafic Volcaniclastics

21.35 - 26.75: Oxidized, light-grey, bleached mafic volcaniclastics with clay-like alteration, calcite stringers, and strained-blebs of pyrite.

<<Min: 21.35 - 26.75 2% Min: Pyrite>> Disseminated blebs of pyrite, increasing abundance downhole.

<<Alt: 21.35 - 26.75 Weak Calcite>> Calcite clots and stringers.

<<Vein: 21.35 - 26.75 Quartz-Carbonate>> Quartz-calcite stringers.

<<Struc: 22.25 - 22.55 Weak Fault>> Rubble zone, and oxidized gouge; poor recovery.

<<Struc: 22.88 - 22.89 dominant foliation>>



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From (m) To (m) Rocktype & Description From (m) To (m) Width Sample Au ppm Ag ppm Cu % Pb % Zn %

<<Struc: 26.63 - 27.55 Trace Fault>> Rubble zone; poor recovery.

26.75 34.10 MDS Carbonaceous Mudstone & Tuffaceous Mudstone

26.75 - 34.1: Dark-grey to black, carbonaceous mudstone. Oxidation is localized within vuggy, carbonate-rich bands.

<<Min: 26.75 - 34.1 0.1% Min: Pyrite>> Pyrite replacement within quartz-carbonate banding.

<<Alt: 26.75 - 34.1 Trace Calcite>>

<<Struc: 31.69 - 31.7 dominant foliation>>

<<Struc: 33.36 - 33.85 Weak-Moderate Fault>> Fault gouge, weak-shearing.

End of Hole @ 34.1