

GeoSpark Logger ~ Drill Log

Project: KZK Hole Number: K16-404

Prospect:	Infrastructure	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Jerome de Pasquale	
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	7/26/2016	
UTM Easting	414779.478	Core Size:	HQ3	Azimuth:	360	Date Logging Complete:	7/27/2016	
UTM Northing:	6818386.115	Casing Pulled?:	Yes	Dip:	-90	Drill Company:	Hytech	
UTM Elev. (m):	1343.106	Casing Depth (m):	9	Length (m):	40.2	Drill Rig:	Tech 5000	
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	7/24/2016	
Local Northing:		Cemented?:	SP	Core Storage Loc.:	KZK Camp	Drill Completed:	7/25/2016	
Local Elev. (m):				Hole Completed?:	Completed	Purpose:	Hydro	
Comments:						Parent Hole:		

Collared at Class A Storage Facility projected site. Four SPT tests were conducted in overburden, three packer tests in bedrock as well as deep monitoring well install. Hole K16-404 consists of mafic tuff and interbedded calcareous mudstone units recognized as Wind Lake Formation. Trace oxidation is visible from 4.80m to 16.50m. Fine grain disseminated pyrrhotite is observed in the mafic horizons. The hole was completed at 40.20m (Engineer's call) in mafic ash tuff showing massive calcite/quartz vein.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Comments Values?	
0	-90	360	0	360	PLND-LiDAR	Knight Piésold	7/24/2016		✓	

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

0.00 8.40 OVBN Overburden

<<Alt: 3.3 - 21.65 Strong Calcite>> and banded.

8.40 12.30 MAFt Mafic Volcaniclastics

8.4 - 12.3: Fine grain, light green, weak CA banded, CA in groundmass.

<<Min: 8.4 - 15.95 0.5% Min: Pyrrhotite>>

12.30 13.20 No Core No Core

13.20 15.95 MDS Carbonaceous Mudstone & Tuffaceous Mudstone

13.2 - 15.95: Dark grey, fine grain, CA bands and blebs. BI in foliation.

<<Vein: 15.8 - 16.4 Quartz-Carbonate>> QZ/TML and CA veins. Rubbly interval, locally vuggy.

15.95 16.25 MAFt Mafic Volcaniclastics

15.95 - 16.25: Fine grain, light green. Rubbly interval containing QZ and CA veins showing locally vuggy texture.

<<Min: 15.95 - 21.65 0.1% Min: Pyrrhotite>>



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

16.25 21.65 MDS Carbonaceous Mudstone & Tuffaceous Mudstone

16.25 - 21.65: Fine grain, dark grey, gradual lower contact. Rare mafic ash beds intercaled, up to 10cm wide. BI in foliaton

21.65 28.35 MAFt Mafic Volcaniclastics

21.65 - 28.35: Medium grain, calcareous. Rare ash layer intercaled (3 to 5cm wide). Gradual lower contact. BI porphyroblasts, low density. CA banded down hole.

<<Min: 21.65 - 28.55 0.5% Min: Pyrrhotite>>

<<Alt: 21.65 - 28 Moderate Calcite>>

<<Alt: 28 - 35.75 Moderate-Strong Calcite>>

28.35 31.95 MDS Carbonaceous Mudstone & Tuffaceous Mudstone

28.35 - 31.95: Dark green chloritic layers interbedded with light blue strongly calcareous fine grain homogeneous layers. CA banded, BI in foliation. Gradual upper contact. Unit consists in mafic and carbonaceous material, dominantly mudstone.

<<Alt: 28.35 - 31.95 Trace Chlorite>>

31.95 35.70 MDS Carbonaceous Mudstone & Tuffaceous Mudstone

31.95 - 35.7: Fine grain, black, CA banded, rare chlorite rich bands, moderately siliceous.

<<Min: 31.95 - 35.7 0.1% Min: Pyrrhotite>>

35.70 36.14 MAFta Coarse grained to ash tuff

35.7 - 36.14: Fine grain, green, homogeneous texture, low CA content.

<<Min: 35.7 - 36.14 1% Min: Pyrrhotite>> <<Alt: 35.75 - 38.35 Weak Calcite>>

36.14 38.35 MDS Carbonaceous Mudstone & Tuffaceous Mudstone

36.14 - 38.35: Fine grain, black, CA banded, containing some moderately siliceous layers. Gradual lower contact.

<<Min: 36.14 - 39.3 0.5% Min: Pyrrhotite>>

<<Struc: 37.46 - 37.6 Weak Fault>> Narrow fault gouge.



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38.35 40.20 MAFt Mafic Volcaniclastics

38.35 - 40.2: Fine grain, light green, CA banded at upper contact hole, possibly highly strain lapilli CA replaced. Finer grain down hole. Massive CA/QZ vein from 39.30 to 39.88m. EOH.

<<Alt: 38.35 - 39.3 Moderate-Strong Calcite>> CA content decreases as the size of the grain decreases.

<<Alt: 39.3 - 40.2 Intense Calcite>> Massive CA veins.

<<Vein: 39.3 - 39.88 Calcite>> QZ/CA vein containing mafic tuff, massive.

End of Hole @ 40.2