

GeoSpark Logger ~ Drill Log

Project: KZK **Hole Number:** K95-162

Prospect:	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Ron Voordouw
Grid: NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	4/17/2016
UTM Easting: 414899.996	Core Size:	NQ	Azimuth:	180	Date Logging Complete:	4/18/2016
UTM Northing: 6818924.947	Casing Pulled?:		Dip:	-90	Drill Company:	
UTM Elev. (m): 1340.427	Casing Depth (m):		Length (m):	75.3	Drill Rig:	
Local Easting:	Stored?:	Yes	Claims Title:	KZK	Drill Started:	
Local Northing:	Cemented?:		Core Storage Loc.:	KZK Camp	Drill Completed:	
Local Elev. (m):			Hole Completed?:		Purpose:	
Comments:					Parent Hole:	

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-90	180		180	SS				<input checked="" type="checkbox"/>	
75	-90	180		180	SS				<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	23.70	OVBN Overburden									
23.70	31.64	MDS Carbonaceous Mudstone & Tuffaceous Mudstone	black	VFG							
23.7 - 31.64: Black to grey, finely laminated (bedding and bed-parallel foliation?), graphitic mudstone; oxidized and pitted											
<<Struc: 29.2 - 29.21 Moderate-Strong Foliation>> Well-developed foliation between graphite and calcite rich bands											
<<Struc: 29.8 - 39.25 Weak-Moderate Fault>> Pervasive fracturing with short intervals of in situ fault gouge and complete disintegration											
31.64	33.00	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	yl	FG							
31.64 - 33: Light grey to yellow orange, strongly oxidized (and clay altered?), mafic intrusion?; similar to oxidized units logged as MAFi in K95-163; lithological ID based on softness and Cominco description (which ranges from mafic to intermediate)											
<<Min: 31.64 - 33 5% Min: Pyrite>> Lenticular blebs of PY that range from pristine to strongly oxidized											
<<Struc: 31.64 - 31.65 Contact>> Contact between MAFi and MDS											
<<Struc: 32.6 - 32.61 Moderate-Strong Foliation>> Defined by aligned lenticular pyrite aggregates in MAFi											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
33.00	35.90	MDS Carbonaceous Mudstone & Tuffaceous Mudstone black VFG 33 - 35.9: Black to grey, finely laminated (bedding and bed-parallel foliation?), strongly fractured, graphitic mudstone; oxidized and pitted									
35.90	36.87	MAFi Mafic Intrusions (primarily footwall mafic intrusion) yl FG 35.9 - 36.87: Yellow orange, strongly oxidized, foliated mafic intrusion (?); same as MAFi previous interval; ID based on similar rock types in K95-163, softness and Cominco logging									
36.87	37.80	MDS Carbonaceous Mudstone & Tuffaceous Mudstone black VFG 36.87 - 37.8: Black to grey, finely laminated (bedding and bed-parallel foliation?) graphitic mudstone; oxidized and pitted; shows gradational contact with mafic volcanoclastic									
37.80	40.30	MDS Carbonaceous Mudstone & Tuffaceous Mudstone grey-brown FG 37.8 - 40.3: Well-laminated (bedding with parallel foliation?) very fine-grained graphitic mudstone with slight coarser-grained limonite-altered (mafic) material; limonite oxidation similar to that of more massive mafic units; entire unit appears sedimentary but with more mafic input than overlying graphite-rich interval <<Alt: 37.8 - 40.3 Moderate-Strong Chlorite>> Pervasive alteration of mafic elements to CL <<Struc: 38 - 38.01 Moderate-Strong Bedding>> Within MDS; foliation appears to be parallel to bedding									
40.30	40.80	MDS Carbonaceous Mudstone & Tuffaceous Mudstone black VFG 40.3 - 40.8: Black to grey, finely laminated (bedding and bed-parallel foliation?) graphitic mudstone with minor MAFt; oxidized and pitted; shows gradational contact with mafic volcanoclastic on either side									
40.80	54.80	MDS Carbonaceous Mudstone & Tuffaceous Mudstone grey-brown FG 40.8 - 54.8: Well-laminated (bedding with parallel foliation?) very fine-grained graphitic mudstone with slight coarser-grained limonite-altered (mafic) material; limonite oxidation similar to that of more massive mafic units; entire unit appears sedimentary but with more mafic input than overlying graphite-rich interval <<Alt: 40.8 - 65.15 Moderate-Strong Chlorite>> Pervasive alteration of mafic elements to CL <<Struc: 45.8 - 46.3 Weak Fault>> Strong fracturing with short interval of gravel-sized particles <<Struc: 50.8 - 50.81 Weak-Moderate Bedding>> Bedding defined by alternations of mafic-rich and graphite-rich material; foliation is parallel to bedding <<Struc: 54 - 54.5 Strong Fault>> Only gravel to clay sized particles; fault gouge									

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
54.80	57.60	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<p>54.8 - 57.6: Homogeneous and massive MAFi, both in terms of texture and grain size; mineralogy dominantly chlorite-plagioclase; patchy limonite staining</p> <p><<Struc: 54.8 - 54.81 Contact>> Bedding parallel contact between MAFi and MDS</p>											
57.60	62.15	MDS Carbonaceous Mudstone & Tuffaceous Mudstone									
<p>57.6 - 62.15: Grey-brown to yellow, showing significantly more limonite staining than overlying intervals; well-laminated (bedding with parallel foliation?); very fine-grained graphitic mudstone with slight coarser-grained limonite-altered (mafic) material.</p> <p><<Struc: 59.6 - 59.61 Weak-Moderate Bedding>> Bedding defined by alternations of mafic-rich and graphite-rich material; foliation is parallel to bedding</p>											
62.15	65.15	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<p>62.15 - 65.15: Fine medium to fine-grained, relatively massive but with xenoliths (or interlayered?) MDS near the lower contact; abundant leucoxene, weak limonite staining and localized overgrowth by biotite porphyroblasts</p> <p><<Alt: 62.55 - 63.6 Moderate Biotite>> Biotite porphyroblasts in MAFi</p>											
65.15	65.80	MDS Carbonaceous Mudstone & Tuffaceous Mudstone									
<p>65.15 - 65.8: Black to grey, finely laminated (bedding and bed-parallel foliation?) graphitic mudstone with minor MAFi; pitted; shows sharp contacts with adjacent MAFi</p> <p><<Struc: 65.15 - 65.16 Contact>> Sharp contact between MAFi and MDS</p>											
65.80	66.65	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
<p>65.8 - 66.65: Massive to strongly laminated near basal contact; ranges from MAFi seen in above interval to MDS-like; most of this interval is gone (either by GSC sampling and/or faulting)</p> <p><<Alt: 65.8 - 66.65 Moderate-Strong Chlorite>> Pervasive alteration of MAFi to CL</p> <p><<Struc: 65.8 - 65.81 Contact>> Sharp contact between MDS and MAFi</p>											
66.65	69.88	MDS Carbonaceous Mudstone & Tuffaceous Mudstone									
<p>66.65 - 69.88: Typical graphitic mudstone with relatively high proportion of calcite-rich layers</p> <p><<Struc: 68 - 68.01 Strong Foliation>> Defined by calcite-rich and graphite-rich bands</p>											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
69.88	70.53	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	yl								
69.88 - 70.53: Massive MAFi with pervasive limonite alteration; pitted											
<<Min: 69.88 - 70.53 3% Min: Pyrite>> Strongly oxidized lenticular blebs											
<<Alt: 69.88 - 70.53 Moderate-Strong Chlorite>> Pervasive alteration of MAFi to CL											
<<Alt: 69.88 - 70.53 Weak-Moderate Biotite>> Biotite porphyroblasts in MAFi											
<<Struc: 69.88 - 69.89 Contact>> Sharp contact between MDS and MAFi											
70.53	71.20	MDS Carbonaceous Mudstone & Tuffaceous Mudstone	dark grey								
70.53 - 71.2: Typical graphitic mudstone with relatively high proportion of calcite-rich layers											
<<Struc: 70.53 - 70.54 Contact>> Sharp contact between MDS and MAFi											
<<Struc: 71.15 - 71.16 Strong Foliation>> Defined by calcite-rich and graphite-rich bands											
71.20	71.52	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	yl								
71.2 - 71.52: Strongly oxidized MAFi											
<<Alt: 71.2 - 71.52 Moderate-Strong Chlorite>> Pervasive alteration of MAFi to CL											
71.52	71.80	MDS Carbonaceous Mudstone & Tuffaceous Mudstone	dark grey								
71.52 - 71.8: Typical graphitic mudstone with relatively high proportion of calcite-rich layers											
<<Struc: 71.52 - 71.53 Contact>> Sharp contact between MDS and MAFi											
71.80	72.95	MAFi Mafic Intrusions (primarily footwall mafic intrusion)	light grey								
71.8 - 72.95: Massive to foliated, light grey to strongly oxidized over short intervals; similarity to most previous MAFi layers											
<<Min: 72.4 - 72.8 10% Min: Pyrite>> Lenticular blebs of PY that range from pristine to strongly oxidized											
<<Alt: 71.8 - 72.95 Moderate-Strong Chlorite>> Pervasive alteration of MAFi to CL											
<<Alt: 71.8 - 72.95 Weak-Moderate Biotite>> Biotite porphyroblasts in MAFi											
72.95	74.87	MDS Carbonaceous Mudstone & Tuffaceous Mudstone	dark grey								
72.95 - 74.87: Typical graphitic mudstone with relatively high proportion of calcite-rich layers											
<<Struc: 72.95 - 72.96 Contact>> Sharp contact between MDS and MAFi											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
<p><<Struc: 73 - 73.01 Strong Foliation>> Defined by calcite-rich and graphite-rich bands</p> <p><<Struc: 73.6 - 74.55 Moderate-Strong Fault>> Strong fracturing with some in situ fault gouge</p> <p>74.87 75.30 MAFi Mafic Intrusions (primarily light grey FMG footwall mafic intrusion)</p> <p>74.87 - 75.3: Relatively unaltered and massive mafic dyke to EOH</p> <p><<Alt: 74.87 - 75.3 Moderate-Strong Chlorite>> Pervasive alteration of MAFi to CL</p> <p><<Alt: 74.87 - 75.3 Weak-Moderate Biotite>> Biotite porphyroblasts in MAFi</p> <p><<Struc: 74.87 - 74.88 Contact>> Sharp contact between MDS and MAFi</p> <p>End of Hole @ 75.3</p>											