

GeoSpark Logger ~ Drill Log

Project: KZK **Hole Number:** K97-179

Prospect:	FCZ	Hole Type:	DD	Survey Type:		Logged By:	Jerome de Pasquale
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:		Date Logging Start:	4/18/2016
UTM Easting	416150	Core Size:	NQ	Azimuth:	180	Date Logging Complete:	4/21/2016
UTM Northing:	6814900	Casing Pulled?:		Dip:	-86	Drill Company:	
UTM Elev. (m):	1685	Casing Depth (m):	3	Length (m):	502.3	Drill Rig:	
Local Easting:	6150	Stored?:	Yes	Claims Title		Drill Started:	5/31/1997
Local Northing:	4900	Cemented?:		Core Storage Loc.:	KZK Camp	Drill Completed:	6/6/1997
Local Elev. (m):	1685			Hole Completed?:		Purpose:	Exploration
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	-86	180		180	SS				<input checked="" type="checkbox"/>	
76	-82	176		176	SS				<input checked="" type="checkbox"/>	
243	-76	173		173	SS				<input checked="" type="checkbox"/>	
320	-72	172		172	SS				<input checked="" type="checkbox"/>	
411	-71	154		154	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	3.10	OVBN Overburden									
3.10	24.30	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
3.1 - 24.3: Could be MAFt, texture obscured. Patchy BI, CA veining.											
<<Min: 3.1 - 67.28 0.1% Min: Pyrite>>											
<<Alt: 3.1 - 63.5 Moderate Biotite>>											
<<Alt: 3.1 - 67.28 Strong Chlorite>> Mafic tuff and mafic sill.											
<<Alt: 3.1 - 74.9 Moderate Calcite>>											
<<Alt: 3.1 - 195 Weak-Moderate Ankerite>>											
24.30	27.90	MAFt Mafic Volcaniclastics									
24.3 - 27.9: Maybe mixed with carb sediments. Strongly foliated.											
<<Vein: 27.8 - 27.9 Quartz>> QZ/CA											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
27.90	49.80	MAFi Mafic Intrusions (primarily footwall mafic intrusion) 27.9 - 49.8: Locally bleached, texture obscured possibly due to SI fluids. Patchy BI. <<Alt: 44.6 - 44.9 Moderate Silicification>> <<Vein: 33.7 - 34 Quartz>> QZ/CA/CL									
49.80	55.00	FLZ Fault Zone 49.8 - 55: Fault gouge and MAFt. 10 to 15 cm QZ/CA veins. <<Struc: 49.8 - 55 Moderate Fault>> Fault gouge and mafic tuff, QZ/CA veins.									
55.00	74.90	MAFt Mafic Volcaniclastics 55 - 74.9: Calcite veining. Large patch of hematite from 67.28 to 73.30 with QZ veins. <<Min: 67.28 - 73.3 1% Min: Pyrite>> Discontinuous veinlets, disseminated and few patch. <<Min: 67.28 - 162 1% Min: Pyrrhotite>> Foliation oriented. More concentrated in MDS. <<Min: 73.3 - 502.3 0.1% Min: Pyrite>> Few patch associated with QZ veins. <<Alt: 67.28 - 73.3 Weak Muscovite>> <<Alt: 67.28 - 213.44 Moderate-Strong Chlorite>>									
74.90	82.70	MDS Carbonaceous Mudstone & Tuffaceous Mudstone 74.9 - 82.7: Locally MAFt interbedded (or mafic dyke p to 40cm wide). <<Alt: 74.9 - 162 Moderate-Strong Calcite>> <<Vein: 79.62 - 79.9 Quartz>> QZ/CA									
82.70	84.10	MAFt Mafic Volcaniclastics									
84.10	89.20	MDS Carbonaceous Mudstone & Tuffaceous Mudstone									
89.20	96.27	MAFt Mafic Volcaniclastics 89.2 - 96.27: Patch of hematite at contact. Mafic according to the LITHO whole rock assay. <<Alt: 92.82 - 95 Weak Biotite>>									
96.27	116.37	MDS Carbonaceous Mudstone & Tuffaceous Mudstone 96.27 - 116.37: Patch of hematite (?).									

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
<p><<Struc: 107.9 - 108.2 Weak Fault>> Fault gouge.</p> <p>116.37 118.75 MAFt Mafic Volcaniclastics 116.37 - 118.75: MDS interbedded. Sharpe contact, could be narrow dyke.</p> <p>118.75 130.85 MDS Carbonaceous Mudstone & Tuffaceous Mudstone 118.75 - 130.85: Few MAFt interbedded.</p> <p><<Vein: 125.42 - 125.61 Quartz>> QZ/CA</p> <p>130.85 132.37 MAFt Mafic Volcaniclastics 132.37 133.21 MDS Carbonaceous Mudstone & Tuffaceous Mudstone</p> <p>133.21 134.80 MAFt Mafic Volcaniclastics 134.80 136.79 MDS Carbonaceous Mudstone & Tuffaceous Mudstone</p> <p>136.79 139.65 RHY undifferentiated rhyolite 136.79 - 139.65: According to the LITHO whole rock assay. The percentage of SI could be biased by QZ veining.</p> <p>139.65 142.88 MDS Carbonaceous Mudstone & Tuffaceous Mudstone</p> <p>142.88 144.10 RHY undifferentiated rhyolite <<Vein: 143.16 - 143.26 Quartz>> QZ/CA</p> <p>144.10 151.18 MAFt Mafic Volcaniclastics 144.1 - 151.18: Dark green, deformed CA veins. Patch of hematite (?).</p> <p><<Vein: 149.1 - 149.4 Quartz>> QZ/CA</p> <p>151.18 172.64 MDS Carbonaceous Mudstone & Tuffaceous Mudstone 151.18 - 172.64: BI/CL. Deformed CA veining. Crosscut by narrow mafic dykes up to 60 cm wide. Thinly foliated.</p> <p><<Min: 162 - 290 0.5% Min: Pyrrhotite>> Locally with SP/GL/PO?GL in QZ/CA vein. <<Alt: 162 - 213.44 Strong Calcite>></p> <p>172.64 174.25 MAFt Mafic Volcaniclastics 172.64 - 174.25: Mixed with argillite.</p>											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
174.25	184.70	MDS Carbonaceous Mudstone & Tuffaceous Mudstone 174.25 - 184.7: Containing tuffaceous material at lower contact. CA veining. Thinly foliated. QZ/CA veins, hematite veinlets.									
184.70	186.04	MAFt Mafic Volcaniclastics 184.7 - 186.04: Fine grain. Mixed with argillite at lower contact.									
186.04	193.24	MDS Carbonaceous Mudstone & Tuffaceous Mudstone 186.04 - 193.24: BI rich. QZ/CA veining.									
193.24	194.94	MAFt Mafic Volcaniclastics 193.24 - 194.94: Fine to medium grain.									
194.94	203.97	MDS Carbonaceous Mudstone & Tuffaceous Mudstone 194.94 - 203.97: Containing tuffaceous material. QZ/CA (maybe dolomite) veining and patch. <<Alt: 195 - 213.44 Moderate-Strong Ankerite>>									
203.97	204.32	MAFt Mafic Volcaniclastics 203.97 - 204.32: Sharpe contacts, could be dike.									
204.32	209.48	MDS Carbonaceous Mudstone & Tuffaceous Mudstone 204.32 - 209.48: Tuffaceous. <<Vein: 205.36 - 205.6 Quartz>> QZ/CA/CL									
209.48	213.44	MAFt Mafic Volcaniclastics 209.48 - 213.44: CA veining. Sharpe contacts. Could be dike.									
213.44	215.95	SED undifferentiated Sediment 213.44 - 215.95: Tuffaceous. Mix with mudstone/siltstone containing locally QE in RHYva layers. <<Alt: 213.44 - 234.72 Weak-Moderate Ankerite>> <<Alt: 213.44 - 502.3 Weak-Moderate Calcite>> and clots. Strong in the mafic dikes.									
215.95	217.60	RHYva Coarse grained to ash tuff									

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
<p><<Alt: 215.95 - 502.3 Moderate-Strong Muscovite>></p> <p>217.60 221.55 MDS Carbonaceous Mudstone & Tuffaceous Mudstone</p> <p>217.6 - 221.55: Medium grain locally.</p> <p>221.55 222.58 RHYcw Curdy textured-flow banded (flows, subvolcanics)</p> <p>222.58 229.10 MDS Carbonaceous Mudstone & Tuffaceous Mudstone</p> <p>222.58 - 229.1: Faulted, strongly foliated.</p> <p><<Struc: 224 - 226 Weak Fault>> Multiple narrow gouge zones.</p> <p><<Struc: 227.9 - 229.1 Moderate Fault>> Fault gouge in graphitic mudstone.</p> <p>229.10 234.74 MDS Carbonaceous Mudstone & Tuffaceous Mudstone</p> <p>229.1 - 234.74: QZ/CA veining.</p> <p><<Alt: 234.72 - 502.3 Moderate Ankerite>> Replacing lapilli. Locally strong due to strong lapilli density.</p> <p><<Vein: 231.45 - 231.9 Quartz>> QZ/CA/FeCA/TO</p> <p><<Vein: 232.18 - 232.58 Quartz>> QZ/CA/PO</p> <p>234.74 240.52 RHYva Coarse grained to ash tuff</p> <p>234.74 - 240.52: Dominantly ash.</p> <p>240.52 242.68 RHYvl Lapilli tuff</p> <p>242.68 243.59 MAFi Mafic Intrusions (primarily footwall mafic intrusion)</p> <p>243.59 251.05 RHYvl Lapilli tuff</p> <p>243.59 - 251.05: BI porphyroblasts, overprinted. Crosscut by narrow mafic dyke from 247.05 to 247.52 showing PO in chill margins. Two foliations observed.</p> <p>251.05 262.85 RHYvl Lapilli tuff</p> <p>262.85 265.13 MAFi Mafic Intrusions (primarily footwall mafic intrusion)</p> <p>262.85 - 265.13: CL.</p>											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
265.13	270.80	RHYvl Lapilli tuff									
270.80	272.25	RHYvl Lapilli tuff									
270.8 - 272.25: Crosscut by narrow chloritized mafic dikes.											
272.25	276.82	RHYva Coarse grained to ash tuff									
272.25 - 276.82: Crosscut by narrow chloritized mafic dikes.											
276.82	280.41	RHYvl Lapilli tuff									
280.41	282.54	RHYva Coarse grained to ash tuff									
280.41 - 282.54: Crosscut by narrow chloritized mafic dikes.											
282.54	284.20	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
282.54 - 284.2: CL/CA.											
284.20	287.10	RHYva Coarse grained to ash tuff									
287.10	332.83	RHYvl Lapilli tuff									
287.1 - 332.83: Few CL bands. BI could be due to pelitic material.											
<<Min: 290 - 502.3 0.1% Min: Pyrrhotite>>											
<<Alt: 287.3 - 502.3 Moderate Biotite>> Porphyroblasts.											
<<Vein: 291.81 - 292 Quartz>> QZ/CA											
<<Vein: 298.3 - 299.13 Quartz>> QZ/CA vein set, up to 8 cm wide.											
<<Vein: 301.86 - 302.12 Quartz>> QZ vein with PO/PY/SP/GL patch.											
<<Vein: 303.07 - 303.61 Quartz>> QZ vein with PY/GL/PO patch											
<<Vein: 304.2 - 304.49 Quartz>> QZ											
332.83	341.50	RHYv Rhyolite volcanoclastic									
332.83 - 341.5: Few lapilli. Narrow rich BI bedding up to 10 cm wide. Possibly mafic dikes. Mafic dike form 341.50 to 342.02, CL/BI/CA.											
341.50	349.39	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
341.5 - 349.39: Confirmed by Whole rock assay. BI/CA. No CL. CA/BI/QZ veins.											
<<Vein: 348.5 - 348.7 Calcite>> CA/BI.											
<<Struc: 344.9 - 346.35 Trace Fault>> Logged by Cominco, really minor structure.											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
349.39	352.46	RHY undifferentiated rhyolite 349.39 - 352.46: Showing BI rich bedding. Silicified at upper contact with MAFi. <<Alt: 349.39 - 350.3 Moderate-Strong Silicification>> Associated with MAFi lower contact.									
352.46	355.94	RHYv Rhyolite volcanoclastic 352.46 - 355.94: Some lapilli. Possibly pelitic locally, high concentration of BI. Ash and lapilli show sort of graded bed sequences.									
355.94	358.62	RHYcf Feldspar & feldspar quartz porphyry 355.94 - 358.62: Could be RHYvl at lower contact.									
358.62	369.02	RHYva Coarse grained to ash tuff 358.62 - 369.02: Mixed with BI rich bedding. Shows to foliation at 361.50.									
369.02	380.54	RHYvx Quartz and/or feldspar crystal tuff									
380.54	383.17	MAFi Mafic Intrusions (primarily footwall mafic intrusion) 380.54 - 383.17: BI/CA.									
383.17	389.28	RHYvx Quartz and/or feldspar crystal tuff <<Alt: 388.89 - 390.3 Weak Muscovite>> Yellow-green muscovite. Could be original alteration.									
389.28	391.65	MAFi Mafic Intrusions (primarily footwall mafic intrusion) 389.28 - 391.65: Confirmed by Whole rock assay. BI/CA rich. QZ/CA veins.									
391.65	402.12	RHYvl Lapilli tuff									
402.12	403.13	MAFi Mafic Intrusions (primarily footwall mafic intrusion) 402.12 - 403.13: BI/CA.									
403.13	406.25	RHYva Coarse grained to ash tuff									

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
406.25	408.66	MAFi Mafic Intrusions (primarily footwall mafic intrusion) 406.25 - 408.66: Two dikes separated by QZ/CA vein and 15 cm of RHYvl.									
408.66	411.12	RHYva Coarse grained to ash tuff									
411.12	425.61	RHYvx Quartz and/or feldspar crystal tuff 411.12 - 425.61: Could be locally RHYc (curdy like texture). Strong lapilli density and some angular clasts at lower contact.									
425.61	443.90	RHYva Coarse grained to ash tuff									
443.90	444.34	MAFi Mafic Intrusions (primarily footwall mafic intrusion) 443.9 - 444.34: BI/CA.									
444.34	446.12	RHY undifferentiated rhyolite 444.34 - 446.12: Almost curdy texture like. Xtl up to 0.5cm. Could be porphyritic.									
446.12	452.04	RHYva Coarse grained to ash tuff 446.12 - 452.04: Locally BI in foliation.									
<<Alt: 450 - 502.3 Trace Chlorite>> Locally in fracture.											
452.04	461.78	RHYva Coarse grained to ash tuff 452.04 - 461.78: And Bippo.									
<<Vein: 461.5 - 461.6 Quartz>> QZ/TO and narrow QZ/BI banded interval, sedimentary looking.											
461.78	463.91	RHY undifferentiated rhyolite 461.78 - 463.91: Could be curdy texture.									
463.91	465.14	RHYcw Curdy textured-flow banded (flows, subvolcanics)									
465.14	466.72	RHYva Coarse grained to ash tuff									
466.72	467.21	MAFi Mafic Intrusions (primarily footwall mafic intrusion) 466.72 - 467.21: BI/CA. 10 cm of RHYvl interbedded showing sharp contacts.									
467.21	467.60	RHYv Rhyolite volcanoclastic									

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
467.60	469.57	MAFi Mafic Intrusions (primarily footwall mafic intrusion) 467.6 - 469.57: BI/CA banded.									
469.57	470.02	RHYv Rhyolite volcanoclastic									
470.02	470.37	MAFi Mafic Intrusions (primarily footwall mafic intrusion) 470.02 - 470.37: CI/CA									
470.37	472.69	RHYvx Quartz and/or feldspar crystal tuff 470.37 - 472.69: Mixed with possibly mafic material. Lost of BI in foliation. Maybe intermediate composition or non consolidated while intruded by MAFi.									
472.69	476.56	MAFi Mafic Intrusions (primarily footwall mafic intrusion) 472.69 - 476.56: BI/CA banded.									
476.56	478.92	RHYvx Quartz and/or feldspar crystal tuff									
478.92	480.00	RHY undifferentiated rhyolite 478.92 - 480: Possibly curdy texture. Probably RHYvx.									
480.00	480.40	MAFi Mafic Intrusions (primarily footwall mafic intrusion) 480 - 480.4: BI/CA.									
480.40	482.20	RHYvl Lapilli tuff 480.4 - 482.2: BI in foliation.									
482.20	484.72	RHY undifferentiated rhyolite 482.2 - 484.72: Possibly ash dominant unit with RHYc locally.									
484.72	484.87	MAFi Mafic Intrusions (primarily footwall mafic intrusion) 484.72 - 484.87: Sharp contact. BI/CA/AK.									

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
484.87	485.23	RHYv Rhyolite volcanoclastic									
485.23	487.76	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
485.23 - 487.76: Confirmed by Whole rock assay. BI/CA banded.											
487.76	493.35	RHYvx Quartz and/or feldspar crystal tuff									
487.76 - 493.35: Trace of deformation visible as the foliation change.											
493.35	499.95	RHYvx Quartz and/or feldspar crystal tuff									
499.95	500.18	RHY undifferentiated rhyolite									
500.18	500.66	MAFi Mafic Intrusions (primarily footwall mafic intrusion)									
500.18 - 500.66: BI/CA.											
500.66	502.30	RHYvx Quartz and/or feldspar crystal tuff									
500.66 - 502.3: AK at contact with MAFi. Intermediate composition, BI rich in foliation. E.O.H.											
End of Hole @ 502.3											