

# GeoSpark Logger ~ Drill Log

**Project:** KZK **Hole Number:** K94-023

Prospect:	ABM	Hole Type:	DD	Survey Type:		Logged By:	Murray Jones
Grid:	NAD83_Z9	Hole Diameter:		Survey By:		Date Logging Start:	
UTM Easting	414850.625	Core Size:		Azimuth:	180	Date Logging Complete:	
UTM Northing:	6815750	Casing Pulled?:		Dip:	-90	Drill Company:	
UTM Elev. (m):	1394.75	Casing Depth (m):		Length (m):	258.2	Drill Rig:	
Local Easting:		Stored?:		Claims Title		Drill Started:	
Local Northing:		Cemented?:		Core Storage Loc.:		Drill Completed:	
Local Elev. (m):						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"/>	
32	-84	176		176	SS				<input checked="" type="checkbox"/>	
63	-83	175		175	SS				<input checked="" type="checkbox"/>	
93	-81	173		173	SS				<input checked="" type="checkbox"/>	
124	-81	181		181	SS				<input checked="" type="checkbox"/>	
154	-81	179		179	SS				<input checked="" type="checkbox"/>	
185	-81	171		171	SS				<input checked="" type="checkbox"/>	
215	-81	193		193	SS				<input checked="" type="checkbox"/>	
246	-81	193		193	SS				<input checked="" type="checkbox"/>	

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<b>0.00</b>	<b>6.40</b>	<b>CASN Casing</b>									
<b>6.40</b>	<b>7.00</b>	<b>RHYvl Lapilli tuff</b>									
<p><b>grey-green</b></p> <p>6.4 - 7: heterogeneous section, with dominantly lapilli and minor flow textured intervals, also several green to brown, CL-BI rich dykes?, with AK pblasts (retro to CA)</p> <p>&lt;&lt;Min: 6.4 - 7 3% Min: Ankerite&gt;&gt;</p> <p>&lt;&lt;Alt: 6.4 - 41.7 Weak (Alt) Muscovite&gt;&gt; interrupted by dykes</p>											

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<b>7.00</b>	<b>9.10</b>	<b>MAFi Mafic Intrusions (primarily footwall mafic intrusion)</b>	<b>green-brown</b>	<b>FG</b>							
7 - 9.1: well fol'd dyke?, AK plus CA pblasts, CA-QZ veinng											
<<Min: 7 - 9.1 5% Min: Calcite>> minor diss'd, along fol'n											
<<Min: 7 - 9.1 10% Min: Ankerite>> pblasts											
<<Alt: 7 - 9.1 Moderate (Alt) Chlorite>>											
<b>9.10</b>	<b>11.70</b>	<b>RHYvl Lapilli tuff</b>	<b>grey-green</b>								
<<Min: 9.1 - 11.7 1% Min: Pyrite>> foliation oriented											
<<Min: 9.1 - 11.7 1% Min: Pyrrhotite>> foliation centric and few disseminated.											
<<Min: 9.1 - 11.7 5% Min: Ankerite>> foliation centric											
<b>11.70</b>	<b>17.50</b>	<b>RHYvx Quartz and/or feldspar crystal tuff</b>	<b>grey-green</b>								
11.7 - 17.5: as above											
<<Min: 14 - 15.5 1% Min: Calcite>> foliation centric											
<<Min: 16.4 - 17.5 1% Min: Pyrrhotite>>											
<<Alt: 14 - 15.5 Moderate (Alt) Biotite>>											
<b>17.50</b>	<b>19.20</b>	<b>RHYvl Lapilli tuff</b>	<b>grey-green</b>								
17.5 - 19.2: as above											
<<Min: 17.5 - 19.2 3% Min: Ankerite>> foliation centric											
<b>19.20</b>	<b>20.80</b>	<b>MAFi Mafic Intrusions (primarily footwall mafic intrusion)</b>	<b>brown</b>								
19.2 - 20.8: SCHSITOSE, BI-QZ rich dyke											
<<Min: 19.2 - 20.8 15% Min: Calcite>> pblasts											
<<Alt: 19.2 - 20.8 Moderate-Strong (Alt) Biotite>>											
<b>20.80</b>	<b>29.00</b>	<b>RHYvl Lapilli tuff</b>									
<<Min: 20.8 - 38 1% Min: Pyrite>> foliation oriented											
<<Min: 20.8 - 38 1% Min: Pyrrhotite>> foliation oriented											
<<Min: 20.8 - 38 15% Min: Ankerite>> foliation centric. Interruptedby felsic flow from 29.35 to 30.41 m											
<b>29.00</b>	<b>30.20</b>	<b>RHYcw Curdy textured-flow banded (flows, subvolcanics)</b>									

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From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
30.20	38.00	<b>RHYvl Lapilli tuff</b> 30.2 - 38: dominantly lapilli tuff, minor flow banded intervals, quite siliceous									
38.00	40.00	<b>MAFi Mafic Intrusions (primarily footwall mafic intrusion)</b> 38 - 40: possible BI pblasts as well as ground mass, strong CA <<Min: 38 - 40 10% Min: Ankerite>> also foliation oriented <<Alt: 38 - 40 Moderate (Alt) Chlorite>>									
40.00	53.60	<b>RHYvl Lapilli tuff</b> 40 - 53.6: dominantly lapilli tuff, minor flow banded intervals, quite siliceous <<Min: 40 - 53.6 1% Min: Pyrite>> foliation oriented <<Min: 40 - 53.6 1% Min: Pyrrhotite>> foliation oriented <<Min: 40 - 53.6 5% Min: Ankerite>> foliation centric <<Alt: 41.7 - 130.56 Weak-Moderate (Alt) Muscovite>>									
53.60	58.20	<b>MAFi Mafic Intrusions (primarily footwall mafic intrusion)</b> 53.6 - 58.2: calcareous-ankeritic altered dyke, wide fg chill <<Min: 53.6 - 58.2 3% Min: Ankerite>> pblasts <<Min: 53.6 - 58.6 5% Min: Calcite>> pblasts <<Alt: 53.6 - 58.2 Moderate-Strong (Alt) Chlorite>> <<Alt: 53.6 - 58.2 Moderate (Alt) Biotite>>									
58.20	66.15	<b>RHYvl Lapilli tuff</b> 58.2 - 66.15: silic-bnds, locally mixed with felsic thick bedded flow <<Min: 58.2 - 66.15 1% Min: Pyrite>> foliation oriented <<Min: 58.2 - 66.15 1% Min: Pyrrhotite>> foliation oriented <<Min: 58.2 - 75.8 1% Min: Pyrite>> foliation oriented <<Min: 58.2 - 75.8 1% Min: Pyrrhotite>> foliation oriented, locally patchy. <<Min: 58.2 - 75.8 5% Min: Ankerite>> foliation oriented									
66.15	67.60	<b>RHYcw Curdy textured-flow banded (flows, subvolcanics)</b> 66.15 - 67.6: progressive transition with lapilli									

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From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
<b>67.60</b>	<b>68.80</b>	<b>MAFi Mafic Intrusions (primarily footwall mafic intrusion)</b>									
67.6 - 68.8: dyke											
<b>68.80</b>	<b>75.80</b>	<b>RHYcw Curdy textured-flow banded (flows, subvolcanics)</b>									
68.8 - 75.8: locally felsic flow thick bedded											
<<Min: 70 - 75.8 1% Min: Pyrite>> and disseminated, sphalerite trace											
<b>75.80</b>	<b>86.40</b>	<b>RHYvx Quartz and/or feldspar crystal tuff</b>									
75.8 - 86.4: probably dyke associated with fault zone. Quartz vein 5 to 10 cm, tourmaline. Feldspar phenocrysts											
<<Min: 78.8 - 87.5 2% Min: Ankerite>> pblasts											
<<Struc: 75.8 - 86.4 Strong (Alt) Fault>>											
<b>86.40</b>	<b>93.90</b>	<b>RHYvl Lapilli tuff</b>									
86.4 - 93.9: few biotite, pyrite disseminated											
<<Min: 86.4 - 121 1% Min: Pyrite>> and disseminated. Po trace.											
<<Min: 87.5 - 93.9 5% Min: Ankerite>> foliation oriented											
<b>93.90</b>	<b>97.90</b>	<b>RHYcf Feldspar &amp; feldspar quartz porphyry</b>									
93.9 - 97.9: associated with quart veins or pods, probably two phase of foliation											
<<Min: 93.9 - 97.9 2% Min: Ankerite>> pblasts											
<b>97.90</b>	<b>100.70</b>	<b>RHYvl Lapilli tuff</b>									
<<Min: 97.9 - 111.9 15% Min: Ankerite>> and pblasts. Foliation oriented.											
<b>100.70</b>	<b>112.90</b>	<b>RHYcw Curdy textured-flow banded (flows, subvolcanics)</b>									
100.7 - 112.9: weak schstosity											
<<Min: 111.9 - 112.9 2% Min: Ankerite>> pblasts											
<b>112.90</b>	<b>126.80</b>	<b>RHYcw Curdy textured-flow banded (flows, subvolcanics)</b>									
112.9 - 126.8: silic-bnds, lapilli (domnant) and flow textures, locally strong fol'n, PY increasing towards argillaceous unit											

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<<Min: 112.9 - 122.5 10% Min: Ankerite>> foliation oriented <<Min: 121 - 126.8 3% Min: Pyrrhotite>>											
<b>126.80</b>	<b>127.40</b>	<b>MDSc Carbonaceous dominant mudstone</b>									
126.8 - 127.4: dark colour due to argillaceous content, PY as diss'd along fol'n,											
<b>127.40</b>	<b>130.60</b>	<b>RHYvl Lapilli tuff</b>									
127.4 - 130.6: sulphidic, PY in seams and along foliation, JA stan common over narrow bands, 146-149.5-stronger fol'n, darker colour below 158 due to CL alt'n											
<<Min: 128.1 - 132 10% Min: Ankerite>> foliation oriented											
<b>130.60</b>	<b>135.90</b>	<b>MDSr Rhyolite tuff dominant mudstone</b>									
<<Alt: 130.6 - 155.6 Strong (Alt) Muscovite>>											
<<Struc: 131.9 - 135.9 Moderate (Alt) Fault>> oxidized commonly											
<b>135.90</b>	<b>145.50</b>	<b>RHYcw Curdy textured-flow banded (flows, subvolcanics)</b>									
<<Min: 135.9 - 155.2 2% Min: Pyrite>> stinger, sheared											
<b>145.50</b>	<b>151.50</b>	<b>MDSw Coherent rhyolite flow with carbonaceous content</b>									
<b>151.50</b>	<b>167.10</b>	<b>RHYcw Curdy textured-flow banded (flows, subvolcanics)</b>	159.60	161.10	1.50	Q311385	0.7	0.008	0.03	0.01	0.03
151.5 - 167.1: difficult to identify in strong alt.											
<<Min: 164 - 167.7 2% Min: Sphalerite>>											
<<Min: 164 - 167.7 3% Min: Pyrite>> discontinuous veins											
<<Min: 164 - 167.7 2% Min: Pyrrhotite>> foliation oriented											
<<Min: 164 - 167.7 Min: Chalcopyrite>> trace											
<<Alt: 155.6 - 159 Moderate (Alt) Muscovite>>											
<<Alt: 157.8 - 159 Weak (Alt) Chlorite>>											
<<Alt: 159 - 163.8 Strong (Alt) Chlorite>>											
<<Alt: 163.8 - 167.1 Strong (Alt) Cordierite>> texturally destructive, CD pblasts common in bands											
<b>167.10</b>	<b>168.20</b>	<b>OH Fine grained, megascopically homogeneous pyrite rock</b>	167.10	168.20	1.10	Q311391	113	0.501	0.48	1.82	7.56
<<Min: 167.7 - 168.2 15% Min: Sphalerite>>											

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From (m) To (m) Rocktype & Description

<<Min: 167.7 - 168.2 80% Min: Pyrite>> fine grained

<<Min: 167.7 - 168.2 1% Min: Chalcopyrite>>

**168.20 176.40 RHYvl Lapilli tuff**

168.2 - 176.4: variably altered, QV's, inter-sx layer, small shears sub-parallel tca

<<Min: 170 - 179.5 3% Min: Ankerite>>

<<Alt: 168.2 - 170.5 Moderate-Strong (Alt) Chlorite>>

<<Alt: 170.5 - 174.5 Moderate (Alt) Muscovite>> not greasy

<<Alt: 174.5 - 180.8 Strong (Alt) Cordierite>> through mxsx minlzn

**176.40 180.80 OD Brecciated sulphides**

176.4 - 180.8: Lge QV below zone

<<Min: 176.4 - 179.3 20% Min: Pyrite>> breccia

<<Min: 176.4 - 179.3 5% Min: Pyrrhotite>> breccia

<<Min: 176.4 - 179.3 5% Min: Chalcopyrite>> breccia

<<Min: 180.6 - 206 25% Min: Calcite>> foliation oriented

**180.80 207.30 MAFi Mafic Intrusions (primarily footwall mafic intrusion)**

180.8 - 207.3: biotite from 186.4 to 207.7m, quartz patch

<<Alt: 180.8 - 186.4 Strong (Alt) Chlorite>> heavybmassive CL, strong CA

**207.30 211.70 RHYva Coarse grained to ash tuff**

207.3 - 211.7: Pyrite stringer wavy and micro faulted. Few jaerosite. Maybe exhalite.

<<Min: 207.3 - 219 1% Min: Ankerite>> foliation oriented

<<Alt: 207.3 - 211.7 Weak (Alt) Muscovite>> related to chlorite decreasing

<<Alt: 207.3 - 211.7 Weak-Moderate (Alt) Chlorite>> related to chlorite decreasing

**211.70 226.20 RHYcw Curdy textured-flow banded (flows, subvolcanics)**

<<Min: 211.7 - 226.2 2% Min: Pyrite>> stinger, sheared-micro fractured. Density of vei increase from 222 to 224

<<Min: 224 - 258.2 1% Min: Pyrite>>

<<Alt: 211.7 - 246.1 Weak (Alt) Muscovite>>

grey-green

green-brown

green-brown

grey-green

From (m)	To (m)	Width	Sample	Ag PPM	Au PPM	Cu %	Pb %	Zn %
168.20	169.70	1.50	Q311392	9.7	0.026	0.12	0.22	0.74
169.70	171.20	1.50	Q311393	1.2	-0.005	0.01	0.03	0.18
171.20	172.50	1.30	Q311394	0.3	0.006	-0.01	-0.01	0.1
172.50	174.00	1.50	Q311395	4.7	0.014	0.07	0.08	0.54
174.00	174.90	0.90	Q311396	1.8	0.005	-0.01	0.06	0.1
174.90	176.40	1.50	Q311397	2	0.008	0.01	0.05	0.1
176.40	177.90	1.50	Q311398	44.5	0.215	1.56	0.46	2.45
177.90	179.00	1.10	Q311399	35	0.216	1.67	0.2	1.37
179.00	180.50	1.50	Q311401	7.2	0.017	0.28	0.05	0.08
180.50	182.00	1.50	Q311402	-0.3	-0.005	-0.01	-0.01	0.01
182.00	183.50	1.50	Q311403	-0.3	-0.005	-0.01	-0.01	-0.01
183.50	185.10	1.60	Q311404	-0.3	-0.005	-0.01	-0.01	-0.01

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<b>226.20</b>	<b>258.20</b>	<b>RHYvl Lapilli tuff</b>									
<p><b>grey-green</b></p> <p>226.2 - 258.2: rare QE, Chlorite-quartz carbonate veins along the core axis created breccia texture locally. E.O.H</p> <p>&lt;&lt;Min: 246.1 - 258.2 10% Min: Ankerite&gt;&gt; foliation oriented, associated with black mineral vein, maybe tormalinebut relatively soft</p> <p>&lt;&lt;Alt: 246.1 - 258.2 Weak (Alt) Muscovite&gt;&gt;</p> <p>&lt;&lt;Struc: 236 - 236.5 Weak (Alt) Fault&gt;&gt; fault gouge in schistosity</p> <p><b>End of Hole @ 258.2</b></p>											