EQUITY | EXPLORATION CONSULTANTS LTD.

GeoSpark Logger ~ Drill Log

Project: KZK **Hole Number:** K16-393

Prospect:	GP4F	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Roger Hulstein
Grid:	NAD83_Z9	Hole Diameter:	96	Survey By:	Challenger_Survey	Date Logging Start:	7/15/2016
UTM Easting	419505.165	Core Size:	HQ3	Azimuth:	180.3	Date Logging Complete:	7/17/2016
UTM Northing:	6813218.931	Casing Pulled?:	Yes	Dip:	-44.8	Drill Company:	New Age
UTM Elev. (m):	1333.635	Casing Depth (m):	19.5	Length (m):	156	Drill Rig:	Zinex A5
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	7/14/2016
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	7/16/2016
Local Elev. (m):				Hole Completed?:	Completed	Purpose:	Resource/Met
						Parent Hole:	

Comments:

The purpose of the DDH was resource infill and to collect a metallurgical sample of the GP4F sulfide lens. The drill hole was successful and met the objectives. The GP4F lens was intersected at 76.37-80.12 m, near the anticipated depth, below and within the Qtz eye marker unit. As seen in other holes a 10+m thick RHYcf unit underlies the GP4F lens. A weak set of sheeted calcite-qtz-chlorite-sulfide veinlets, hosted by RHY units, is found in both the hanging wall and footwall of the GP4F. An obvious lower lens was not intersected although from about 120.18-127.3 weak chlorite alteration and trace sp-gl was noted and strong chlorite-biotite alteration and 1-3% pyrite was observed from about 142.2-147.00 m in an area of high core loss. From 133.6-147.00m the PEL and RHY units are weakly to intensely sheared and faulted and from 147.00-156.00m the DDH is in a gouge fault zone with lots of lost core. Rounded core rubble of intense chlorite alteration with Py-Sp-Gl was noted from 154.50-154.80m - could be OJ type mineralization of lower lens or cave material.

Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-44.8	178.9	1.4	180.3	TN14	Roger Hulstein	7/14/2016		☑	RH and RV aligned rig at 10AM, July 14, 2016
5	-45.52119	178.99821	1.4	180.39821	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =100
10	-45.60211	179.00106	1.4	180.40106	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =100
15	-45.59068	179.05776	1.4	180.45776	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =100
20	-45.53622	179.08164	1.4	180.48164	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =100
25	-45.61523	179.00081	1.4	180.40081	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =99.8965805858176
27	-45.4	159.9	22.1	182	ReflexEZS	New Age	7/14/2016	5747	☐	
30	-45.74608	179.20222	1.4	180.60222	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =100
35	-46.13187	179.32731	1.4	180.72731	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =100
40	-46.47291	179.44498	1.4	180.84498	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =99.860670119089
45	-46.68272	179.66316	1.4	181.06316	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =99.8964379998091
50	-46.89792	179.95845	1.4	181.35845	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =100
55	-47.17412	180.21241	1.4	181.61241	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =100
60	-47.37029	180.44467	1.4	181.84467	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =100
60.01	-47.4	162.6	22.1	184.7	ReflexEZS	New Age	7/14/2016	5743	☐	
65	-47.53983	180.6641	1.4	182.0641	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =99.8787688605413
70	-47.69701	180.9021	1.4	182.3021	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =100

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Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
75	-47.79141	181.3015	1.4	182.7015	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =100
80	-47.91366	181.37857	1.4	182.77857	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =100
85	-48.03932	181.77353	1.4	183.17353	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =100
90	-48.13401	182.13258	1.4	183.53258	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =100
90.01	-47.9	163.8	22.1	185.9	ReflexEZS	New Age	7/15/2016	5722	☐	
95	-48.2112	182.33502	1.4	183.73502	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =100
100	-48.21684	182.62402	1.4	184.02402	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =98.3628243280145
105	-48.26435	182.83891	1.4	184.23891	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =100
110	-48.24773	182.93072	1.4	184.33072	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =99.6896593450452
115	-48.21846	183.16304	1.4	184.56304	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =100
120	-48.29598	183.30329	1.4	184.70329	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =99.0121659428948
120.01	-48.2	164.1	22.1	186.2	ReflexEZS	New Age	7/15/2016	5743	☐	
125	-48.53686	183.4713	1.4	184.8713	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =99.9394034540862
130	-48.65913	183.51075	1.4	184.91075	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =100
135	-48.60797	183.41479	1.4	184.81479	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =97.8893765101896
140	-48.74015	183.51301	1.4	184.91301	Gyro	Alicia Vainio	7/16/2016		☑	Motion Quality =100
150	-48.6	165.5	22.1	187.6	ReflexEZS	New Age	7/15/2016	5756	☐	Hole shut down at 8AM July 16, 2016

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

0.00 20.10 OVBN Overburden

20.10 24.07 RHYvl Lapilli tuff

<<Min: 20.1 - 24.07 0.1% Min: Pyrrhotite>>

<<Alt: 20.1 - 24.07 Weak Calcite>> and as fracture filling

<<Struc: 20.5 - 21.7 Weak-Moderate Fault>> broken and crushed core, minor gougecalcite on fractures

24.07 25.40 PEL Equigranular biotite + calcite +/- quartz rock

24.07 - 25.4: Bi - calcite rich PEL with chlorite blebs and bands over 40cm section in middle.

<<Min: 24.07 - 25.4 0.1% Min: Sphalerite>>

<<Min: 24.07 - 25.4 0.5% Min: Pyrite>>

<<Alt: 24.07 - 25.4 Strong Calcite>>

<<Alt: 24.07 - 25.4 Moderate Biotite>>

<<Alt: 24.17 - 25.25 Moderate Chlorite>> chl bands and blebs in center of PEL unit, proto OJ alteration

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

25.40 29.75 RHYvl Lapilli tuff

<<Min: 25.4 - 29.75 3% Min: Pyrite>>

<<Min: 25.4 - 29.75 1% Min: Pyrrhotite>>

<<Alt: 25.4 - 29.75 Weak-Moderate Calcite>> and as diss

<<Alt: 29.65 - 30 Weak-Moderate Chlorite>>

<<Struc: 25.4 - 26.4 Weak Fault>> broken core

<<Struc: 26.4 - 29 Moderate dominant foliation>>

29.75 31.80 PEL Equigranular biotite + calcite +/- quartz rock

29.75 - 31.8: 30.20-3.80: Bleached, biotite destroyed in and around gouge fault zone.

<<Min: 29.75 - 31.8 1% Min: Pyrite>>

<<Alt: 29.75 - 31.8 Strong Calcite>> and as bands

<<Alt: 30 - 41.95 Trace Chlorite>>

<<Vein: 30.22 - 31.8 10% Calcite>> calcite bands and veinlets, vein clasts in fault brx

<<Struc: 30.52 - 31.65 Strong Fault>> gouge and breccia

31.80 41.90 RHYvl Lapilli tuff

31.8 - 41.9: good lpl texture, bleached, remnant BCQlpl texture

<<Min: 31.8 - 37.2 1% Min: Pyrrhotite>>

<<Min: 31.8 - 41.47 3% Min: Pyrite>> locally concentrated in calcite bands

<<Min: 41.47 - 42.82 1% Min: Pyrite>>

<<Min: 41.47 - 42.82 1% Min: Pyrrhotite>>

<<Alt: 31.8 - 37.3 Weak Muscovite>> focused around fracture zones

<<Alt: 31.8 - 41.27 Weak Calcite>> and as diss

<<Alt: 37.3 - 41.95 Weak-Moderate Muscovite>> focused around fracture zones

<<Alt: 41.27 - 42.82 Moderate-Strong Calcite>> diss and as bands

<<Vein: 41.49 - 42.82 5% Quartz-Carbonate>> mostly calcite

<<Struc: 35.1 - 36 Moderate dominant foliation>>

<<Struc: 41.37 - 41.46 Moderate-Strong Fault>>

41.90 42.82 PEL Equigranular biotite + calcite +/- quartz rock

<<Alt: 41.95 - 43 Weak Biotite>>

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

42.82 48.13 RHYva Coarse grained to ash tuff

42.82 - 48.13: trace Bippo, PEL = brown biotite wisps and bands concentrated in upper section of unit. Alteration and minor disseminated sulfides also in upper section of unit (evidence of fluids trapped below overlying PEL? Muscovite alteration increases towards bottom of unit.

<<Min: 42.82 - 45.7 3% Min: Pyrrhotite>> concentratedin qtz-cal-chlorite bands

<<Min: 43.4 - 44 0.1% Min: Sphalerite>>

<<Min: 43.4 - 44 0.1% Min: Galena>>

<<Min: 43.4 - 45.7 3% Min: Pyrite>> mostly diss in bands and blebby patches

<<Min: 45.7 - 47.9 0.1% Min: Sphalerite>>

<<Min: 45.7 - 47.9 3% Min: Pyrite>>

<<Alt: 42.82 - 44 Weak Chlorite>>

<<Alt: 42.82 - 45 Weak-Moderate Calcite>>

<<Alt: 42.82 - 46 Weak Muscovite>>

<<Alt: 45 - 46.4 Weak Calcite>>

<<Alt: 46 - 48.07 Moderate-Strong Muscovite>> bleached, abundant fine muscovite

<<Alt: 46.4 - 47.9 Trace Calcite>>

<<Alt: 47.9 - 48.85 Moderate Calcite>>

<<Struc: 44 - 45 Weak dominant foliation>>

<<Struc: 46 - 47.57 Moderate Fault>> muscovite altered schist

48.13 51.56 RHYvx Quartz and/or feldspar crystal tuff

48.13 - 51.56: First appearance of qtz eye marker unit. Grey color due to diss Bi - Bippo.

<<Min: 48.13 - 49 1% Min: Sphalerite>> concentrated in chl-cal-qtz-py+/-gl bands

<<Min: 48.13 - 49 3% Min: Pyrite>>

<<Min: 48.13 - 49 0.1% Min: Galena>>

<<Min: 48.13 - 49 0.1% Min: Chalcopyrite>>

<<Min: 49 - 51.66 1% Min: Pyrite>>

<<Min: 49 - 51.66 3% Min: Pyrrhotite>>

<<Min: 49.5 - 51.56 0.5% Min: Sphalerite>> in bands with chl-calcite

<<Alt: 48.13 - 51.56 Weak-Moderate Chlorite>> and as rare bands

<<Alt: 48.13 - 51.56 Weak-Moderate Biotite>> as wisps and with chlorite

<<Alt: 48.85 - 54.4 Weak-Moderate Calcite>> diss and minor bands

<<Struc: 49 - 49.5 Moderate dominant foliation>>

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

<<Struc: 50.8 - 51 Weak Foliation>> sulfide band

<<Struc: 51 - 51.2 Moderate dominant foliation>>

51.56 55.03 RHYva Coarse grained to ash tuff

51.56 - 55.03: Mixed unit, variably bleached, weak muscovite alteration. Minor bands and blebs of qtz-calcite-chlorite

<<Min: 51.66 - 57.72 1% Min: Pyrite>>

<<Alt: 51.56 - 70.5 Weak Biotite>>

<<Alt: 51.76 - 54.4 Weak-Moderate Muscovite>> associated with bleached PEL

<<Alt: 54.3 - 59.5 Weak Chlorite>> often in bands

<<Alt: 54.4 - 55.03 Moderate-Strong Calcite>>

<<Struc: 51.56 - 57 Weak Vein>> cc vinlets in PEL unit

55.03 57.30 RHYvx Quartz and/or feldspar crystal tuff

55.03 - 57.3: marker unit

<<Min: 55.52 - 56.37 1% Min: Sphalerite>> dis in qtz-cal+/-chl bands

<<Alt: 55.03 - 57.3 Weak Calcite>>

57.30 57.72 PEL Equigranular biotite + calcite +/- quartz rock

57.3 - 57.72: Minor bands and blebs of qtz-calcite-chlorite

<<Alt: 57.3 - 57.72 Moderate-Strong Calcite>>

57.72 63.80 RHYvx Quartz and/or feldspar crystal tuff

57.72 - 63.8: marker unit

<<Min: 57.72 - 63.8 3% Min: Pyrite>> diss and in qtz-cal-sp veinlets

<<Min: 58.97 - 63.8 1% Min: Sphalerite>> focused in this foliaform qtz-cal-py+/- chl bands.

<<Min: 58.97 - 63.8 0.1% Min: Galena>>

<<Min: 58.97 - 63.8 0.1% Min: Chalcopyrite>>

<<Alt: 57.72 - 63.8 Weak-Moderate Calcite>> diss and bands

<<Alt: 59.5 - 61.7 Weak-Moderate Muscovite>> bleached zone

<<Alt: 61.7 - 70.5 Weak Chlorite>>

<<Struc: 58.2 - 58.5 Moderate dominant foliation>> biotite bands and wisps defining fol

<<Struc: 61.7 - 62 Moderate Foliation>> sulfide bands appear to crosscut DFOL at slight angle.

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
		<<Struc: 61.7 - 62 Moderate dominant foliation>>									
63.80	**64.73**	**PEL** **Equigranular biotite + calcite +/- quartz rock**									
		63.8 - 64.73: Minor bands and blebs of qtz-calcite-chlorite									
		<<Min: 63.8 - 64.73 0.5% Min: Pyrite>>									
		<<Alt: 63.8 - 64.73 Strong Calcite>>									
64.73	**72.00**	**RHYvx** **Quartz and/or feldspar crystal tuff**	70.50	72.00	1.50	D00004389	0.019	8.8	0.02	0.17	1.08
		64.73 - 72: 69.80-69.96: PEL unit or MAFi dyke. Most of RHYvx unit is grey to to Bi content, Bippo.									
		<<Min: 64.73 - 66.2 1% Min: Sphalerite>> in bands as above									
		<<Min: 64.73 - 66.2 3% Min: Pyrite>>									
		<<Min: 64.73 - 66.2 0.1% Min: Chalcopyrite>>									
		<<Min: 66.2 - 70.8 0.1% Min: Sphalerite>> In bands									
		<<Min: 66.2 - 70.8 1% Min: Pyrite>>									
		<<Min: 66.2 - 70.8 0.1% Min: Galena>>									
		<<Min: 70 - 71.45 0.1% Min: Galena>>									
		<<Min: 70.8 - 71.45 0.5% Min: Sphalerite>> in bands as above									
		<<Min: 70.8 - 73.77 3% Min: Pyrite>>									
		<<Alt: 64.73 - 72 Weak Calcite>> and as diss. Often in bands with qtz-chlorite and sulfides									
		<<Vein: 67.65 - 67.85 80% Quartz-Chlorite-Sulphide>> irregular qtz 'vein' or qtz flooding, chlorite on margins, sulfide clasts									
		<<Vein: 69.8 - 70.3 5% Quartz-Carbonate>> margins of PEL unit									
		<<Struc: 71.6 - 71.8 Moderate dominant foliation>>									
72.00	**76.37**	**RHYva** **Coarse grained to ash tuff**	72.00	73.50	1.50	D00004391	0.035	2.2	0.02	0.05	0.14
		72 - 76.37: mixed package of RHYva - PEL with gradational contacts. Ash (light grey sections) mod-strong muscovite altered. Minor calcite-qtz-chlorite+/- biotite blebs and bands in PEL sections. Alteration increases markedly in last 0.5m.									
		<<Min: 73.77 - 75.84 0.1% Min: Sphalerite>>	73.50	75.00	1.50	D00004392	0.009	0.7	-0.01	0.02	0.05
		<<Min: 73.77 - 75.84 1% Min: Pyrite>>	75.00	75.83	0.83	D00004393	-0.005	-0.3	-0.01	-0.01	0.01
		<<Min: 75.84 - 76.37 1% Min: Sphalerite>>	75.83	76.34	0.51	D00004394	0.067	6.5	0.08	0.41	1.33
		<<Min: 75.84 - 76.37 1% Min: Pyrite>>	76.34	77.10	0.76	D00004395	0.203	21.7	0.12	1.03	3.21
		<<Min: 75.84 - 76.37 5% Min: Pyrrhotite>>									
		<<Min: 75.84 - 76.37 0.1% Min: Galena>>									

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
<<Min: 75.84 - 76.37 0.5% Min: Chalcopyrite>>											
<<Alt: 72 - 73.77 Weak Calcite>> PEL bands are calcareous											
<<Alt: 73.77 - 76.14 Moderate Calcite>> PEL bands are calcareous											
<<Alt: 76.14 - 78.25 Trace Calcite>>											
<<Alt: 76.34 - 77.1 Weak Garnet>>											
<<Struc: 73.77 - 75 Moderate dominant foliation>> calcite veins and bleached banding											
76.37	**77.10**	**OJ** **Heavilly disseminated sulphides and/or stringer style mineralization in proximal altered rock** **MCG**									
76.37 - 77.1: Banded and blebs of qtz-chl-biotite-cordierite-sulfides.											
<<Min: 76.37 - 77.1 3% Min: Sphalerite>>											
<<Min: 76.37 - 77.1 1% Min: Pyrite>>											
<<Min: 76.37 - 77.1 5% Min: Pyrrhotite>>											
<<Min: 76.37 - 77.1 0.5% Min: Galena>>											
<<Min: 76.37 - 77.1 1% Min: Chalcopyrite>>											
<<Struc: 76.55 - 76.9 Moderate-Strong dominant foliation>>											
<<Struc: 77.05 - 77.15 Moderate-Strong Contact>>											
77.10	**77.83**	**OF** **Pyrrhotite rich sulphides** **MCG**	77.10	77.83	0.73	D00004396	10.58	161	0.33	5.01	8.42
77.1 - 77.83: Massive to interstitial PO with abundant CI and possibly leucite (Jerome P - Steve Piercy comm.). 10cm qtz at lower contact.											
<<Min: 77.1 - 77.83 3% Min: Sphalerite>>											
<<Min: 77.1 - 77.83 5% Min: Pyrite>>											
<<Min: 77.1 - 77.83 30% Min: Pyrrhotite>>											
<<Min: 77.1 - 77.83 3% Min: Galena>>											
<<Min: 77.1 - 77.83 3% Min: Chalcopyrite>>											
<<Struc: 77.15 - 77.3 Weak-Moderate Foliation>> crude sulfid banding											
77.83	**80.12**	**OL** **semi to massive sulphide; 10 – 40% coarse buckshot PY in a SP +/- PO, MG, GL, CP matrix** **MCG**	77.83	79.00	1.17	D00004397	2.37	231	0.26	8.22	13.3
77.83 - 80.12: SP-PO matrix with diss buckshot pyrite. Minor cordierite and possibly some large 1-2cm leucite crystals. Lower contact marked by 5cm of qtz and leucite(?) crystals, minor chlorite.											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
		<<Min: 77.83 - 80.12 20% Min: Sphalerite>> semi mass in places	79.00	80.12	1.12	D00004398	2.42	194	0.16	6.76	11.6
		<<Min: 77.83 - 80.12 20% Min: Pyrite>> buckshot									
		<<Min: 77.83 - 80.12 15% Min: Pyrrhotite>> semi mass in places									
		<<Min: 77.83 - 80.12 10% Min: Galena>>									
		<<Alt: 78.25 - 78.95 Weak Calcite>>									
		<<Alt: 78.95 - 80.16 Moderate-Strong Calcite>> diss in matrix									
		<<Struc: 80.1 - 80.12 Moderate-Strong Contact>>									
80.12	**81.85**	**RHYvx** **Quartz and/or feldspar crystal tuff**	80.12	81.00	0.88	D00004399	0.036	3.6	0.01	0.15	0.22
		80.12 - 81.85: Upper contact to 81.85m is mixed RHYvx (qtz eye) and PEL with Bipppo and qtz - clacite - chlorite blebs and bands.									
		<<Min: 80.12 - 81.85 1% Min: Pyrite>>	81.00	81.85	0.85	D00004401	0.038	173	-0.01	0.03	0.07
		<<Min: 80.12 - 81.85 0.1% Min: Pyrrhotite>>									
		<<Alt: 80.12 - 80.9 Weak-Moderate Chlorite>>									
		<<Alt: 80.12 - 81.85 Weak-Moderate Biotite>>									
		<<Struc: 80.32 - 81 Moderate dominant foliation>>									
81.85	**86.61**	**RHYvx** **Quartz and/or feldspar crystal tuff**	81.85	83.00	1.15	D00004402	0.017	7.5	0.02	0.11	0.22
		81.85 - 86.61: PEL bands and wisps (brown biotite)									
		<<Min: 81.85 - 86.61 0.5% Min: Sphalerite>>	83.00	84.50	1.50	D00004403	-0.005	3.7	0.01	0.19	0.61
		<<Min: 81.85 - 86.61 3% Min: Pyrite>> diss and in sulfid bands	84.50	86.00	1.50	D00004404	0.015	2.4	0.01	0.28	0.47
		<<Min: 81.85 - 86.61 1% Min: Pyrrhotite>> in sulfide bands									
		<<Min: 81.85 - 86.61 0.1% Min: Galena>>									
		<<Alt: 81.85 - 82.61 Weak Muscovite>> fine white muscovite									
		<<Alt: 82.16 - 82.25 Moderate Calcite>>									
		<<Alt: 82.25 - 86.61 Trace Calcite>>									
		<<Struc: 82.6 - 82.85 Weak-Moderate dominant foliation>>									
		<<Struc: 82.79 - 82.8 Moderate-Strong Foliation>> sulfide band									
		<<Struc: 85 - 85.5 Moderate dominant foliation>>									
86.61	**89.11**	**PEL** **Equigranular biotite + calcite +/- quartz rock**									
		86.61 - 89.11: minor bands of ash - bleaching									

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
<<Min: 86.61 - 89.11 0.5% Min: Pyrite>>											
<<Min: 86.61 - 89.11 1% Min: Pyrrhotite>>											
<<Alt: 86.61 - 87.65 Moderate-Strong Calcite>>											
<<Alt: 87.65 - 88.9 Weak Calcite>> diss patches											
<<Alt: 87.65 - 93.6 Weak Muscovite>>											
<<Alt: 88.9 - 89.1 Moderate-Strong Calcite>>											
<<Alt: 89.1 - 96.3 Trace Calcite>>											
<<Struc: 87.7 - 88.3 Moderate dominant foliation>>											
89.11	**101.02**	**RHYvx Quartz and/or feldspar crystal tuff**	94.00	94.43	0.43	D00004405	0.006	13.9	0.01	0.57	0.4
89.11 - 101.02: very similar to marker unit except for presence of 5% decrepitated feldspar phenocrysts (avg 0.5-1.0cm).											
<<Min: 89.11 - 90.2 0.5% Min: Galena>> in sulfide bands											
<<Min: 89.11 - 90.2 3% Min: Pyrrhotite>>											
<<Min: 89.11 - 90.2 1% Min: Pyrite>>											
<<Min: 89.11 - 90.2 0.5% Min: Sphalerite>> in sulfide bands											
<<Min: 89.11 - 90.2 0.1% Min: Chalcopyrite>>											
<<Min: 90.2 - 93 0.1% Min: Galena>>											
<<Min: 90.2 - 93 1% Min: Pyrite>>											
<<Min: 90.2 - 93 0.1% Min: Sphalerite>>											
<<Min: 90.2 - 93.55 1% Min: Pyrrhotite>>											
<<Min: 93 - 93.55 3% Min: Pyrite>> in fractures- sparse bands (<0.5cm avg)											
<<Min: 93 - 93.55 1% Min: Sphalerite>> in fractures- sparse bands (<0.5cm avg)											
<<Min: 93 - 93.55 0.5% Min: Galena>> in fractures- sparse bands (<0.5cm avg)											
<<Min: 94 - 94.43 1% Min: Galena>>											
<<Min: 94 - 94.43 1% Min: Pyrrhotite>>											
<<Min: 94 - 94.43 3% Min: Pyrite>>											
<<Min: 94 - 94.43 1% Min: Sphalerite>>											
<<Min: 94.43 - 100.5 1% Min: Pyrrhotite>> diss in bands											
<<Min: 94.43 - 113.75 1% Min: Pyrite>>											
<<Min: 94.43 - 118.78 0.1% Min: Sphalerite>> in fractures- sparse bands (<0.5cm avg)											
<<Min: 94.43 - 118.78 0.1% Min: Galena>> in fractures - bands											
<<Alt: 90 - 113.75 Trace Chlorite>> patchey and in thin qtz-cal veinlets											
<<Alt: 96.3 - 108 Weak Calcite>>											

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

<<Alt: 99.5 - 101.9 Weak Muscovite>>

<<Vein: 93.55 - 94.41 95% Quartz-Sulphide>> qtz vein with 5% clasts of biotite alt rhyolite, 94.00-94.42: 3% sp-gl-py, rare cpy and chlorite filling fractures.

<<Struc: 93 - 93.5 Weak Fault>> broken core

<<Struc: 94.4 - 94.45 Strong Vein>>

<<Struc: 98.9 - 99.1 Moderate dominant foliation>>

<<Struc: 99.5 - 100.45 Weak-Moderate Fault>> broken core, minor crushed core

<<Struc: 100.6 - 105.1 Moderate Fault>> zones broken and crushed core, minor gouge, sericite-clay on fractures.

101.02 113.75 RHYcf Feldspar & feldspar quartz porphyry

101.02 - 113.75: massive light grey unit, very little foliaform biotite unlike adjacent RHYvx, 5-10% feldspar phenocrysts, sparse blue qtz eyes (unlike abunadant QE in adjacent RHYvx). Uniform except for rare wispy biotite bands).

<<Alt: 101.9 - 105.2 Weak-Moderate Muscovite>> sericite on fractures

<<Alt: 105.2 - 120.18 Weak Muscovite>>

<<Alt: 108 - 120.18 Weak-Moderate Calcite>>

<<Struc: 107.42 - 108.1 Moderate Fault>> broken, core rubble

<<Struc: 109 - 113.75 Weak Fault>> fractured with clay-sericite

113.75 117.00 RHYvx Quartz and/or feldspar crystal tuff

113.75 - 117: as RNYvx QE above. Feldspar phenocrysts increase increase over last 0.75m.

<<Min: 113.75 - 117 3% Min: Pyrite>>

<<Min: 113.9 - 116.1 1% Min: Pyrrhotite>>

<<Alt: 113.75 - 117 Weak-Moderate Chlorite>>

<<Struc: 113.75 - 114 Moderate dominant foliation>>

117.00 120.18 RHYcf Feldspar & feldspar quartz porphyry

117 - 120.18: similar to RHYcf above but more feldspar phenocrysts.

<<Min: 117 - 139.15 1% Min: Pyrite>>

<<Alt: 119.7 - 125.9 Weak-Moderate Biotite>> PATCHY

<<Struc: 117 - 119 Weak-Moderate Fault>> broken, fractured with clay-sericite

120.18 122.20 RHY undifferentiated rhyolite

120.18 - 122.2: altered, strong sericite zone, some missing core.

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

<<Alt: 120.18 - 122.2 Moderate Muscovite>> sericite in healed shear zone

<<Alt: 120.18 - 124 Moderate-Strong Calcite>>

<<Struc: 120.25 - 122 Weak-Moderate Fault>> broken, fractured with clay-sericite, missing core

122.20 122.70 MAFi Mafic Intrusions (primarily footwall mafic intrusion)

122.2 - 122.7: med grained qtz-biot-feldspar (dyke?), finer grained on margins.

<<Alt: 122.2 - 129.48 Weak Muscovite>>

122.70 125.96 RHYva Coarse grained to ash tuff

122.7 - 125.96: Messy unit, RHYva-PEL, rare blue qtz eyes in RHYva sections. Unit is approximately where lower lens was expected.

<<Min: 123.4 - 125.4 0.5% Min: Sphalerite>> mm veinlets

<<Min: 123.4 - 125.4 0.5% Min: Galena>>

<<Alt: 124 - 127 Weak Calcite>>

<<Alt: 124.6 - 127.5 Weak-Moderate Chlorite>> PATCHY

<<Vein: 125.6 - 125.75 50% Quartz>> qtz flooding

<<Struc: 122.75 - 124.1 Moderate-Strong Fault>> broken and crushed core, minor gouge, sericite-clay on fractures.

125.96 127.00 RHY undifferentiated rhyolite

125.96 - 127: possibly a partly silicified RHYva.

<<Struc: 126.15 - 126.25 Weak dominant foliation>>

<<Struc: 126.9 - 127 Weak Fault>> broken, fractured with clay-sericite

127.00 132.07 PEL Equigranular biotite + calcite +/- quartz rock

127 - 132.07: Bi-r PEL at margins and bleached PEL in center (128,70-130.06m). Minor qtz-cal-chl bands with trace diss sulphides below 130.06m.

<<Alt: 127 - 132.1 Trace Calcite>>

<<Alt: 128.38 - 128.58 Weak Garnet>>

<<Vein: 127 - 127.3 50% Calcite>> calcite vein breccia, margin of PEL unit

<<Vein: 128.5 - 132.2 5% Calcite>> calcite bands

<<Struc: 128.8 - 129.5 Weak Fault>> broken, fractured with clay-sericite

<<Struc: 129.6 - 129.9 Moderate dominant foliation>> Calcite bands

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

132.07 136.66 RHYvx Quartz and/or feldspar crystal tuff

132.07 - 136.66: 133.42m; 15cm PEL unit. 133.57-136.34m; fault zone in RHYvx - QE

<<Alt: 132.07 - 139.15 Weak-Moderate Muscovite>> in breccciated fault zone

<<Alt: 132.1 - 133.4 Weak Calcite>>

<<Alt: 133.4 - 138 Moderate Calcite>>

<<Struc: 133.11 - 136 Strong Fault>> missing core, broken and crushed core, minor gouge, sericite-clay on fractures.

136.66 137.50 PEL Equigranular biotite + calcite +/- quartz rock

137.50 139.10 RHYvx Quartz and/or feldspar crystal tuff

137.5 - 139.1: broken, crushed RHYvx - in fault zone, missing core

<<Alt: 138 - 139.15 Weak Calcite>> patchy

<<Struc: 137.5 - 139.15 Strong Fault>> broken and crushed core, minor gouge, sericite-clay on fractures.

139.10 147.00 PEL Equigranular biotite + calcite +/- quartz rock

139.1 - 147: broken, crushed PEL - in fault zone, missing core. Minor RHYvx-QE with abundant biotite at approx.139.7-140.80m.

<<Min: 139.15 - 143.6 0.5% Min: Pyrite>>

<<Min: 143.6 - 147 3% Min: Pyrite>>

<<Alt: 139.14 - 143.4 Weak-Moderate Chlorite>>

<<Alt: 139.15 - 153 Moderate-Strong Calcite>> patchy, minor non calc or wekly calcareous sections. Blebs, veins, diss cc.

<<Alt: 143.4 - 147.3 Moderate Chlorite>> and as diss and blebs. In sheared PEL unit

<<Alt: 143.4 - 147.3 Weak-Moderate Biotite>> with chlorite

<<Vein: 139.15 - 147 10% Calcite>> calcite bands, veins and vein clasts, both foliaform and cross cutting

147.00 156.00 FLZ Fault Zone

147 - 156: Gouge and crushed - broken core, missing core. Pieces of PEL, RHY and possibly weakly mineralized OJ at 154.50-154.80m (Chlorite with minor diss SP and PY). 154.5-156.0m :wash and cave.

<<Min: 154.5 - 154.8 0.5% Min: Sphalerite>>

<<Min: 154.5 - 154.8 10% Min: Pyrite>>

<<Min: 154.5 - 154.8 0.5% Min: Galena>>

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
<<Alt: 153 - 154.2 Trace Calcite>> fault gouge											
<<Alt: 154.5 - 154.8 Strong Chlorite>> could be cave material											
<<Vein: 147.1 - 149.9 20% Quartz-Carbonate>> fault breccia, qtz clasts cemented by calcite											
End of Hole @ 156											