

## GeoSpark Logger ~ Drill Log

**Project:**

**KZK**

**Hole Number:**

**K16-341**

Prospect:	Krakatoa	Hole Type:	DD	Survey Type:	RTK DGPS	Logged By:	Dillon Hume
Grid:	NAD83_Z9	Hole Diameter:	75.7	Survey By:	Challenger_Survey	Date Logging Start:	5/11/2016
UTM Easting	414973.0831	Core Size:	NQ3	Azimuth:	24.58	Date Logging Complete:	5/13/2016
UTM Northing:	6815005.1129	Casing Pulled?:	Yes	Dip:	-54	Drill Company:	Hytech
UTM Elev. (m):	1385.677	Casing Depth (m):	30	Length (m):	190	Drill Rig:	Tech 5000
Local Easting:		Stored?:	Yes	Claims Title		Drill Started:	5/10/2016
Local Northing:		Cemented?:	Yes	Core Storage Loc.:	KZK Camp	Drill Completed:	5/12/2016
Local Elev. (m):				Hole Completed?:	Completed	Purpose:	Resource Definition
Comments:	Parent Hole:						

K16-341 was drilled to test an inferred portion the Krakatoa upper lens. Bedrock was encountered at 31.5 m depth and consists of rhyolite to a depth of 56.9 m. Below the rhyolite there is a mudstone unit from 56.9-61 m with a lower faulted contact (61-66 m). Below this fault, rhyolite persists to 144.7 m depth, with moderate MU alteration and an interval of strong pervasive MU alteration (130.2-136.7 m) and patchy BI alteration associated with disseminated sulfides (134-135.8 m). Below the rhyolite unit, the mafic sill occurs from 144.7-162 m. From 162-162.25 m there is a small lens of massive sulfide (OB) above another MU-altered rhyolite (135.8-166.1 m). The lower contact of this rhyolite grades into the mafic sill with disseminated sulfides (166.1-166.6 m). The mafic sill persists from 166.6-190 m (EOH). This hole was terminated before intersecting the Krakatoa main lens in order to avoid drilling a main lens pierce point that will be tested with a subsequent drill hole..

### Downhole Surveys:

Depth (m)	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Survey Type	Survey By	Survey Date	Mag Field	Accept Values?	Comments
0	-54	23.18	1.4	24.58	APS	Chris Hughes	5/10/2016		<input checked="" type="checkbox"/>	Rig aligned to true north (measured azimuth). Grid convergence of 1.4 deg applied to correct to UTM azimuth.
39	-52.4	5.4	22.1	27.5	ReflexEZS	Hytech	5/11/2016	5705	<input checked="" type="checkbox"/>	Measured azimuth relative to magnetic north. Grid declination of 22.1 deg applied to correct to UTM azimuth.
56.6	-52.6	5.1	22.1	27.2	ReflexEZS	Hytech	5/11/2016	5718	<input checked="" type="checkbox"/>	Measured azimuth relative to magnetic north. Grid declination of 22.1 deg applied to correct to UTM azimuth.
87	-53.1	6.8	22.1	28.9	ReflexEZS	Hytech	5/11/2016	5743	<input checked="" type="checkbox"/>	Measured azimuth relative to magnetic north. Grid declination of 22.1 deg applied to correct to UTM azimuth.
118	-53.4	8.7	22.1	30.8	ReflexEZS	Hytech	5/11/2016	5738	<input checked="" type="checkbox"/>	Measured azimuth relative to magnetic north. Grid declination of 22.1 deg applied to correct to UTM azimuth.
143	-54	10.6	22.1	32.7	ReflexEZS	Hytech	5/12/2016	5786	<input checked="" type="checkbox"/>	Measured azimuth relative to magnetic north. Grid declination of 22.1 deg applied to correct to UTM azimuth.
168	-54.5	12.1	22.1	34.2	ReflexEZS	Hytech	5/12/2016	5731	<input checked="" type="checkbox"/>	Measured azimuth relative to magnetic north. Grid declination of 22.1 deg applied to correct to UTM azimuth.
190	-54.7	11.8	22.1	33.9	ReflexEZS	Hytech	5/12/2016	5710	<input checked="" type="checkbox"/>	Measured azimuth relative to magnetic north. Grid declination of 22.1 deg applied to correct to UTM azimuth.

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
<b>0.00</b>	<b>31.50</b>	<b>OVBN Overburden</b>									

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
0 - 31.5: Note small interval of semi-massive sulphide from 29.7-30 m, which may represent in-situ highly fractured rock above solid bedrock or is transported overburden?											
<b>31.50</b>	<b>47.00</b>	<b>RHYvi Lapilli tuff</b>									
<<Min: 31.5 - 50.6 2% Min: Pyrrhotite>>											
<<Alt: 31.5 - 49.4 Weak-Moderate Muscovite>>											
<<Alt: 31.5 - 56.9 Trace Calcite>>											
<<Struc: 39.3 - 39.31 dominant foliation>> Low angle to core axis foliation											
<<Struc: 46.4 - 47 Weak-Moderate Fault>> Clay gouge fault zone with significant core loss. Only ~10 cm of the fault zone remains.											
<b>47.00</b>	<b>56.90</b>	<b>RHYc Rhyolite coherent volcanics</b>									
47 - 56.9: Siliceous banded rhyolite with zone of patchy pinch-swell and folded semi-massive sulphide layers from 50.6-52 m. Lower contact is gradational with MDSc.											
<<Min: 50.6 - 52 7% Min: Pyrite>> Blebby to pinch-swell banded pyrite +/- pyrrhotite											
<<Min: 50.6 - 52 1% Min: Pyrrhotite>>											
<<Min: 52 - 56.9 2% Min: Pyrrhotite>>											
<<Min: 55.6 - 56.9 2% Min: Pyrite>>											
<<Alt: 49.4 - 50.6 Strong Muscovite>>											
<<Alt: 50.6 - 56.9 Moderate Muscovite>>											
<b>56.90</b>	<b>61.00</b>	<b>MDSc Carbonaceous dominant mudstone</b>									
<<Min: 56.9 - 61 3% Min: Pyrite>>											
<<Alt: 56.9 - 66 Weak-Moderate Calcite>>											
<b>61.00</b>	<b>66.00</b>	<b>MDSc Carbonaceous dominant mudstone</b>									
61 - 66: Faulted contact between mudstone and underlying rhyolite with high core loss											
<<Min: 61 - 66 1% Min: Pyrite>>											
<<Struc: 61 - 66 Moderate Fault>> Faulted contact between mudstone and underlying rhyolite											
<b>66.00</b>	<b>96.60</b>	<b>RHYv Rhyolite volcanoclastic</b>									
<<Min: 66 - 130.2 2% Min: Pyrite>>											
<<Alt: 66 - 130.2 Moderate Muscovite>>											
<<Alt: 66 - 134 Weak Calcite>>											
<<Struc: 68 - 68.01 dominant foliation>>											

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
<<Struc: 78.4 - 78.41 dominant foliation>> <<Struc: 93.05 - 93.06 dominant foliation>> <<Struc: 94.7 - 94.71 dominant foliation>>											
<b>96.60</b>	<b>130.20</b>	<b>RHYcw Curdy textured-flow banded (flows, subvolcanics)</b>	128.70	130.20	1.50	B00292001	0.02	4.9	-0.01	0.05	0.15
<<Vein: 123.5 - 123.52 100% Quartz 90 deg. >> ~2 cm wide QZ vein with diss cgr SP + PY + GL +/- CP. Formed at high angle to dominant foliation. Late remobilization of sulfides. <<Vein: 124.8 - 125.2 100% Quartz-Carbonate>> QZ-Carb veining +/- sulfides. Deformed within foliation <<Vein: 129.9 - 130 100% Quartz>> QZ vein											
<b>130.20</b>	<b>134.00</b>	<b>RHY undifferentiated rhyolite</b>	130.20	131.00	0.80	B00292002	0.073	9.3	0.02	0.1	0.32
130.2 - 134: Strongly MU altered rhyolite											
<<Min: 130.2 - 134 3% Min: Pyrite>>			131.00	132.50	1.50	B00292003	0.011	1.5	-0.01	0.02	0.03
<<Alt: 130.2 - 136.7 Strong Muscovite>>			132.50	134.00	1.50	B00292004	0.009	1.4	-0.01	0.01	0.07
<<Vein: 130.8 - 131.1 5% Quartz-Tourmaline>> QZ-Carb-Tourmaline vein with low angle to core axis											
<<Vein: 131.9 - 132 100% Quartz-Carbonate>> Massive QZ-Carb vein											
<b>134.00</b>	<b>135.80</b>	<b>OI Heavily disseminated sulphides in host schist</b>	134.00	134.90	0.90	B00292005	0.319	48.3	0.08	0.39	0.92
134 - 135.8: Zone of disseminated PY +/- SP associated with blebby BI alteration											
<<Min: 134 - 135.8 1% Min: Sphalerite>> Local blebs with higher concentrations of disseminated PY +/- SP and BI alteration			134.90	135.80	0.90	B00292006	0.757	36.8	0.05	0.29	0.43
<<Min: 134 - 135.8 5% Min: Pyrite>> Local blebs with higher concentrations of disseminated PY +/- SP and BI alteration											
<<Alt: 134 - 135.8 Moderate Biotite>> BI alteration associated with patches of disseminated PY +/- SP											
<<Alt: 134 - 144.7 Moderate Calcite>>											
<b>135.80</b>	<b>144.70</b>	<b>RHYc Rhyolite coherent volcanics</b>	135.80	137.30	1.50	B00292007	0.037	3.3	-0.01	0.03	0.03
135.8 - 144.7: Siliceous banded and MU cleavage coherent rhyolite											
<<Min: 135.8 - 144.7 0.5% Min: Pyrite>> Trace disseminated pyrite			137.30	138.80	1.50	B00292008	0.01	2.3	-0.01	0.02	0.01
<<Vein: 138.2 - 138.25 100% Quartz-Carbonate>> Massive QZ-Carb vein			138.80	140.30	1.50	B00292009	0.007	1.3	-0.01	0.01	-0.01
<b>144.70</b>	<b>162.00</b>	<b>MAFi Mafic Intrusions (primarily footwall mafic intrusion)</b>	157.50	159.00	1.50	B00292011	0.005	0.8	-0.01	0.01	0.01
<<Min: 144.7 - 162 0.5% Min: Pyrite>>			159.00	160.50	1.50	B00292012	0.006	0.7	-0.01	-0.01	0.01
<<Alt: 144.7 - 162 Strong Chlorite>>			160.50	162.00	1.50	B00292013	-0.005	-0.3	-0.01	-0.01	0.02

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
<<Alt: 144.7 - 162 Moderate Calcite>> <<Alt: 144.7 - 162 Moderate Biotite>> <<Struc: 144.7 - 145.6 Weak-Moderate Fault>> Green chloritic fault gouge at contact between MAFi and RHY <<Struc: 147.95 - 147.96 dominant foliation>> <<Struc: 155.37 - 155.38 dominant foliation>>											
<b>162.00</b>	<b>162.35</b>	<b>OB Wispy laminar, fine buckshot textured, massive sulphide with lesser magnetite</b>	162.00	162.35	0.35	B00292014	1.53	295	0.53	3.03	6.92
162 - 162.35: OB mineralization from 162-162.25 m on MAFi and RHY contact. (Unit made larger in order to match minimum sample size)  <<Min: 162 - 162.25 2% Min: Sphalerite>> <<Min: 162 - 162.25 85% Min: Pyrite>> <<Min: 162 - 162.25 1% Min: Galena>> <<Min: 162 - 162.25 1% Min: Barite>> <<Alt: 162 - 162.25 Weak Calcite>> <<Alt: 162.25 - 166.3 Moderate-Strong Muscovite>> <<Alt: 162.25 - 166.3 Trace Calcite>>											
<b>162.35</b>	<b>166.10</b>	<b>RHY undifferentiated rhyolite</b>	162.35	163.50	1.15	B00292015	0.02	-0.3	-0.01	0.01	0.02
<<Vein: 165.8 - 166.1 40% Quartz-Carbonate>> Zone with 3 QZ +/- carb veins <<Struc: 164.16 - 164.17 dominant foliation>>			163.50	164.80	1.30	B00292016	0.009	0.8	-0.01	-0.01	-0.01
<b>166.10</b>	<b>166.60</b>	<b>OI Heavily disseminated sulphides in host schist</b>	164.80	166.10	1.30	B00292017	0.009	1.3	-0.01	0.01	-0.01
166.1 - 166.6: Disseminated PY +/- GL +/- SP along RHY and MAFi contact  <<Min: 166.1 - 166.6 1% Min: Sphalerite>> <<Min: 166.1 - 166.6 4% Min: Pyrite>> <<Min: 166.1 - 166.6 0.5% Min: Galena>> <<Alt: 166.3 - 166.6 Weak Muscovite>> <<Alt: 166.3 - 166.6 Weak Chlorite>> <<Alt: 166.3 - 166.6 Moderate-Strong Calcite>> <<Alt: 166.3 - 166.6 Weak Biotite>>			166.10	166.60	0.50	B00292018	1.36	86.5	0.03	0.95	1.81
<b>166.60</b>	<b>190.00</b>	<b>MAFi Mafic Intrusions (primarily footwall mafic intrusion)</b>	166.60	168.10	1.50	B00292019	0.006	0.8	-0.01	0.01	0.05

# GeoSpark Logger ~ Drill Log

Project:

KZK

Hole Number:

K16-341

From (m)	To (m)	Rocktype & Description	From (m)	To (m)	Width	Sample	Au ppm	Ag ppm	Cu %	Pb %	Zn %
		<<Min: 166.6 - 190 0.5% Min: Pyrite>>	168.10	169.60	1.50	B00292021	-0.005	0.8	-0.01	0.01	0.03
		<<Min: 171.8 - 171.9 0.5% Min: Chalcopyrite>>	169.60	171.10	1.50	B00292022	-0.005	1.2	-0.01	-0.01	0.02
		<<Min: 171.8 - 171.9 1% Min: Arsenopyrite>> Disseminated AS +/- CP may be related to a small zone of chloritic alteration, but is quite hard to determine due to the host lithology being the CL-BI schist.	171.10	172.60	1.50	B00292023	-0.005	0.7	-0.01	-0.01	0.02
		<<Alt: 166.6 - 169.5 Moderate Calcite>>									
		<<Alt: 166.6 - 175.4 Moderate Biotite>>									
		<<Alt: 166.6 - 190 Strong Chlorite>>									
		<<Alt: 169.5 - 190 Weak-Moderate Calcite>>									
		<<Alt: 175.4 - 190 Weak-Moderate Biotite>>									
		<<Vein: 178.4 - 178.6 90% Calcium carbonate/Carbonate>> Calcite vein with blebs of chlorite and quartz									
		<<Vein: 179 - 179.5 90% Calcium carbonate/Carbonate>> Calcite vein with blebs of chlorite and quartz									
		<<Vein: 180.55 - 180.8 95% Calcium carbonate/Carbonate>> Calcite vein with blebs of chlorite and quartz									
		<<Struc: 168.19 - 168.2 dominant foliation>>									
		<<Struc: 170.7 - 170.71 dominant foliation>>									
		<<Struc: 172.55 - 172.56 dominant foliation>>									
		<<Struc: 174.79 - 174.8 dominant foliation>>									
		<<Struc: 177.17 - 177.18 dominant foliation>>									
		<<Struc: 181.37 - 181.38 dominant foliation>>									
<b>End of Hole @ 190</b>											