EQUITY | EXPLORATION CONSULTANTS LTD.

# GeoSpark Logger ~ Drill Log

**Project:** KZK **Hole Number:** K16-419

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Prospect: | Krakatoa | Hole Type: | DD | Survey Type: | PLND-LiDAR | Logged By: | Alicia Vainio |
| Grid: | NAD83_Z9 | Hole Diameter: | 96 | Survey By: | Oscar Nielsen | Date Logging Start: | 9/18/2016 |
| UTM Easting | 415242 | Core Size: | HQ3 | Azimuth: | 7.8 | Date Logging Complete: | 9/29/2016 |
| UTM Northing: | 6815246 | Casing Pulled?: | Yes | Dip: | -86.8 | Drill Company: | New Age |
| UTM Elev. (m): | 1440 | Casing Depth (m): | 8 | Length (m): | 416.22 | Drill Rig: | Zinex A5 |
| Local Easting: | | Stored?: | Yes | Claims Title | | Drill Started: | 9/18/2016 |
| Local Northing: | | Cemented?: | Yes | Core Storage Loc.: | KZK Camp | Drill Completed: | 9/28/2016 |
| Local Elev. (m): | | | | Hole Completed?: | Completed | Purpose: | Resource Definition |
| | | | | | | Parent Hole: | |

Comments:

K16-419 was designed as a step-out hole to test the down-dip extents of Krakatoa Zone mineralization. Two massive sulphide lenses were encountered; the upper lens occured between 296.73-299.40 m, and the main lens was intercepted within the expected zone, from 333.20-346.55 m. The Wind Lake Formation occurs to a depth of 44.85 m followed by the KZK Formation to EOH. Here the KZK Formation consists of alternating felsic volcanic ash-lapilli tuffs and coherent volcanics, intercalated with minor pelitic-beds and mudstone. Moderate-strong, muscovite-silica alteration began around 198.20 m, and increases in intensity when proximal to both the upper and main lens mineralisation. The upper lens (296.73 -299.40 m) consisted of OB-type mineralization with disseminated sulphides (OI) immediately before this from 296.35 m - 296.73 m. The main lens consisted of mixed OB and OA-type mineralization with a significant pyrrhotite-component within the final 50cm (OF). Moderate muscovite-silica-biotite alteration with disseminated pyrite was pervasive throughout the felsic footwall. Previous drillholes in the Krakatoa Zone show a similar alteration assemblage at this depth but no further mineralization has been intercepted. A DHEM survey was completed by Aurora Geosciences on September 28th, 2016.

***Downhole Surveys:***

| Depth (m) | Dip | Measured Azimuth | Correction Factor | Corrected Azimuth | Survey Type | Survey By | Survey Date | Mag Field | Accept Values? | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | -86.8 | 6.4 | 1.4 | 7.8 | TN14 | Oscar Nielsen | 9/19/2016 | | ☑ | |
| 0.01 | -86.81661 | 4.6 | 1.4 | 6 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 5 | -86.41067 | 5.65021 | 1.4 | 7.05021 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 10 | -86.43163 | 6.30135 | 1.4 | 7.70135 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 99.9179119227992 |
| 15 | -86.58694 | 4.40836 | 1.4 | 5.80836 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 20 | -86.9463 | 358.96608 | 1.4 | 0.3661 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 25 | -87.43714 | 357.29961 | 1.4 | 358.69961 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 30 | -87.62423 | 357.87824 | 1.4 | 359.27824 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 99.9421404405406 |
| 35 | -87.51987 | 357.99125 | 1.4 | 359.39125 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 39 | -88 | 348.2 | 22.1 | 10.3 | ReflexEZS | New Age | 9/20/2016 | 5785 | ☐ | |
| 40 | -87.39047 | 357.28352 | 1.4 | 358.68352 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 45 | -87.39977 | 356.81857 | 1.4 | 358.21857 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 50 | -87.37676 | 356.53843 | 1.4 | 357.93843 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 55 | -87.48269 | 355.37068 | 1.4 | 356.77068 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 60 | -87.61677 | 356.92725 | 1.4 | 358.32725 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 65 | -87.80604 | 353.22133 | 1.4 | 354.62133 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 66 | -87.9 | 337.2 | 22.1 | 359.3 | ReflexEZS | New Age | 9/21/2016 | 5724 | ☐ | |

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**Project:** KZK **Hole Number:** K16-419

| Depth (m) | Dip | Measured Azimuth | Correction Factor | Corrected Azimuth | Survey Type | Survey By | Survey Date | Mag Field | Accept Values? | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 70 | -88.02075 | 354.56437 | 1.4 | 355.96437 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 75 | -87.99015 | 354.51007 | 1.4 | 355.91007 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 80 | -88.02095 | 355.13913 | 1.4 | 356.53913 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 85 | -88.00754 | 354.42394 | 1.4 | 355.82394 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 90 | -88.19486 | 355.19202 | 1.4 | 356.59202 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 93 | -87.7 | 326.3 | 22.1 | 348.4 | ReflexEZS | New Age | 9/21/2016 | 5762 | ☐ | |
| 95 | -88.34811 | 348.92518 | 1.4 | 350.32518 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 100 | -88.64307 | 346.81165 | 1.4 | 348.21165 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 105 | -88.8372 | 348.29484 | 1.4 | 349.69484 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 110 | -89.13312 | 348.93589 | 1.4 | 350.33589 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 115 | -89.27736 | 344.86827 | 1.4 | 346.26827 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 117 | -89.6 | 322.1 | 22.1 | 344.2 | ReflexEZS | New Age | 9/22/2016 | 5736 | ☐ | |
| 120 | -89.41901 | 345.87217 | 1.4 | 347.27217 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 125 | -89.48446 | 357.53113 | 1.4 | 358.93113 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 130 | -89.54456 | 10.15215 | 1.4 | 11.55215 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 135 | -89.59529 | 39.86002 | 1.4 | 41.26002 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 140 | -89.68312 | 70.68488 | 1.4 | 72.08488 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 145 | -89.82427 | 90.69657 | 1.4 | 92.09657 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 147 | -89.9 | 283.2 | 22.1 | 305.3 | EZ-MARK | New Age | 9/22/2016 | 57364 | ☐ | |
| 150 | -89.71167 | 117.95321 | 1.4 | 119.35321 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 155 | -89.65728 | 124.47383 | 1.4 | 125.87383 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 160 | -89.47832 | 143.40555 | 1.4 | 144.80555 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 165 | -89.33182 | 159.82462 | 1.4 | 161.22462 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 170 | -89.2384 | 160.76384 | 1.4 | 162.16384 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 174 | -89.7 | 177.6 | 22.1 | 199.7 | EZ-MARK | New Age | 9/23/2016 | 57537 | ☐ | |
| 175 | -89.26311 | 165.22421 | 1.4 | 166.62421 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 180 | -89.19555 | 167.51956 | 1.4 | 168.91956 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 185 | -89.12763 | 157.74326 | 1.4 | 159.14326 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 190 | -89.09152 | 155.70495 | 1.4 | 157.10495 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 195 | -89.04396 | 158.55415 | 1.4 | 159.95415 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 200 | -88.93465 | 161.49129 | 1.4 | 162.89129 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 201 | -89.1 | 137.5 | 22.1 | 159.6 | EZ-MARK | New Age | 9/23/2016 | 57385 | ☐ | |
| 205 | -88.76108 | 159.53223 | 1.4 | 160.93223 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 210 | -88.61126 | 161.94307 | 1.4 | 163.34307 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 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 |
|---|---|---|---|---|---|---|---|---|---|---|
| 215 | -88.3256 | 165.40792 | 1.4 | 166.80792 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 220 | -87.94352 | 165.77787 | 1.4 | 167.17787 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 225 | -87.6716 | 169.08744 | 1.4 | 170.49 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 225.01 | -88.4 | 162.5 | 22.1 | 184.6 | EZ-MARK | New Age | 9/23/2016 | 57386 | ☐ | |
| 230 | -87.50256 | 168.79524 | 1.4 | 170.19524 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 235 | -87.41593 | 167.67397 | 1.4 | 169.07397 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 240 | -87.2798 | 169.75839 | 1.4 | 171.15839 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 245 | -87.18626 | 169.6385 | 1.4 | 171.0385 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 250 | -87.19758 | 167.56248 | 1.4 | 168.96248 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 252 | -87.4 | 145.1 | 22.1 | 167.2 | EZ-MARK | New Age | 9/24/2016 | 57389 | ☐ | |
| 255 | -87.37741 | 167.63901 | 1.4 | 169.03901 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 260 | -87.24861 | 168.95718 | 1.4 | 170.35718 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 265 | -87.28407 | 169.53837 | 1.4 | 170.93837 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 270 | -87.02254 | 169.14669 | 1.4 | 170.54669 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 275 | -87.7102 | 171.75689 | 1.4 | 173.16 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 275.01 | -87 | 120.3 | 22.1 | 142.4 | EZ-MARK | New Age | 9/24/2016 | 57483 | ☐ | |
| 280 | -86.50169 | 174.056 | 1.4 | 175.456 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 285 | -86.42215 | 172.7274 | 1.4 | 174.1274 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 290 | -86.19282 | 173.30068 | 1.4 | 174.70068 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 295 | -86.06794 | 172.646 | 1.4 | 174.046 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 300 | -85.96235 | 173.39405 | 1.4 | 174.79405 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 305 | -85.91342 | 172.77743 | 1.4 | 174.17743 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 306 | -86.3 | 145.8 | 22.1 | 167.9 | EZ-MARK | New Age | 9/25/2016 | 57958 | ☐ | |
| 310 | -85.79859 | 172.55789 | 1.4 | 173.95789 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 315 | -85.73948 | 173.74966 | 1.4 | 175.14966 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 320 | -85.68761 | 174.06853 | 1.4 | 175.46853 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 325 | -85.73865 | 174.37013 | 1.4 | 175.77013 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 330 | -85.725 | 175.76126 | 1.4 | 177.16 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 330.01 | -85.9 | 146.3 | 22.1 | 168.4 | EZ-MARK | New Age | 9/25/2016 | 57989 | ☐ | |
| 335 | -85.79398 | 174.17492 | 1.4 | 175.57492 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 340 | -85.86205 | 175.20373 | 1.4 | 176.60373 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 345 | -85.8536 | 174.81351 | 1.4 | 176.21351 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 350 | -85.85221 | 176.05942 | 1.4 | 177.45942 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 354 | -85.8 | 156.3 | 22.1 | 178.4 | EZ-MARK | New Age | 9/26/2016 | 56340 | ☐ | |

| Depth (m) | Dip | Measured Azimuth | Correction Factor | Corrected Azimuth | Survey Type | Survey By | Survey Date | Mag Field | Accept Values? | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 355 | -85.77755 | 176.49918 | 1.4 | 177.89918 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 360 | -85.60529 | 178.31773 | 1.4 | 179.71773 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 365 | -85.40749 | 178.54836 | 1.4 | 179.94836 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 370 | -85.28138 | 178.84909 | 1.4 | 180.24909 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 375 | -85.08539 | 179.67764 | 1.4 | 181.07764 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 380 | -84.99654 | 180.087 | 1.4 | 181.487 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 381 | -85.4 | 161.4 | 22.1 | 183.5 | EZ-MARK | New Age | 9/27/2016 | 57202 | ☐ | |
| 385 | -84.90353 | 180.94137 | 1.4 | 182.34137 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 390 | -84.9041 | 181.04453 | 1.4 | 182.44453 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 395 | -84.77137 | 182.81477 | 1.4 | 184.21477 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 400 | -84.66597 | 183.03878 | 1.4 | 184.43878 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 405 | -84.51217 | 184.06974 | 1.4 | 185.46974 | Gyro | Oscar Nielsen | 9/28/2016 | | ☑ | 100 |
| 409 | -85.3 | 167.2 | 22.1 | 189.3 | EZ-MARK | New Age | 9/27/2016 | 57381 | ☐ | |

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

**0.00 8.15 OVBN Overburden**

**8.15 9.69 MDS Carbonaceous Mudstone & Tuffaceous Mudstone**

8.15 - 9.69: Weakly-oxidized, dark grey to black, fine-grained, carbonaceous mudstone interbedded with cm-size zones of mafic tuff. FLT zone between 8.42- 8.55m; FLT consists of gouge and fractured MDS.

<<Min: 8.15 - 11.85 0.1% Min: Pyrite>>

<<Min: 8.15 - 11.85 0.1% Min: Pyrrhotite>>

<<Alt: 8.15 - 9.69 Weak-Moderate Calcite>> Banded CA; patchy-carbonate within quartz bands.

<<Vein: 8.55 - 8.91 Quartz-Carbonate 55 deg. >> Weakly-oxidized, carbonate-rich, quartz veins.

<<Struc: 8.42 - 8.62 Weak-Moderate Fault>> Gouge - Fractured MDS.

<<Struc: 9.33 - 9.38 Weak Fault>> Minor shear-gouge zone within oxidized MDS.

<<Struc: 9.48 - 9.49 dominant foliation>>

**9.69 11.85 MAFt Mafic Volcaniclastics MG**

9.69 - 11.85: Weakly-oxidized, greyish-green, medium-grained, well-sorted mafic tuff. Upper CNT is sharp; quartz vein-FLT lower CNT.

<<Alt: 9.69 - 19 Weak-Moderate Calcite>> Pervasive and FRA.

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

<<Vein: 11.8 - 11.85 Quartz-Carbonate 65 deg. >> Competent, quartz-carbonate vein within a minor sheared-FLT zone. Vein contains small (<3mm), subangular MDS clasts.

<<Struc: 10.91 - 10.92 dominant foliation>>

<<Struc: 11.7 - 11.88 Trace Fault>> Sheared-gouge, vein-FLT CNT between mafic tuff and mudstone.

## 11.85 30.00 MDS Carbonaceous Mudstone & Tuffaceous Mudstone

11.85 - 30: Dark grey to black, fine-grained, carbonaceous mudstone intercalated with minor siltstone. Oxidation is visible on fractured surfaces; the oxidation-intensity decreases downhole. Oxidized quartz-carbonate bands are vuggy (up to 14.80m). Carbonate-rich bands undulate in localized zones. Minor FLT gouge-zones occur throughout the unit.

<<Min: 11.85 - 26.4 0.5% Min: Pyrrhotite>> Disseminated, isolated blebs; rare FRA.

<<Min: 11.85 - 62.76 0.5% Min: Pyrite>> Disseminated; rare FRA.

<<Min: 26.4 - 27.3 3% Min: Pyrrhotite>>

<<Min: 27.3 - 34.15 1% Min: Pyrrhotite>>

<<Alt: 19 - 22.5 Weak Calcite>>

<<Alt: 22.5 - 27.3 Trace Calcite>>

<<Alt: 27.3 - 32.8 Weak Calcite>> Banded CA; quartz-carbonate veins.

<<Vein: 28.15 - 28.21 Quartz-Carbonate>> Weakly-oxidized, quartz-carbonate vein with trace disseminated pyrrhotite.

<<Struc: 13.16 - 13.17 dominant foliation>>

<<Struc: 13.37 - 15.5 Trace Fault>> Fractured mudstone.

<<Struc: 15.5 - 15.6 Moderate Fault>> MDS gouge with trace oxidation.

<<Struc: 17.6 - 17.61 dominant foliation>>

<<Struc: 17.64 - 18.18 Weak Fault>> Incompetent, fractured mudstone; ~75% recovered.

<<Struc: 21.16 - 21.17 dominant foliation>>

<<Struc: 21.9 - 21.91 dominant foliation>>

<<Struc: 22 - 27.15 Trace Fault>> Localized zones with fractured mudstone, and rubble.

<<Struc: 28.35 - 30 Moderate Fault>> Fractured-pulverized mudstone, with traces of gouge visible on fractured surfaces; <10% recovered.

## 30.00 31.42 MAFt Mafic Volcaniclastics

30 - 31.42: Green, well-sorted mafic tuff; carbonaceous bands become prominent around 31m, due to gradational MDS lower CNT. The upper CNT occurs within a FLT between 28.35-30m; ~90% loss occurred wthin the FLT zone. Localized bands (<5cm) have undergone bleaching.

<<Struc: 30.87 - 30.88 dominant foliation>>

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

## 31.42 34.15 MDS Carbonaceous Mudstone & Tuffaceous Mudstone

31.42 - 34.15: Light-medium grey, carbonaceous mudstone interbedded with mafic tuff (32.68-32.88m). Minor FLTing occurs between 31.67- 32.06m.

<<Alt: 32.8 - 42.5 Weak-Moderate Calcite>> Banded CA; CA is more intense within quartz-carbonate veins.

<<Vein: 32.85 - 33.14 Quartz-Carbonate 65 deg. >> Quartz-carbonate veins (1-4cm wide).

<<Struc: 31.85 - 31.91 Weak-Moderate Fault>> Mudstone with chloritic gouge, on fractured surfaces.

<<Struc: 33.68 - 33.69 dominant foliation>> 180 deg. off?

## 34.15 34.85 MAFt Mafic Volcaniclastics

34.15 - 34.85: Green, chloritic mafic tuff with minor disseminated pyrrhotite. Sharp upper and lower CNT.

<<Min: 34.15 - 34.85 1% Min: Pyrrhotite>>

<<Struc: 34.35 - 34.36 dominant foliation>> 180 deg. off?

## 34.85 44.85 MDS Carbonaceous Mudstone & Tuffaceous Mudstone

34.85 - 44.85: Medium-dark grey, carbonaceous mudstone. Moderate - strong FLT zones are common throughout the unit; >50% loss has occurred within the MDS. There is a massive quartz-carbonate-sericite vein from approx 41.7-42.5m; the vein might be larger, depending on where the loss within the FLT is most prominent. Disseminated blebs of pyrrhotite and pyrite are most common within the fractured-FLT zones.

<<Min: 34.85 - 85.3 0.5% Min: Pyrrhotite>> Disseminated PO; blebs within rare quartz-carbonate veins; minor FRA.

<<Alt: 42.5 - 63.1 Trace Calcite>> Trace disseminated CA; more intense within rare quartz-carbonate veins.

<<Vein: 36.07 - 36.52 Quartz-Carbonate 45 deg. >> Undulating-brecciated, quartz-carbonate veins with mm-size, subrounded quartz clasts.

<<Vein: 41.7 - 42.5 Quartz-Carbonate-Sericite>> Incompetent, fractured quartz-carbonate vein with sericite FRA; disseminated pyrrhotite blebs, and traces of pyrite.

<<Struc: 35.43 - 36 Moderate Fault>> Fractured-pulverized MDS with fine-grained PY-rich zones; >50% loss.

<<Struc: 36.51 - 45 Moderate-Strong Fault>> MDS rubble-gouge. FLT-intensity decreases downhole, within the massive quartz-carbonate-sericite vein. ~40% recovered.

## 44.85 59.90 RHYvl Lapilli tuff

44.85 - 59.9: Light-medium green, felsic volcaniclastics with moderate-strong FLT zones. Subrounded, carbonate-poor, poorly-sorted lapilli are localized, and proximal to FLT zones. Quartz-carbonate vein - FLT upper CNT; gradational lower CNT.

<<Vein: 44.85 - 48.12 Quartz-Carbonate-Sericite>> Fractured quartz-carbonate veins with sericite FRA, and disseminated pyrite and pyrrhotite. Rare pyrite FRA (stringers).

<<Struc: 45 - 45.3 Weak-Moderate Fault>> Fractured RHY with sericitic gouge.

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

<<Struc: 46.52 - 48 Moderate Fault>> Sheared RHY and quartz veins, with sericitic gouge; gouge contains mm-size, brecciated clasts of RHY. ~70% washed away.

<<Struc: 48.7 - 55.6 Moderate-Strong Fault>> Localized zones with moderate-strong FLT-intensity; zones consist of sericitic gouge-shear. The gouge contains small (1-10mm), subangular clasts of RHY and MDS. 25% of the interval consists of competent, non-faulted RHY; there is approx 60% core loss within the unit.

<<Struc: 55.72 - 55.73 dominant foliation>>

<<Struc: 57.2 - 60 Weak Fault>> Incompetent, fractured RHYv with small zones of gouge; interval has approx 60% core loss.

## 59.90 85.30 RHYva Coarse grained to ash tuff

59.9 - 85.3: Light-medium green, ash-dominant, felsic volcaniclastics intercalated with minor bands (cm-size) of localized, biotite-rich sediment. Localized porphyritic texture between 62.36-62.6m. Joint-set with QC+PY+/-PO FRA between 62.76-63.42m. Localized, cm-size tourmaline veinlets, and minor FLTing occur throughout the unit.

<<Min: 62.76 - 63.43 3% Min: Pyrite>> QC+PY+/-PO FRA within a well-developed joint set. FD along foliation.

<<Min: 63.43 - 67.7 0.1% Min: Pyrite>>

<<Min: 67.7 - 71.59 2% Min: Pyrite>> Quartz-carbonate-tourmaline stringers +/- PY. Vugs contain coarse-grained, euhedral PY.

<<Min: 71.56 - 71.59 2% Min: Galena>> GL-filled vugs within quartz vein.

<<Min: 71.59 - 79.8 0.5% Min: Pyrite>> Trace disseminated PY; occasional blebs within quartz-carbonate stringers.

<<Min: 79.8 - 80.95 2% Min: Pyrite>> PY FRA; blebs within tourmaline stringers. Disseminated PY is visible within gouge.

<<Min: 80.95 - 85.3 0.1% Min: Pyrite>>

<<Alt: 62.9 - 67.15 Trace Biotite>> Trace disseminated biotite.

<<Alt: 63.1 - 85.3 Weak Calcite>> Disseminated-banded CA; quartz-carbonate FRA.

<<Alt: 75 - 77.4 Weak Ankerite>> Patchy-zones of banded AK (?).

<<Alt: 79 - 85.3 Trace Muscovite>>

<<Alt: 84.5 - 85.3 Weak Silicification>> Weak silicification proximal to RHYi.

<<Vein: 62.76 - 63.42 Quartz-Carbonate-Sulphide 45 deg. >> Parallel, joint set of mm-size QC+PY+/-PO stringers.

<<Vein: 67.7 - 70.45 Tourmaline>> Tourmaline-dominant, quartz-carbonate stringers +/- pyrite. Stringers contain mm-size, subrounded clasts of RHY host. Vugs are rare, and contain med-grained, euhedral pyrite.

<<Vein: 71.56 - 71.59 Quartz-Sulphide 35 deg. >> Quartz vein with mm-scale vugs; vugs contain fine-grained PY (3%), and med-grained GL (< 2%).

<<Vein: 75.15 - 80 Quartz-Carbonate-Sulphide 25 deg. >> Quartz-carbonate and tourmaline stringers with disseminated PY +/- PO.

<<Struc: 60.77 - 60.78 dominant foliation>>

<<Struc: 62.93 - 62.94 dominant foliation>>

<<Struc: 65.95 - 65.96 dominant foliation>>

<<Struc: 67.93 - 68 Weak Fault>> Fractured RHY with minor gouge.

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

<<Struc: 69.38 - 69.39 dominant foliation>>

<<Struc: 70.11 - 70.12 dominant foliation>>

<<Struc: 73.08 - 73.09 dominant foliation>>

<<Struc: 73.3 - 75 Weak Fault>> Fractured-pulverized RHY; 1m wash.

<<Struc: 76.96 - 76.97 dominant foliation>>

<<Struc: 78.5 - 78.58 Weak Fault>> Sheared, strong-gouge RHY.

<<Struc: 80.12 - 80.95 Weak-Moderate Fault>> Minor FLT zones within competent RHY (mottled texture); 30% competent RHY. FLT zones consist of pulverized RHY and rubble. Interval has approx ~50% loss.

<<Struc: 81.57 - 81.58 dominant foliation>>

<<Struc: 82.26 - 83.7 Weak-Moderate Fault>> RHY shear, gouge, and rubble; ~50% recovered.

<<Struc: 84.33 - 84.34 dominant foliation>>

<<Struc: 84.92 - 85 Weak Fault>> Shear-gouge.

## 85.30 91.10 RHYi Aphanitic Rhyolite (intrusion)

85.3 - 91.1: Light greenish-grey to reddish-grey, siliceous, aphanitic RHYi. Minor sulphide mineralization FRA; dom. PY +/- PO. Massive quartz vein (35cm) at lower CNT.

<<Min: 85.3 - 91.1 0.5% Min: Pyrrhotite>> QC+PY +/- PO fracture infill.

<<Min: 85.3 - 91.2 4% Min: Pyrite>> QC+PY +/- PO fracture infill.

<<Alt: 85.3 - 93.48 Trace Calcite>> Quartz-carbonate (weak) FRA within hairline fractures.

<<Vein: 85.3 - 91.1 Quartz-Carbonate>> Hairline quartz-carbonate, and PY +/- PO FRA within RHYi.

<<Struc: 86.3 - 86.34 dominant foliation>>

<<Struc: 88 - 93.47 Trace Fault>> Several RHY rubble zones within competent core (25% competent); ~50% loss.

## 91.10 96.83 RHYva Coarse grained to ash tuff

91.1 - 96.83: Light green, ash-dominant, felsic volcaniclastic tuff with weak MU-alteration, and localized lapilli-rich zones. MU-alteration is stronger proximal to FLT zones disseminated PY is common within gouge.

<<Min: 93.46 - 96.83 1% Min: Pyrite>> Disseminated throughout unit; patchier within gouge zones.

<<Min: 93.46 - 120.45 0.5% Min: Pyrrhotite>> Disseminated PO; rare blebs within quartz veins.

<<Alt: 93.46 - 96.83 Weak Muscovite>> Weak MU alteration; alteration is stronger within FLT zones.

<<Alt: 93.48 - 96.83 Weak-Moderate Calcite>> Disseminated-blebs.

<<Vein: 91.1 - 91.45 Quartz>> Massive quartz vein with PY + CC FRA.

<<Vein: 91.45 - 93 Quartz>> Quartz and RHY rubble; < 20% recovered.

<<Vein: 93.46 - 94.52 Quartz-Carbonate>> Cm-size, quartz-carbonate veinlets within sheared zones. Veins contain blebs of disseminated PY.

<<Struc: 93.85 - 93.86 dominant foliation>>

<<Struc: 94.4 - 94.44 Weak Shear>> Weak shear zone.

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

<<Struc: 96.26 - 96.3 Weak-Moderate Fault>> Sericitic gouge with mm-size, subrounded clasts of quartz and RHY, and disseminated PY.

<<Struc: 96.49 - 96.5 dominant foliation>>

## 96.83 102.14 RHYi Aphanitic Rhyolite (intrusion)

96.83 - 102.14: Light grey, siliceous RHYi. Hairline fractures are prominent throughout the unit. Calcite FRA contains trace disseminated CL +/- PY +/- SP (?)

<<Min: 96.83 - 102.14 0.5% Min: Sphalerite>>

<<Min: 96.83 - 102.14 1% Min: Pyrite>> QC FRA +/- PY +/- SP

<<Alt: 96.83 - 102.14 Weak-Moderate Calcite>> Quartz-carbonate infill within hairline fractures; disseminated blebs.

<<Vein: 96.83 - 102.14 Quartz-Carbonate>> Hairline quartz-carbonate, chlorite, and sulphide FRA. Sulphides consist of PY +/- SP.

<<Struc: 100.1 - 101.34 Weak-Moderate Fault>> Fractured-rubble RHY; ~75% loss.

## 102.14 104.15 RHYvl Lapilli tuff

102.14 - 104.15: Light greyish-green, volcaniclastic lapilli tuff with clasts of silica-rich, RHYc (?)

<<Min: 102.14 - 121.57 0.1% Min: Pyrite>>

<<Alt: 102.14 - 114.35 Weak-Moderate Calcite>> Disseminated blebs-banded CA.

<<Vein: 102.9 - 103.4 Quartz-Carbonate 30 deg. >> Quartz stringers with disseminated calcite.

<<Struc: 103 - 103.2 Trace Fault>> Cm-size bands of gouge (< 20%) within competent RHY.

<<Struc: 103.9 - 103.91 dominant foliation>>

## 104.15 117.43 RHYva Coarse grained to ash tuff

104.15 - 117.43: Light green, ash-dominant, volcaniclastic tuff intercalated with minor pelitic beds. Weak-disseminated biotite alteration occurs from 111.37-117.43m.

<<Alt: 111.37 - 117.43 Weak Biotite>>

<<Alt: 114.35 - 117.43 Trace Calcite>> Trace disseminated blebs.

<<Vein: 110.62 - 110.63 Quartz 50 deg. >> Quartz stringer with subangular blebs of PO (< 5mm), and CL FRA.

<<Struc: 106.76 - 107.71 Weak Fault>> Heavily-jointed RHY with small-rare gouge zones.

<<Struc: 107.85 - 107.86 dominant foliation>>

<<Struc: 109.55 - 109.56 dominant foliation>>

<<Struc: 110.68 - 111 Weak Fault>> RHY rubble; ~ 65% recovered.

<<Struc: 114 - 114.2 Weak Fault>> Weak-shear zone with small (< 5mm), subangular quartz clasts.

<<Struc: 115.58 - 115.59 dominant foliation>>

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

## 117.43 121.37 PEL Equigranular biotite + calcite +/- quartz rock

117.43 - 121.37: PEL interbedded with biotite-rich, ash-dominant, felsic volcaniclastics. FLT zone between 118.7-119.00m; FLT consists of RHY-gouge, and pulverized PEL. Sharp upper and lower CNT.

<<Min: 120.45 - 120.8 1% Min: Sphalerite>>

<<Min: 120.45 - 120.8 2% Min: Pyrrhotite>>

<<Min: 120.45 - 120.8 0.5% Min: Galena>> Disseminated GL within quartz-carbonate bands.

<<Min: 120.8 - 129.57 0.5% Min: Pyrrhotite>>

<<Alt: 117.43 - 121.57 Trace Calcite>> Trace-weak pervasive CA within PEL.

<<Vein: 120.45 - 120.8 Quartz-Carbonate-Sulphide>> Quartz-carbonate bands with trace PO+SP+/-GL.

<<Struc: 117.9 - 117.91 dominant foliation>>

<<Struc: 118.66 - 119 Moderate Fault>> RHY gouge and pulverized PEL. Sharp upper CNT (~30 deg.)

## 121.37 124.70 RHYva Coarse grained to ash tuff

121.37 - 124.7: Light-medium green, ash-dominant volcaniclastic tuff with weak MU-alteration. Weak-moderate FLT zones occur throughout the unit.

<<Min: 121.57 - 124.7 1% Min: Pyrite>> DEF, mm-size QC-PY stringers.

<<Alt: 121.57 - 124.7 Trace Calcite>> Trace disseminated-blebs of CA.

<<Struc: 121.57 - 121.58 Contact>> CNT between PEL-RHYv.

<<Struc: 121.65 - 122.7 Weak-Moderate Fault>> RHY gouge and rubble zone; ~30% recovered.

<<Struc: 123.5 - 124 Weak Fault>> Sheared-fractured, gouge zone; ~50% recovered.

## 124.70 129.57 PEL Equigranular biotite + calcite +/- quartz rock

124.7 - 129.57: Pelite intercalated with biotite-altered, felsic volcaniclastics. Hairline fractures with QC infill is common; minor FLTing between 126-127.6m.

<<Min: 124.7 - 129.57 0.1% Min: Pyrite>>

<<Alt: 124.7 - 125.6 Weak-Moderate Calcite>> Banded-pervasive CA within PEL.

<<Alt: 125.6 - 129.57 Trace Calcite>>

<<Vein: 125 - 129.57 Quartz-Carbonate>> Undulating quartz-carbonate veins (1-5cm wide) with trace disseminated BI, due to host PEL.

<<Struc: 126 - 127.6 Trace Fault>> Fractured, volcaniclastic RHY within PEL. Minor zones of sericitic gouge.

<<Struc: 128.25 - 128.26 dominant foliation>>

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

## 129.57 144.39 RHYv Rhyolite volcaniclastic

129.57 - 144.39: MU-altered, volcaniclastic RHY with disseminated PY. Quartz-carbonate bands undulate, in localized-altered zones. MU-alteration increases downhole.

<<Min: 129.57 - 132.15 1% Min: Pyrrhotite>>

<<Min: 129.57 - 137.04 0.5% Min: Pyrite>>

<<Min: 132.15 - 139.2 0.5% Min: Pyrrhotite>>

<<Min: 137.04 - 142.6 2% Min: Pyrite>> Disseminated, subangular blebs (< 5mm), and FRA.

<<Min: 137.48 - 137.66 0.5% Min: Galena>> Med-grained, disseminated GL within zoned, QC-SP (?) veinlet.

<<Min: 137.48 - 140.65 2% Min: Sphalerite>> SP FRA, and zonation within a quartz-carbonate veinlet.

<<Min: 139.2 - 140.75 1% Min: Pyrrhotite>> Coarse-grained, disseminated PO; and FRA.

<<Min: 140.75 - 144.39 0.5% Min: Pyrrhotite>>

<<Min: 142.6 - 144.39 0.5% Min: Pyrite>>

<<Alt: 129.57 - 139.18 Weak Muscovite>>

<<Alt: 129.57 - 144.39 Weak-Moderate Calcite>> Banded-clots of CA; patchy-carbonate within quartz-carbonate veins.

<<Alt: 139.18 - 144.39 Weak-Moderate Muscovite>>

<<Vein: 131.02 - 134.25 Quartz-Carbonate>> Regular to massive, deformed quartz-carbonate veins.

<<Vein: 137.6 - 137.61 Quartz-Carbonate-Sulphide 50 deg. >> Quartz-carbonate-sulphide veinlet; sulphides consist of sphalerite (?) and galena. Zoneation: quartz-carbonate (outside) to inner sulphides.

<<Vein: 138.5 - 144 Quartz-Carbonate>> Quartz-carbonate veins (1-10cm); rare sulphide FRA (PY+/-SP).

<<Struc: 130.35 - 130.36 dominant foliation>>

<<Struc: 132.12 - 132.22 Weak Fault>> Small rubble zone.

<<Struc: 132.4 - 132.41 dominant foliation>>

<<Struc: 133.95 - 134.9 Weak Fault>> Small bands of sericitic gouge; gouge contains mm-size, subrounded clasts of RHY host, and disseminated PY. The remainder of the interval, consists of fractured RHYv.

<<Struc: 137.13 - 137.14 dominant foliation>>

<<Struc: 140.35 - 140.36 Crenulation cleavage>>

<<Struc: 143.64 - 143.65 dominant foliation>>

## 144.39 145.68 RHYcw Curdy textured-flow banded (flows, subvolcanics)

144.39 - 145.68: Light grey, quartz-rich, flow-banded RHY. Undulating, flow bands are brecciated apart with MU +/- PY +/- PO FRA. Upper and lower CNT are gradational.

<<Min: 144.39 - 150.76 1% Min: Pyrite>> MU, PY, and PO fracture infill, within fractured, flow-banded RHY. Coarse-grained, disseminated blebs and FRA throughout volcaniclastic RHY.

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

<<Min: 144.39 - 155.54 1% Min: Pyrrhotite>> MU, PY, and PO fracture infill, within fractured, flow-banded RHY. Coarse-grained, disseminated blebs and FRA throughout volcaniclastic RHY.

<<Alt: 144.39 - 145.68 Weak-Moderate Muscovite>> MU blebs and FRA within brecciated RHYc.

<<Alt: 144.39 - 145.68 Trace Calcite>> Trace disseminated CA within flow-banded RHY; rare FRA.

<<Vein: 145.66 - 148.53 Quartz-Carbonate>>

**145.68 149.77 RHYva Coarse grained to ash tuff**

145.68 - 149.77: Light to med-green, ash-dominant, volcaniclastic tuff with weak MU-alteration; and undulating, carbonate-rich bands. PY + PO are disseminated throughout the unit. Sharp lower CNT.

<<Alt: 145.68 - 149.77 Moderate Muscovite>>

<<Alt: 145.68 - 150.76 Weak-Moderate Calcite>> Calcite blebs, and quartz-carbonate bands.

<<Struc: 145.92 - 145.93 dominant foliation>>

<<Struc: 148.11 - 148.12 dominant foliation>>

**149.77 150.76 RHYcw Curdy textured-flow banded (flows, subvolcanics) FG**

149.77 - 150.76: Light grey, quartz-rich, heavily-fractured, coherent RHY. FRA consists of silver-medium green MU, and PY +/- PO.

<<Alt: 149.77 - 155.54 Moderate Muscovite>> MU FRA within cleavage planes and undulating fractures, within the BRX.

<<Struc: 150.58 - 150.59 dominant foliation>>

**150.76 154.44 RHYcw Curdy textured-flow banded (flows, subvolcanics)**

150.76 - 154.44: Light grey, siliceous, flow-banded, BRX-stockwork RHY. FRA consists of silver to dark-green MU, tourmaline, chlorite (?) and PY +/- PO. Dark green, subangular clasts (< 1cm) are localized; mm-size vugs are most prominent within pyrite-rich zones.

<<Min: 150.76 - 154.44 6% Min: Pyrite>> Patchy-zones of PY FRA within BRX RHYc.

<<Alt: 150.76 - 154.44 Trace Calcite>> Trace disseminated and FRA.

<<Vein: 151.98 - 152.23 Quartz-Carbonate 55 deg. >> Quartz-dominant veins with disseminated-blebs of CA.

**154.44 155.54 RHYcw Curdy textured-flow banded (flows, subvolcanics) FG**

154.44 - 155.54: Light grey, quartz-rich, heavily-fractured, coherent RHY. FRA consists of silver-medium green MU, and PY +/- PO.

<<Min: 154.44 - 155.54 0.5% Min: Pyrite>> MU, PO, and PY FRA within fractured RHYc.

<<Alt: 154.44 - 159.54 Weak Calcite>> Disseminated-blebs of CA; rare FRA.

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

## 155.54 159.18 RHYv Rhyolite volcaniclastic

155.54 - 159.18: Grey, volcaniclastic RHY with forest-green, MU-alteration visible within fractures-cleavage. Minor shearing is evident throughout the unit.

<<Min: 155.54 - 159.18 1% Min: Pyrrhotite>>

<<Min: 155.54 - 169 0.5% Min: Pyrite>> FD along foliation; rare hairline FRA, and blebs within quartz-carbonate bands.

<<Alt: 155.54 - 162.56 Weak-Moderate Muscovite>> MU-alteration along cleavage planes - foliation within RHY.

<<Vein: 156 - 159.18 Quartz-Carbonate>>

<<Struc: 158.41 - 158.42 Crenulation cleavage>>

<<Struc: 158.71 - 158.72 dominant foliation>>

## 159.18 173.74 RHYc Rhyolite coherant volcanics grey-green

159.18 - 173.74: Light grey-green, coherent RHY. Green muscovite within cleavage planes-fractures create a brecciated-look between the large (cm-scale), gritty, RHYc 'clasts'. Silica and ankerite (?) alteration pick up within the final 2m. Minor FLTing occurs between approx 160.6- 161.95m and 169-169.25m. Silicic bands undulate when proximal to FLT zones.

<<Min: 159.18 - 169 0.1% Min: Pyrrhotite>> Trace disseminated PO; rare, hairline FRA.

<<Min: 169 - 173.74 1% Min: Pyrite>> Hairline to mm-size stringers; PY +/- PO infill within fractures.

<<Min: 169 - 173.74 0.5% Min: Pyrrhotite>> Hairline to mm-size stringers; PY +/- PO infill within fractures.

<<Alt: 159.54 - 162.56 Weak-Moderate Calcite>> Disseminated-banded CA; occasional FRA.

<<Alt: 162.56 - 173.74 Weak Calcite>> Disseminated-blebs and FRA.

<<Alt: 162.56 - 191.73 Weak Muscovite>> Banded to pervasive MU-alteration; alteration is most prominent along foliation breaks.

<<Alt: 171.32 - 172.8 Weak-Moderate Silicification>>

<<Alt: 172.8 - 173.74 Trace Chlorite>>

<<Alt: 172.8 - 173.74 Weak-Moderate Ankerite>> Yellowish-white, gritty, carbonate alteration - ankerite?

<<Vein: 159.18 - 159.56 Quartz-Carbonate>> Massive quartz vein with patchy-carbonate, and CA FRA. Trace disseminated PY.

<<Vein: 171.3 - 173.79 Quartz-Carbonate>> Quartz-carbonate stringers and veinlets.

<<Struc: 160.6 - 161.94 Trace Fault>> Small sheared/pulverized-rehealed zones, and rubble zones within competent RHYc (~40%).

<<Struc: 162.5 - 162.51 dominant foliation>>

<<Struc: 167.6 - 167.61 dominant foliation>>

<<Struc: 169 - 169.1 Weak-Moderate Fault>> Pulverized RHYc, and rubble.

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

## 173.74 180.21 RHYvl Lapilli tuff grey-green

173.74 - 180.21: Light greenish-grey, volcaniclastic lapilli tuff. Subrounded, quartz-carbonate (poor) lapilli (< 1cm) are poorly-sorted. Lapilli abundance is greatest within the centre of the unit. PY-rich (+/- PO) kink bands are sporadic, throughout the interval.

<<Min: 173.74 - 180.21 3% Min: Pyrite>> Disseminated kink-bands of PY +/- PO within lapilli tuff.

<<Min: 173.74 - 180.21 0.5% Min: Pyrrhotite>> Disseminated kink-bands of PY +/- PO within lapilli tuff.

<<Alt: 173.74 - 180.21 Weak-Moderate Calcite>> Disseminated-blebs; quartz-carbonate lapilli.

<<Vein: 175.5 - 176.42 Quartz-Carbonate>> Quartz carbonate veinlets (1-2cm wide) containing disseminated PY blebs.

<<Struc: 174.87 - 174.88 dominant foliation>>

<<Struc: 179.46 - 179.47 dominant foliation>>

## 180.21 184.32 RHYc Rhyolite coherant volcanics light grey

180.21 - 184.32: Light-grey, gritty, coherent RHY. QC +/- PY stringers are common, and create a brecciated-look. Upper and lower CNT are gradational.

<<Min: 180.21 - 184.32 3% Min: Pyrite>> QC stringer-network +/- PY +/- PO.

<<Min: 180.21 - 184.32 0.5% Min: Pyrrhotite>> QC stringer-network +/- PY +/- PO.

<<Alt: 180.21 - 184.32 Weak-Moderate Calcite>> Disseminated CA; mostly FRA.

<<Vein: 180.21 - 183.15 Quartz-Carbonate-Sulphide>> QC +/- PY stringers; stringers brecciate coherent RHY.

<<Vein: 183.1 - 183.66 Quartz-Carbonate>> Quartz-carbonate bands.

<<Struc: 183.44 - 183.45 dominant foliation>>

## 184.32 189.00 RHYvl Lapilli tuff

184.32 - 189: Light greenish-grey, volcaniclastic, lapilli tuff. Subrounded, quartz-carbonate lapilli are < 10mm, and are poorly-sorted; abundance is < 25%. There is a moderate FLT between 187.12-187.32m; the FLT consists of hard-sericitic gouge, and large, subangular quartz clasts (< 2cm). PY is disseminated within clasts. PY-rich disseminated-bands are common throughout the RHY.

<<Min: 184.32 - 198.21 3% Min: Pyrite>> Disseminated PY-rich (+/- PO) QC bands.

<<Min: 184.32 - 198.21 0.1% Min: Pyrrhotite>> Disseminated PY-rich (+/- PO) QC bands.

<<Alt: 184.32 - 191.73 Weak Calcite>> Disseminated-blebs of CA; rare FRA.

<<Struc: 184.55 - 184.56 dominant foliation>>

<<Struc: 186.8 - 186.81 dominant foliation>>

<<Struc: 187.12 - 187.32 Moderate Fault>> Semi-hard, sericitic gouge. The gouge contains cm-size clasts of quartz; disseminated PY is visible within the quartz.

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

**189.00 191.73 RHYva Coarse grained to ash tuff grey-green**

189 - 191.73: Light green-grey, ash-dominant, volcaniclastic tuff with rare PY-rich bands.

**191.73 198.21 RHYva Coarse grained to ash tuff**

191.73 - 198.21: Siliceous, ash-dominant, volcaniclastic tuff. Possible QE? (rare)

<<Alt: 191.73 - 192.2 Moderate-Strong Silicification>>

<<Alt: 191.73 - 198.21 Trace Muscovite>>

<<Alt: 191.73 - 198.21 Trace Calcite>> Trace-weak, disseminated CA; rare FRA.

<<Alt: 192.2 - 245.88 Moderate Silicification>> Moderate SI-alteration (?) or just siliceous RHY unit (no alteration).

<<Vein: 195.04 - 195.18 Quartz-Carbonate>> Quartz-carbonate veinlets with trace, disseminated PY.

<<Vein: 197.25 - 199.25 Quartz-Carbonate 65 deg. >>

<<Struc: 192.87 - 192.88 dominant foliation>>

<<Struc: 196.75 - 196.76 dominant foliation>>

**198.21 204.97 RHYvl Lapilli tuff**

198.21 - 204.97: MU-SI-altered, volcaniclastic lapilli tuff. Minor FLT zone between 199.13-200m.

<<Min: 198.21 - 207.23 1% Min: Pyrite>> Disseminated-banded PY.

<<Min: 198.21 - 207.23 0.1% Min: Pyrrhotite>> Trace, disseminated PO.

<<Alt: 198.21 - 205.34 Moderate Muscovite>> Pervasive MU-alteration, most prominent within folia, creating a banded-appearance.

<<Alt: 198.21 - 205.34 Weak Calcite>> Disseminated blebs of CA; quartz-carbonate lapilli.

<<Struc: 198.21 - 198.22 Contact>>

<<Struc: 199.66 - 200 Weak-Moderate Fault>> Soft-sericitic gouge; gouge contains mm-size, subrounded RHY clasts. ~ 50% of the unit is competent RHY.

<<Struc: 202.34 - 202.35 dominant foliation>>

<<Struc: 204.54 - 204.55 dominant foliation>>

**204.97 207.23 RHYva Coarse grained to ash tuff FG**

204.97 - 207.23: Fine-grained, ash-dominant, volcaniclastic tuff with strong, pervasive muscovite alteration. Coarse-grained, disseminated, subhedral PY is common along foliation.

<<Alt: 205.34 - 206.27 Strong Muscovite>> Pervasive-patchy, MU-alteration proximal to a massive quartz vein-FLT zone.

<<Alt: 205.34 - 206.27 Moderate Calcite>> Patchy-carbonate within quartz veins.

<<Alt: 206.27 - 207.23 Moderate Muscovite>>

<<Alt: 206.27 - 207.53 Moderate Calcite>>

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

<<Vein: 205.35 - 206.43 Quartz-Carbonate>> Regular - undulating quartz-carbonate veins, and a massive - faulted vein (205.6-206.15m).

<<Vein: 207 - 208.2 Quartz-Carbonate 60 deg. >> Quartz-carbonate bands; occasional PY-replacement within bands.

<<Struc: 205.73 - 206.15 Weak-Moderate Fault>> Rubble-quartz vein.

<<Struc: 206.95 - 206.96 dominant foliation>>

## 207.23 215.20 RHYv Rhyolite volcaniclastic

207.23 - 215.2: Light greenish-grey, MU-SI altered RHY. Disseminated PY is common within silica-rich bands. PY-rich bands occur in localized zones. Disseminated (singular) PY +/- PO is visible throughout the unit.

<<Min: 207.23 - 233.86 5% Min: Pyrite>> Disseminated PY; banding is common within silica-rich zones.

<<Min: 207.23 - 233.86 1% Min: Pyrrhotite>>

<<Alt: 207.23 - 245.88 Weak-Moderate Muscovite>> Weak-moderate MU-alteration; alteration is most intense within FLT zones.

<<Alt: 207.53 - 209.7 Weak-Moderate Calcite>> Quartz-carbonate aggregates-disseminated blebs.

<<Alt: 209.7 - 220.5 Weak Calcite>> Disseminated-blebs of CA; rare FRA.

<<Struc: 208.45 - 208.65 Trace Fault>> Heavily-fractured, incompetent RHY.

<<Struc: 209.85 - 209.86 dominant foliation>>

<<Struc: 211.61 - 211.62 dominant foliation>>

## 215.20 247.50 RHY undifferentiated rhyolite

215.2 - 247.5: Light greenish-grey, MU-SI altered, undifferentiated RHY with disseminated PY +/- PO. Disseminated PY-rich bands are common within silica-rich zones.

<<Min: 233.86 - 240.38 8% Min: Pyrite>> Disseminated PY; banding is common within silica-rich zones.

<<Min: 233.86 - 240.38 0.1% Min: Pyrrhotite>>

<<Min: 240.38 - 247.5 0.5% Min: Pyrite>> Trace disseminated PY.

<<Min: 240.38 - 247.5 4% Min: Pyrrhotite>> Disseminated PO +/- PY; PO is elongated-strained along foliation.

<<Alt: 220.5 - 228.55 Moderate Calcite>> Moderate CA within aggregates and quartz-carbonate bands; trace disseminated.

<<Alt: 228.55 - 273 Trace Calcite>> Trace disseminated; rare FRA. Weak, patchy-carbonate within quartz veins.

<<Alt: 245.88 - 248.87 Moderate Muscovite>> Stronger alteration within FLT zone.

<<Alt: 245.88 - 272.23 Weak-Moderate Silicification>>

<<Vein: 220.45 - 221.38 Quartz-Carbonate>>

<<Vein: 227.7 - 228.47 Quartz-Carbonate>> 1-3cm wide, quartz-carbonate veins.

<<Vein: 240.27 - 241.08 Quartz-Carbonate 65 deg. >> Quartz-carbonate veins (1-5cm wide) with trace disseminated-blebs of PO.

<<Struc: 215.2 - 215.35 Weak-Moderate Fault>> Fractured-pulverized RHY.

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

<<Struc: 215.78 - 215.79 dominant foliation>>

<<Struc: 217.11 - 217.19 Moderate Fault>> Sericitic-gouge; gouge contains mm-size, subrounded quartz clasts, and trace disseminated PY.

<<Struc: 218.53 - 218.63 Moderate Fault>> FLT gouge with mm-size, subangular quartz clasts.

<<Struc: 221.9 - 221.91 dominant foliation>>

<<Struc: 222.51 - 222.52 dominant foliation>>

<<Struc: 225.32 - 225.33 dominant foliation>>

<<Struc: 226.2 - 226.21 Crenulation cleavage>>

<<Struc: 227.05 - 227.06 dominant foliation>>

<<Struc: 230.83 - 230.84 dominant foliation>>

<<Struc: 233.42 - 233.43 dominant foliation>>

<<Struc: 234.5 - 234.51 dominant foliation>>

<<Struc: 235.19 - 235.35 Weak-Moderate Fault>> RHY shear-gouge with cm-size, subrounded quartz clasts, and disseminated PY.

<<Struc: 236.35 - 236.92 Weak-Moderate Fault>> Weak-sheared RHY to semi-hard gouge; 1-10mm size, subangular quartz clasts, and disseminated PY.

<<Struc: 238.5 - 238.54 Weak-Moderate Fault>> RHY-gouge with mm-size, subangular quartz clasts, and patchy-PY.

<<Struc: 241.71 - 241.72 dominant foliation>>

<<Struc: 244.36 - 244.37 dominant foliation>>

<<Struc: 245.9 - 247.5 Weak Fault>> Trace-weak, sheared, MU-altered RHY with minor bands of gouge.

## 247.50 248.87 FLZ Fault Zone

247.5 - 248.87: Brecciated, silica-rich, MU-altered RHY. Cm-scale, subrounded quartz clasts contain disseminated PY. Soft, sericitic-gouge FRA.

<<Min: 247.5 - 249.34 6% Min: Pyrite>> Subrounded quartz clasts within RHY-FLT contain disseminated PY.

<<Struc: 247.5 - 248.87 Moderate Fault>> Sheared-brecciated RHY; sericitic gouge-clay within fractures. Clasts range from mm-size to cm-scale, and are generally made up of quartz. PY-replacement within quartz clasts is localized.

## 248.87 263.20 RHY undifferentiated rhyolite

248.87 - 263.2: MU-SI altered, undifferentiated RHY. Weak-moderate FLTing has created minor brecciated zones. Disseminated PO +/- PY is visible throughout the unit; pyrite-rich bands occur in zones with strong SI-alteration.

<<Min: 249.34 - 263.2 1% Min: Pyrite>> Disseminated PO +/- PY; disseminated PY is patchy within silica-rich zones. Rare FRA.

<<Min: 249.34 - 263.2 4% Min: Pyrrhotite>> Disseminated PO +/- PY; PO is elongated-strained along foliation.

<<Alt: 248.87 - 273.05 Weak-Moderate Muscovite>> Pervasive weak-moderate MU-alteration; alteration is stronger within FLT zones.

<<Struc: 250.5 - 250.95 Weak Fault>> Fractured RHY; ~ 50% recovered.

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

<<Struc: 252.62 - 253.4 Weak-Moderate Fault>> Pulverized RHY, and rubble.

<<Struc: 255.36 - 257.3 Weak Fault>> Trace-weak FLT zones, within competent RHY; zones consist of fractured-sheared RHY, and pyrite-rich gouge within fractures.

<<Struc: 261.7 - 261.71 dominant foliation>>

<<Struc: 262 - 262.37 Weak Fault>> Fractured RHY; small pulverized zones.

**263.20 264.89 MDS Carbonaceous Mudstone & Tuffaceous Mudstone**

263.2 - 264.89: Dark grey, mudstone intercalated with MU-SI altered RHY (30%). Trace disseminated PO + PY.

<<Min: 263.2 - 267.13 0.1% Min: Pyrite>> Disseminated PO +/- PY.

<<Min: 263.2 - 272.03 3% Min: Pyrrhotite>> Disseminated PO +/- PY; PO-banding occurs in silica-rich zones within RHY.

**264.89 265.78 RHY undifferentiated rhyolite**

264.89 - 265.78: MU-SI altered RHY with disseminated PY+PO. FLT upper CNT; gradational lower CNT.

<<Struc: 264.9 - 265 Moderate-Strong Fault>> Soft-gouge with mm-size, subangular RHY clasts. FLT represents CNT between MDS and RHY.

<<Struc: 265.63 - 265.64 dominant foliation>>

**265.78 267.13 MDS Carbonaceous Mudstone & Tuffaceous Mudstone**

265.78 - 267.13: Med-dark grey, siliceous (?) mudstone with disseminated PY+PO.

**267.13 296.35 RHY undifferentiated rhyolite**

| From (m) | To (m) | Width | Sample | Au ppm | Ag ppm | Cu % | Pb % | Zn % |
|---|---|---|---|---|---|---|---|---|
| 292.00 | 293.50 | 1.50 | D00005751 | 0.03 | 3.2 | 0.02 | -0.01 | 0.01 |

267.13 - 296.35: MU-SI altered, undifferentiated RHY. MU alteration becomes strong around 273m; alteration is strongest within foliation and fractures. Localized zones contain brecciated quartz-aggregates; clasts are seperated with strongly-altered sericite. RHY ranges from well-sorted-banded to a poorly-sorted, mottled texture. Alteration and textural-distortion increases downhole.

<<Min: 267.13 - 272.03 5% Min: Pyrite>> Disseminated-banded PY.

| From (m) | To (m) | Width | Sample | Au ppm | Ag ppm | Cu % | Pb % | Zn % |
|---|---|---|---|---|---|---|---|---|
| 293.50 | 295.00 | 1.50 | D00005752 | 0.007 | 1.2 | -0.01 | -0.01 | 0.05 |

<<Min: 272.03 - 296.35 3% Min: Pyrite>> Disseminated PY +/- PO; PY is elongated-strained along foliation.

| From (m) | To (m) | Width | Sample | Au ppm | Ag ppm | Cu % | Pb % | Zn % |
|---|---|---|---|---|---|---|---|---|
| 295.00 | 296.35 | 1.35 | D00005753 | 0.062 | 7.5 | 0.09 | 0.03 | 0.16 |

<<Min: 272.03 - 296.35 1% Min: Pyrrhotite>> Disseminated PY +/- PO; PO is elongated-strained along foliation.

<<Min: 294 - 296.35 0.1% Min: Sphalerite>> Trace disseminated SP.

<<Min: 296.25 - 296.35 5% Min: Chalcopyrite>> Blebs of CP within quartz vein; trace subhedral PY +/- SP.

<<Alt: 272.23 - 296.35 Moderate Silicification>> SI-alteration within quartz-rich RHY; brecciated apart by strong MU-alteration.

<<Alt: 273 - 274.4 Weak-Moderate Calcite>> Patchy-carbonate within quartz-carbonate veins; FRA.

<<Alt: 273.05 - 274.4 Moderate-Strong Muscovite>> Moderate-strong MU-alteration; tight foliation gives a banded-appearance.

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

<<Alt: 274.4 - 291.28 Strong Muscovite>> Banded-FRA MU alteration. Olive-lime green, sericite is visible along folia, and within fractures; alteration is pervasive throughout the interval, and has destroyed the original texture of the undifferentiated RHY, creating a brecciated-mottled look in weaker zones.

<<Alt: 274.4 - 296.35 Weak Calcite>> Trace to weak, disseminated-blebs and FRA. CA is weak-moderate within quartz-carbonate veins.

<<Alt: 291.28 - 293.17 Strong Muscovite>> Strong, pervasive MU alteration with more intense, patchy, MU-altered zones.

<<Alt: 293.17 - 296.44 Moderate Muscovite>>

<<Vein: 268.04 - 269.68 Quartz-Carbonate>> Undulating quartz veins with CA patches and FRA.

<<Vein: 270.82 - 271.11 Quartz>> Massive quartz vein, broken apart by RHY host; vein contains carbonate blebs and FRA.

<<Vein: 272.72 - 274.4 Quartz-Carbonate 70 deg. >> Quartz-carbonate veins (0.5-4cm wide).

<<Vein: 279.46 - 285.23 Quartz-Carbonate 70 deg. >> Quartz veins with patchy-carbonate, and CA FRA.

<<Vein: 285.45 - 295.5 Quartz-Carbonate>> DEF-undulating quartz-carbonate veins within heavily-altered RHY.

<<Vein: 296.26 - 296.35 Quartz-Sulphide>> Fractured, quartz vein with angular-brecciated clasts of RHY host; CP blebs.

<<Struc: 271.42 - 271.52 Moderate Fault>> Semi-soft RHY gouge-shear zone, with disseminated PY.

<<Struc: 273.37 - 273.47 Weak-Moderate Fault>> Clast-supported, FLT BRX. Large, angular RHY clasts have undergone strong sericite alteration, and are surrounded with semi-soft, sericitic gouge.

<<Struc: 273.85 - 274.4 Foliation>> Tight-foliation - shear zone (?) proximal to FLT.

<<Struc: 275.72 - 277.34 Weak-Moderate Fault>> Brecciated RHY with strong sericite alteration. Minor bands of gouge.

<<Struc: 279.58 - 279.59 dominant foliation>>

<<Struc: 283.25 - 283.26 dominant foliation>>

<<Struc: 283.46 - 283.7 Weak Fault>> Fractured-brecciated, MU-altered RHY with minor gouge.

<<Struc: 293.9 - 293.91 dominant foliation>>

<<Struc: 295.68 - 295.69 dominant foliation>>

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **296.35** | **296.73** | **OK** | **Heavilly disseminated sulphides and/or stringer style mineralization associated with barite ± quartz ± carbonate gangue** | 296.35 | 296.85 | 0.50 | D00005754 | 0.807 | 128 | 0.85 | 0.7 | 2.78 |

296.35 - 296.73: Heavily-disseminated PY + SP +/- CP within a silicate-rich gangue. There is strong MU-alteration at the beginning of the interval.

<<Min: 296.35 - 296.73 10% Min: Sphalerite>> Heavily-disseminated PY + SP +/- CP within a silicate-rich gangue.

<<Min: 296.35 - 296.73 15% Min: Pyrite>> Heavily-disseminated PY + SP +/- CP within a silicate-rich gangue.

| From (m) | To (m) | Rocktype & Description | From (m) | To (m) | Width | Sample | Au ppm | Ag ppm | Cu % | Pb % | Zn % |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | <<Min: 296.35 - 296.73 3% Min: Chalcopyrite>> Heavily-disseminated PY + SP +/- CP within a silicate-rich gangue. | | | | | | | | | |
| | | <<Struc: 296.67 - 296.68 dominant foliation>> | | | | | | | | | |
| **296.73** | **299.40** | **OB** **Wispy laminar, fine buckshot textured, massive sulphide with lesser magnetite** | 296.85 | 298.00 | 1.15 | D00005755 | 1.23 | 97.7 | 1.37 | 0.53 | 4.78 |
| | | 296.73 - 299.4: Fine-coarse grained, PY-dominant, massive sulphide with disseminated SP +/- CP. CA is weakly-disseminated; subrounded, carbonate-rich blebs are rare. Sharp upper and lower CNT. | | | | | | | | | |
| | | <<Min: 296.73 - 299.4 7% Min: Sphalerite>> Fine-coarse grained, PY-dominant, massive sulphide with disseminated SP +/- CP. | 298.00 | 299.40 | 1.40 | D00005756 | 1.31 | 143 | 0.79 | 0.78 | 6.83 |
| | | <<Min: 296.73 - 299.4 75% Min: Pyrite>> Fine-coarse grained, PY-dominant, massive sulphide with disseminated SP +/- CP. | | | | | | | | | |
| | | <<Min: 296.73 - 299.4 2% Min: Chalcopyrite>> Fine-coarse grained, PY-dominant, massive sulphide with disseminated SP +/- CP. | | | | | | | | | |
| | | <<Alt: 296.73 - 299.4 Weak Calcite>> Weakly-disseminated CA; and rare, carbonate-rich blebs. | | | | | | | | | |
| | | <<Struc: 297.69 - 297.7 dominant foliation>> | | | | | | | | | |
| **299.40** | **329.89** | **RHY** **undifferentiated rhyolite** | 299.40 | 300.90 | 1.50 | D00005757 | 0.01 | 1.1 | -0.01 | 0.01 | 0.02 |
| | | 299.4 - 329.89: MU-SI altered, undifferentiated RHY; alteration is strongest proximal to the massive sulphide, and within FLT zones. Ankerite alteration begins around 320.85m, and continues to 329.89m. Massive quartz veins occur between 321-328.8m; veins contain blebs of GL+CP+/-SP. | | | | | | | | | |
| | | <<Min: 299.4 - 306.6 0.1% Min: Sphalerite>> Trace, finely-disseminated SP along foliation. | 300.90 | 302.40 | 1.50 | D00005758 | 0.006 | 0.5 | -0.01 | -0.01 | -0.01 |
| | | <<Min: 299.4 - 306.6 2% Min: Pyrite>> 1-2% PY, FD along foliation. PY blebs are visible within the FLT zone (302.9-303.3m). | 302.40 | 304.00 | 1.60 | D00005759 | 0.005 | 0.4 | -0.01 | -0.01 | -0.01 |
| | | <<Min: 306.6 - 321.03 3% Min: Pyrite>> FD to disseminated PY along foliation. | 327.50 | 329.00 | 1.50 | D00005761 | 0.386 | 40.3 | 0.05 | 0.18 | 0.11 |
| | | <<Min: 306.87 - 321.03 2% Min: Arsenopyrite>> FD to blebs of disseminated AS. | 329.00 | 330.13 | 1.13 | D00005762 | 0.77 | 53.2 | 0.14 | 0.21 | 1.25 |
| | | <<Min: 321.03 - 326.28 1% Min: Sphalerite>> SP blebs and FRA within massive quartz veins. | | | | | | | | | |
| | | <<Min: 321.03 - 326.28 0.5% Min: Pyrite>> Disseminated PY along foliation; trace PY within quartz veins. | | | | | | | | | |
| | | <<Min: 321.03 - 326.28 2% Min: Galena>> Blebs of GL within massive quartz veins. | | | | | | | | | |
| | | <<Min: 324.7 - 326.28 2% Min: Chalcopyrite>> CP blebs and FRA within a massive quartz vein. | | | | | | | | | |
| | | <<Min: 326.28 - 328.04 0.5% Min: Pyrite>> | | | | | | | | | |
| | | <<Min: 328.04 - 328.8 2% Min: Sphalerite>> SP blebs and FRA within a fractured, massive quartz vein. | | | | | | | | | |
| | | <<Min: 328.04 - 328.8 3% Min: Galena>> GL blebs and FRA within a fractured, massive quartz vein. | | | | | | | | | |
| | | <<Min: 328.04 - 329 0.5% Min: Pyrite>> Disseminated PY is visible on fractured, quartz surfaces. FD along foliation of RHY. | | | | | | | | | |
| | | <<Min: 329 - 329.1 5% Min: Sphalerite>> Disseminated blebs and FRA within a quartz-carbonate vein. | | | | | | | | | |
| | | <<Min: 329 - 329.1 2% Min: Chalcopyrite>> Disseminated-blebs of CP+SP within a quartz-carbonate vein. | | | | | | | | | |

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

<<Min: 329 - 329.89 2% Min: Pyrite>> Disseminated PY within quartz-carbonate vein; FD along foliation of RHY.

<<Alt: 299.4 - 326.28 Moderate Muscovite>> Mod-strong, pervasive MU-alteration, most visible along cleavage planes. MU-alteration is strongest within the FLT zone (~302.9-303.3m).

<<Alt: 299.4 - 326.28 Weak Calcite>> Trace-weak, disseminated CA; occasional FRA. CA blebs within massive quartz veins.

<<Alt: 299.4 - 333.2 Moderate Silicification>>

<<Alt: 320.85 - 331 Moderate Ankerite>> Disseminated-blebs of AK, pervasive throughout the RHY.

<<Alt: 326.28 - 329.02 Trace Calcite>> Trace disseminated CA; blebs and FRA within quartz veins.

<<Alt: 326.28 - 333.2 Moderate-Strong Muscovite>>

<<Alt: 329.02 - 330.13 Weak-Moderate Calcite>> CA-rich patches within quartz-carbonate veins.

<<Vein: 321.03 - 321.6 Quartz>> Blebs of GL +/- SP within a massive quartz vein; CA blebs and FRA.

<<Vein: 323.26 - 323.71 Quartz>> Massive quartz vein with blebs of SP+GL.

<<Vein: 324.7 - 326.28 Quartz>> Massive quartz vein with blebs of carbonate. CP+GL+SP+PY blebs and FRA within vein.

<<Vein: 327.72 - 327.81 Quartz-Carbonate>> DEF quartz veins with blebby-carbonate.

<<Vein: 328.04 - 328.8 Quartz>> Fractured, massive quartz vein with patchy-carbonate, and blebs of GL+SP; ~70% recovered.

<<Vein: 329.02 - 330.3 Quartz-Carbonate-Sulphide>> Quartz-carbonate veins with disseminated PY+SP.

<<Struc: 299.4 - 299.41 Contact>> Lower CNT of massive sulphide, between OB mineralization and RHY.

<<Struc: 301.3 - 301.31 dominant foliation>>

<<Struc: 302.85 - 303.55 Moderate Fault>> Weak, fractured-brecciated RHY with strong MU-alteration, minor gouge, and disseminated PY.

<<Struc: 305.72 - 305.73 dominant foliation>>

<<Struc: 306.4 - 306.87 Weak Fault>> Competent, fractured-brecciated RHY with strong MU alteration, and minor gouge.

<<Struc: 308 - 308.01 dominant foliation>>

<<Struc: 313.27 - 314.65 Moderate Fault>> MU-altered, RHY BRX and RHY. The matrix surrounding cm-size, subrounded quartz and RHY clasts consists of weak, sericitic gouge.

<<Struc: 316.83 - 316.84 dominant foliation>>

<<Struc: 319.84 - 319.85 dominant foliation>>

<<Struc: 321.6 - 322.9 Weak-Moderate Fault>> MU & AK-altered RHY rubble, with small pulverized zones.

<<Struc: 327.22 - 327.23 Foliation>>

<<Struc: 329.81 - 329.82 dominant foliation>>

| From (m) | To (m) | Rocktype & Description | From (m) | To (m) | Width | Sample | Au ppm | Ag ppm | Cu % | Pb % | Zn % |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **329.89** | **330.13** | **OI** **Heavilly disseminated sulphides in host schist** | | | | | | | | | |
| 329.89 - 330.13: Heavily-disseminated PY + SP +/- GL within host RHY, and a quartz-carbonate vein (330.01-330.07m). | | | | | | | | | | | |
| <<Min: 329.89 - 330.13 3% Min: Sphalerite>> Disseminated SP; blebs within quartz-carbonate veins. | | | | | | | | | | | |
| <<Min: 329.89 - 330.13 20% Min: Pyrite>> Banded to semi-massive PY; PY is disseminated within quartz-carbonate veins. | | | | | | | | | | | |
| <<Min: 329.89 - 330.13 0.5% Min: Galena>> Trace disseminated GL within quartz-carbonate veins. | | | | | | | | | | | |
| **330.13** | **333.20** | **RHY** **undifferentiated rhyolite** | 330.13 | 331.70 | 1.57 | D00005763 | 0.031 | 2.5 | -0.01 | -0.01 | 0.03 |
| 330.13 - 333.2: MU-AK-SI altered, undifferentiated RHY with disseminated PY +/- SP. Sharp lower CNT, with massive sulphide. | | | | | | | | | | | |
| <<Min: 330.13 - 333.2 0.5% Min: Sphalerite>> Trace disseminated SP, near the margins of the upper and lower CNT. | | | 331.70 | 333.20 | 1.50 | D00005764 | 0.027 | 7.1 | 0.02 | 0.05 | 0.21 |
| <<Min: 330.13 - 333.2 2% Min: Pyrite>> Most abundant proximal to upper and lower CNT. | | | | | | | | | | | |
| <<Alt: 330.13 - 333.45 Trace Calcite>> | | | | | | | | | | | |
| <<Alt: 331 - 332.89 Weak-Moderate Ankerite>> | | | | | | | | | | | |
| **333.20** | **338.82** | **OB** **Wispy laminar, fine buckshot textured, massive sulphide with lesser magnetite** | 333.20 | 334.40 | 1.20 | D00005765 | 2.42 | 345 | 0.39 | 3.13 | 9.9 |
| 333.2 - 338.82: Semi-massive to massive PY with disseminated-bands of SP, and trace disseminated GL+CP+/-MG. Quartz-carbonate bands and aggregates occur throughout the interval; possible BA aggregates? Localized zones contain tourmaline (?) FRA and blebs. | | | | | | | | | | | |
| <<Min: 333.2 - 333.53 2% Min: Sphalerite>> | | | 334.40 | 335.90 | 1.50 | D00005766 | 2.07 | 275 | 0.33 | 2.56 | 7.23 |
| <<Min: 333.2 - 334.4 1% Min: Chalcopyrite>> Semi-massive to massive PY with disseminated-banded SP, and trace disseminated CP+GL. | | | 335.90 | 337.00 | 1.10 | D00005767 | 2.02 | 209 | 0.27 | 2.09 | 6.34 |
| <<Min: 333.2 - 338.09 60% Min: Pyrite>> Semi-massive to massive PY with disseminated-banded SP, and trace CP+GL+/-MG. | | | 337.00 | 338.09 | 1.09 | D00005768 | 2.42 | 263 | 0.2 | 4.26 | 9.6 |
| <<Min: 333.2 - 338.84 0.5% Min: Galena>> Semi-massive to massive PY with disseminated-banded SP, and trace disseminated CP+GL. | | | 338.09 | 338.82 | 0.73 | D00005769 | 1.5 | 120 | 0.29 | 1.85 | 7.41 |
| <<Min: 333.53 - 334.4 10% Min: Sphalerite>> Disseminated-banded SP within massive PY. | | | | | | | | | | | |
| <<Min: 334.3 - 338.82 0.1% Min: Magnetite>> | | | | | | | | | | | |
| <<Min: 334.4 - 338.09 6% Min: Sphalerite>> Disseminated-banded SP within semi-massive to massive PY. | | | | | | | | | | | |
| <<Min: 334.4 - 338.8 0.5% Min: Chalcopyrite>> | | | | | | | | | | | |
| <<Min: 334.93 - 338.09 2% Min: Barite>> Possible BA aggregates? | | | | | | | | | | | |
| <<Min: 338.09 - 338.82 3% Min: Sphalerite>> Disseminated-banded SP within massive PY. | | | | | | | | | | | |

| From (m) | To (m) | Rocktype & Description | From (m) | To (m) | Width | Sample | Au ppm | Ag ppm | Cu % | Pb % | Zn % |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | <<Min: 338.09 - 338.82 85% Min: Pyrite>> Massive PY with disseminated-banded SP, and trace disseminated CP +/- MG. | | | | | | | | | |
| | | <<Min: 338.8 - 340.94 3% Min: Chalcopyrite>> Disseminated-blebs of CP; most common within quartz-carbonate aggregates. | | | | | | | | | |
| | | <<Alt: 333.45 - 334.4 Weak-Moderate Calcite>> Disseminated-pervasive CA; QC aggregates. | | | | | | | | | |
| | | <<Alt: 334.4 - 342.25 Trace Calcite>> Trace-weak, disseminated OP; patchy within quartz-carbonate (poor) aggregates. | | | | | | | | | |
| | | <<Struc: 333.2 - 333.21 Contact>> Upper CNT of massive sulphide. | | | | | | | | | |
| | | <<Struc: 335.86 - 335.87 dominant foliation>> | | | | | | | | | |
| | | <<Struc: 336.34 - 337.52 Weak-Moderate Fault>> Incompetent, fractured OB mineralization. | | | | | | | | | |
| | | <<Struc: 337.86 - 337.87 dominant foliation>> | | | | | | | | | |
| **338.82** | **340.94** | **OA Laminar or heavilly disseminated magnetite bearing massive sulphide** | 338.82 | 340.00 | 1.18 | D00005772 | 1.71 | 183 | 0.42 | 3.22 | 7.56 |
| | | 338.82 - 340.94: Massive PY with disseminated-banded MG+SP+/-GL. Quartz-carbonate aggregates contain blebs of CP+SP+GL. | | | | | | | | | |
| | | <<Min: 338.82 - 340.94 10% Min: Magnetite>> Disseminated blebs-bands of MG within massive PY. | 340.00 | 340.94 | 0.94 | D00005773 | 0.712 | 160 | 0.13 | 3.39 | 9.88 |
| | | <<Min: 338.82 - 342.25 70% Min: Pyrite>> Semi-massive to massive PY. | | | | | | | | | |
| | | <<Min: 338.82 - 343.4 5% Min: Sphalerite>> Disseminated-banded SP+MG within massive PY. SP+GL blebs are common within quartz-carbonate aggregates. | | | | | | | | | |
| | | <<Min: 338.84 - 340.75 1% Min: Galena>> Disseminated GL within massive PY; GL-blebs are common within quartz-carbonate aggregates. | | | | | | | | | |
| | | <<Min: 340.75 - 345.34 0.1% Min: Galena>> Trace disseminated GL within the massive PY. | | | | | | | | | |
| **340.94** | **344.35** | **OB Wispy laminar, fine buckshot textured, massive sulphide with lesser magnetite** | 340.94 | 342.25 | 1.31 | D00005774 | 1.78 | 152 | 0.32 | 2.58 | 7.51 |
| | | 340.94 - 344.35: Semi-massive to massive PY with disseminated-bands of SP +/- CP. Quartz-carbonate bands-aggregates host disseminated sulphides. Tourmaline porphyrblasts are localized (343.9-344.35m). | | | | | | | | | |
| | | <<Min: 340.94 - 342 1% Min: Chalcopyrite>> Disseminated-blebs of CP; gen found within visible host rock. | 342.25 | 343.40 | 1.15 | D00005775 | 2.86 | 180 | 0.27 | 1.42 | 5.07 |
| | | <<Min: 342.25 - 344.35 60% Min: Pyrite>> Semi-massive to massive PY. | 343.40 | 344.35 | 0.95 | D00005776 | 3.63 | 437 | 0.23 | 5.3 | 10.8 |
| | | <<Min: 342.25 - 344.35 1% Min: Barite>> Possible BA aggregates? | | | | | | | | | |
| | | <<Min: 343.4 - 345.34 8% Min: Sphalerite>> Disseminated-banded SP within massive PY. | | | | | | | | | |
| | | <<Alt: 342.25 - 343.4 Weak Calcite>> Disseminated-banded CA. | | | | | | | | | |
| | | <<Alt: 343.4 - 345.34 Trace Calcite>> | | | | | | | | | |
| | | <<Struc: 342.41 - 342.42 dominant foliation>> | | | | | | | | | |

| From (m) | To (m) | Rocktype & Description | From (m) | To (m) | Width | Sample | Au ppm | Ag ppm | Cu % | Pb % | Zn % |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **344.35** | **345.34** | **OA** **Laminar or heavilly disseminated magnetite bearing massive sulphide** | 344.35 | 345.34 | 0.99 | D00005777 | 1.06 | 135 | 0.19 | 1.9 | 11.1 |

344.35 - 345.34: Massive PY with disseminated-banded MG+SP; trace disseminated GL, and rare quartz-carbonate aggregates.

<<Min: 344.35 - 345.34 15% Min: Magnetite>> Disseminated blebs-bands of MG within massive PY.

<<Min: 344.35 - 346.05 70% Min: Pyrite>>

<<Struc: 345.3 - 345.31 dominant foliation>>

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **345.34** | **346.05** | **OB** **Wispy laminar, fine buckshot textured, massive sulphide with lesser magnetite** | 345.34 | 346.05 | 0.71 | D00005778 | 0.375 | 138 | -0.01 | 3.24 | 9.16 |

345.34 - 346.05: Massive PY with disseminated-banded SP. Quartz-carbonate and barite (?) aggregates contain disseminated SP+GL.

<<Min: 345.34 - 346.05 6% Min: Sphalerite>> Disseminated-banded SP within massive PY; SP+GL blebs within quartz-carbonate aggregates.

<<Min: 345.34 - 346.05 1% Min: Galena>> Disseminated GL within massive PY; GL-blebs within quartz-carbonate aggregates.

<<Min: 345.34 - 346.05 2% Min: Barite>>

<<Alt: 345.34 - 346.05 Weak-Moderate Calcite>> Weak-moderate, pervasive CA; QC aggregates.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **346.05** | **346.55** | **OF** **Pyrrhotite rich sulphides** | 346.05 | 346.55 | 0.50 | D00005779 | 0.37 | 39.2 | 0.5 | 0.65 | 7.63 |

346.05 - 346.55: Semi-massive to massive PO+PY, with disseminated SP, MG, CP, and coarse-grained AS. Soft, dark-green, chloritic host (?) and subangular clasts - mafic origin? Sharp, quartz vein lower CNT with RHY.

<<Min: 346.05 - 346.55 8% Min: Sphalerite>> Fine-medium grained, disseminated-banded SP within semi-massive PO+PY.

<<Min: 346.05 - 346.55 15% Min: Pyrite>> Semi-massive to massive PY+PO, with disseminated SP, MG, CP, and coarse-grained AS.

<<Min: 346.05 - 346.55 35% Min: Pyrrhotite>> Semi-massive to massive PY+PO, with disseminated SP, MG, CP, and coarse-grained AS.

<<Min: 346.05 - 346.55 4% Min: Magnetite>> Disseminated-blebs of MG.

<<Min: 346.05 - 346.55 1% Min: Chalcopyrite>> Disseminated-blebs.

<<Min: 346.05 - 346.55 5% Min: Arsenopyrite>> Coarse-grained, disseminated AS within semi-massive PO+PY and altered-host.

<<Alt: 346.05 - 355 Trace Calcite>> Trace, blebs and FRA within quartz veins.

| From (m) | To (m) | Rocktype & Description |
|---|---|---|
| **346.55** | **380.90** | **RHY undifferentiated rhyolite** |

346.55 - 380.9: MU-SI altered, undifferentiated RHY with minor BRX FLT zones, and localized chevron-folding. Massive quartz veins are prominent up to approx 353.4m. CL-alteration is restricted to FLT zones. PY is disseminated throughout the unit; PY-rich banding is localized, and more prominent towards the end of the interval.

<<Min: 346.55 - 356.6 0.5% Min: Pyrite>>

<<Min: 346.55 - 361.38 0.1% Min: Pyrrhotite>>

<<Min: 356.6 - 357.18 4% Min: Pyrite>> Fine-medium grained, disseminated-banded PY.

<<Min: 357.18 - 361.38 1% Min: Pyrite>> Disseminated PY; rare, localized banding.

<<Min: 361.38 - 364.49 2% Min: Pyrrhotite>>

<<Min: 361.38 - 364.8 3% Min: Pyrite>> Disseminated-banded.

<<Min: 364.49 - 371.5 0.1% Min: Pyrrhotite>> Trace disseminated PO.

<<Min: 364.8 - 371.5 0.5% Min: Pyrite>> Rare bands of disseminated PY; blebs within massive quartz vein.

<<Min: 371.5 - 380.9 4% Min: Pyrite>> Disseminated-banded PY +/- PO.

<<Min: 371.5 - 380.9 1% Min: Pyrrhotite>> Disseminated-banded PY +/- PO.

<<Alt: 346.55 - 375.1 Weak-Moderate Silicification>>

<<Alt: 346.55 - 380.9 Moderate Muscovite>>

<<Alt: 355 - 370.85 Trace Calcite>> Trace disseminated CA.

<<Alt: 366.35 - 375.29 Trace Chlorite>>

<<Alt: 370.85 - 379.35 Weak-Moderate Calcite>> Patchy-blebs within quartz-carbonate veins.

<<Alt: 370.97 - 375 Weak Biotite>> BI-alteration +/- PO within silica-rich blebs.

<<Alt: 375.1 - 380.9 Moderate Silicification>>

<<Alt: 379.35 - 380.9 Trace Calcite>>

<<Vein: 346.55 - 347.66 Quartz>> DEF quartz veins; carbonate blebs and FRA within hairline fractures.

<<Vein: 348.19 - 348.61 Quartz>> Massive quartz vein; rare carbonate blebs.

<<Vein: 348.7 - 350.16 Quartz>> 1-5cm quartz veins with carbonate blebs and FRA.

<<Vein: 353.23 - 353.46 Quartz>>

<<Vein: 355.3 - 355.5 Quartz>>

<<Vein: 359.04 - 363.13 Quartz-Carbonate>>

<<Vein: 370.88 - 371.43 Quartz-Carbonate>> Massive-undulating quartz vein with patchy-carbonate, and blebs of chlorite, tourmaline, biotite, and pyrite.

<<Vein: 374.07 - 376.8 Quartz-Carbonate>> Series of fractured-pulverized quartz-carbonate veins with tourmaline FRA, and disseminated PY.

<<Vein: 378.07 - 378.48 Quartz-Carbonate>> DEF quartz veins with patchy-carbonate, blebs of chlorite, and disseminated biotite and pyrite.

<<Vein: 379.26 - 381.67 Quartz-Carbonate>> Quartz veins with blebby-carbonate.

| From (m) | To (m) | Width | Sample | Au ppm | Ag ppm | Cu % | Pb % | Zn % |
|---|---|---|---|---|---|---|---|---|
| 346.55 | 348.00 | 1.45 | D00005781 | 0.007 | 1.4 | -0.01 | 0.01 | 0.03 |
| 348.00 | 349.50 | 1.50 | D00005782 | 0.006 | 0.4 | -0.01 | -0.01 | -0.01 |
| 349.50 | 351.00 | 1.50 | D00005783 | 0.006 | 0.8 | -0.01 | -0.01 | -0.01 |

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

<<Struc: 346.55 - 346.56 Contact>> Lower CNT of massive sulphide.

<<Struc: 348.04 - 348.05 dominant foliation>>

<<Struc: 348.66 - 348.67 dominant foliation>>

<<Struc: 351.3 - 353.6 Trace Fault>> Trace-weak, fractures throughout RHY; minor shearing-gouge.

<<Struc: 356.27 - 356.28 dominant foliation>>

<<Struc: 359.7 - 359.71 dominant foliation>>

<<Struc: 363.19 - 363.2 dominant foliation>>

<<Struc: 367.48 - 367.49 dominant foliation>>

<<Struc: 370.44 - 370.45 dominant foliation>>

<<Struc: 372.7 - 373.25 Weak-Moderate Fault>> Incompetent-fractured RHY with 8cm of weak, chloritic gouge.

<<Struc: 374.1 - 376.4 Weak-Moderate Fault>> Fractured RHY with minor shearing. Quartz-RHY is pulverized proximal to the quartz vein (~375m). Subrounded, brecciated quartz clasts (< 4cm) occur within the sheared RHY.

<<Struc: 376.67 - 377.15 Moderate Fault>> Fractured RHY with pulverized zones, and minor gouge. Sericitic gouge contains subangular quartz clasts (1-10mm).

<<Struc: 377.69 - 377.7 dominant foliation>>

## 380.90 381.74 PEL Equigranular biotite + calcite +/- quartz rock

380.9 - 381.74: Dark green-brown, chlorite-rich, biotite-poor PEL (?) with quartz-carbonate banding, and disseminated PY + PO.

<<Min: 380.9 - 381.74 0.1% Min: Pyrite>>

<<Min: 380.9 - 381.74 0.5% Min: Pyrrhotite>> Disseminated PO; generally localized.

<<Alt: 380.9 - 381.74 Weak-Moderate Chlorite>> Chlorite-rich PEL.

<<Alt: 380.9 - 381.74 Weak Calcite>> Weak-pervasive CA within PEL; quartz-carbonate bands.

## 381.74 382.80 RHY undifferentiated rhyolite

381.74 - 382.8: Light grey, SI-altered RHY with disseminated PO.

<<Min: 381.74 - 382.8 2% Min: Pyrrhotite>>

<<Min: 381.74 - 387.98 0.5% Min: Pyrite>> Disseminated PY; PY blebs within quartz vein.

<<Alt: 381.74 - 382.8 Moderate Silicification>>

<<Alt: 381.74 - 382.8 Moderate Muscovite>>

<<Alt: 381.74 - 382.8 Trace Calcite>>

<<Struc: 381.76 - 381.77 dominant foliation>>

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

**382.80 384.93 PEL Equigranular biotite + calcite +/- quartz rock**

382.8 - 384.93: Greenish-brown, biotite-rich PEL with localized MU-alteration, and disseminated PO +/- PY.

<<Min: 382.8 - 387.98 1% Min: Pyrrhotite>> Disseminated-banded PO; PO blebs within quartz vein.

<<Alt: 382.8 - 387.98 Weak Chlorite>> Chloritic PEL. CL blebs are stronger within massive quartz-carbonate-chlorite, altered vein.

<<Alt: 382.8 - 387.98 Weak-Moderate Calcite>> Patchy, CA is stronger within the massive quartz-carbonate-chlorite vein.

<<Struc: 383.52 - 383.53 dominant foliation>>

**384.93 387.98 PEL Equigranular biotite + calcite +/- quartz rock**

384.93 - 387.98: Alternating beds of PEL and altered-RHY, with gradational contacts. Minor FLT zones occur throughout the interval. There is a massive quartz-carbonate-chlorite vein with disseminated biotite +/- pyrite from approx 385.7-385.9m.

<<Alt: 384.93 - 387.98 Moderate Silicification>> Pervasive SI-alteration within RHY.

<<Alt: 384.93 - 416.22 Moderate Muscovite>> Pervasive, web-like texture surrounding BI-SI blebs; alteration is stronger within FLZ.

<<Vein: 385.59 - 386.05 Quarzt-Chlorite-Carbonate>> Regular to massive quartz veins with patchy carbonate and chlorite, disseminated biotite is most prominent within the carbonate. Trace disseminated pyrite.

<<Vein: 386.05 - 393.85 Quartz-Carbonate>>

<<Struc: 384.94 - 384.95 dominant foliation>>

<<Struc: 385.14 - 385.75 Weak-Moderate Fault>> Heavily-fractured RHY - rubble zone; <50% recovered.

<<Struc: 387.6 - 387.61 dominant foliation>>

<<Struc: 387.7 - 387.97 Weak-Moderate Fault>> Fractured RHY - rubble zone.

**387.98 416.22 RHY undifferentiated rhyolite**

387.98 - 416.22: MU-SI-BI altered RHY (?) with disseminated PO + PY. FLZ from approx 390.15-391.5m. Tourmaline FRA and localized, mm-size blebs are rare.

<<Min: 387.98 - 400.6 2% Min: Pyrite>> Disseminated PY; gen localized within SI-BI altered blebs.

<<Min: 387.98 - 400.6 5% Min: Pyrrhotite>> Disseminated PO localized within SI-BI blebs.

<<Min: 400.6 - 401.62 0.5% Min: Pyrite>>

<<Min: 400.6 - 401.62 0.1% Min: Pyrrhotite>>

<<Min: 401.62 - 406.03 3% Min: Pyrite>> Disseminated PY; rare bands.

<<Min: 401.62 - 406.03 2% Min: Pyrrhotite>>

<<Min: 406.03 - 406.85 1% Min: Pyrite>> Disseminated-banded.

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

<<Min: 406.03 - 406.85 1% Min: Pyrrhotite>> Disseminated PO; localized within SI-rich zone.

<<Min: 406.85 - 416.22 4% Min: Pyrite>> Fine-grained blebs to coarse-grained disseminated PY. Subhedral, med-coarse grained PY is visible on fractured surfaces. FRA is rare.

<<Min: 406.85 - 416.22 4% Min: Pyrrhotite>> Disseminated PO+PY; PO is gen localized within silica-rich blebs. Difficult to approximate percentage, based on amount of mixed biotite alteration.

<<Alt: 387.98 - 394.5 Weak Calcite>>

<<Alt: 387.98 - 405.3 Weak Biotite>> Blebs of disseminated BI +/- PO within silica-rich blebs.

<<Alt: 387.98 - 416.22 Weak-Moderate Silicification>> SI-rich blebs host disseminated BI+PO+/-PY. SI appears brecciated, due to surrounding MU-alteration, web-like texture.

<<Alt: 394.5 - 416.22 Trace Calcite>>

<<Alt: 406.85 - 416.22 Weak Biotite>> Blebs of disseminated BI +/- PO within silica-rich blebs.

<<Vein: 402.22 - 403.46 Quartz-Carbonate>> Quartz veins with blebby-carbonate.

<<Struc: 390.17 - 391.5 Moderate-Strong Fault>> MU-BI altered RHY FLT consists of sheared-RHY and gouge. The weak, sericitic gouge contains mm-size, subangular clasts of RHY, quartz, and disseminated PY. Gouge FRA is common within fractures. ~ 60% of the unit was recovered.

<<Struc: 393.1 - 393.11 dominant foliation>>

<<Struc: 399 - 400 Trace Fault>> Fractured, incompetent RHY.

<<Struc: 401.98 - 401.99 dominant foliation>>

<<Struc: 405.65 - 406.24 Weak Fault>> Sheared-fractured zones, within competent RHY.

<<Struc: 406.41 - 406.42 dominant foliation>>

<<Struc: 406.7 - 406.85 Moderate-Strong Fault>> Weak, sericitic gouge with mm-size quartz clasts, and disseminated pyrite.

<<Struc: 411.18 - 411.85 Trace Fault>> Fractured zone.

<<Struc: 413.1 - 413.11 dominant foliation>>

**End of Hole @ 416.22**