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ASX Limited  
Company Announcements Office

21st September 2012

## Andewa Drilling Update

Frontier Resources Ltd is pleased to announce a drilling update for the Andewa porphyry gold - copper mineralised system in Papua New Guinea.

- Five drill holes are proposed for the current 5,000m total drilling program.
  - ADH014 was completed at 1,004.0m (the planned depth).
  - ADH015 was terminated at 847.8m (due to drilling difficulties).
  - ADH016 and 017 are drilling on and are at approximately 760m and 660m depth, respectively.
  - Fifteen core drill holes have been completed since the program commenced in mid-2011, for a total of 7,735.6m.
  - Nine figures showing drill hole traces on various backgrounds are included as Appendix 1.
  - Geological summaries and core photographs of ADH014 and 015 are included as Appendix 2.
- Assays have been received for parts of holes ADH010 through ADH013. Results will be released on a hole by hole basis when the required assays are received and collated.
- A 1,538 line kilometre aeromagnetics and radiometrics geophysical program was completed in late July covering the entire Schrader EL. The final data have now been received and will be processed, evaluated and reported.

Refer to ASX releases (dated 28/9/2005, 24/10/2006, 31/7/2007, 25/9/2007, 12/10/2007, 29/10/2007, 31/3/2008, 9/5/2008, 22/0/2008, 20/11/2009, 23/7/2010, 26/11/2010, 22/11/10, 18/02/2011, 22/02/2011, 18/03/2011, 28/03/2011, 1/7/2011, 8/7/2011, 28/10/2011, 11/10/2011, 1/9/2011, 21/11/2011, 19/1/2012, 17/2/2012, 5/3/2012, 6/3/2012, 8/3/2012, 28/3/2012, 30/4/2012, 15/5/2012, 15/6/2012 and 4/7/2012) for additional information relating to the Andewa Project.

For additional information relating to Frontier Resources, please visit the Company's website at [www.frontierresources.com.au](http://www.frontierresources.com.au) or feel free to contact me.

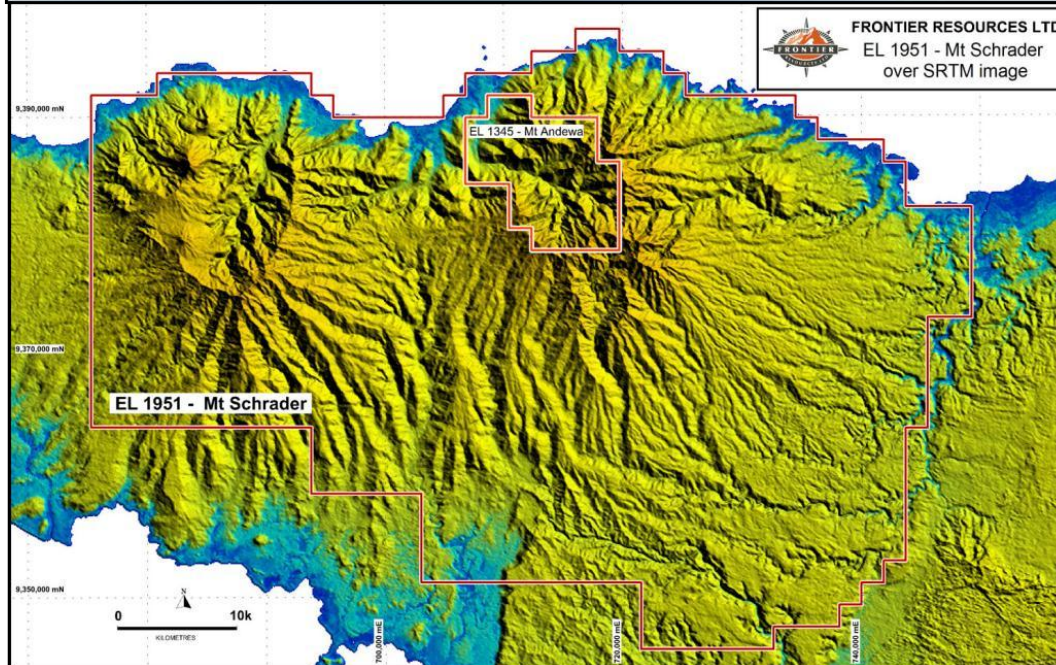
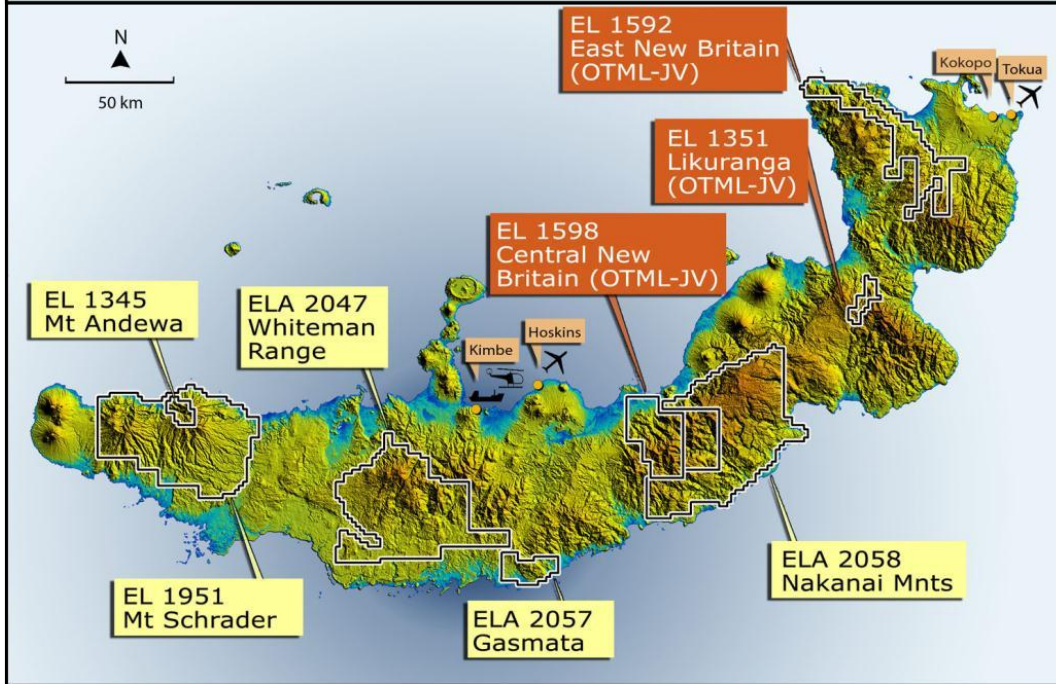
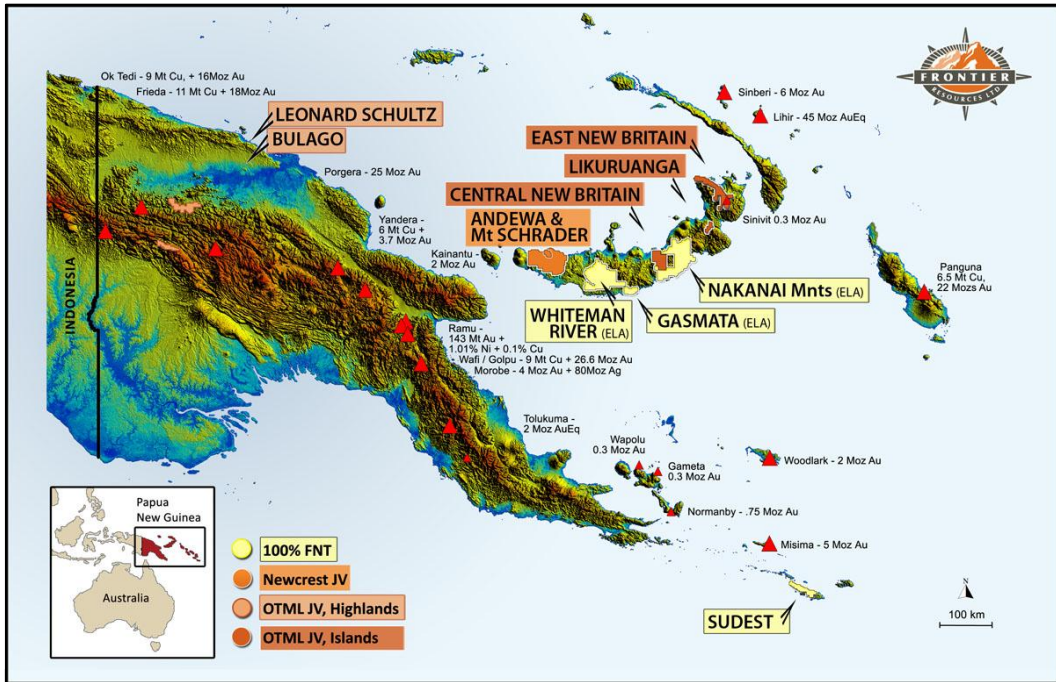
**FRONTIER RESOURCES LTD**

P.A. McNeil, M.Sc.  
CHAIRMAN / MANAGING DIRECTOR

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by, or compiled under the supervision of Peter A. McNeil - Member of the Aust. Inst. of Geoscientists. Peter McNeil is the Managing Director of Frontier Resources, who consults to the Company. Peter McNeil has sufficient experience which is relevant to the type of mineralisation and type of deposit under consideration to qualify as Competent Person as defined in the 2004 Edition of the Australasian Code of Reporting Exploration Results, Mineral Resources and Ore Resources. Peter McNeil consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

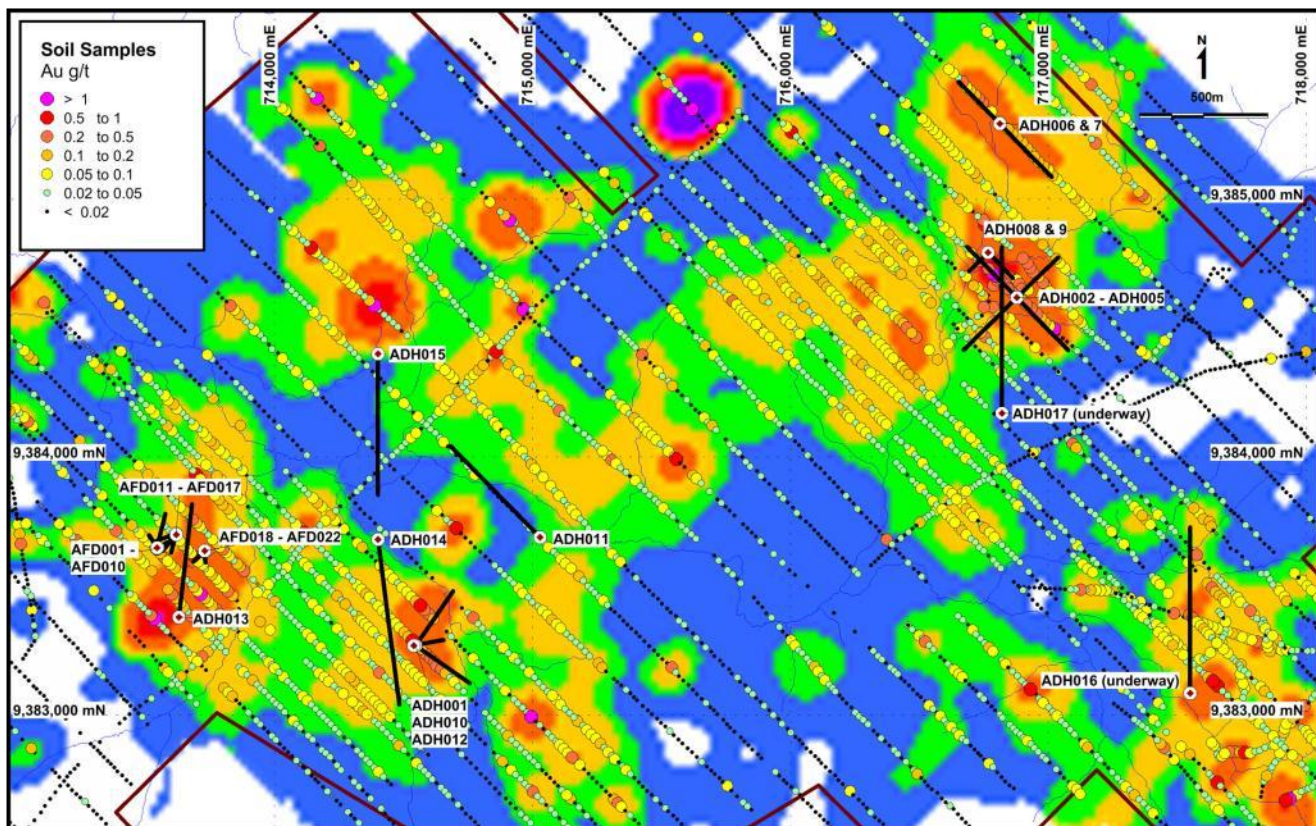
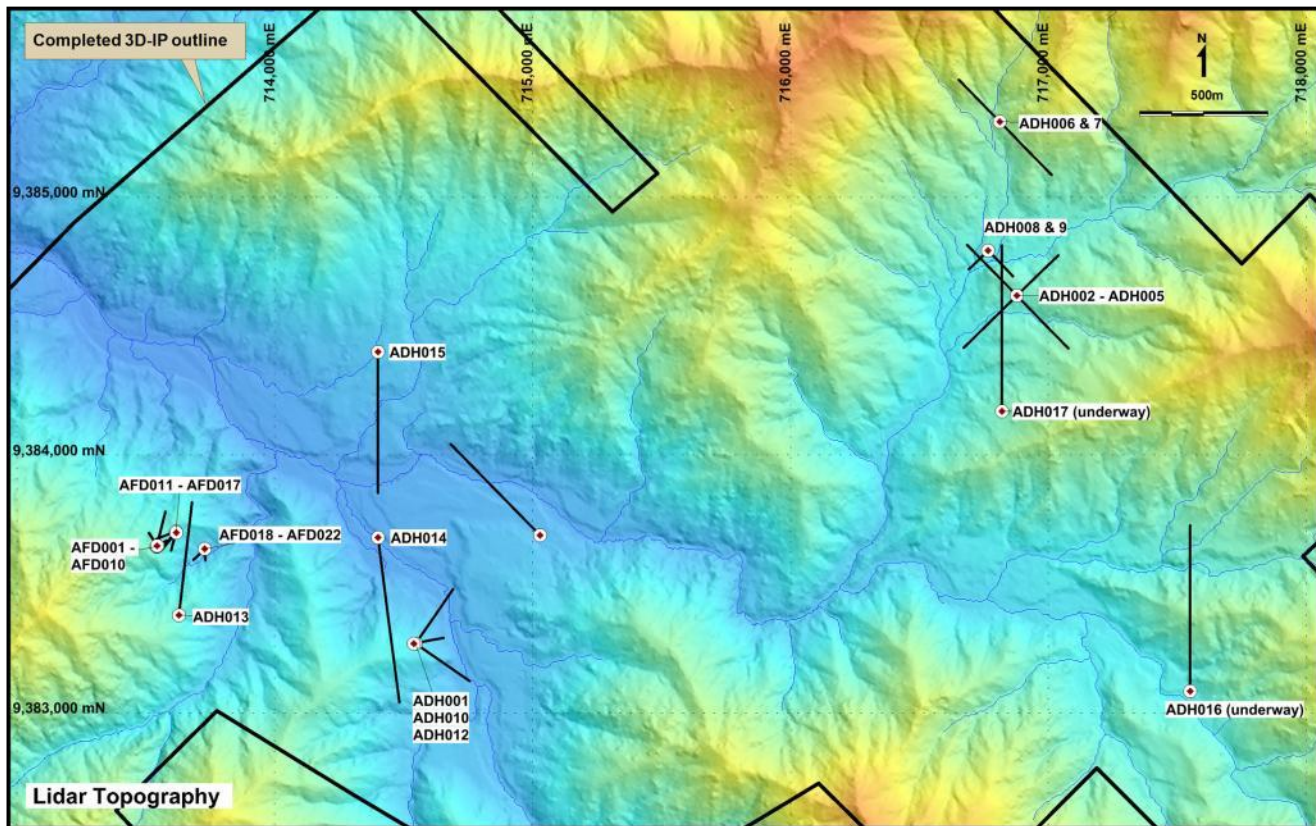
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APPENDIX 1. Figures

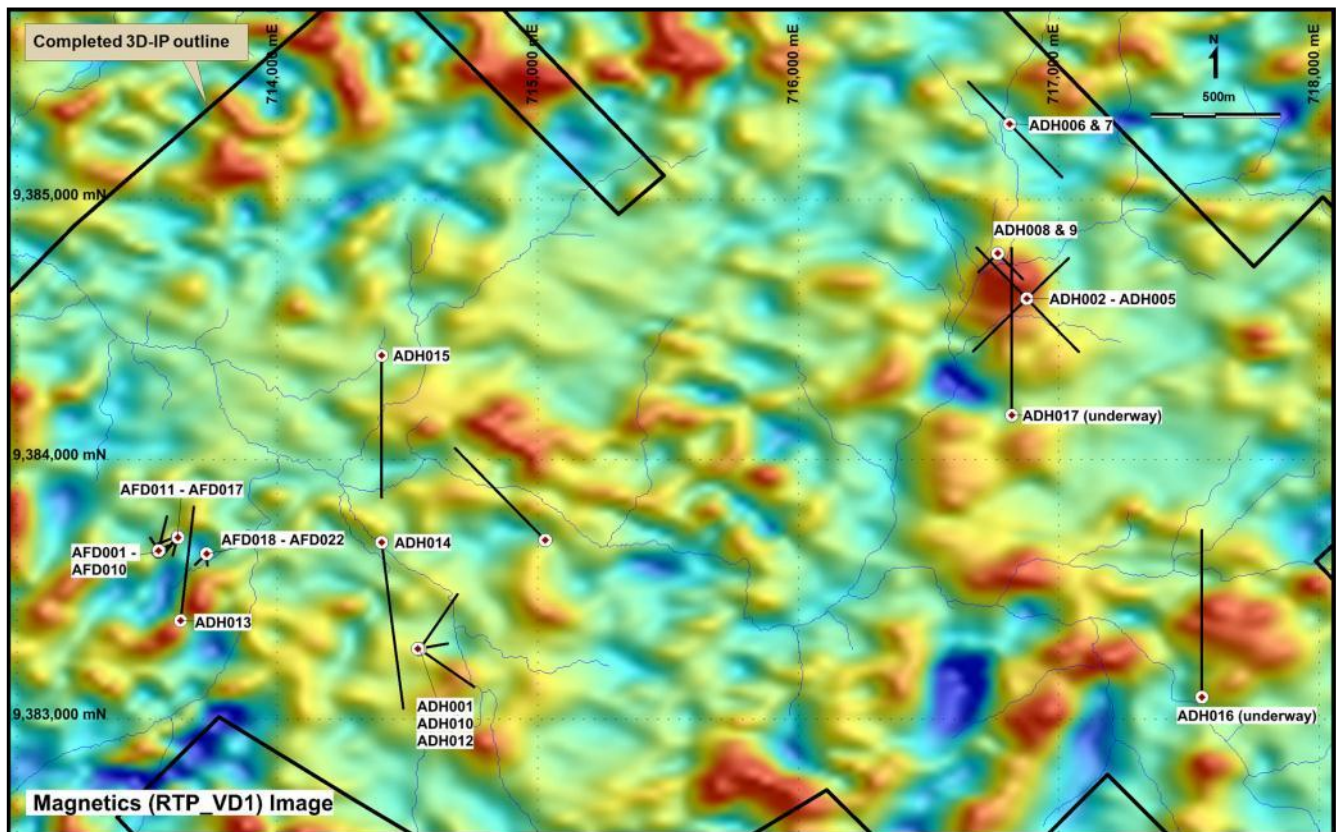
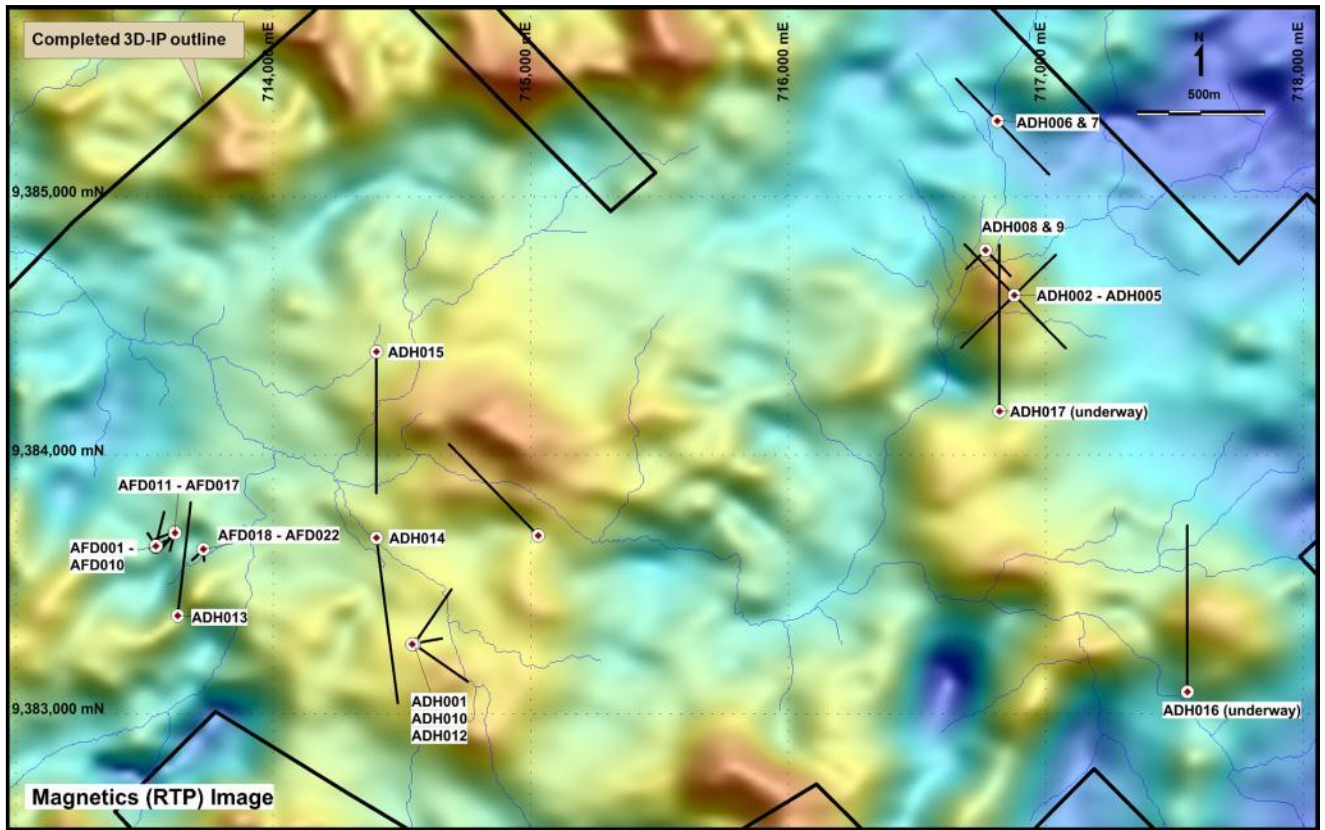


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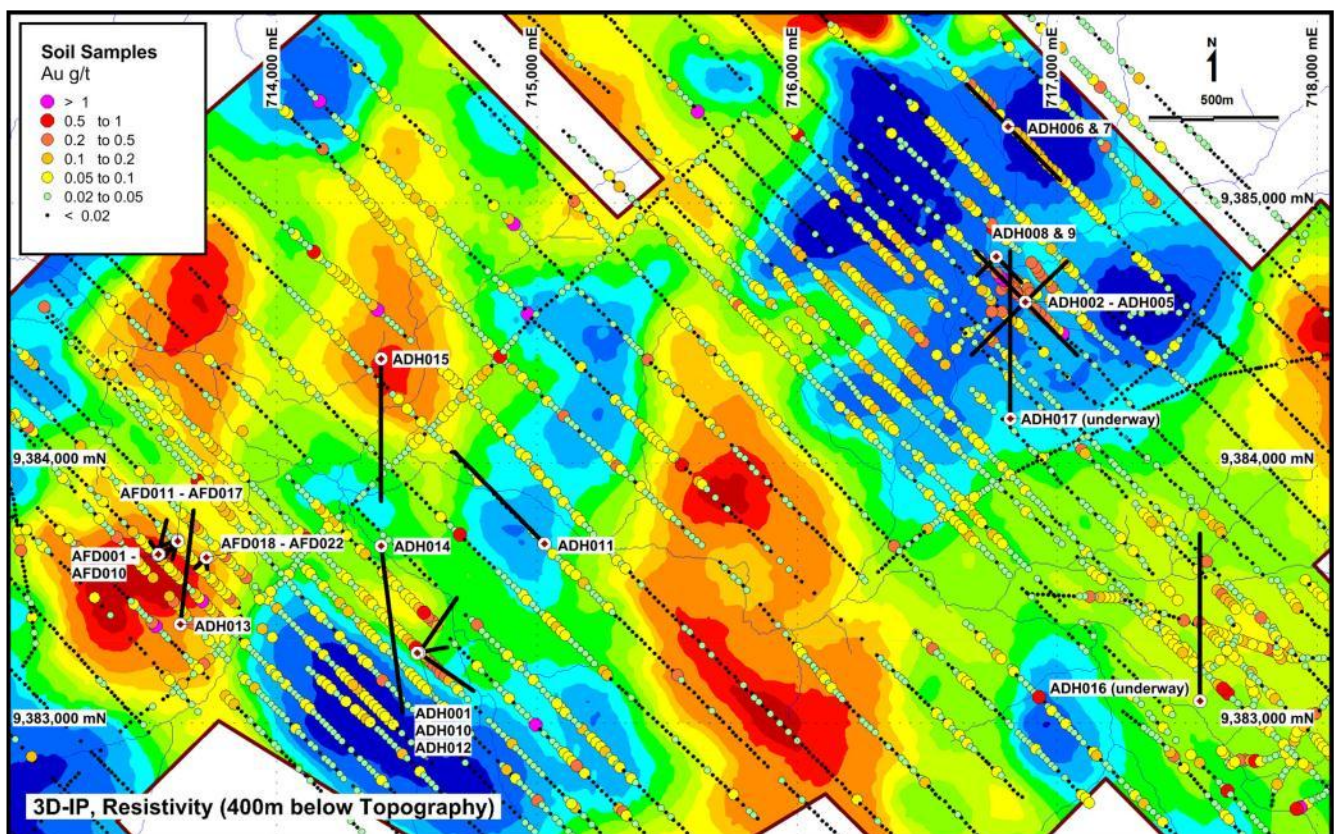
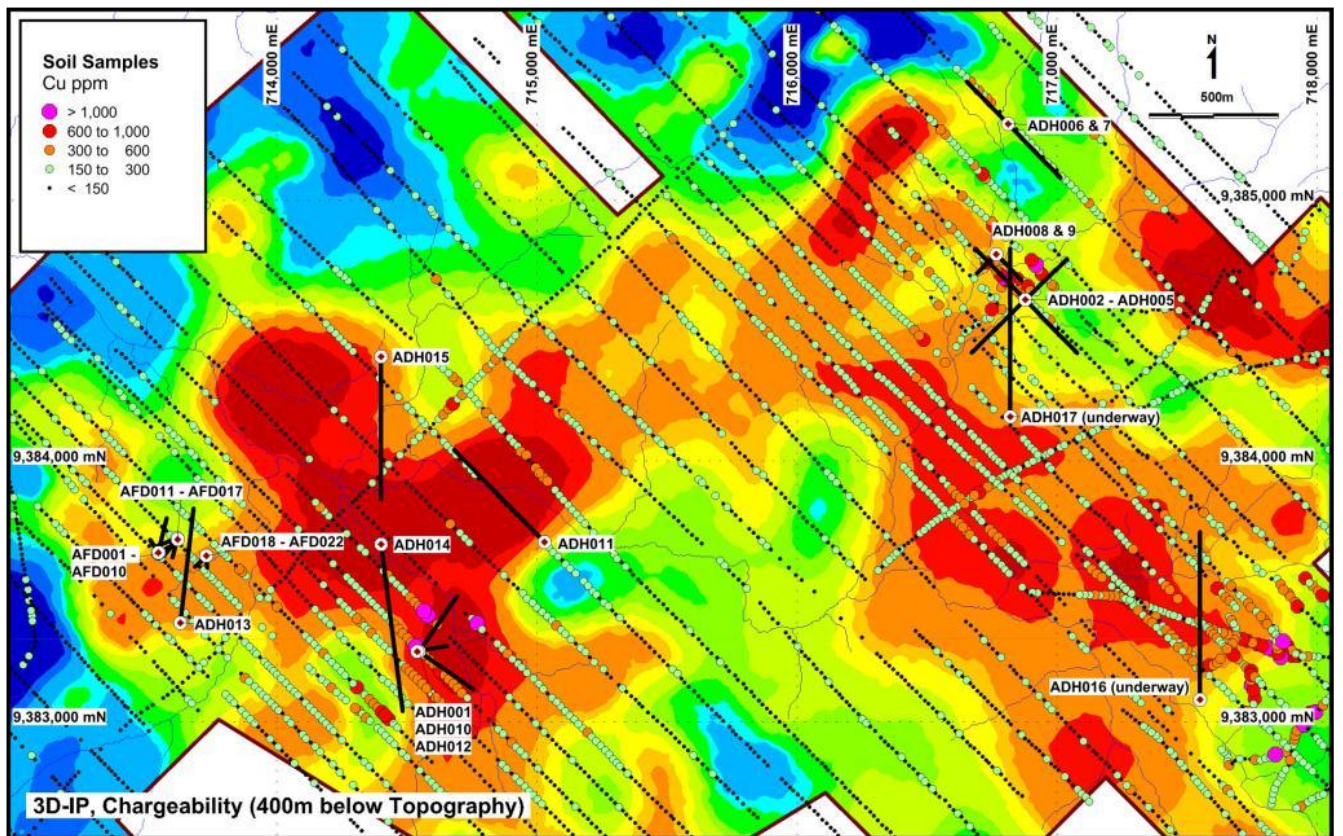
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## APPENDIX 2 Andewa drill hole lithologic summaries and core photographs.

Note that any percentages are strictly estimates and may not be well constrained. This data is to give the reader an idea of what was observed in the hole. Photos are obviously selective and not necessarily representative.

### ADH014.

Drill hole ADH014 encountered a thin layer of boulder terrace at the surface and drilled straight into a felsic diorite unit. Down to a depth of 150m, the hole encountered an extensively brecciated and silicified unit. The breccia displays monolithic to polymictic textures with clasts of diorite only and clasts of diorite and andesite respectively. The diorite clasts are strongly bleached and moderately altered to clay while the andesite clasts are fresh with chlorite +-epidote +- trace pyrites. Most of the clasts are angular and rotated with open spaces partially filled with pyrites. Late stage of pyrite + sericite veinlets cuts through with fine hairline magnetite veins. The weak to moderate pyrite mineralisation on the class may be related to the late phyllic alteration which is overprinted by weak clay alterations.



40.9 – 46.9m: **Quartz Andesite Breccia** unit – cracked, strongly silicified and argillic altered enriched w/white puggy clay material.



**Polymictic breccia (40m-150m)**

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This breccia unit appears to be at the top part of an intensely shattered and variably brecciated rock sequence which continues from 150m to half way down the hole. The predominant rock-type within this sequence is a diorite unit (and microdiorite) with some occasional quartz diorite. Small dykes of andesite/basaltic units intrude the above unit. The shearing and shattered event in the breccia is perhaps related to this intrusive activity.



**Basaltic dyke intruding older bleached andesites rocks at 211.00m – 212.30m**



**Brecciated bleached rock with late qz-py-sulph veins@463.00m – 463.30m**

Polymictic breccia bands within this unit range from a couple of meters to up to ten meters thick. The rocks appear to have been subjected to strong pervasive silicification with strong qz-ser-py alteration with weak to moderate clay enrichment in the fractures. The silicification appears to have been overprinted by a bleaching event, possibly related to the late andesite and diorite intrusive stages which appear to have given it the vuggy appearance. Some milky white qz-cb? pyrite veining cuts the above units, pyrite is ubiquitous and constitutes up to 3% of the rock.

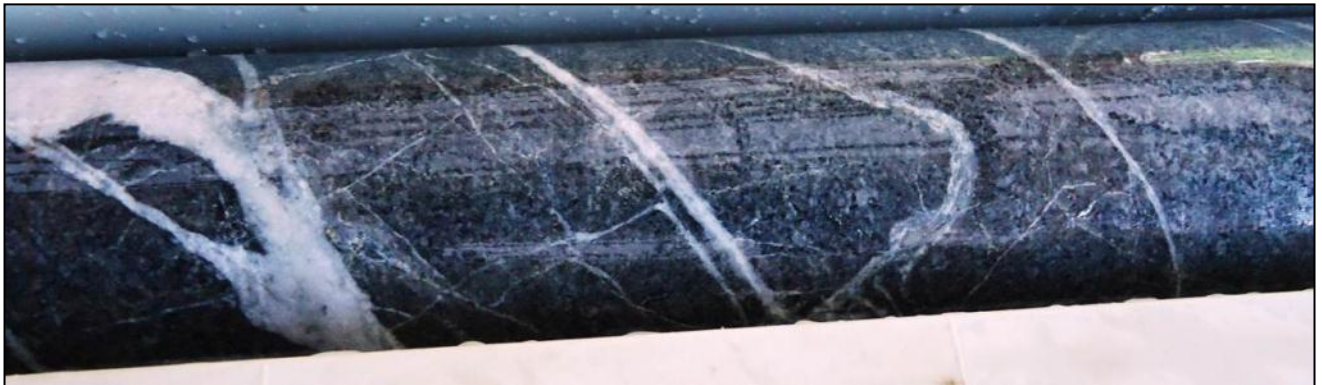
From halfway down the hole to the end at 1004 m, the down hole geology is dominated by mafic rich rocks. Pyroxene andesite appears to be the dominant host rock, intruded in places by diorites/microdiorite.



**Host rock Pyroxene Andesite, variably brecciated with sheeted qz-carbonate veins @670-670.30m**

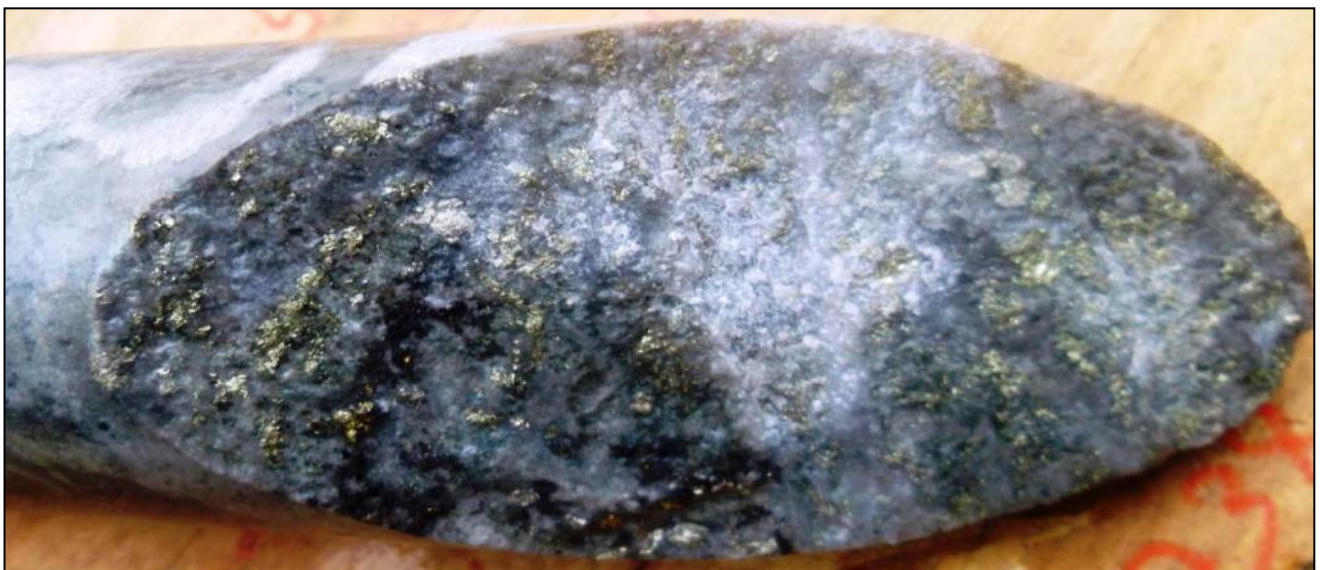
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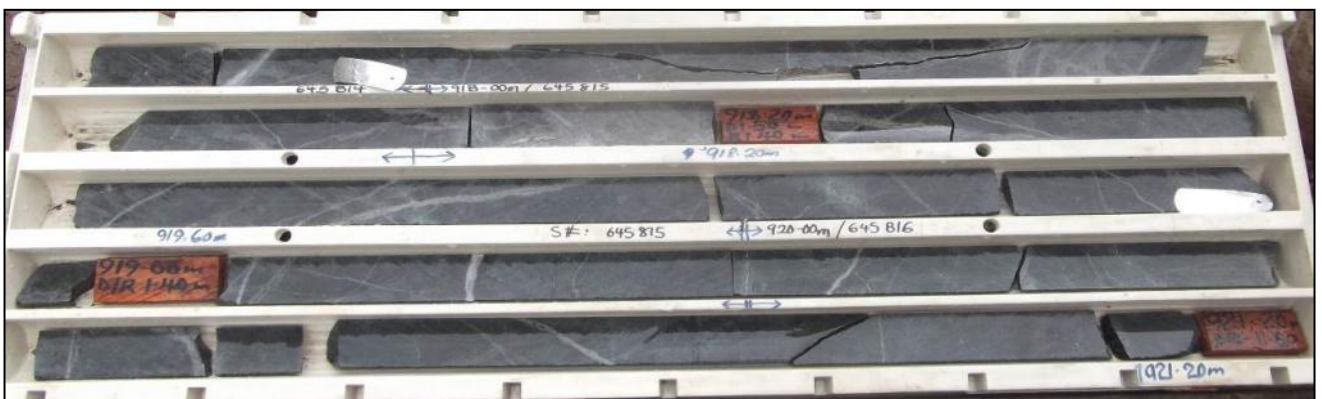


**Microdiorite with sheeted quartz-cab-anhydrite/gypsum veins at 870-870.4m.**

The potassic alteration correlates well with the occurrence of weak to trace disseminated chalcopyrite moly mineralisation. Blebs of chalcopyrite were also noted towards the end of the hole. Late vuggy qz-cb sulphide (py-cpy-mo) veins are also common in some parts of the hole and cut through the ubiquitous narrow grey white –quartz-carbonate veins.



**912.4m: Pyroxene Diorite (microdiorite) unit – enriched with py-cpy-mo selvages on fractures, moderate magnetic and propylitic altered overprint by late weak potassic altn.**



**Sheeted qz-cab-gypum veining to end of the hole.**

In summary, hole ADH014 encountered a thick unit of intensely shattered, silicified and brecciated rocks in the top part of the hole. This structural activity appears to be related to a series of felsic and andesitic dykes which intrude the rocks. From here to the bottom of hole at 1004 m, the hole encountered a rock sequence dominated by pyroxene andesites and basalts but also with wide intrusions of microdiorite, diorite and pyroxene rich porphyries. Chlorite-epidote-magnetite and carbonate and pyrite (disseminated) is the dominant alteration assemblage throughout this hole, with a zone of weak potassic alteration characterised



by biotite-actinolite-chlorite-magnetite developed in the lower portion of the hole. Some clay-sericite-chlorite-magnetite enrichment is noted in areas of structural weakness. Hematite blebs are conspicuously present throughout the hole in less silicified rocks.. Rimmed quartz-carbonate and pyrite veining is ubiquitous and occurs across all lithological boundaries. Pyrite, chalcopyrite and molybdenite are the main sulphide minerals present, with pyrite normally occurring as blebs and veins especially within vuggy quartz sulphide veins which are normally sub parallel to core axis. Trace disseminated chalcopyrite-molybdenite mineralisation is associated with the potassic phase.

#### **ADH 015**

From surface to 300m, hole ADH015 drilled through a pyroxene rich andesitic sequence which was intruded by occasional felsic and mafic dykes. The dykes consisted principally of fine grained equigranular rocks mainly of dioritic and or dacitic composition. They appear to occur within a couple of clay shear zones which were tens of meters thick. Abundant clay-sericite-pyrite-fuchsite development is common within these shear zones. Silicified and brecciated rock fragments containing visible chalcopyrite-molybdenite mineralisation were sampled within these shear or fracture zones. The chalcopyrite-molybdenite occurs as blebs in veins and in mineralised clasts within these brecciated fragments. The dykes are usually light green in colour due to the pervasive epidote alteration throughout this unit.



**Chalcopyrite-molybdenite blebs on vein in brecciated clasts within the shear zone.**

From 300 m to 700 m the hole encountered a sequence of pyroxene rich andesites with alternating narrow bands of fine grained pyroxene basalts. The rocks appear to have been intruded by wide dykes of microdiorite which are relatively fresh and unaltered compared to the andesitic host. Fine disseminated magnetite is common and moderately pervasive throughout with haematitic (reddish) alteration.



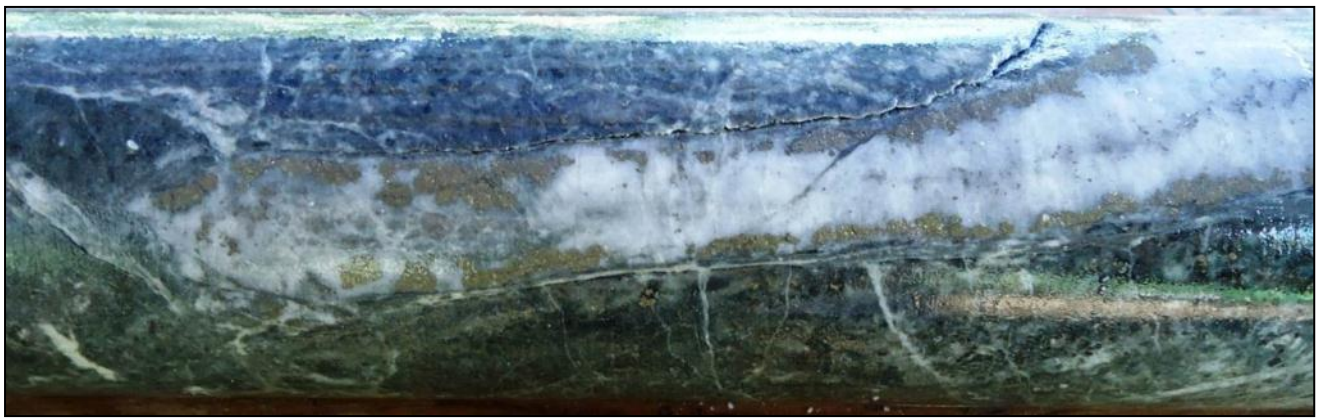
**Weakly mineralised and altered microdiorite at 598-600m**

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**Abundant hematite blebs in a brecciated pyroxene andesite unit at 432.20m – 432.40m**

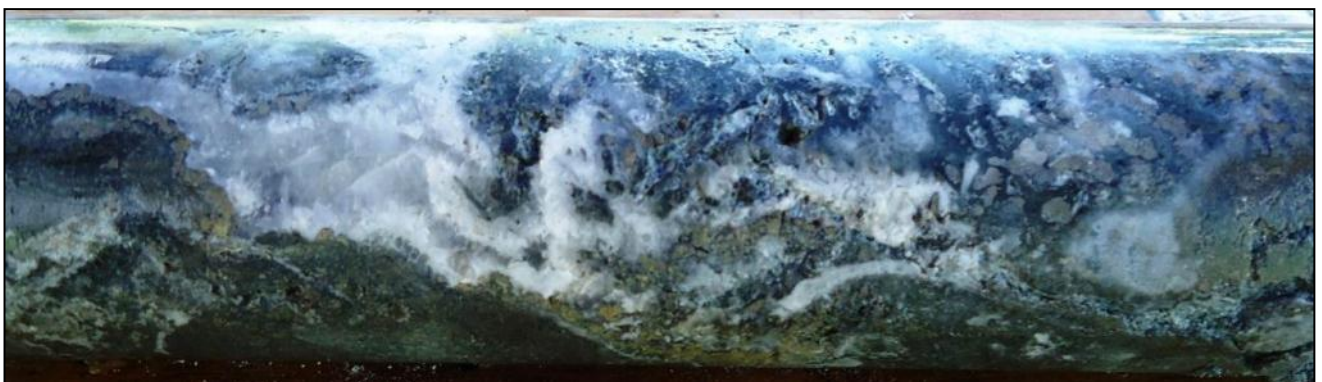
Chlorite + epidote +/- pyrite alteration is moderate throughout. Veining is weak to moderately selective throughout with pyrite + quartz +/- calcite. Thick quartz-carbonate -sulphide veining is common throughout the pyroxenes andesite unit and veins are usually parallel or sub parallel to core axis.



**Quartz-calcite-sulphide vein sub parallel to core axis at 458m.**

This event may be related to the weakly mineralised microdiorite intrusives. Narrow grey white quartz-carbonate veining is quite common within both the pyroxene andesites and the microdiorite suggesting this event postdates the microdiorite intrusive activity. They sometimes form a halo around pyrite veins also suggesting that a pyrite phase may postdate the quartz-carbonate stage.

Pyrite is the main mineralisation mineral throughout and is confined to veins and structures (minor faults) exploiting the pre-existing fractures. Trace moly is associated with pyrite + quartz + sericite vein and confined in the centre of the vein bounded by quartz and pyrite. Also moly presence is noted in moderately sheared and clay altered fractures.



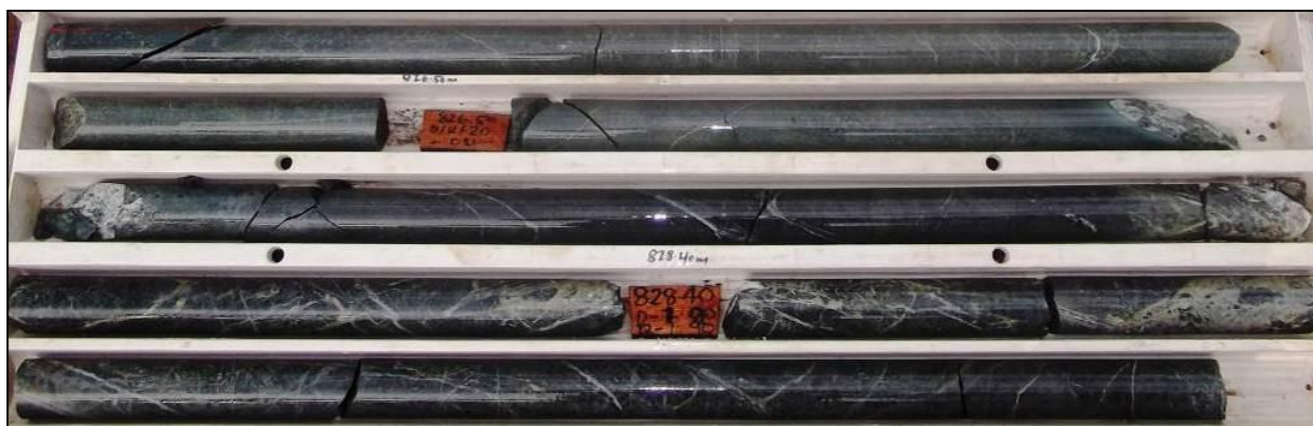
**Pyrite-chalcopyrite-molybdenite blebs in Quartz-carbonate-sulphide vein at 460m.**

The last 200m of this hole to 850m is dominated by a sequence pyroxene andesites and basalts with lesser microdiorites. These rocks have been subjected moderately pervasive chlorite-epidote-carbonate-magnetite alteration with abundant narrow quartz-carbonate stockwork. Weak to trace chalcopyrite mineralisation is

noted towards the end of the hole as blebs usually in quartz-cab-sulph veins. These veins are generally parallel to core axis.



**Quartz-sulphide vein at 731.0m**






**Alternating basaltic and andesite units from 825m – 829m with sheeted quartz –carbonate veining.**

In summary, weak to trace chalcopyrite-molybdenite mineralisation is observed in most parts of this hole especially from 200-500m and thence from 700m down to the end of the hole. It usually occurs as blebs, associated with quartz sulphide veins and in fragments within clay-sericite-pyrite enriched shear or fracture zones. The middle part of this hole is dominated by relatively fresh weakly mineralised microdiorites. The dominant alteration assemblage throughout the hole is propylitic (epidote-chlorite-magnetite-carbonate and pyrite).

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Depth	Comments.
48.5-52.2m	<p data-bbox="316 174 1505 275"><i>Intermediate Dyke?. Fine grained, yellow green colour with abundant epidote staining t/o, 0.5-1.0% diss sulph esp. py, weakly mt, occasional hem blebs in places, weak cly –sericite altn in fractures.</i></p>  <p data-bbox="316 736 916 763"><i>Possible intermediate dyke at top part of picture.</i></p>
52.2-112.0m	<p data-bbox="316 775 1505 875"><i>Pyroxene Andesite. Mass, str indurated, mg-cg, rock, occasional chl-ser-cly hem??/k feldspar?? Veining up to 20cm wide, trace qz-cb-mt vns 1-2/m, weak –mod prop (chl-epi-qz-mt), epi-chl in fractures, 0.5-1.0% diss sulph.</i></p>  <p data-bbox="316 1326 1043 1352"><i>108m - vuggy qz hem/k feldspar? vn within chl-ser-py rock.</i></p>
161.0-166.0m	<p data-bbox="316 1368 1505 1491"><i>Fault Zone. Intermediate to moderate fracture abundant cly-py-ser-py-chl enrichment in fracture, occasional bxted pieces with mineralised clasts within breccia, Cpy-Mo- mineralised clasts in matrix. Abundant fine diss py up to 3% in matrix, Fragments in fault zone dominantly andesite. Photo at 166.1m.</i></p>  <p data-bbox="316 2054 1235 2080"><i>Brecciated 20cm clasts in shear zone. Notice min fragment with cpy and py.</i></p>

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166.0 –  
273.7m

*Pyroxene Andesite.-mg-cg dark grey indurated rock, basically fresh rock but subjected to weak propylitic altn, occasional bxted in places, abundant narrow qz –cb vns but also occasional qz-cb k-feldspar? veining. Hem blebs common. 1-2% diss sulphides. Photo at 266.5m*



*qz-cb-mo vein in a cly shear. Notice Moly rimming vein*



*Vuggy Qz-kfels? Mo vein in pyroxene andesite*

295.08-  
302.6m

*Fracture or Shear Zone. Fracture or shear Zone with abundant qz-py fuchsite veining up to 30cm wide. Pink feldspar stringers as stockworks or as fracture coating and also as vns, dis py-cpy? up to 2%. Photo at 297.3m*



*qz-chl-fuchsite-k feldspar/hem breccia in fracture Zone, part of 1-2m breccia.*

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304.0-450.4m

*Microdiorite-compact equigranular rock, mg-cg, occasional hem and mt blebs t/o, weak -mod chl-epi-cb-mt alteration, occasional clay-chl-ser enrichment in fractures up to 10cm, or coating in fractures and as stringers, occasional qz-cab-mo sulphide vns up to 10cm. (Basaltic dyke from 421-423m)*



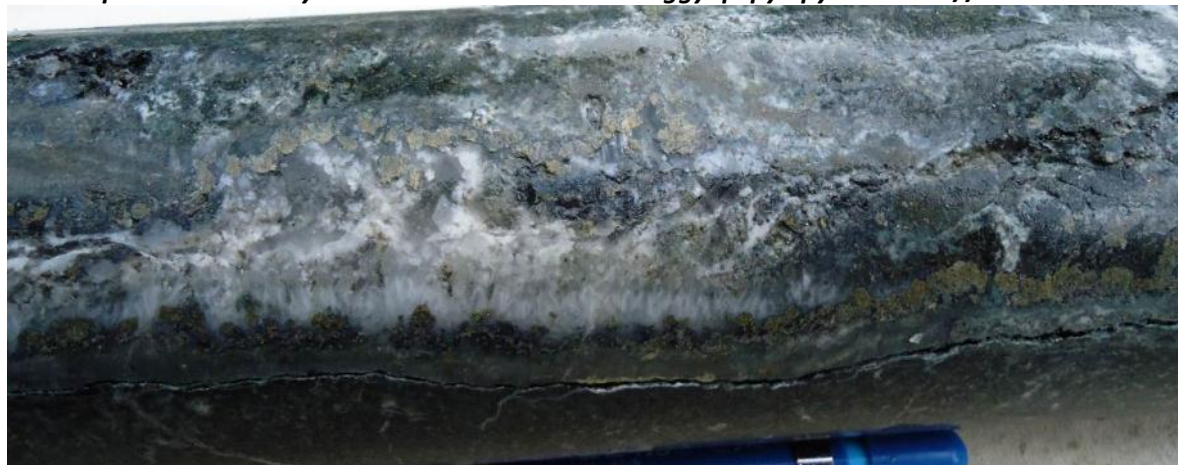
*vuggy qz-py-cpy -mo vein at 381.1m*



*Host rock microdiorite from 430-433.0m*

463.0-535.5m

*Andesite. Possibly microdiorite, medium grained equigranular with occasional 1-2m basaltic dykes. Generally weakly mineralised but with occasional qz-chl-epi-cab veins up to 1-2/m, up 1% total sulphides but locally more. Occasional narrow vuggy qz-py-cpy-mo veins // to core axis.*

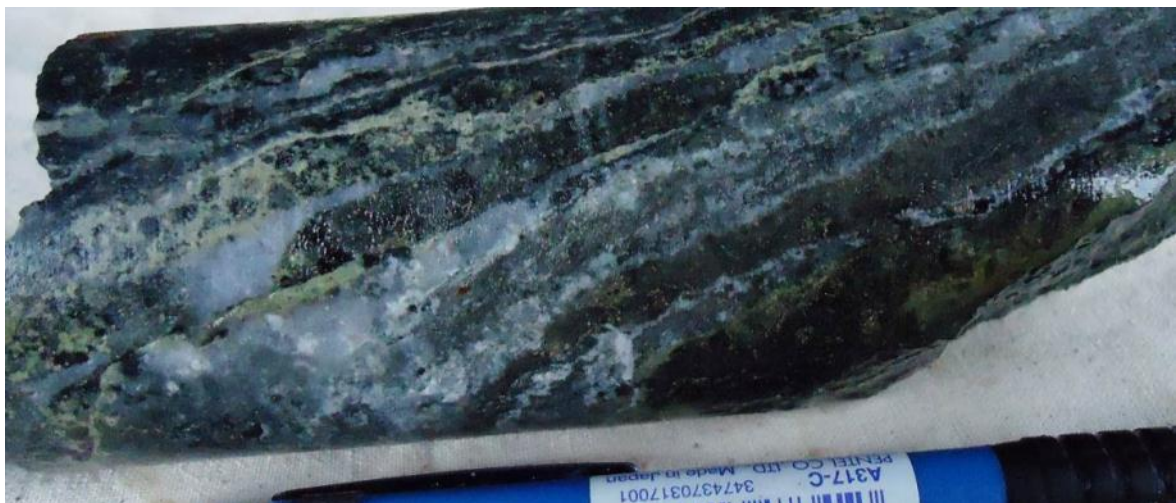


*520m - qz-cb-cpy-py-Mo vein, part of 0.60m long vein.*

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598.5-675.3m

*Microdiorite. Medium grained equigranular roc. Relatively fresh weakly mineralised and altered. Occasional grey white qz-cab veins/stringers quite common, trace py up 0.5%. Hem blebs common in places.*



675.3-691.1m

*Pyroxene Basalt. Fine to medium grained, competent rock with occasional narrow microdiorite bands, variably silicified with moderate to weak propylitic alteration, some individual pyroxene grains altered to epidote, Epidote common as vns and blebs, mod magnetic as blebs in rock and in veins, trace chalcopyrite mineralisation as diss and blebs in places. From 685.70-690.0m zone of intense-str-mt-qz-gyp  $\pm$  k feldspar stockwork, milky white qz-cb-gyp vnlts x-cut early .*



689.1m. Milky white qz-cb-gyp? Vein crosscut earlier veining.

801.0-846.3m

*Andesite/Basalt. Interval with alternating basalt and andesite units, also subjected to moderate propylitic alteration dominated by epi-chl-and mt, abundant narrow qz-cb-gyp vns/stringers, 1-2/m, trace blebs of cpy and mo down to this depth, rock variably silic and bxted with up to 3% total sulphide.*

