



Final Drilling Project Report, Exploration Drilling Grant Initiative Round 7

Dora 3 Zone, Lake Dora Prospect

Report Details

Title: Final Drilling Project Report, Exploration Drilling Grant Initiative Round 7

Subtitle: Dora 3 Zone, Lake Dora Prospect

Report type: EDGI Final Report

Report for: Mineral Resources Tasmania

Report submission date: 10 August 2023

Tenement: EL16/2018

Tenement holder: Georgina Resources Pty Ltd

Tenement grant date: 17 Dec 2019

Tenement expiry date: 16 Dec 2024

Project name: Skyline

Project operator: Georgina Resources Pty Ltd

Author name: Erin Lawlis

Author signature:  _____

Table of Contents

Report Details.....	1
List of Figures.....	3
List of Tables	3
List of Files Accompanying this Report.....	4
1 Introduction.....	5
1.1 Introduction.....	5
1.2 Tenement Details	5
1.3 Location and Access	5
2 Previous Exploration.....	1
3 Work Program Approvals	1
4 Diamond Drill Hole D3-001	3
4.1 Rationale for Drill Target	3
4.2 Drilling	3
4.3 Surveys.....	4
4.4 Drill Core Data Collection.....	5
4.4.1 Logging	5
4.4.2 Structures.....	5
4.4.3 Density	5
4.4.4 Magnetic Susceptibility	5
4.4.5 Photography	5
4.5 Sampling and Geochemical Analysis.....	6
4.6 Environmental Management	6
4.6.1 Drill Site Preparation and Access Tracks	6
4.6.2 Drill Site Remediation.....	7
4.6.3 Cuttings Management	7
4.6.4 Campsite.....	7
4.6.5 Weed Management	7
5 D3-001 Results.....	8
5.1 Geology	8
5.1.1 Host rocks	8
5.1.2 Alteration.....	13
5.1.3 Veins, Breccias and Mineralisation.....	17

5.2	Assay Results	22
5.3	Magnetic Susceptibility	24
6	Discussion of Results.....	24
7	Recommendations for Future Work	25
8	Expenditure	26
9	References	26

List of Figures

Figure 1: Location of the Dora Prospect in western Tasmania.....	0
Figure 2: Rock chip samples coloured by Cu (ppm), location of planned drill holes and extents of the Dora prospect zones (Dora 1–4), with total magnetic intensity (TMI) underlay.)	0
Figure 3: Dora 3 area rock chip samples coloured by Cu (ppm), collar location/trace of D3-001, and historic mine workings with (A) TMI underlay and (B) MRT 1:25k-scale geology underlay.	2
Figure 4: Correlation matrix for drill core assay and magnetic susceptibility results from D3-001.....	23
Figure 5: Magnetic susceptibility and copper grades downhole in D3-001.....	25

List of Tables

Table 1: D3-001 collar details	3
Table 2: D3-001 drilling activity log	4
Table 3: D3-001 survey data.....	4
Table 4: Average assay values for anomalous intercepts from drill hole D3-001	22
Table 5: Positive correlations amongst elements of interest.....	24
Table 6: Expenditure for drilling D3-001	26

Appendices

Appendix 1. D3-001 collar details (EL162018_202308_02_SL.xls)
Appendix 2. D3-001 downhole survey data (EL162018_202308_03_DS.xls)
Appendix 3. D3-001 downhole lithology logs (EL162018_202308_04_DL.xls)
Appendix 4. D3-001 lithology logging codes (EL162018_202308_05_LithologyCodes.xls)
Appendix 5. D3-001 downhole geochemistry data (EL162018_202308_06_DG.xls)
Appendix 6. D3-001 downhole QAQC data (EL162018_202308_07_QAQC.xls)
Appendix 7. D3-001 core tray photos (EL162018_202308_08_CorePhotos)

Appendix 8. D3-001 magnetic susceptibility data (EL162018_202308_09_MagSusc.xls)
 Appendix 9. D3-001 density data (EL162018_202308_10_Density.xls)
 Appendix 10. D3-001 downhole structural data (EL162018_202308_11_Structures.xls)

List of Files Accompanying this Report

Exploration Work Type	Filename	File format
Report	EL162018_202308_01_Report.pdf	pdf
Drilling	EL162018_202308_02_SL.xls	xls
	EL162018_202308_03_DS.xls	xls
	EL162018_202308_04_DL.xls	xls
	EL162018_202308_05_LithologyCodes.xls	xls
	EL162018_202308_06_DG.xls	xls
	EL162018_202308_07_QAQC.xls	xls
Other	EL162018_202308_08_CorePhotos	folder containing jpg photos and xls photo index files
	EL162018_202308_09_MagSusc.xls	xls
	EL162018_202308_10_Density.xls	xls
	EL162018_202308_11_Structures.xls	xls
File Verification Listing	EL162018_202308_00_FileListing.xls	xls

1 Introduction

1.1 Introduction

In July 2022, Georgina Resources Pty Ltd was awarded three grants for co-funded exploration drilling projects totalling \$185,000 in Round 7 of the Tasmanian State Government's Exploration Drilling Grant Initiative (EDGI). The grants were awarded for the drill testing of three exploration targets - Dora 2 and Dora 3 at the Dora prospect (Skyline project) and Alpine West (Alpine project). Funding totalled \$70,000 each for Dora 2 and Dora 3 (up to \$50,000 toward direct drilling costs and an additional \$20,000 toward helicopter support), and \$45,000 for Alpine West. This report details work completed under the EDGI 2022 Round 7 grant for the Dora 3 scout drilling program between January and June 2023, that is, the drilling and analysis of diamond drill hole D3-001. All maps and location coordinates contained within this report are presented in MGA94 Zone 55 datum format unless otherwise noted.

1.2 Tenement Details

The Dora prospect is situated within EL16/2018 (Figure 1), which is 100% held and operated by Georgina Resources Pty Ltd. The exploration license was granted on 17 December 2019 and expires on 16 December 2024. EL16/2018 covers 95 square kilometres of ground near Walford Peak in western Tasmania and is considered prospective for magmatic-related IOCG and hybrid magmatic-hydrothermal-epithermal styles of Cu-Au mineralisation hosted within the Mount Read Volcanics (MRV; Figure 1). Key to the mineral potential of the tenement area is the recognition of buried Cambrian magnetite-series granitoids that span the length of the eastern margin of the MRV (Figure 1) and which are thought to drive district-scale magmatic-hydrothermal systems related to Cu-Au mineralisation, including the Mt Lyell Cu-Au and Henty Au deposits.

1.3 Location and Access

The Dora Prospect is located immediately west of Lake Dora, to the southeast of Walford peak. Vehicle access is via the Lake Spicer 4WD track, which commences at a locked gate along the Anthony Road, approximately 30-minutes' drive from Zeehan (38.5 km; Figure 1). A key for the gate can be obtained from Parks and Wildlife Service West Coast in Strahan. Past the Lake Rolleston camp (~5.3 km along the track), the surface becomes rugged and requires use of a side-by-side or lifted 4WD utility vehicle. The Dora prospect has been divided into four prospect zones by Georgina Resources (Dora 1–4 from north to south; Figure 2). It is about 16 km from the track start to the D3-001 drill pad. A short track (~30 m) going west through button grass between the Lake Spicer track and the collar of D3-001 has been cut and marked with flagging tape. This will be easily passable, even if the track degrades over time.

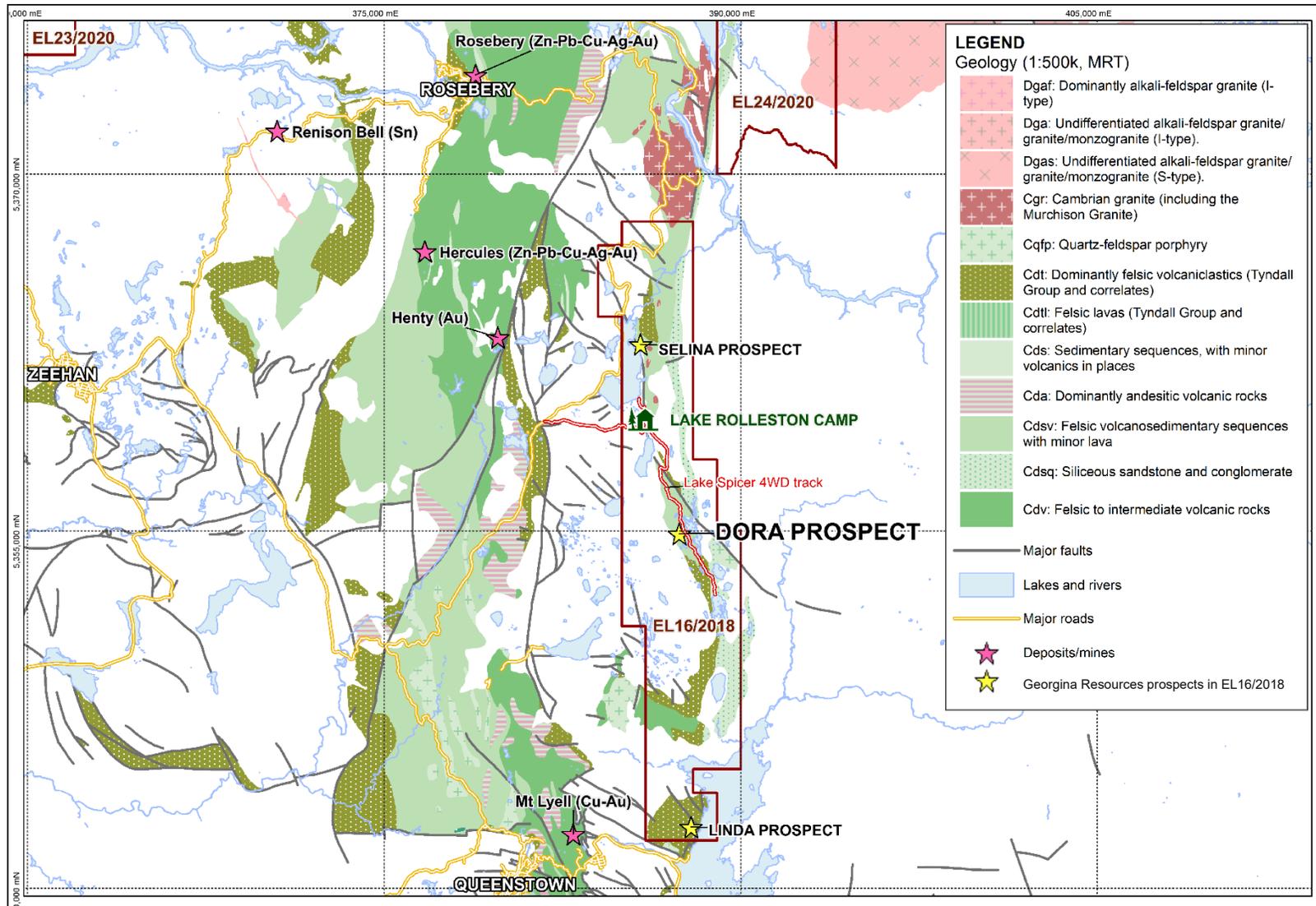


Figure 1: Location of the Dora Prospect in western Tasmania

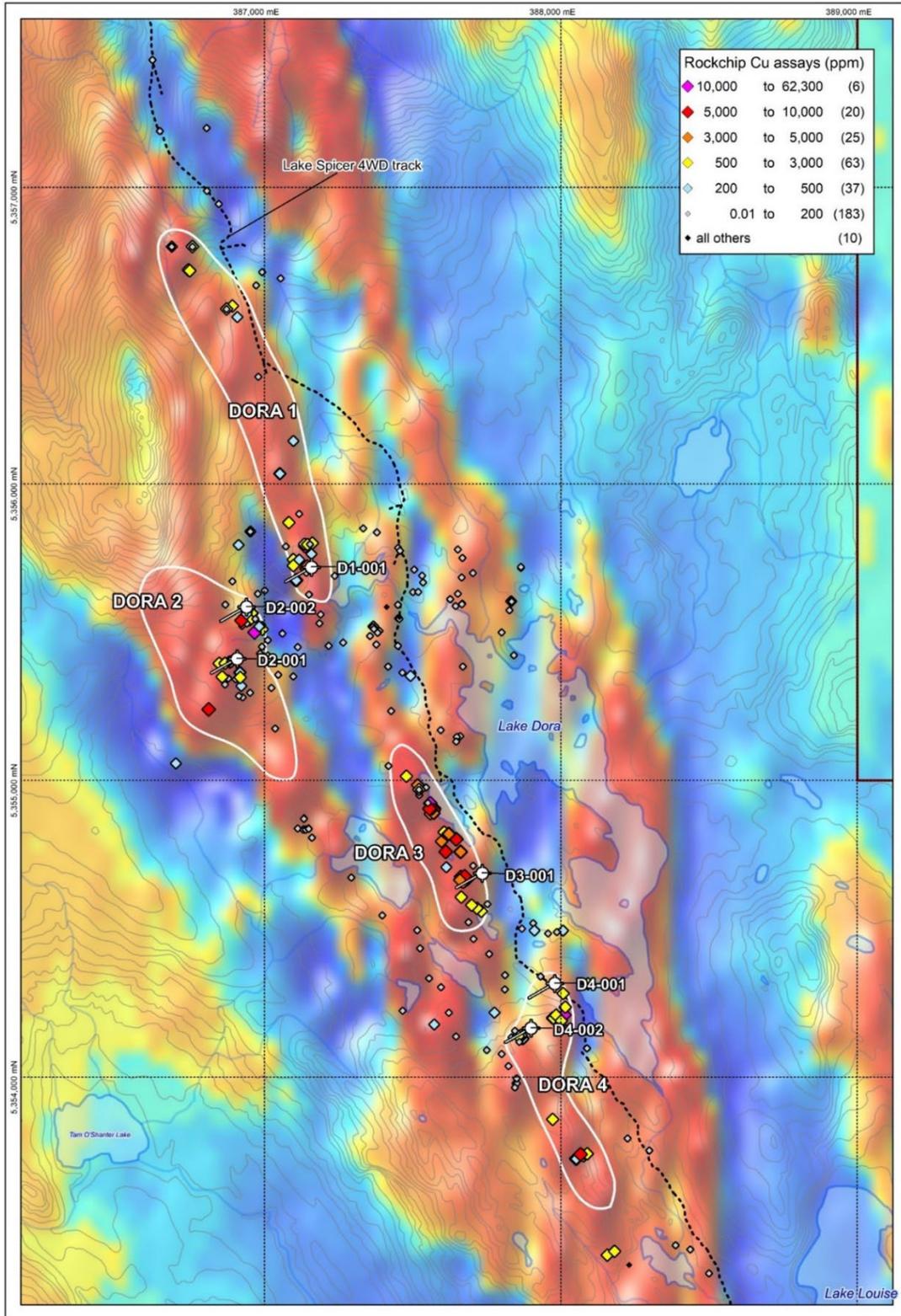


Figure 2: Rock chip samples coloured by Cu (ppm), location of planned drill holes and extents of the Dora prospect zones (Dora 1–4), with total magnetic intensity (TMI) underlay. A total of 339 rock chip samples have been collected from the Dora prospect area, including 123 samples taken by Georgina Resources (Lawlis and Westbrook, 2022).

2 Previous Exploration

Considerable prospecting was done in the Dora-Spicer area in 1896-1899, and many small workings were established. The field was abandoned in 1909 due to the extraction of lower grades and tonnages than were anticipated. A modern regional exploration program was initiated in 1969 (Mt Lyell Mining/Goldfields; EL9/66). Gridding, mapping, soil and rock chip sampling were undertaken in the area from Lake Dora to Selina. Geophysical surveys included pole-dipole IP, SP, fluxgate magnetics and EM. The area was relinquished in 1985. Further rock chip sampling and mapping was completed by CRAE (1986; EL 5/85) and Pasmaenco (1999; EL 24/96). Pasmaenco identified zones of strong chlorite-silica alteration and magnetite-sulphide veining in the Dora 3 area (Figure 3). Assay results from rock chip samples in the area around D3-001 include 1.29% Cu and 0.39 g/t Au. This has been verified in recent mapping and rock chip sampling by Georgina Resources (Figure 2 and Figure 3).

Bass Metals/Adamus Resources JV conducted gridding and soil sampling over a NNW-trending ~5 x 0.75 km area west of Lake Dora. Most soils contained low Au (90% of samples had <7.3 ppb Au; n = 585), but two samples within 200 m of D3-001 had anomalous Au (i.e., 18, 178 ppb Au). Soils in the immediate area around D3-001 contained locally anomalous Cu (up to 39 ppm Cu). There is no historic or recent drilling at Dora 3. The closest drill holes are DPD001 and DPD002, drilled by Bass Metals on the northern slope of Walford Peak. Bass Metals were looking for VHMS-style mineralization. Their drilling targets underlie a 1 km x 200 m Pb-Zn-Au soil geochemical anomaly that paralleled a NW-striking district-scale fault (Anthony Fault). The drill holes intersected the fault but found only minor quantities of base metal sulfides. A down-hole EM survey failed to detect any conductive bodies.

3 Work Program Approvals

A helicopter-supported drilling program for the Dora prospect was approved by MRT in 2022. The work program comprises a minimum of 2, and up to 6, separate drilling locations spaced over a lateral distance of approximately 2 km (Figure 2). Priority drill holes are D3-001 and D2-001, for which EDGI grants were awarded. Drilling at the additional 4 drill sites is dependent on results of the first two holes and other factors such as timing, weather and access conditions.

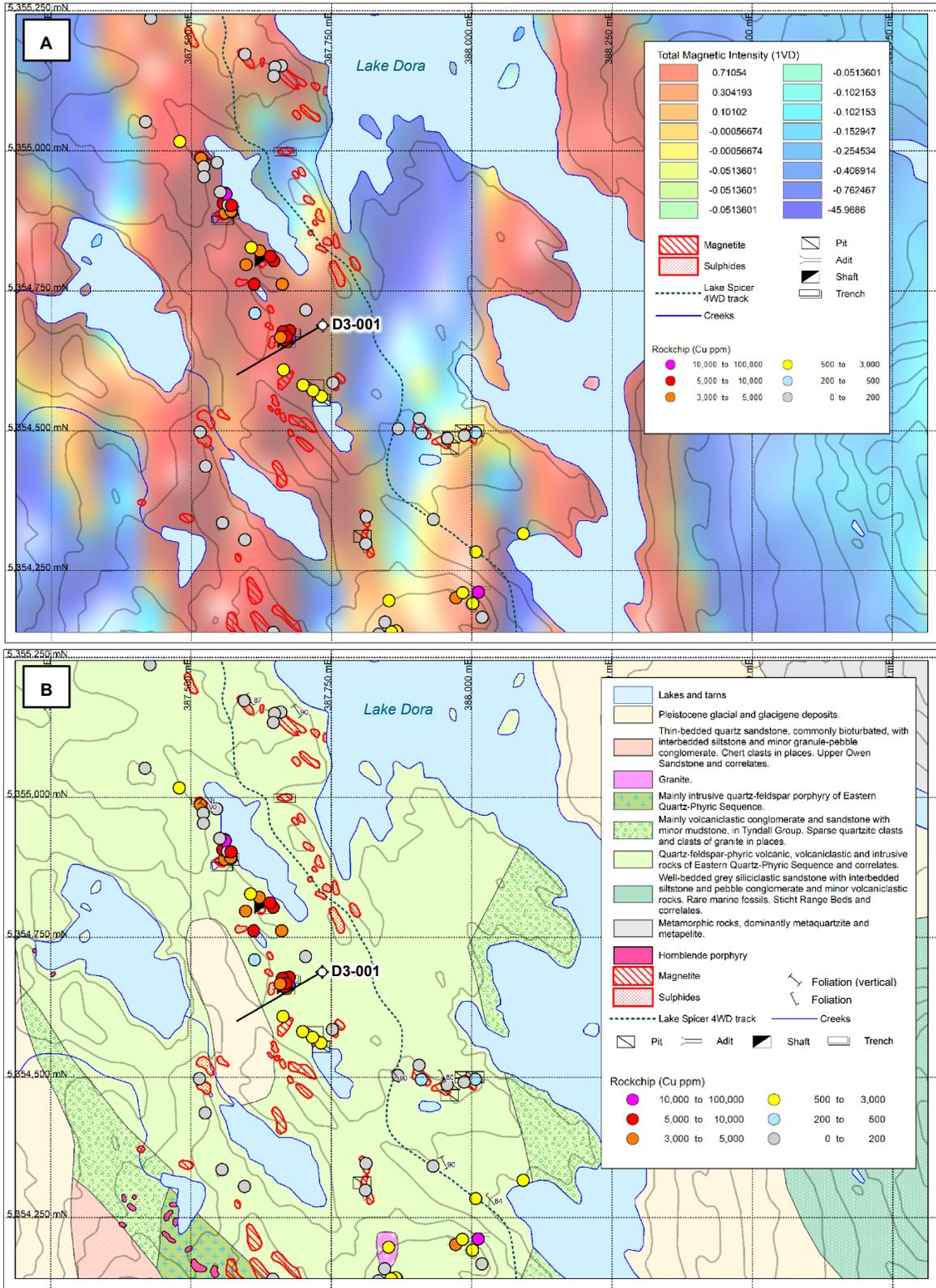


Figure 3: Dora 3 area rock chip samples coloured by Cu (ppm), collar location/trace of D3-001, and historic mine workings with (A) TMI underlay and (B) MRT 1:25k-scale geology underlay with structures from Georgina Resources. Magnetite and sulfide polygons are from Denwer et al., (2000).

4 Diamond Drill Hole D3-001

4.1 Rationale for Drill Target

D3-001 aims to test a N-S trending magnetic anomaly that has a coincident surface geochemical anomaly (Cu ± Au in rock chip samples; Figure 2 and Figure 3). Outcropping rocks overlying the target consist of vertical to steeply dipping, sheared, strongly chlorite-silica-altered quartz-feldspar-phyric volcanic rocks of the Cambrian Eastern Quartz-Phyric Sequence. Outcropping mineralisation comprises foliation-parallel magnetite and pyrite-chalcopyrite bands and stringers. No previous drilling has been conducted. The results from drilling D3-001 add to the geological model for the prospect, assist further targeting and give a clearer picture of what grade and style of mineralisation lies at depth in Dora 3.

4.2 Drilling

Between February 14 and March 7, 2023, a single diamond drill hole (D3-001) was completed on EL16/2018 as part of MRT's EDGI program (Round 7; Table 1 and Table 2). Drilling was conducted by Spaulding Drillers Pty Ltd of Devonport, Tasmania. The hole was drilled to 60 m by triple tube HQ diamond drilling followed by 332.5 m of triple tube NQ diamond drilling to the end of hole at 392.5 m depth. The planned depth was exceeded due to the continued presence of chalcopyrite in the core samples.

Table 1: D3-001 collar details

Drill hole ID	D3-001
Easting	387,745 mE
Northing	5,354,686 mN
Elevation	765 masl
Azimuth (grid north)	240°
Dip	-50°
Planned depth	350 m
Actual depth	392.5 m

Collar coordinates (easting/northing) were recorded by handheld GPS. Collar elevation was determined by draping the collar onto a digital elevation model (DEM) in MapInfo. The DEM was generated from Land Information Systems Tasmania's (LIST's) 10-m contour data. Collar details are provided in Table 1 and Appendix 1.

A second EDGI-sponsored drill hole was planned to follow, which would test for Cu(-Au) mineralisation at Dora 2 (D2-001; Figure 2), however, heavy rain and low visibility prevented the helicopter from mobilising the drill rig to the second site. Instead, a second hole (D3-002) was drilled at Dora 3 to test the continuity of mineralisation to the

north along strike. D3-002 will be reported on in the annual report to MRT for EL16/2018 in December 2023.

Table 2: D3-001 drilling activity log

Date	Activity	From (m)	To (m)	Total (m)
Feb 1	Drill pad and access track cutting			
Feb 7	Fly in auxiliary gear and set up bedlog bases			
Feb 8-9	Drill deconstructed and moved to lifting off site			
Feb 10	Helicopter mobilisation of drill rig and remaining gear			
Feb 13	Camp and drill site set up			
Feb 14-17	Drilling HQ (0-60 m) and NQ (60-134.9 m)	0	134.9	134.9
Feb 20-24	Drilling NQ	134.9	248.9	114
Feb 27 – Mar 3	Drilling NQ	248.9	356.9	108
Mar 6-7	Drilling NQ	356.9	392.5	35.6
Mar 14	Complete surveys; fly out drill core			

4.3 Surveys

Survey data (Table 3; Appendix 2) were collected every 30 m downhole using a DeviShot electronic multishot survey instrument, which has an azimuth accuracy of $\pm 0.5^\circ$ and an inclination accuracy of $\pm 0.1^\circ$. The DeviShot uses magnetism to measure the drillhole path and can be affected by ferromagnetic rocks and equipment such as drill rods. No spurious measurements due to ambient ferromagnetism were flagged by the DeviShot software.

Table 3: D3-001 survey data.

Drill Hole ID	Depth (m)	Azimuth (True)	Azimuth (Grid)	Dip	Total Magnetic Intensity	Temperature (°C)
D3-001	30	227.43°	241.32°	-49.12°		
D3-001	60	227.35°	241.24°	-48.34°		
D3-001	210	229.31°	243.20°	-37.59°	62352	20.27
D3-001	270	229.66°	243.55°	-32.38°	62503	22.08
D3-001	300	227.90°	241.79°	-29.90°	62327	15.76
D3-001	330	220.36°	234.25°	-27.23°	58939	18.01
D3-001	390	232.99°	246.88°	-21.96°	62817	10.79

4.4 Drill Core Data Collection

4.4.1 Logging

Geological logging of D3-001 consisted of detailed description and/or measurement of important aspects of the lithology, weathering/oxidation, alteration, mineralisation, veins and breccias, and structures observed in drill core. Geotechnical logging involved the collection of core recovery and rock quality designation (RQD) data. All logging data was collected using a field laptop and in-house logging codes (Appendix 4). Lithology and weathering logs are provided in Appendix 3.

4.4.2 Structures

Orientation (bottom of hole) lines were drawn onto drill core where the driller's orientation tool successfully marked the bottom of hole. Structural measurements were collected from the oriented core with a goniometer (alpha angles) and a clear plastic wrap-around protractor (beta angles). The measurements were converted to dip/dip direction using MapInfo Pro. Structural data are provided in Appendix 10.

4.4.3 Density

Density values were collected at a rate of one per core box (ave. 1 per ~4 m). The values were calculated according to the formula:

$$Density = \frac{Mass (g)}{Volume (mL)}$$

The mass of the sample was measured using an Ohaus Valor 1000 Series scale. The volume of the sample was determined by subtracting a known initial volume of water from the volume of that water plus the submerged sample in a graduated cylinder (10 mL increments). Density data are provided in Appendix 9.

4.4.4 Magnetic Susceptibility

Magnetic susceptibility measurements were taken on whole core at one-meter intervals using a KT-10 v2 meter (Terraplus). Magnetic susceptibility data is summarised and discussed in Section 5.2 and the full dataset is provided in Appendix 8.

4.4.5 Photography

Whole core was photographed both wet and dry (before cutting) using a Canon EOS Rebel SL3 mounted to a light-dispersing frame. Imago Capture X software was used to perform frame and core cropping and to assign metadata (e.g., drill hole ID, tray number, etc.) to the photos. All core tray photos are provided in Appendix 7. Photos were also taken to document geological features observed in core and edited manually in Darktable.

4.5 Sampling and Geochemical Analysis

All drill core was cut using a diamond saw at Georgina Resource's core facility in Zeehan, Tasmania. One-metre lengths of half core samples were collected from the cut material. Course duplicates and certified reference materials (appropriate to the anticipated copper grade) were inserted into the sample run at an approximate rate of 1 in 20. Sample blanks were included at the start and end of a sample run. All samples were placed into individually numbered bags, consolidated into batches of 5-10 samples and then sealed within polyweave sacks. The samples were delivered by hand to the assay laboratory by a Georgina Resources employee. In total, 430 drill core samples from D3-001 (58 HQ drill core, 332 NQ drill core, 40 QA/QC samples) were sent to ALS Laboratories in Burnie for sample preparation and multi-element analysis.

Samples were analysed by 4-acid digest (HF-HNO₃-HClO₄ digestion with HCl leach) and inductively coupled plasma mass spectrometry (ICP-MS) and inductively coupled plasma atomic emission spectroscopy (ICP-AES) finish for 60 elements including REE (ALS method ME-MS61r). Note that some rare earth elements (REEs) are only partially recovered with a four-acid digestion. Gold was determined by fire assay using a 30 g charge and atomic absorption spectrometry (AAS) finish (ALS method Au-AA25). For silver over the upper detection limit (Ag > 100 ppm), analysis was by 4-acid digest and ICP-AES or AAS finish (ALS method Ag-OG62). For copper over the upper detection limit (Cu > 1%), analysis was by 4-acid digest and ICP finish (ALS method Cu-OG62). Results are summarized and discussed in Section 5 and full results are provided in Appendix 5. QAQC data is provided in Appendix 6. Remaining drill core, and coarse and pulp rejects will be returned to Mineral Resources Tasmania's core facility in Mornington, Tasmania, in August 2023.

4.6 Environmental Management

4.6.1 Drill Site Preparation and Access Tracks

Prior to drill site preparation, a flora and fauna survey was conducted by Environmental Consulting Options Tasmania (ECOTas; Lawlis and Westbrook, 2022). No threatened species were identified at any of the sites proposed for the drill pad, drill access (footpath), emergency helicopter egress pad or lifting off site. Therefore, the areas were cleared of buttongrass and shrubs. No trees were required to be cleared. No new vehicular tracks were required, as the access footpath could be accessed directly from the Lake Spicer 4WD track. Machinery, auxiliary gear, fuel, drill trays/core and a portable toilet were flown in by helicopter. No sumps were required to be dug, as an above-ground sump system was used (Section 4.5.3).

Partway through the program, the water level of the Anthony River rose due to high rainfall and became impassable. A temporary footbridge was constructed near the Lake Rolleston huts to re-establish access. This bridge has been left in place temporarily (as work continues at Lake Dora) and has been marked with danger tape.

4.6.2 Drill Site Remediation

D3-001 caved in and was covered over on completion of the program. The hole was not making water or releasing gases. A poly pipe with a labelled cap was fixed in cement and was placed over the drill collar location.

Machinery, auxiliary gear, fuel, drill trays/core and the portable toilet were flown out by helicopter. Rubbish was removed by buggy. There are several sandbags left on site, which will be removed by buggy soon.

Button grass and other plants remain across the drill site and should regenerate over time.

4.6.3 Cuttings Management

Two, large, above-ground, plastic sumps were used to contain drill cuttings and a flocculent block was used to settle fines out of suspension. When the sumps began to overflow, water from the second, clearer sump was pumped out and distributed over the adjacent buttongrass plains. This was done to keep the drill effluent from channelling, travelling larger distances, and potentially reaching Lake Dora. The flow path to Lake Dora was monitored and no drill cuttings were observed to have contaminated the lake.

4.6.4 Campsite

The driller and offsider stayed at the Lake Rolleston huts overnight during drilling of D3-001. Water was pumped from the Anthony River into a reservoir for use as required. Electricity was provided from a high-capacity rechargeable battery box, which was recharged by a petrol generator. A portable toilet was available at the campsite for the duration of the drilling program. Heaters were used inside the huts. Fires were not allowed, either inside or in the outdoor fire pit.

The camp is accessible by 4WD vehicle, so food, fuel and supplies were brought in, and rubbish taken out regularly. All camp gear was driven in and has since been removed.

4.6.5 Weed Management

To prevent the spread of *Phytophthora cinnamomi* (root rot disease) in the project area, Georgina Resources employees and contractors cleaned soil from clothing, vehicles, and equipment prior to bringing them on site and sprayed down the items with Phytokill fungicide prior to entry at the Lake Spicer 4WD track gate.

A site inspection by MRT environmental officer David Gatehouse and his assistant occurred on March 15. Overall, Mr. Gatehouse was impressed by the environmental management at the site, especially considering the many challenging aspects of the program. Mr. Gatehouse did note an area of potential *Phytophthora cinnamomi* (root rot disease) along the Lake 4WD Spicer track. Georgina Resources collected two soil samples from under affected plants and had them tested using a standard baiting method with lupins. The tests confirmed the presence of root rot disease, so Parks and

Wildlife Services was notified and the diseased location has been added to the Natural Values Atlas. The presence of root rot disease is not necessarily attributed to the current work program as the track is open to the public.

5 D3-001 Results

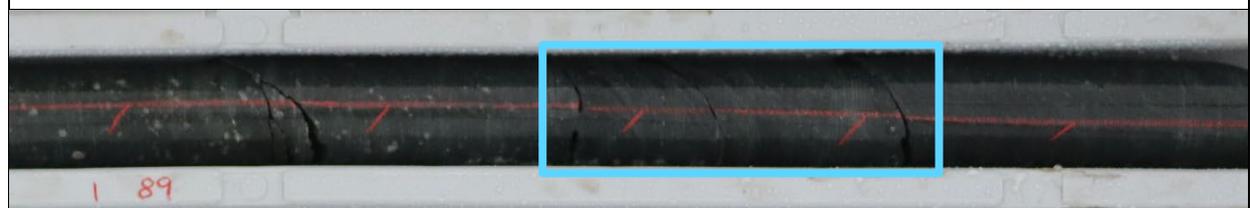
5.1 Geology

5.1.1 Host rocks

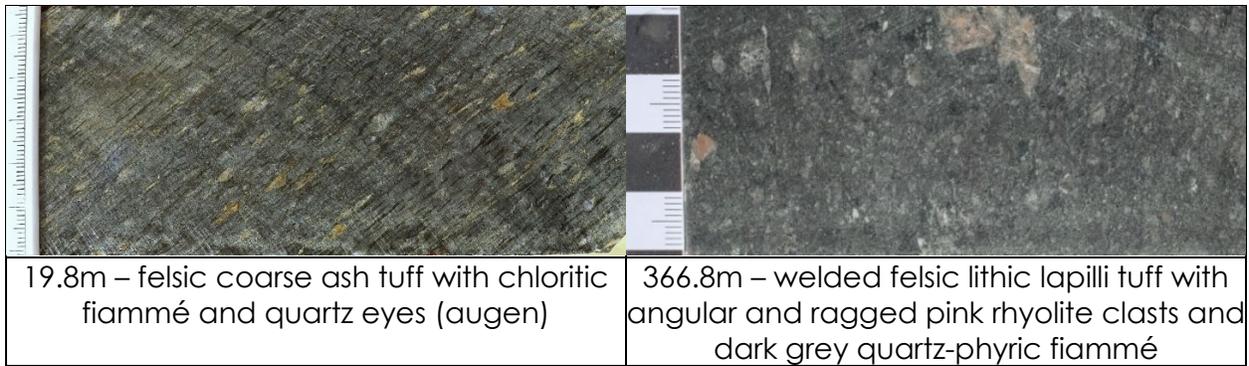
The host rocks in drill hole D3-001 consist of quartz-feldspar-phyric rhyolites, diverse felsic volcanoclastic rocks, feldspar-biotite-hornblende-phyric andesites and (related?) mafic-intermediate volcanoclastic rocks. These volcanic rocks have been subjected to greenschist facies regional metamorphism and deformation. The regional foliation is roughly parallel to bedding planes and the trend of mineralised zones in the prospect area and is vertical to very steeply west-southwest-dipping. Drill hole D3-001 is oriented up sequence, such that youngest rocks are at the bottom of the hole. Rock types will be described in this section from oldest to youngest.

Felsic tuffs

Felsic tuffs in D3-001 display a range of diverse textures and compositions. Tephra range from fine ash to cobble size. Components include broken quartz and feldspar crystals, rounded 'quartz eyes', lithic clasts including mudstone (or aphanitic volcanic clasts? in a variety of colours – grey, green, purple, pink), angular and ragged (juvenile) quartz-feldspar-phyric rhyolite clasts, and wispy dark grey features (fiammé) that range from small/thin to large/ragged and quartz ± feldspar-phyric. Some of the small fiammé may be sheared, chloritized ferromagnesian minerals or amygdales, but the larger porphyritic fiammé are interpreted to be flattened rhyolitic pumice clasts. Many of the felsic tuffs appear to be welded and/or laminated, however, it is possible that this is a result of secondary deformation. Tuffs appeared to be massive or reverse-graded, with larger pumice clasts concentrated at the tops of beds.

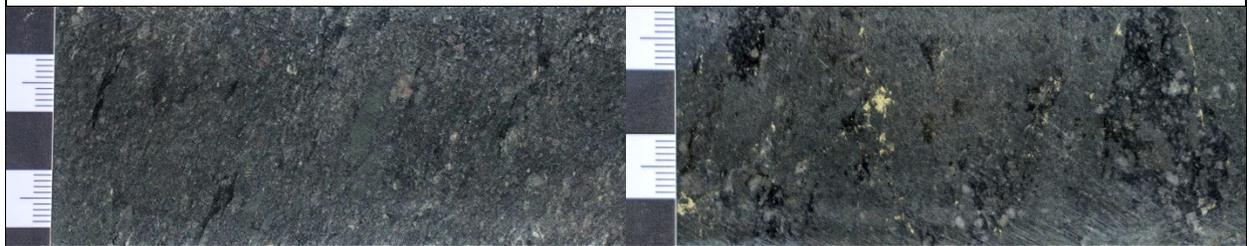


88.3-88.4m – wavy laminated felsic coarse ash tuff (within blue box)



19.8m – felsic coarse ash tuff with chloritic fiammé and quartz eyes (augen)

366.8m – welded felsic lithic lapilli tuff with angular and ragged pink rhyolite clasts and dark grey quartz-phyric fiammé



218.8m – welded felsic lapilli tuff with abundant polymict lithic clasts and thin dark grey quartz-phyric fiammé

214.5m - felsic lapilli tuff with large dark grey quartz-phyric fiammé



47.5m (left) – strongly welded felsic lapilli tuff with small and large dark grey quartz-feldspar-phyric fiammé

Felsic volcanoclastic sandstone and breccia

Felsic volcanoclastic sandstone and breccia are distinguished from the felsic tuffs by their lack of fiammé. They typically consist of fine sand- to granule-sized quartz eyes/broken crystals with lesser feldspar crystals, 'quartz eyes' and outsized mudstone or aphanitic lithic clasts (up to pebble sized) in a dark grey-green mud matrix. The grains appear to have diffuse margins, likely due to alteration and deformation effects.



88.4-89.8m – massive matrix-rich volcanoclastic sandstone with outsized broken quartz crystals (within blue box)



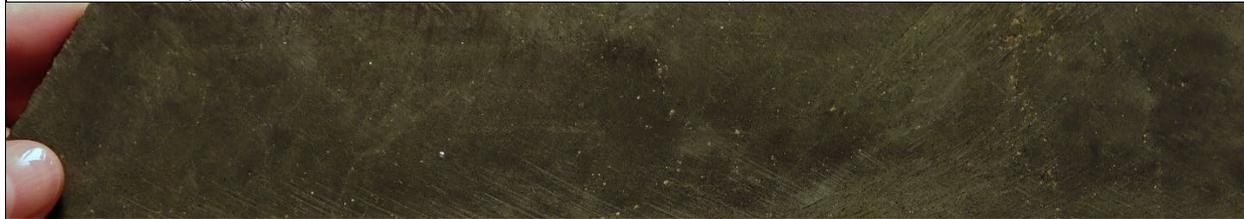
166.9m – massive volcaniclastic sandstone with abundant quartz crystals, outsized dark grey aphanitic clasts

Monomict volcanic breccia with altered aphanitic clasts

This rock type consists of monomict, clast-rotated to chaotic, granule to pebble breccia with subangular aphanitic volcanic or fine ash/mud clasts. The matrix is mud to fine sand-sized, dark grey green and typically strongly chlorite-altered. The matrix may contain rare quartz grains and disseminated, clustered sulfides (especially pyrite). This rock type can also be picked out by its slightly elevated magnetic susceptibility (see Section 4.4.4). It is intercalated with felsic tuff and felsic volcaniclastic sandstone to breccia.



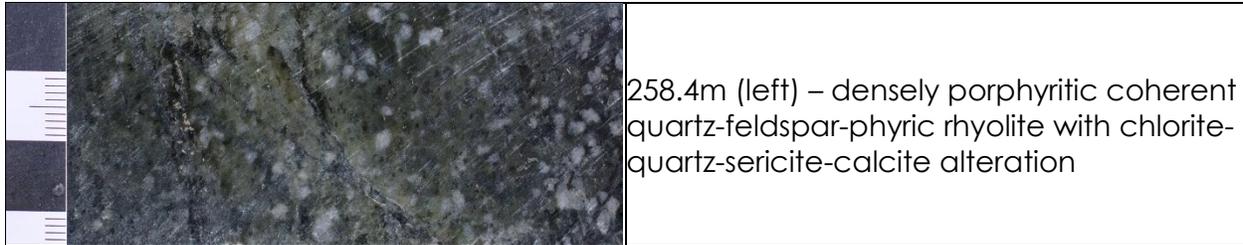
91.5m (dry) – the breccia texture in this rock type is best seen in dry drill core



131.7m (wet) – the breccia texture in the wet drill core is not as obvious, and the rock appears like fine ash or mudstone, however, you can note the clusters of pyrite and strong chlorite alteration in the matrix

Quartz-feldspar-phyric rhyolite

Quartz-feldspar-phyric rhyolite is the most abundant rock type in D3-001. It has a variable appearance and colour dependent on alteration. It is composed of quartz (1-8 mm; ~20%), feldspar (1-4mm; ~2%) and relict ferromagnesian phenocrysts (biotite?; 3%) in an aphanitic groundmass. Many of the quartz phenocrysts are rounded. The density and proportion of phenocrysts is variable, suggestion multiple pulses of volcanic activity. The rhyolite ranges from coherent to brecciated, however the proportions and distribution are obscured by alteration. Breccias have a jigsaw-fit to chaotic clast organization and vary from clast- to matrix-supported.



258.4m (left) – densely porphyritic coherent quartz-feldspar-phyric rhyolite with chlorite-quartz-sericite-calcite alteration



289.6m – altered contact between two phases of quartz-feldspar-phyric rhyolite



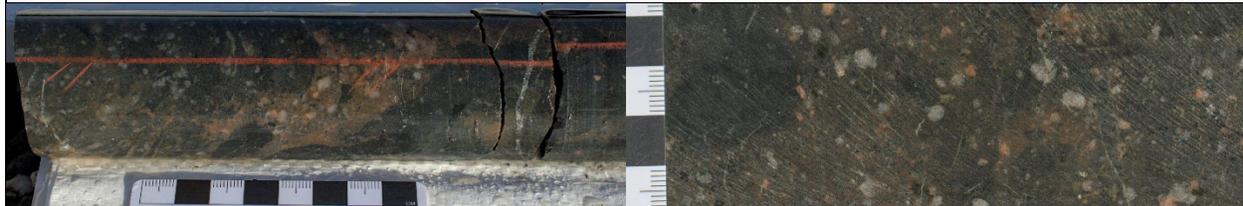
347.4m – brecciated quartz-feldspar-phyric rhyolite with preferentially K-feldspar-quartz-altered clasts and chlorite-quartz-altered matrix



356.0m – brecciated quartz-feldspar-phyric rhyolite with angular jigsaw-fit clasts reminiscent of a hyaloclastite

Sparsely K-feldspar(?) - plagioclase-quartz eye-phyric rhyolite

This rhyolite has rounded 'quartz eyes' (1-5 mm; ~3%), pink K-feldspar (1-4mm; ~0.5%), and white plagioclase (<2mm, 0.5%) in an aphanitic groundmass. Its margins are intrusive, brecciating and incorporating the surrounding quartz-feldspar-phyric rhyolite as xenoliths.

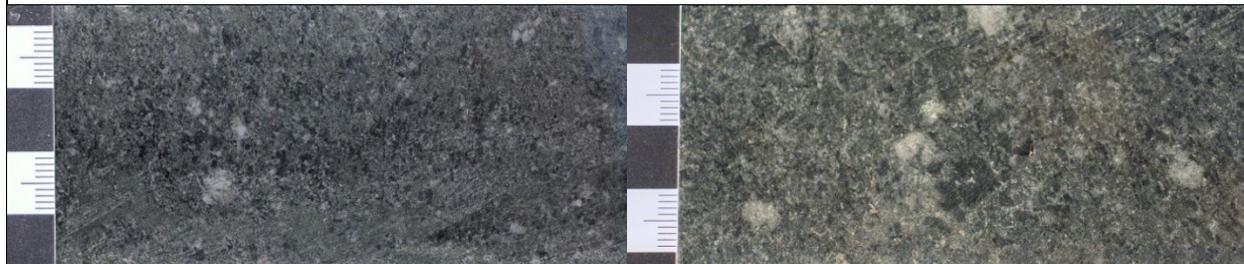


295.0m - sparsely K-feldspar(?) - plagioclase-quartz eye-phyric rhyolite (pink) brecciating quartz-feldspar-phyric rhyolite (dark grey green)

298.2m - sparsely K-feldspar(?) - plagioclase-quartz eye-phyric rhyolite with dark grey-green domains that are interpreted to be quartz-feldspar-phyric rhyolite xenoliths

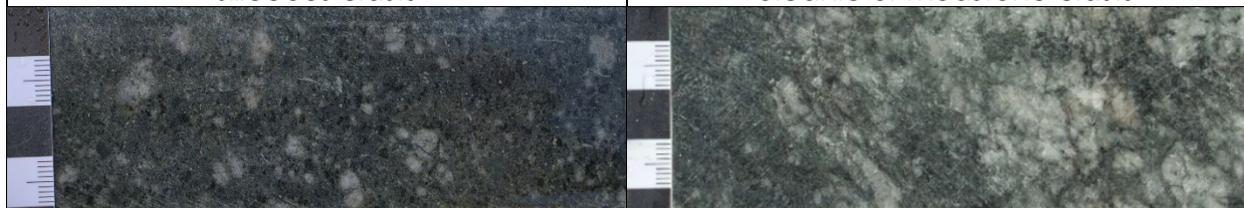
Pebbly mafic-intermediate volcanoclastic sandstone with siliceous clasts

This mafic-intermediate volcanoclastic sandstone consists primarily of coarse sand-sized grains of hornblende (15%) and feldspar (10%), with granule- to pebble-sized altered aphanitic volcanic or mudstone clasts (5%) and granule- to boulder-sized 'siliceous clasts' (5-10%) in a fine sand-sized matrix. It has a granular, massive, spotty texture and is poorly sorted. The 'siliceous clasts' locally have jigsaw-fit texture and are hypothesized to be disaggregated quartz veins or siliceous alteration domains. They could also be recrystallized quartzite clasts, quartz replacement domains, or recrystallised /modified white quartz crystals. It is possible that this rock is also a diorite or crystal-rich andesite porphyry.



198.0m – crystal-rich mafic-intermediate volcanoclastic sandstone with sparse siliceous clasts

371.6m - crystal-rich mafic-intermediate volcanoclastic sandstone with aphanitic volcanic or mudstone clasts

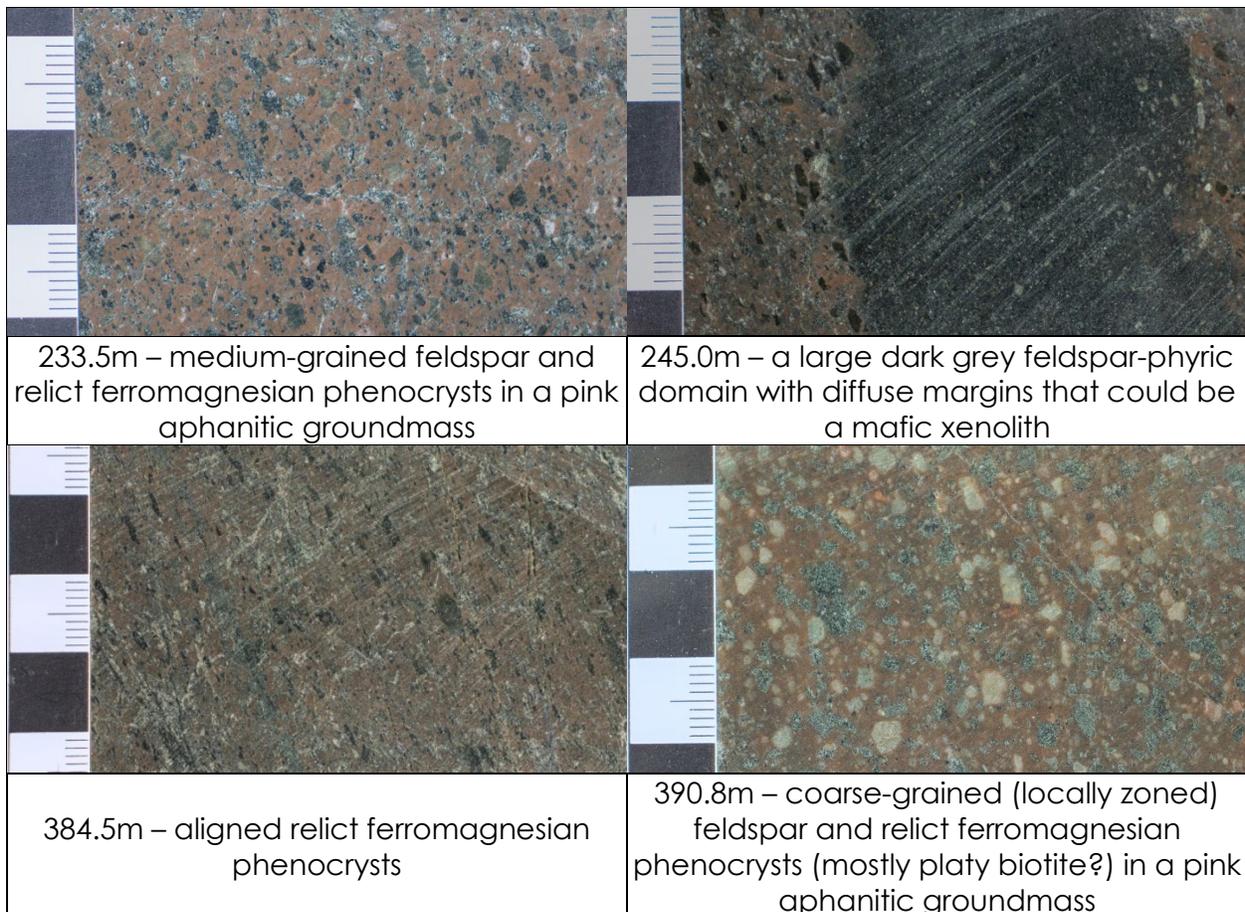


209.4m – matrix-rich mafic-intermediate volcanoclastic sandstone with abundant siliceous clasts

372.3m – a particularly large, jigsaw-fit siliceous clast

Feldspar-biotite-hornblende-phyric andesite

This rock type is composed of feldspar (1-6mm; ~15%) and relict ferromagnesian phenocrysts (biotite + hornblende; 20%) in a typically pink aphanitic groundmass and has minor round fine-grained mafic xenoliths up to cobble sized. At the contact of this andesite with pebbly mafic-intermediate volcanoclastic sandstone with siliceous clasts at 383.9 m depth downhole, there is an alignment and increased abundance of hornblende / decrease in size and abundance of feldspar that could indicate that this is a flow foliation and/or chilled margin. The andesite is typically coherent, but locally has brecciated margins and is intercalated with quartz-feldspar-phyric rhyolite.

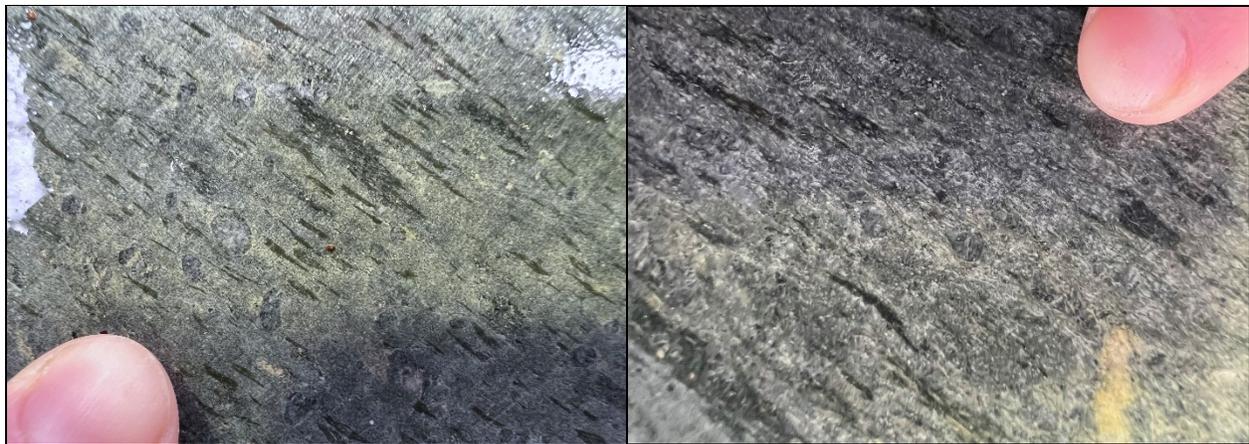


5.1.2 Alteration

The major alteration assemblages observed in D3-001 were sericite-chlorite-calcite±quartz, chlorite-quartz-sericite and K-feldspar-quartz. Both sericite-chlorite-calcite and chlorite-quartz-sericite alteration were observed to overprint K-feldspar-quartz alteration and are interpreted to be younger. Chlorite-quartz-sericite alteration is strongly associated with the presence of copper mineralisation.

Sericite-chlorite-calcite±quartz alteration

Sericite-chlorite-calcite±quartz alteration is typically moderate to strong and gives the rocks a light grey-green coloration. Sericite-chlorite typically align in the foliation plane. Sericite-calcite locally preferentially alter feldspars. Calcite preferentially forms in fractures and around quartz crystals and in very thin fracture meshes.



9.0m

47.5m



382.4m



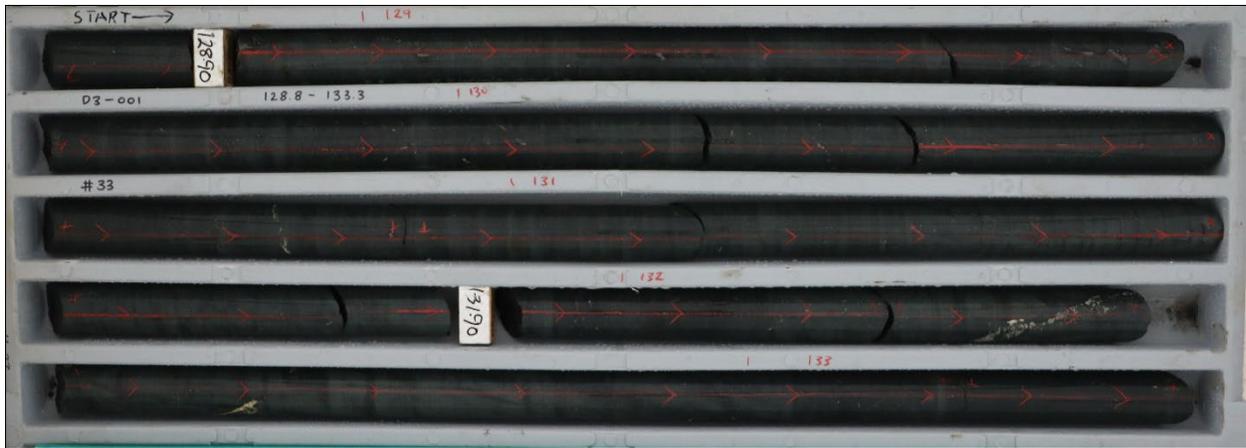
moderate-strong light grey-green ser-chl-cal-qtz alteration

strong dark green chl-qtz-ser alteration

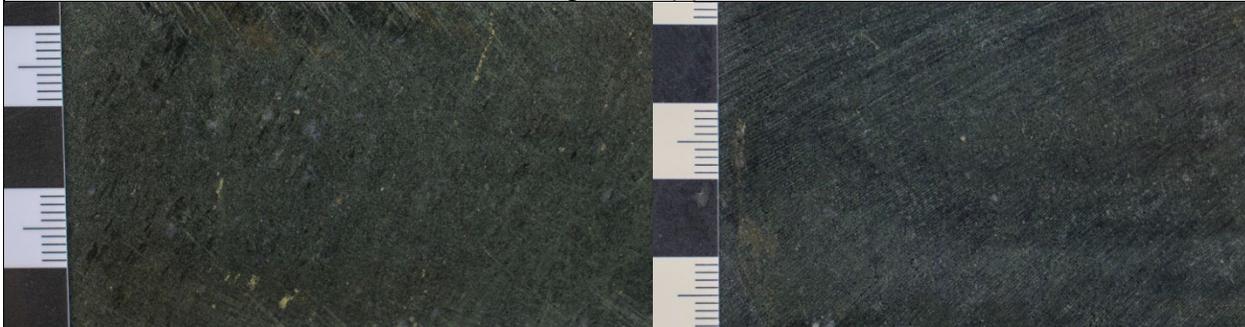
85.0-90.5m

Chlorite-quartz-sericite alteration

Chlorite-quartz-sericite alteration is typically very strong, pervasive, texturally destructive and gives the rocks a dark grey-green coloration. This alteration may preferentially alter the matrix of breccias. Magnetite, pyrite and calcite alteration are associated locally.



128.8-133.3m – strong, pervasive, dark grey-green chlorite-quartz-sericite alteration affects the clasts and matrix of monomict volcanic breccia with altered aphanitic clasts, causing it to appear uniform



169.9m - strong, pervasive, dark grey-green chlorite-quartz-sericite alteration of felsic tuff; fiammé are replaced by chlorite

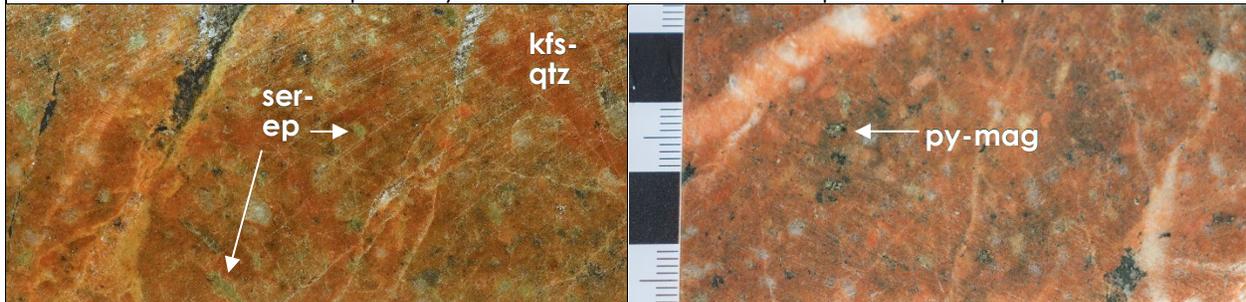
266.6m - strong, pervasive, dark grey-green chlorite-quartz-sericite alteration of a matrix-rich domain in quartz-feldspar-phyric rhyolite breccia

Quartz – K-feldspar – sericite alteration

Quartz – K-feldspar – sericite alteration is very hard and pink. It is correlated with zones of high potassium content that do not align with lithological boundaries. Major alteration minerals are quartz, K-feldspar (hematite-dusted) and sericite. Minor or inconsistently present alteration minerals are calcite, magnetite, epidote, pyrite, and chlorite. There is a strong negative correlation between Fe and K (Figure 4), and high K/low Fe discriminates zones of quartz – K-feldspar – sericite alteration from chlorite-quartz-sericite alteration. Some of the quartz – K-feldspar – sericite alteration may be related to K-feldspar-quartz veins.

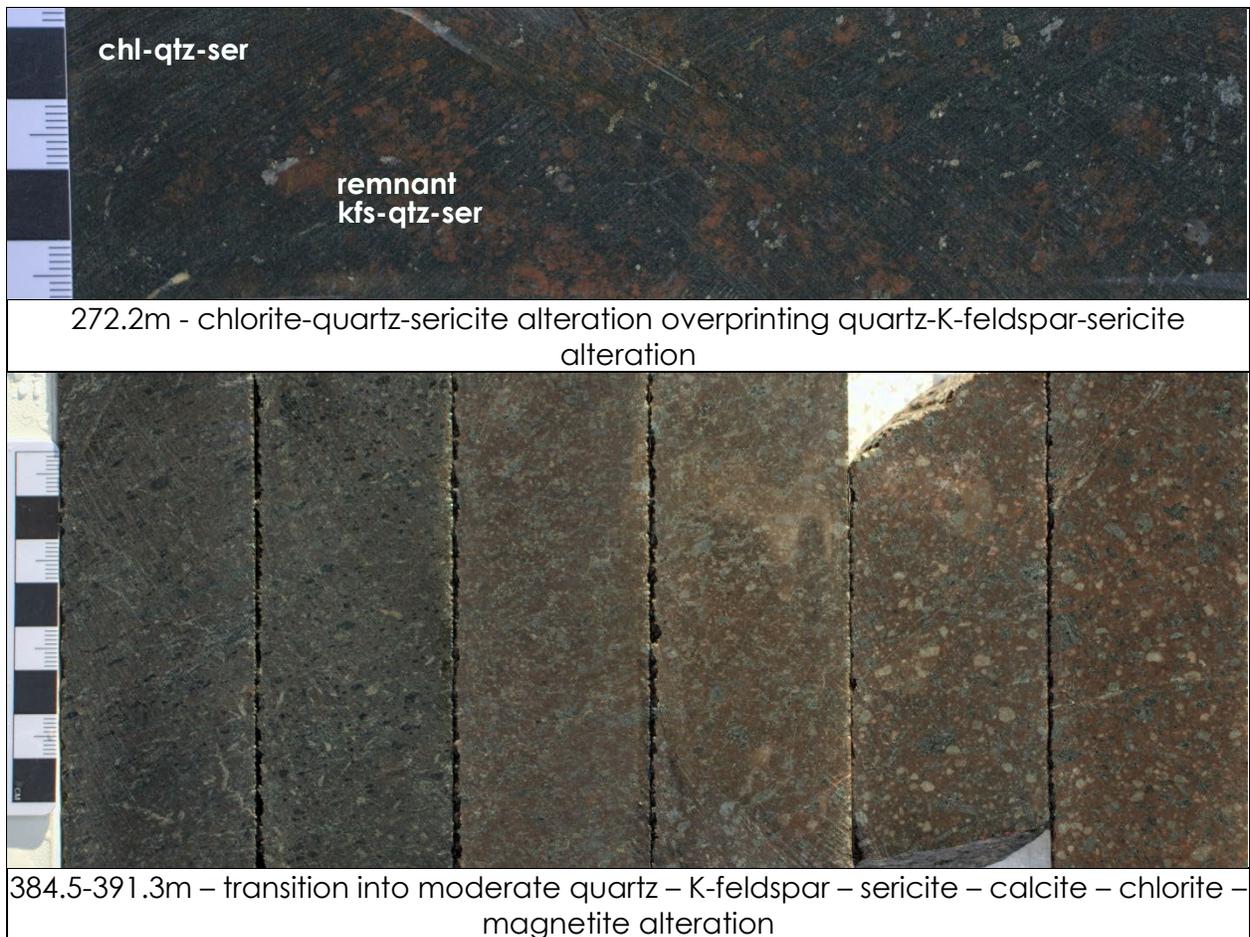


310.9-323.7m – very strong quartz – K-feldspar – sericite/epidote? – calcite – chlorite alteration zone possibly associated with a set of quartz-K-feldspar veins



318.0m – pistachio green epidote or sericite alteration of feldspars?

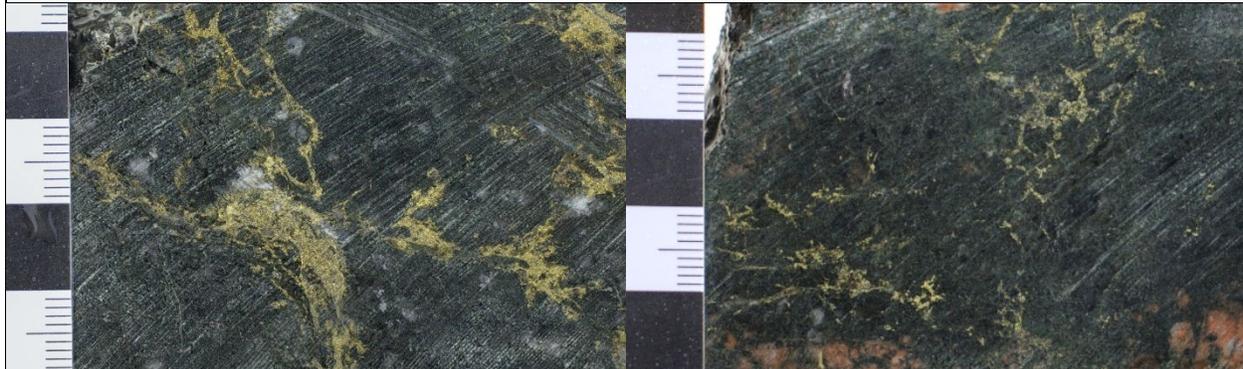
316.6m – pyrite-magnetite spots



5.1.3 Veins, Breccias and Mineralisation

The major styles of copper mineralisation are sulfide-quartz-chlorite stockwork veins and breccias and sulfide stringers, blebs and disseminations. These styles of mineralisation are typically associated with pervasive or vein-halo chlorite-quartz-sericite alteration. Carbonate \pm quartz \pm chlorite \pm sulfide veins and breccias and fibrous quartz-chlorite-calcite \pm sulfide veins also locally contain copper mineralisation. Quartz-K-feldspar \pm chlorite veins with K-feldspar alteration halos and magnetite veins and breccias also occur in D3-001, but are not associated with copper mineralisation.

Sulfide-quartz-chlorite stockwork veins and breccias



261.8m – wispy, laminated and discontinuous chalcopryite-pyrite-galena-sphalerite-quartz-chlorite breccia vein with an intense chlorite-quartz alteration halo hosted in quartz-feldspar-phyric rhyolite

251.6m – discontinuous chalcopryite-pyrite-galena-sphalerite-quartz-chlorite breccia vein with irregular margins and intense chlorite-quartz alteration halo overprinting quartz-K-feldspar-altered quartz-feldspar-phyric rhyolite breccia



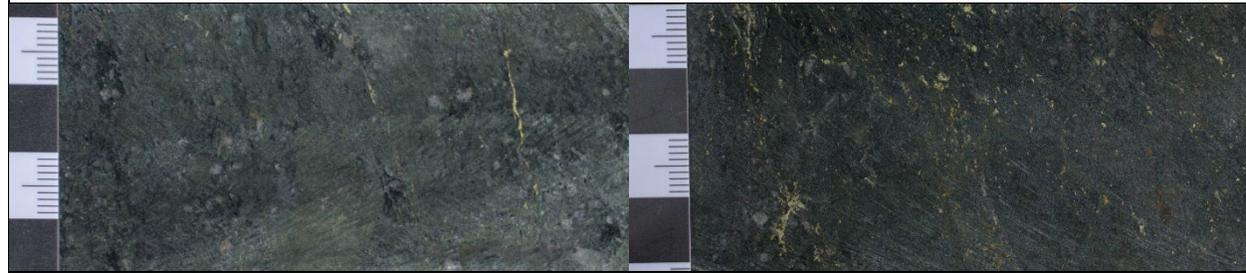
229.6m – an irregular stockwork of chlorite ± quartz ± pyrite ± chalcopryite veinlets with very thin chlorite-quartz alteration halos overprinting blocky quartz-chlorite-calcite veins

250.0m – pyrite-chalcopryite-galena-sphalerite-quartz-chlorite vein brecciating a blocky quartz-chlorite-calcite vein



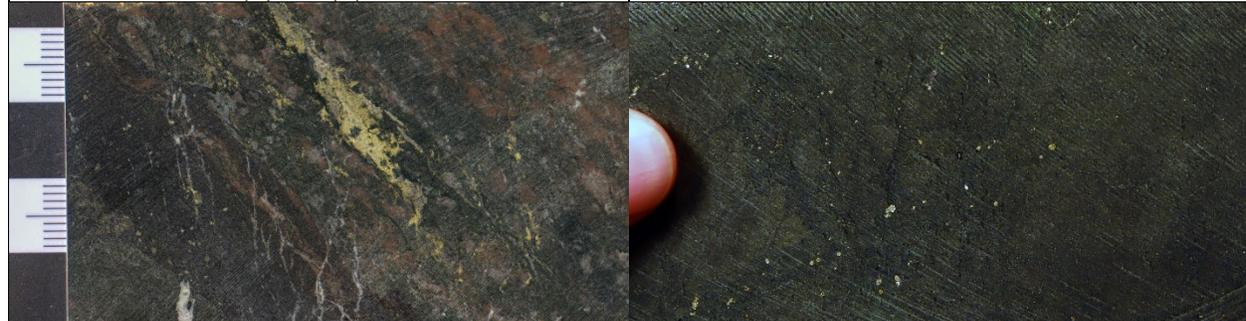
250.9m – discontinuous, wispy chalcopryite-pyrite-galena-sphalerite-quartz-chlorite breccia vein with jasper clasts(?) and irregular margins in pervasively chlorite-quartz-altered andesite breccia

Sulfide stringers, blebs and disseminations



214.5m – chalcopyrite-pyrite stringer subparallel to foliation and several chalcopyrite-pyrite blebs

228.0m – specks, blebs and disseminations of pyrite-chalcopyrite in andesitic volcanic breccia



273.8m – pyrite-chalcopyrite-chlorite-sphalerite-galena stringer crosscutting a magnetite vein

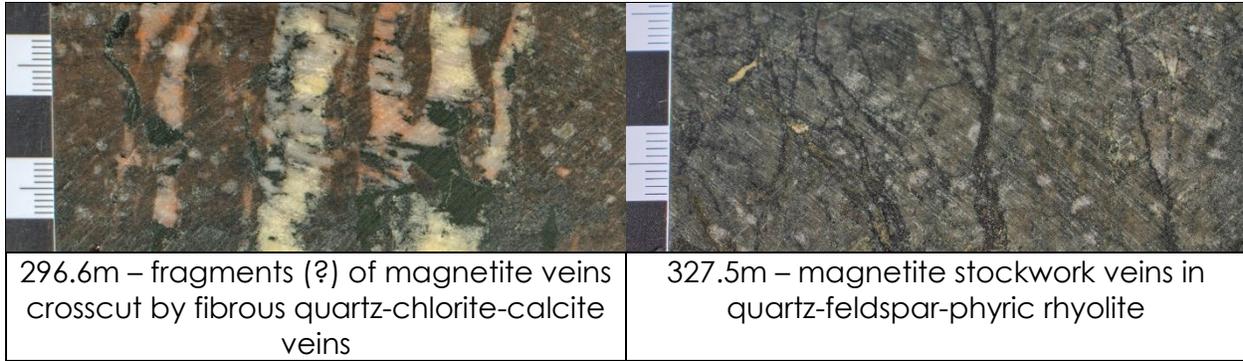
100.1m – clusters of disseminated pyrite and lesser chalcopyrite in the matrix of monomict volcanic breccia with altered aphanitic clasts

Magnetite veins and breccias

Minor magnetite occurs within discordant stockwork veins and cemented breccias. This mineralisation style is associated with spurious high magnetic susceptibility. Elemental associations are Cs, Rb, Be, Cr, K, Ba, Tl, Sr, Na, Ta, Nb, Th, U, and REE.



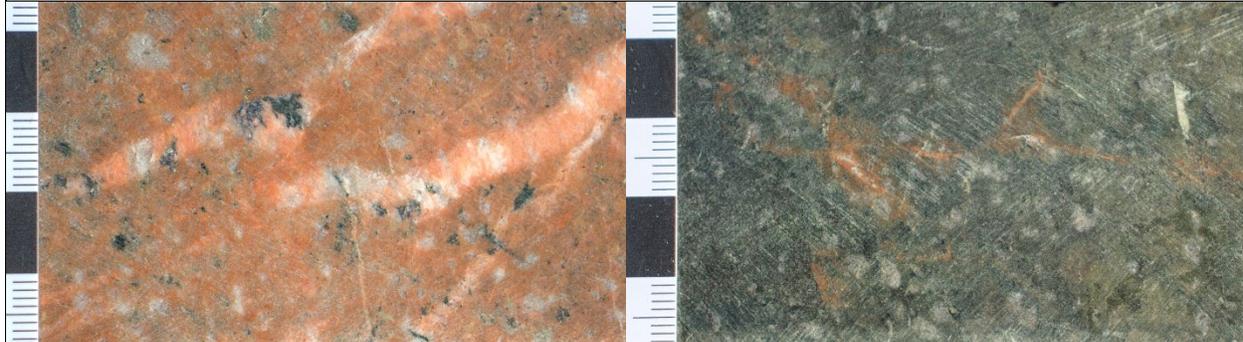
329.0m – jigsaw-fit to clast-rotated magnetite-cemented breccia being crosscut by irregular chlorite ± sulfide veins



Quartz-K-feldspar ± chlorite veins with K-feldspar-quartz alteration halos



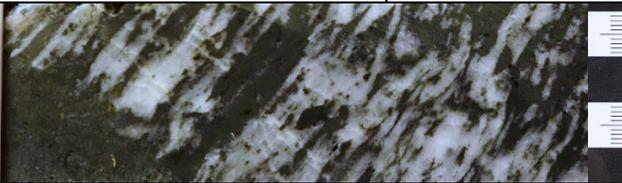
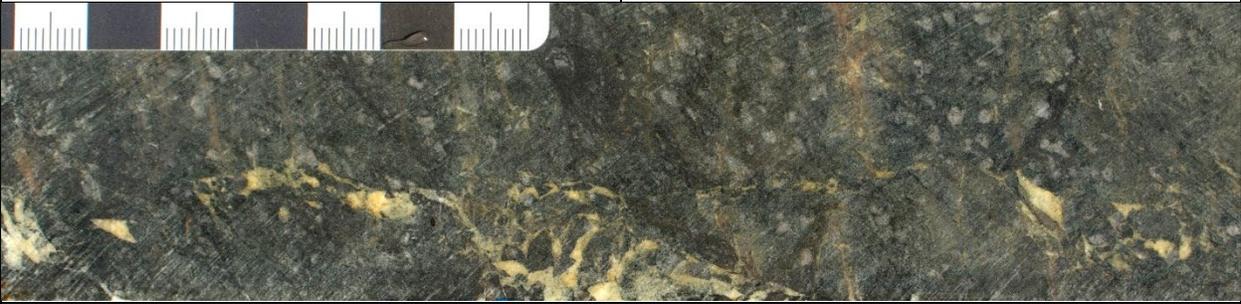
318.3m - strong K-feldspar-quartz alteration halos around quartz-K-feldspar-chlorite veins



<p>316.6m –blebs of galena and pyrite in discontinuous quartz and K-feldspar veins with coalesced K-feldspar-quartz halos</p>	<p>321.1m – hairline quartz veinlets with strong K-feldspar-quartz alteration halos</p>
---	---

Fibrous quartz-chlorite-calcite ± sulfide veins



211.5m – quartz-chlorite-calcite vein with an unusual triangular intergrowth of minerals (reminiscent of cuneiform texture...)	
	
111.5m – ‘fibrous’ bands of chlorite and quartz, with minor intergrown calcite	214.3m – minor flecks of chalcopyrite-pyrite (and sphalerite?) in fibrous quartz-chlorite-calcite veins, with veins likely acting as a passive host
Carbonate ± quartz ± chlorite ± sulfide veins and breccias	
	
236.5m – barren, irregular calcite-quartz stockwork veins with a small calcite-quartz-cemented breccia zone hosted in feldspar-biotite-hornblende-phyric andesite	384.5m – barren calcite veinlets that appear to have been folded or rotated into the foliation plane in feldspar-biotite-hornblende-phyric andesite
	
339.5m – oxidized (yellowed) calcite breccia vein hosted in quartz-feldspar-phyric rhyolite	
	
310.6m – oxidized (yellowed) calcite breccia vein crosscutting quartz-K-feldspar veins	127.0m – irregular calcite-chalcopyrite-pyrite vein in monomict volcanic breccia with altered aphanitic clasts

5.2 Assay Results

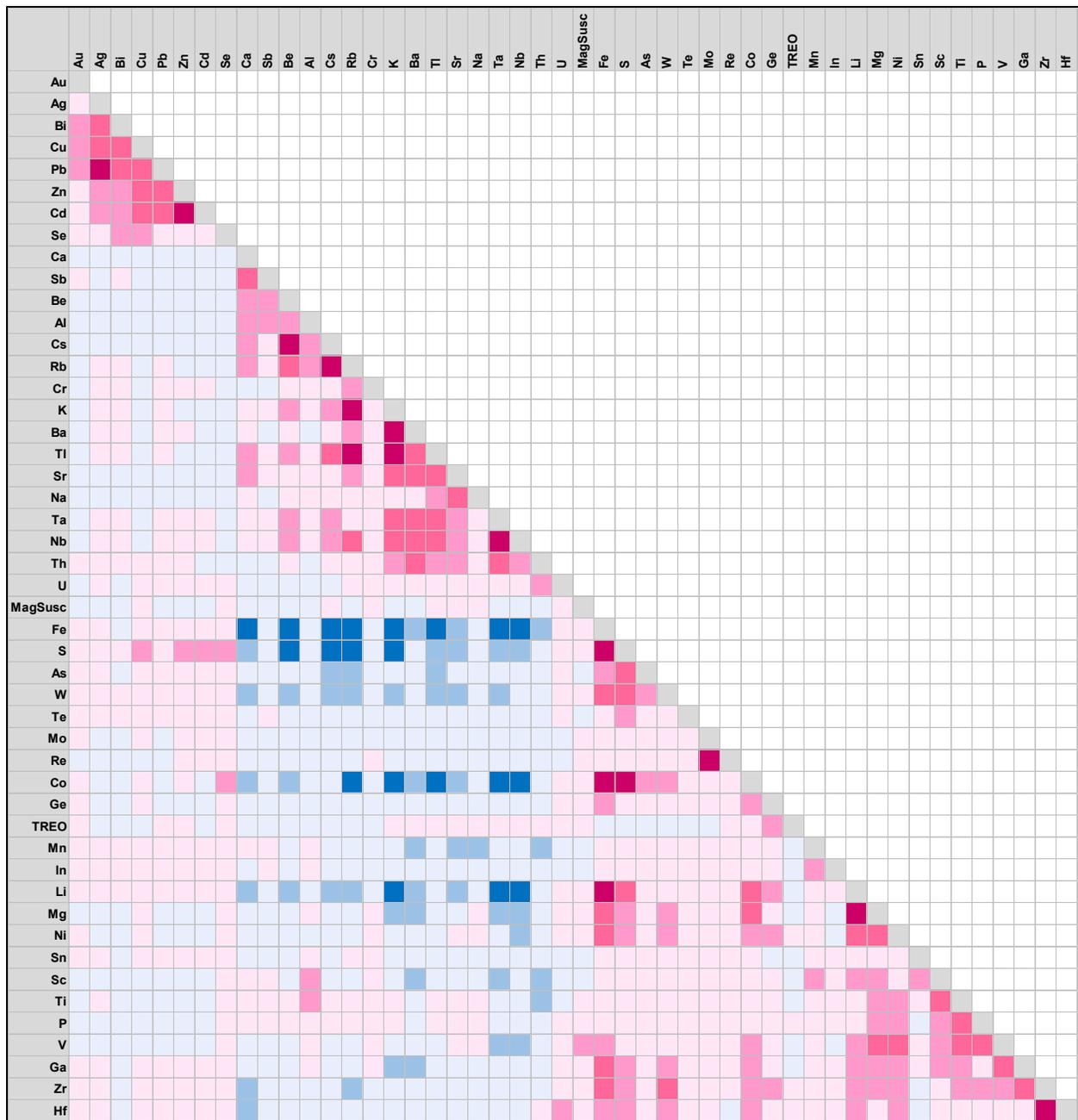
D3-001 encountered numerous discrete domains of Cu-Au and Pb-Ag-Zn mineralisation (Table 6). A 29-metre-wide zone was intercepted from 248 m containing 0.18% copper, 16 g/t silver, 0.23% lead and 0.23% zinc, including a three-metre intercept of pyrite-chalcopryrite stockwork veins with 0.50% copper, 0.14 g/t gold, 37 g/t silver, 0.55% lead and 0.58% zinc from 249 m. Individual one-metre samples from D3-001 returned results of up to 68 g/t silver, 0.31 g/t gold, 0.7% zinc and 0.9% lead.

Table 4: Average assay values for anomalous intercepts from drill hole D3-001. All intervals are for depths downhole. True widths of mineralisation are not currently known.

	From (m)	To (m)	Interval (m)	Cu (ppm)	Au (ppm)	Ag (ppm)	Pb (ppm)	Zn (ppm)
	121	122	1	1905	0.02	4	281	391
	133	136	3	1288	0.02	2	39	387
	142	143	1	1200	0.02	1	19	289
	152	159	7	1065	0.03	6	374	781
	186	188	2	1016	BDL	1	320	1068
	214	230	16	1196	0.02	7	1215	2841
	248	277	29	1756	0.04	16	2260	2283
<i>including</i>	249	252	3	4960	0.14	37	5463	5817
	261	262	1	4810	0.16	2	1025	1410
	284	285	1	1395	0.01	20	4470	1485
	286	287	1	1090	0.02	28	4360	2620
	360	361	1	1255	0.05	12	2920	1905
	364	365	1	1525	0.02	10	1515	2080
	368	369	1	1225	0.02	3	2170	2480

There is a strong Ag-Pb-Cu-Bi-Zn-Cd association (Figure 4 and Table 5) suggesting a polymetallic mineralisation style with pyrite, chalcopryrite, sphalerite (Cd-bearing), galena (possibly Ag-bearing), possibly native elements (Au, Ag, Bi), and possibly sulfosalts (e.g., of Au, Ag, Bi and Pb, and note there is no correlation with As and Sb). Some of these minerals are likely only visible in thin section. Magnetic susceptibility is only weakly correlated to Fe (likely due to strong chlorite alteration) and is moderately correlated with V (commonly incorporated into magnetite; Figure 4 and Table 5). There is also a very strong Co-Fe-S association (Figure 4 and Table 5) indicating that cobaltiferous pyrite may be present.

Assay results from historical rock chip samples from the Lake Dora area include up to 6.2% copper, 2.3% cobalt, 250 g/t silver, 47.7 g/t gold, 4% lead and 9.7% zinc. Surface rock chip samples display a strong Au-Ag-Co-As association and a Cu-Co-Ni association not seen in the current drill results (cf. Lawlis and Westbrook, 2022). This highlights the potential for various styles and higher grades of polymetallic mineralisation nearby.



LEGEND							
Colour	Correlation coefficient (r)		Significance	Colour	Correlation coefficient (r)		Significance
	-1.00	-0.80	Very strong negative correlation		0.00	0.39	Weak positive correlation
	-0.79	-0.60	Strong negative correlation		0.40	0.59	Moderate positive correlation
	-0.59	-0.40	Moderate negative correlation		0.60	0.79	Strong positive correlation
	-0.39	0.00	Weak negative correlation		0.80	1.00	Very strong positive correlation

Figure 4: Correlation matrix for drill core assay and magnetic susceptibility ("Mag Susc") results from D3-001.

Table 5: Positive correlations amongst elements of interest.

	Strength of correlation		
	Very Strong	Strong	Moderate
Au			Bi, Cu, Pb
Ag	Pb	Bi, Cu	Zn, Cd
Bi		Cu, Pb, Ag	Se, Au, Zn, Cd
Cu		Pb, Zn, Ag, Bi, Cd	S, Se, Au
Pb	Ag	Bi, Cd, Cu, Zn	Au, Cd, Se, Zn
Zn	Cd	Cu, Pb	Ag, Bi, S
Fe	Li, S, Co	Ga, Mg, Ni, W, Zr	As, Ge, Hf, V
S	Co, Fe	As, Li, W	Cd, Cu, Ga, Hf, Mg, Ni, Se, Te, Zr, Zn
Ge			Co, Fe, Li, Ni, Zr, TREO
Co	Fe, S	Li, Mg	As, Ga, Ge, Hf, Ni, Se, V, W, Zr
TREO			Ge
Mag Susc			V

5.3 Magnetic Susceptibility

Magnetite susceptibility in D3-001 is:

- low within felsic tuffs (average 6.3×10^{-3} SI),
- elevated within monomict volcanic breccia with altered aphanitic clasts, due to pervasive magnetite alteration or very fine-grained primary magnetite (average 30.8×10^{-3} SI),
- elevated within coherent andesite due to the presence of disseminated and spotty magnetite, which may also be a primary feature (average 28×10^{-3} SI; Figure 2),
- sporadically high due to the presence of magnetite patches, veins and breccias from 144-160m and from 283-343 m (up to 495×10^{-3} SI; Figure 2), and
- negatively correlated with copper (correlation coefficient = -0.024; Figure 4 and Figure 5).

6 Discussion of Results

The best copper mineralisation in D3-001 is hosted in structurally-controlled, steeply-dipping to vertical domains of chlorite \pm quartz-alteration within intercalated felsic and intermediate – mafic volcanics. Mineralisation mainly consists of clusters and foliation-parallel chains of disseminated sulfide minerals, sulfide stringers, and chlorite-sulfide stockwork veins. There is a polymetallic association of Ag-Pb-Cu-Bi-Zn-Cd that may signify an ore mineral assemblage of chalcopyrite, Cd-bearing sphalerite, Ag-bearing(?)galena, native elements (Au, Ag and/or Bi), and sulfosalts (Au, Ag, Bi and/or Pb).

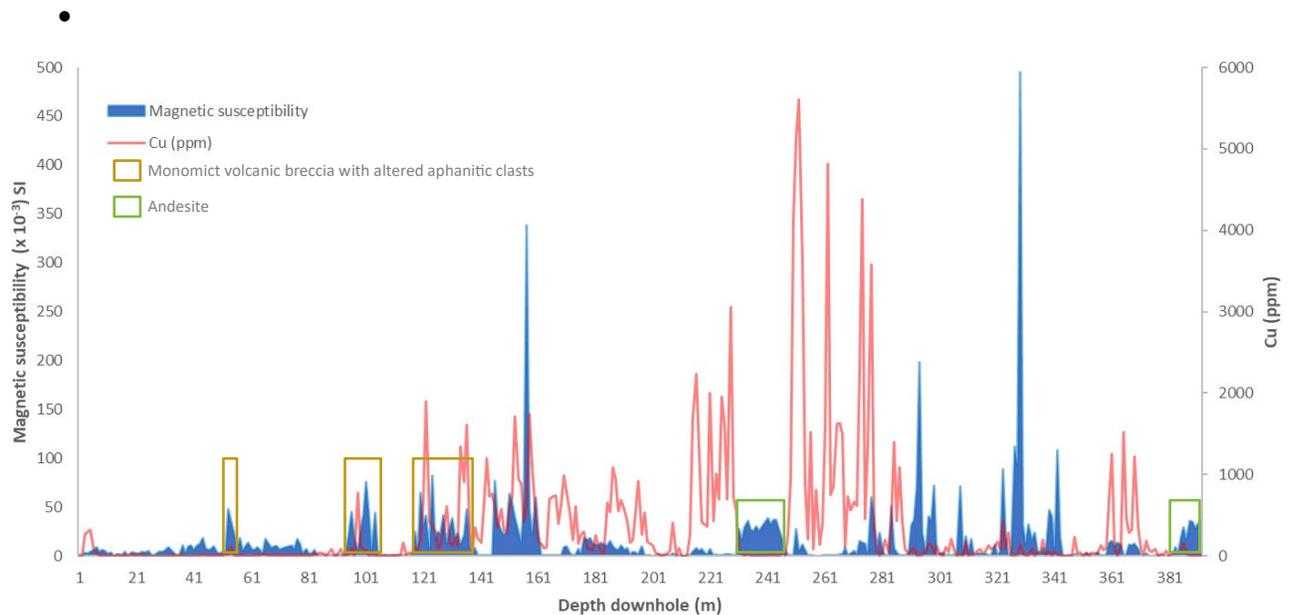


Figure 5: Magnetic susceptibility and copper grades downhole in D3-001.

Given that magnetic susceptibility was not correlated with copper, only using aerial magnetics to target further copper mineralisation at Lake Dora may not be successful. It may help to pair magnetics with gravity and/or induced polarity data.

7 Recommendations for Future Work

Drilling of D3-001 has verified that there is a broad, subsurface hydrothermal alteration zone and associated low grade copper-gold mineralisation at Lake Dora. Much of the prospect area remains untested and further work is warranted. Recommendations for future work include:

- Detailed geophysics (ground magnetics and gravity, possible IP), geological mapping and rock chip sampling in Dora 1 and Dora 2 zones to define an ore body drill target. Follow-up drilling if such a target is identified.
- Synthesis of structural and geochemical data from Dora 3 Zone drill core and outcrop.
- Petrographic analysis of drill core and regional rock chip samples to gain insight into mineralisation styles and paragenesis and to better understand the regional stratigraphy. Twelve samples have been selected from D3-001 drill core for petrographic analysis. Results will be available in Spring and will be reported on in the 2023 annual report to MRT for EL16/2018.
- HyLogger analysis of D3-001 drill core to objectively map the mineralogical composition of veins and alteration downhole.
- Backpack drill rig sampling of Dora 3 outcrops to test mineralisation along strike of D3-001 and D3-002.

8 Expenditure

Expenditure for drilling D3-001 EDGI drilling program is summarised in Table 6.

Table 6: Expenditure for drilling D3-001

ITEM	EXPENDITURE (AUD)
Number of Holes	1
Drilling Methods	DD – HQ3 & NQ3
Meters Drilled	392.5m
Total Direct Drilling Costs (ex-GST)	\$111,087.88
Total Helicopter Support Costs (ex-GST)	\$48,219.15
Total Government Funding Sought	\$70,000

9 References

Lawlis, E., and Westbrook, S. (2022). EL16 /2018 Walford Peak, Tasmania. Third Annual Report for the Year Ended 16 December 2022. Georgina Resources Pty Ltd.

Denwer, K., McNeill, A., and Dauth, C., (2000). Queenstown North project comprising Walford Peak EL24/96, Queenstown EL6/98, Beatrice EL20/98, annual report for the period ending October 1999. Pasmenco Exploration. MRT report 00-4444.