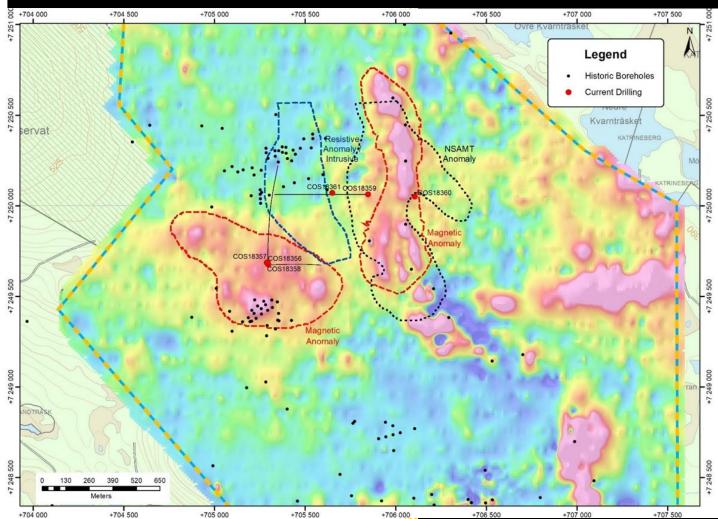


# 2018

## Copperstone Technical Report – Update on 2018 Drilling Campaign



Chris McKnight Copperstone Resources AB 5/16/2018



#### Highlights

- Mineralisation consisting of interspersed chalcopyrite veins (assay results still pending) has been intercepted in drillhole COS18359 over 81m from 745m to 826m. This mineralisation is associated with a vertical resistive Natural Source Audio-frequency magnetotelluric (NSAMT) feature which has considerable strike and depth extent and is being drill- tested for the first time.
- Potassic alteration is a characteristic style of alteration in porphyry style deposits and was intercepted over several hundred metres (from 110.7m to 361.4m) in drillhole COS18356 and from 155.8 to 618.9m in drillhole COS18357. This helps substantiate the porphyry style of mineralisation proposed for the genesis of the Cu sulphides historically drill tested on the project.
- Geochemistry commensurate with Adakite in drillhole COS18358 provides further validation for porphyry style mineralisation.

#### Introduction and Objective of Drill Campaign

Copperstone has been drill testing the targets generated through recently conducted geophysical surveys (ground magnetics and NSAMT). To date four holes have been completed with a single drill rig (COS18356, COS18357, COS18358 and COS18359). A second drill rig was brought to site on the 06/05/2018. These rigs are currently drilling the fifth and sixth drillholes of the programme (COS18360 and COS18361). Drilling started on  $2^{ND}$  January 2018 and is expected to be complete in August 2018 (approximately 7,200m). To date ~3,100m has been drilled using NQ sized core and sampling over select zones has been conducted using a 1.5-2.0m sample length and appropriate QAQC protocol including standards, blanks and duplicates. The drillhole localities are shown in figure 1.

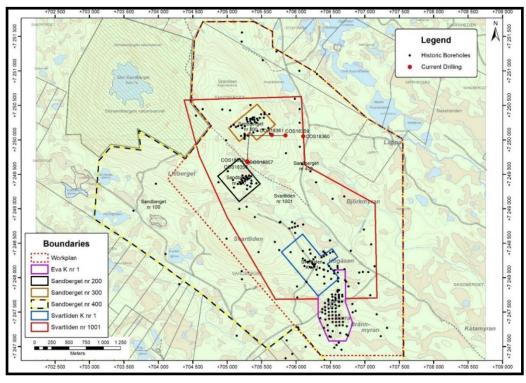


Figure 1: Locality of 2018 boreholes shown as red circles relative to the Copperstone licenses and historic boreholes



The holes that have been drilled and the target/objective for each drillhole is tabulated below and further explained and illustrated in the ensuing text and images.

Table 1: 2018 Drillhole Summary				
Drillhole ID.	End of Hole Depth	Azimuth	Dip	Target/Objective
COS18 356	638.4	090° - East	-65°	Circular Magnetic Anomaly (Target A shown in figure 2) drilled with vertical hole
COS18 357	711.3	Vertical	-90°	Circular Magnetic Anomaly (Target A) associated with potassic alteration drilled with hole orientated to the east
COS18 358	843	0° - North	-55°	Circular Magnetic Anomaly (Target A) associated with potassic alteration and potential sulphide veins underlying Granliden Hill mineralisation
COS18 359	878	275° - West	-55°	Resistive NSAMT feature underlying Granliden Hill mineralisation (see figure 2)
COS18 360	In progress	275° - West	-60°	Drill testing the NSAMT conductor (see figure 2)
COS18 361	In progress	275° - West	-55°	Drill testing the vertical extension of the mineralisation intercepted in Cos 18 359 (see figure 8) i.e. to test whether it is continuous between where it was intercepted at depth in COS18359 and where it has been drilled in shallow holes vertically above COS18359

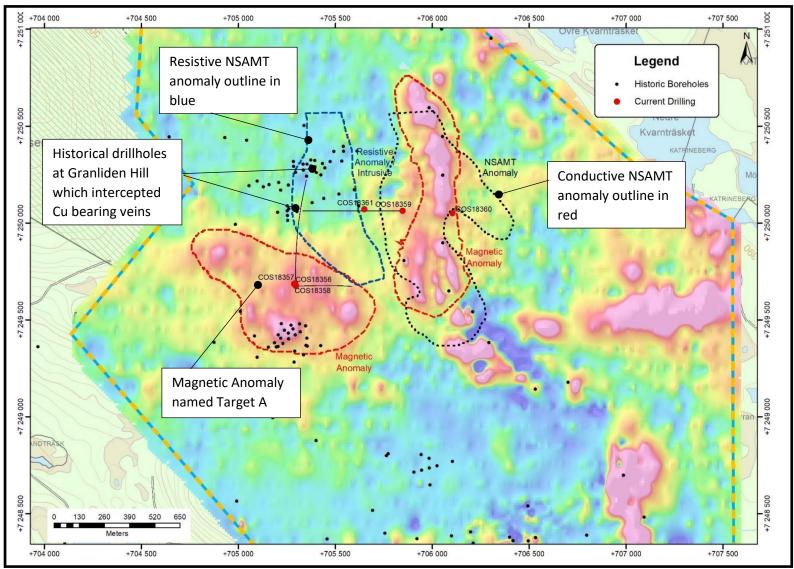
As can be seen in figure 2, drillholes COS18356, COS18357 and COS18358 were all drilled from the same collar position. These drillholes tested the magnetic feature labelled Target A since magnetite is frequently associated with mineralisation in copper porphyries.

COS18358 was drilled to the north in order to drill through the contact of the intrusion interpreted to be defined by Target A, and to drill underneath the mineralisation historically drill tested at Granliden Hill. This drillhole also drill tested the south-western margin of the feature labelled "Resistive Anomaly/Intrusion".

This resistive feature was identified from the NSAMT survey as shown in figure 3. It is a roughly north-south orientated resistive zone interpreted to be an intrusion. COS18359 and COS18361 drill tested the potential for mineralisation within or adjacent to, this interpreted intrusive, which may be leading to the copper mineralisation intercepted at shallower depths at Granliden Hill.

COS18359 also, coincidently, tested the upper extension of mineralisation that may be associated with the NSAMT conductor (as opposed to the NSAMT resistor) whereas COS18360 was positioned to intercept the NSAMT conductor at a more prospective depth.





*Figure 2: Borehole localities relative to the targets being tested overlying ground magnetics (100m upward continuation)* 



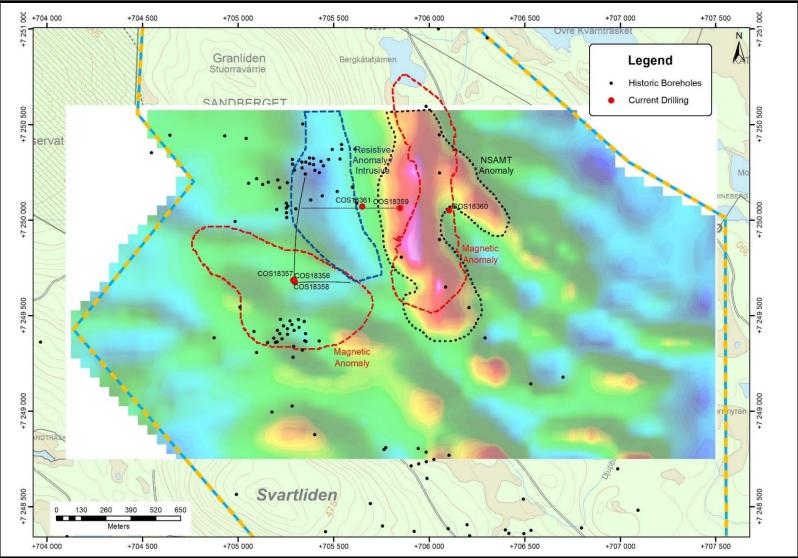


Figure 3: Outline of NSAMT and Magnetic Anomalies overlying NSAMT 100m depth slice



#### Mineralisation

COS18356 was the first hole of this programme and was drilled into the magnetic anomaly. This is the first drillhole to have ever intercepted potassic alteration on the property. As potassic alteration is frequently associated with Cu porphyry deposits this extensive zone of alteration (~350m drilled thickness) from 110.7m to 361.4m provided further indications that a porphyry style mineralising system may have been the cause of Cu mineralisation. The second drillhole (COS18357) also intercepted extensive potassic alteration (over ~ 470m from 155.8m to 618.9m). These results are reported on in the press release dated  $23^{rd}$  March 2018. The first three drillholes which intercepted potassic alteration did not unfortunately intercept any significant mineralisation.

COS18358 was then drilled to the north to further evaluate the potassic alteration as well as the SW margin of the resistive NSAMT anomaly. COS18358 is thought to have drilled subparallel to the sulphide veins so did not intercept a high density of these. Six veins were intercepted between 650m and 761m and individual samples of 1.5m to 2m long returned values from 0.2% Cu to 1.48% Cu.

The next drillholes were positioned to drill test the two NSAMT anomalies and were positioned such that an E-W section line could be generated. One NSAMT anomaly is a conductor and the other a resistor (see figure 2). COS18359 successfully intercepted Cu bearing sulphides (see figure 4) on the western margin of the resistive anomaly over 81m from 745m to 826m directly below the shallow mineralisation historically drill tested at Granliden Hill . Assay results from this new drillhole are pending. As outlined under the section headed "Discussion" these sulphides are located directly beneath the Granliden Hill Cu bearing sulphides (see figures 6, 7 and 8). If these sulphides are continuous between where they were intercepted at depth and Granliden Hill surface this will provide a zone with a vertical depth of ~750m that could potentially be mineralised (see figure 8). COS18361 will test the vertical continuity of this zone. If this mineralisation straddles the resistive anomaly its strike length may be substantial (see figure 3).

COS18361 is currently at 92m so has not yet reached the target depth although it has intercepted minor sulphides from 83m to 92m which are interpreted to be an upward extension of the mineralisation associated with the conductive NSAMT anomaly.

The second NSAMT anomaly is conductive (see figure 2). Upward extensions of this feature have been tested by drillholes COS18359 and COS18361 which both intercepted minor amounts of Cubearing sulphides. Assay results from this part of COS18359 have been received and returned values of 0.8 to 1% Cu from three non-contiguous 2 m long samples which each included chalcopyrite veining.

The first drillhole to properly test the prospective part of this anomaly is COS18360 which is currently at a depth of approximately 50m.





Figure 4: COS18359 Examples of mineralisation intercepted between 745m and 826m

### Alteration

Drillholes COS18356 and COS18357 intercepted distinctive potassic alteration imprinted on a weakly porphyritic quartz diorite intrusive (see figure 5). This alteration style is characteristic of porphyry style mineralisation but did not return any significant copper results in these drillholes.

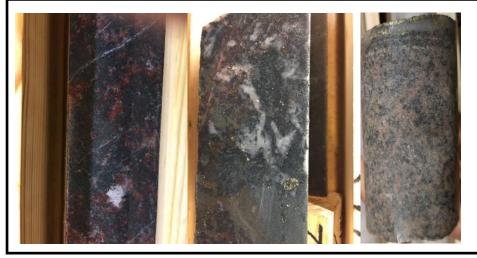


Figure 5: Potassic Alteration intercepted in COS18356 and COS18357



#### Geochemistry

Adakites are rock types that are mostly, although not exclusively, formed as a result of magma generated through subducting oceanic plates. This is an environment conducive to the formation of Cu porphyries and indeed adakites are frequently associated with porphyry deposits. Castillo (2006) gives some characteristic values for Adakites which are compared in table 2, to the geochemistry from a diorite intercepted from 371.40 to 416.50m in COS18358. (The COS18358 oxide values have been calculated from standard analytical techniques (as opposed to whole rock analyses).

Table 2: Comparison of values from COS18358 to those that characterise Adakites   (Castillo 2006)				
	Typical Adakite Values	Cos 18358 Diorite Values	Correlation	
Al <sub>2</sub> O <sub>3</sub>	≥15%	13-15%	yes	
SiO <sub>2</sub>	≥56%	~65%*	yes	
MgO	<3% & rarely above 8%	5-8.5%	approximately	
Y	≤ 18ppm	15-18ppm	yes	
Sr	≥400ppm	300-520ppm	approximately	
Sr/Y	>20	25-30	yes	

\* SiO2 values taken from silica content described in thin-section descriptions

Adakites are also characterised by enrichment in the elements Rb, K, Ba and Sr and depletion in Nb, Ta, Zr and Ti. The table below compares these elements to those of the Phillipine adakites (values taken from Jego et. al. (2005).

Table 3: Comparison of values from COS18358 to those that characterise Adakites from						
the Phillipines (Jego et. al. 2005)EnrichmentKRbBaSr						
Cos 18358	0.3-1.1%	12-27%	120-270ppm	300-540		
Phillipine						
Adakites	1.5-3.6%	25-60%	137-514	350-1300		
Depletion	Nb	Та	Zr	Ti		
				3100-		
Cos 18358	2.4-3.8ppm	0.15-0.23ppm	45-60ppm	4000ppm		
Phillipine				618-		
Adakites	1-11ppm	0ppm	91-332ppm	4700ppm		

Overall there is a very strong correlation between the Copperstone values and those that typify adekites.

#### Discussion

Figure 6 shows a cross-section looking north through line of 2018 drillholes



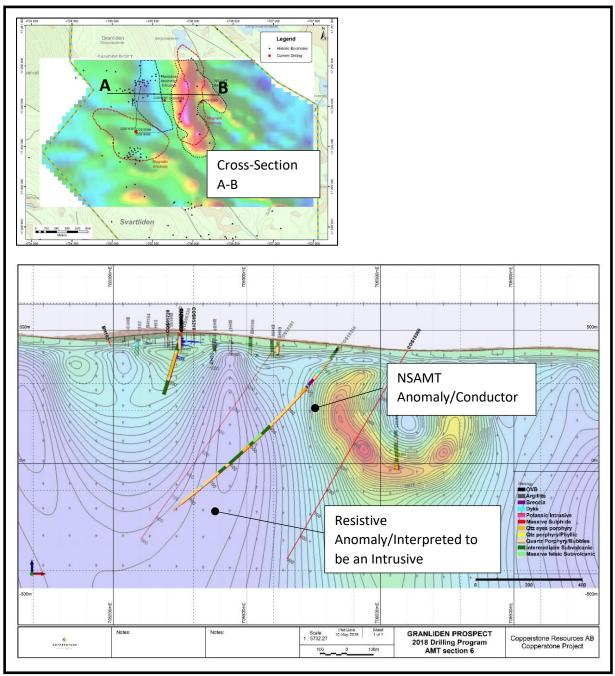


Figure 6: Cross-Section A\_B looking north through the 2018 E-W line of drillholes



An interpretation of what this could mean based on the limited amount of drilling that has been conducted to date through this feature is shown below in figure 7. This interpretation will be confirmed, or proven incorrect, as drillholes COS18360 and COS18361 are drilled and as geochemical and petrographical information becomes available.

**Zone 1** is thought to be the country rock represented by propylitically altered geology probably of a mafic composition. These rocks are layers of lava and subordinate sandy sediments (arenites).

**Zone 2** coincides with the NSAMT anomaly/conductor and appears to be a contact zone between the porpylitically altered country rocks to the east and a large quartz porphyry intrusive to the west.

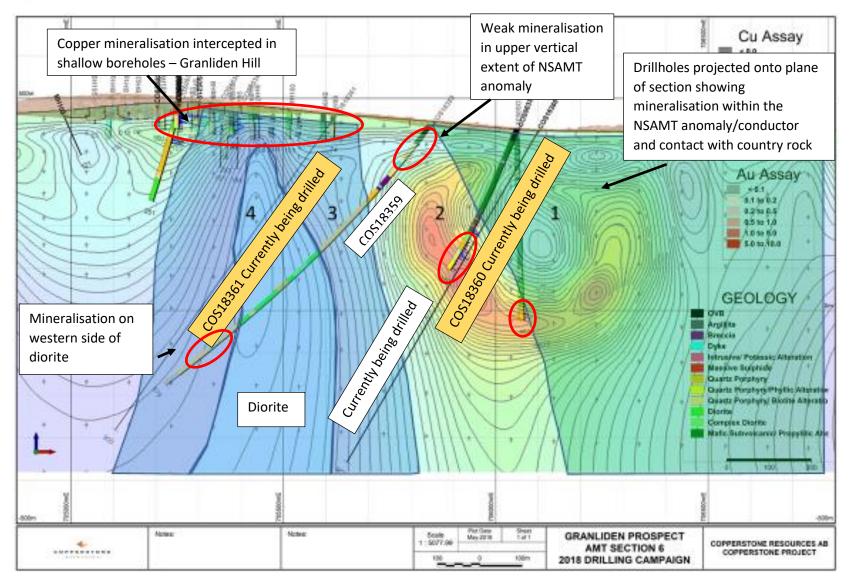
**Zone 3** is an extensive (vertically and horizontally) quartz porphyry intrusive body thought to represent part of a major resurgent dome emplaced into an ancient caldera. This body is intruded by various quartz diorite phases and also contains large to small scale xenoliths of country rock.

**Zone 4** is a possible diorite intrusive body.

The interface between Zone 1 and 2 includes altered versions of both rock types including phyllic alteration of the quartz porphyry and is associated with the extensive formation of pyrrhotite which is thought to be the reason for the magnetic anomaly associated with this feature and possibly (at least in part) for the NSAMT conductive anomaly too. In places the pyrrhotite is associated with chalcopyrite such as in the historic drillhole COS06331 which returned 0.40% Cu over 75m.

The quartz porphyry in zone 3 straddles the central intrusive/diorite which coincides with the resistive NSAMT feature which is labelled Zone 4 in figures 7 and 8. The red ovals are around the zones where chalcopyrite has been intercepted.





*Figure 7: Cross-section showing interpreted geology based on resistivity and drilled geology* 



The interpretation in the section above shows there are two zones that could potentially be mineralised that warrant drill testing. The first is the vertical extent between what was intercepted in COS18359 on the western side of the intrusive and the other is the mineralisation along the contact margin (labelled 2) which coincides with the NSAMT conductivity. These two areas extracted from the section above are highlighted below in figure 8 shown in cross-section and figure 9 in plan view.

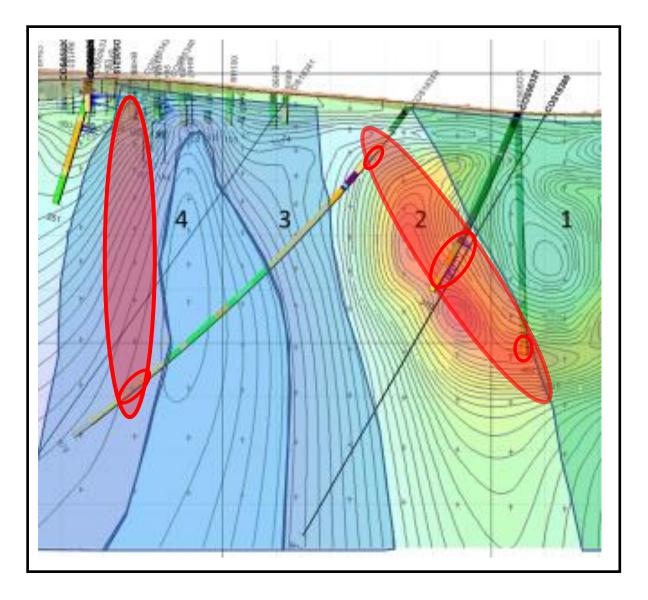


Figure 8: Cross-Section showing the target areas that could potentially be mineralised

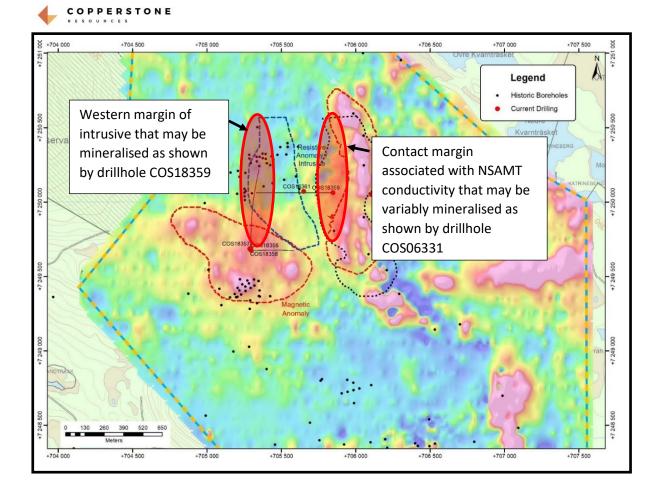
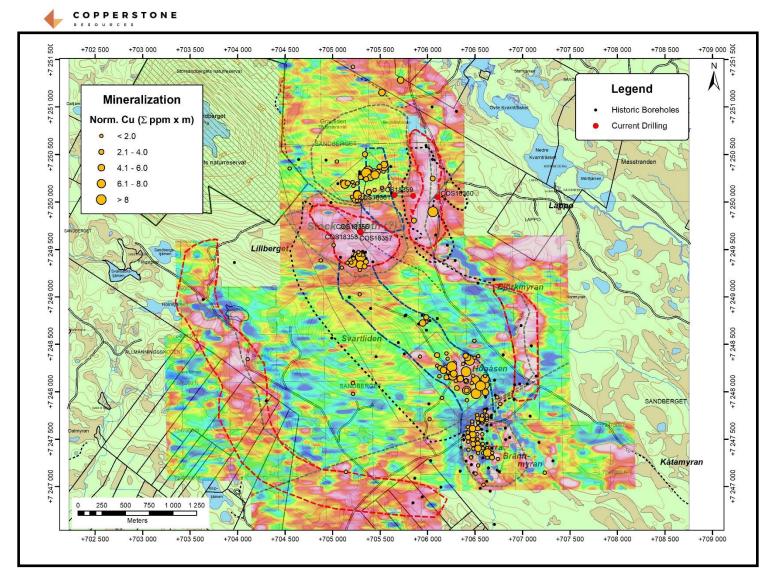


Figure 9: Plan view showing the potential extent of mineralisation based on the strike extent of the NSAMT resistive anomaly and NSAMT conductive anomaly overlying the ground magnetic image (100m upward continuation)

The magnetic anomaly associated with Zone 2 and the NSAMT anomaly appear to continue further south within the permit although to date no NSAMT survey has been conducted over this area to corroborate this. What is also evident is that the mineralisation intercepted in the historic shallow drillholes continues along a roughly N-S orientation. If this represents the crest of the diorite intrusion that appears to control the fluid movement which caused the mineralisation, then the remainder of the property remains open to explore for this same style and trend of mineralisation. Likewise the geological contact between the country rock and the quartz porphyry (Zone 2) also appears to have provided a conduit for up-flowing mineralised fluids. A preliminary interpretation of these geological contacts based on geophysics is shown below in figures 10 and 11. Figure 11 includes solid fill within the stippled polygons to make the interpreted lithologies clearer.



*Figure 10: Interpretation of the geology across the project area showing distribution of Cu relative to ground magnetics and interpreted geology* 



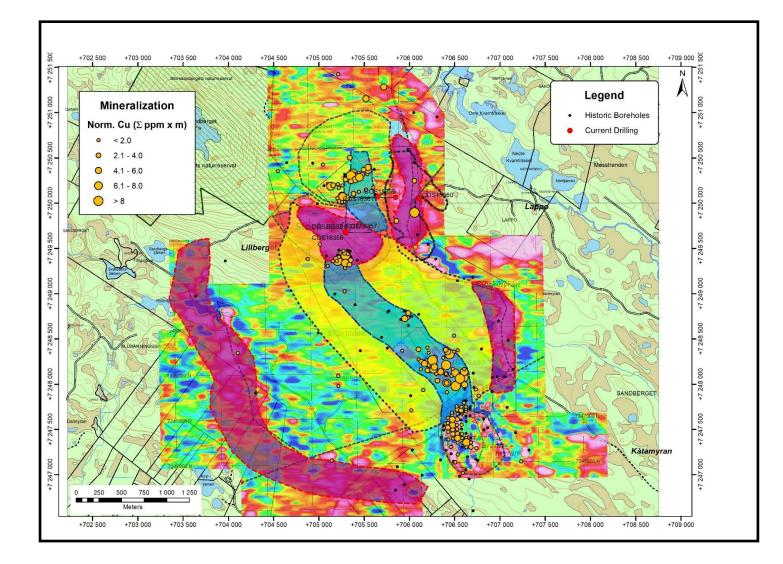


Figure 11: Interpretation of the geology across the project area showing distribution of Cu relative to ground magnetics and interpreted geology



#### Conclusion

The vertical and lateral extent of mineralisation intercepted in COS18359 still needs to be confirmed through additional drilling, which is currently underway, and the actual Cu values are also unknown since the assay results are still pending. Nonetheless the association of mineralisation with geophysical features of significant scale shows there is potential for the project to host an extremely large tonnage.

The 2018 drilling thus far has:

- identified mineralisation at localities that coincide with interpretations of the geology based on NSAMT, and which are in line with the proposed porphyry style genetic model
- clarified the geology of the project
- identified what appears to be an intrusion/diorite (zone 4 in figure 8) and a geological contact zone (zone 2) which have facilitated the ingress of mineralising fluids. This has allowed the identification of the strike and dip of two potential zones of mineralisation which will allow an extensive drill programme to be implemented to evaluate the full extent of these zones
- Identified geochemical signatures and alteration indicative of porphyry style mineralisation

A summary of each of these drillholes is included in the Appendix A and Appendix B contains a disclaimer.

#### Way Forward

Drill holes COS18359, COS18360 and COS18361 will form the first east-west section line across the Granliden Hill Area. It is expected that this drilling will be complete by early June 2018.

After that a second line of three drillholes will be drilled about 200m to the north on a section line parallel to the first line of holes. This will complete the 2018 drill programme by approximately mid-August 2018 and help to locate and confirm the continuity of mineralisation along the identified mineralised zones.

Subject to ongoing successful results from the completion of the 2018 drilling campaign it is envisaged that further NSAMT will be conducted over the remainder of the project area and that an extensive drill programme will then be implemented to drill test the continuity of mineralisation along the target horizons shown in figures 8 and 9.



#### Appendix A - Borehole Summaries

#### Intercept From (m) To (m) Description (m) Overburden 0.0 16.3 16.3 Strong phyllic alteration (quartz-pyrite-sericite) overprinting wall rock lava, pyroclastics and edge of lower granite. 16.3 110.7 94.4 Coarse-grained potassic altered granitic intrusive with a number of younger mafic intrusives (possible dykes). 110.7 135.4 24.7 Pervasive potassic alteration (k-alteration) developed in coarse granite intrusive with remnants of feldspar porphyries and secondary magnetite, anhydrite (calcium sulphate), epidote and biotite. Strong 135.4 361.4 226.0 pink colouration due to orthoclase feldspar. Incipient phyllic alteration as selvedges around fine quartzbiotite veinlets. Finely fragmental uniform mafic breccia/intrusive with occasional blocks of k-alt granite, narrow dykes. Younger and cross-cutting the overlying granite. 361.4 559.4 198.0 Coarse-grained intermediate-mafic dyke with poorly formed porphyritic texture, no obvious kalteration, faulted and brecciated in places. Younger than granite. 559.4 594.9 35.5 Grey uniform diabase dyke with numerous quartz-calcite veins. 594.9 628.5 33.6 Fault zone, silicified and brecciated rock, very broken ground. 628.5 638.0 9.5

#### COS18356

#### COS18357

From (m)	To (m)	Intercept (m)	Description
0.0	16.6	16.6	Overburden
16.6	155.8	139.2	Phyllic alteration overprinting lava, pyroclastics and edge of granite intrusive.
155.8	618.9	463.1	Very uniform pervasive potassic altered granite, with obvious incipient sericite selvedges to 338m, increasing magnetite and anhydrite with depth. Sub-horizontal quartz veinlets with no wall rock reaction from 560m depth.
618.9	711.0	92.1	Dark greenish grey coarse to fine-grained intermediate-mafic intrusive with poorly formed porphyritic texture. Younger than granite and possibly sill-like. Remnant of Potassic altered granite



#### COS18358

From (m)	To (m)	Intercept (m)	Description
0.0	15.3	15.3	Overburden
15.3	138.5	123.2	Phyllic alteration overprinting pyroclastic, intruded intermediate-mafic intrusive with disseminated and spotty epidote/Magnetite.
138.5	250.2	111.7	Dark greenish grey, coarse to fine grained, fractured and faulted, intermediate-mafic intrusive, disseminated epidote and magnetite. Unit cross cutted by felsic young intrusive injected by quartz and calcite veinlets, trace of Chalcopyrite and Pyrrhotite.
250.2	288.0	37.8	Grey fine grained, massive, Quartz porphyry, locally overprinted by biotite alteration.
288.0	457.3	169.3	Dark greenish grey, coarse to fine grained, intermediate-mafic intrusive (Complex Diorite), disseminated epidote and magnetite, injected by quartz and calcite veinlets, trace of Chalcopyrite and Pyrrhotite
457.3	533.8	76.5	Grey fine grained, massive, Quartz porphyry, locally overprinted by biotite alteration, trace of Chalcopyrite on milky quartz veinlets. Intruded by narrow intermediate-mafic dykes.
533.8	612.0	78.2	Grey fine grained, massive, injected by quartz and calcite veinlets, trace of disseminated Pyr, intermediate intrusive (Complex Diorite).
612.0	843.0	231	Grey fine grained, massive, Quartz porphyry, overprinted by biotite alteration, disseminated and stringer Chalcopyrite and Pyrrhotite.



#### COS18359

From (m)	To (m)	Intercept (m)	Description
0.0	30.0	30.0	Overburden
30.0	55.3	25.3	Greenish grey, very fine grained, massive, mafic subvolcanic
55.3	395.0	339.7	Grey, fine grained, phyllic altered at the upper zone, locally silicified with hydrothermal breccia. Biotite alteration in the lower contact. Injected by quartz veinlets. Sporadic chalcopyrite veinlets @ 2%. Intruded by narrow intermediate dyke
395.0	653.0	258.0	Dark greenish grey, coarse to fine grained, intermediate-mafic intrusive (Complex Diorite), injected by quartz and calcite veinlets, trace of Chalcopyrite and Pyrrhotite. Unit intercalated with narrow quartz porphyry, with locally Cpy veinlets @2%
653.0	743.0	90.0	Grey fine grained, massive, Quartz porphyry, overprinted by biotite alteration, stringer trace of Chalcopyrite and Pyrrhotite.
743.0	825.0	82.0	Grey fine grained, massive, overprinted biotite altered, injected by Chalcopyrite/Pyrrhotite ranked from 0.5% to 3%. Disseminated magnetite localised on sulphide veinlets.
825.0	878.0	53.0	Grey fine grained, massive, Quartz porphyry, overprinted by biotite alteration, stringer trace of Chalcopyrite and Pyrrhotite.

#### Appendix **B**

FORWARD LOOKING STATEMENTS: This report may contain forward-looking statements, which relate to future events or future performance and reflect Copperstone's current expectations and assumptions. Such forward-looking statements reflect Copperstone's current beliefs and are based on assumptions made by and information currently available to the Company.

Investors are cautioned that these forward looking statements are neither promises nor guarantees, and are subject to risks and uncertainties that may cause future results to differ materially from those expected.

These forward-looking statements are made as of the date hereof and, except as required under applicable securities legislation, the Company does not assume any obligation to update or revise them to reflect new events or circumstances.

Please note drill intercepts are quoted as drilled and are not corrected for true thickness as the shape of the orebodies is not yet known.