## JASPEROIDE COPPER-GOLD PROJECT CUSCO REGION, PERU

## NI 43-101 TECHNICAL REPORT MINERAL RESOURCE ESTIMATE

**Prepared For** 

C3 Metals Inc.

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#### **Date and Signature Page**

The effective date of this report is May 23, 2023. The issue date of this report is July 5, 2023. See Appendix A for certificates of Qualified Persons. These certificates are considered the date and signature of this report in accordance with Form 43-101F1.

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#### 1.0 Summary

#### 1.1 Introduction

This Technical Report was prepared for C3 Metals Inc. ("C3 Metals" or the "Issuer" or the "Company") and its subsidiaries, C3 Metals Peru S.A.C. and Molino Azul S.A.C. The most recent Technical Report was issued 31 March 2022 for the purpose of describing exploration work conducted by C3 Metals and to report the results of C3 Metals' Phase 1 drilling program. C3 Metals is listed on the TSX Venture Exchange ("TSX-V") and trades under the symbol "CCCM".

C3 Metals is an exploration stage junior mining company engaged in the identification, acquisition, evaluation, and exploration of mineral properties in Peru and Jamaica.

On 26 February 2020, the Company (then Carube Copper Corp.) completed the acquisition of a 100% interest in Latin America Resource Group ("LARG").

On 5 August 2020, Carube Copper Corp. ("Carube") changed its name to C3 Metals Inc., changed its TSX-V ticker symbol from CUC to CCCM, and began trading under the new name and symbol on 10 August 2020.

The purposes of this Technical Report are as follows:

- Describe the results of the Phase 2 drilling program.
- Present the first Mineral Resource estimate for the Jasperoide Project.
- Describe exploration potential and targets for the next stage of exploration.

This report has been prepared by Independent Mining Consultants, Inc. (IMC) of Tucson, Arizona, Atticus Geoscience Peru (Atticus), and Transmin Metallurgical Consultants of the United Kingdom.

#### **1.2 Property Description and Ownership**

The Jasperoide Copper-Gold Project is located in the districts of Omacha, Colquemarca, Capacmarca, Chamaca, and Accha, provinces of Chumbivilcas and Paruro, Department of Cusco, approximately 600 km southeast of Lima and 70 km south of the City of Cusco (Figure 4-1). The closest town to the project area is Capacmarca, 20 km northwest of the Project. The location of the project is 14° 09' 18" S, 71° 55' 04" W. A general UTM coordinate for the central project area is: 187647mE, 8433202mN (WGS84 19L).

The Project consists of 62 mining concessions covering about 31,422.18 ha in three separate blocks. Forty-eight of the concessions have been granted title ('Titulado'), 12 are in process ('Tramite'), and 2 will be auctioned.

All known mineralization, economic or potentially economic, that is the focus of this Report is located within the boundary of the property concessions.

The Project is located approximately 160 road kilometres south of the City of Cusco, Peru. Access to the Project is via paved road from Cusco for 33 kilometers on the Cusco-Paruro highway to the



town of Yaurisque (Road 117), and then by approximately 125 km of well-maintained gravel road (Roads 119 and 120) to the Capacmarca turnoff. About 12 km past Capacmarca, the route continues on unmaintained dirt roads heading east off the maintained Las Bambas gravel road, leading into the Jasperoide Project area.

The Project area is also accessed via the town of Accha, by driving approximately 22 km south along an unsealed gravel road that parallels the Rio Velille River. The total travel time from Cusco to the Project, in wet or dry season, is approximately four hours.

The City of Cusco, the capital of the Department of Cusco with a population of 428,000 (2017 census), can be accessed via numerous daily flights from Lima or other centres around the country. Flight time from Lima to Cusco is 1 hour and 15 minutes. Cusco can also be reached by paved highway from Lima. Road distance from Lima to Cusco is approximately 1,300 kilometres.

#### **1.3 Geology and Mineralization**

The Jasperoide Project is located at the western contact between a large raft of Cretaceous Ferrobamba Formation sedimentary / chemical rocks and intrusive rocks of Paleocene to Early Oligocene (*see* Figure 7-5; Figure 7-6). The stratigraphy of the Ferrobamba Formation is well documented by Perelló et al., 2003, which shows key stratigraphic horizons in the Ferrobamba Formation are host to multiple world class skarn deposits. The strongest skarn alteration and highest-grade mineralization are generally coincident with the upper dolomite and lower impure limestone units of the Ferrobamba Formation, which act like "sponges" to hydrothermal fluids.

The intrusive / carbonate contact zone at Jasperoide Project displays broad zones of pervasive prograde and retrograde skarn alteration that extends for at least 15-km north-northeast of the Project's Montaña de Cobre Zone ("MCZ") and over 13 km south-southwest of Jasperoide's Callejón de Oro Zone ("COZ"). This 28-km zone of semi-contiguous skarn alteration is cumulatively herein referred to as the "Jasperoide Belt" and Jasperoide Project is centrally located to the belt (*see* Figure 7-7). Approximately 10 km west of Jasperoide Project is a second and parallel copper-gold mineralized belt, host to the Alicia Porphyry & Skarn and Alcatraz Polymetallic Projects (see Figure 7-7).

Jasperoide proper, comprised of MCZ, Cresta Verde Zone ("CVZ") and COZ, is host to multiple skarns and potentially stacked skarns at depth. The skarn bodies are telescoped by low, intermediate, and high sulphidation epithermal vein systems, generally occurring as the porphyry hydrothermal system wanes.



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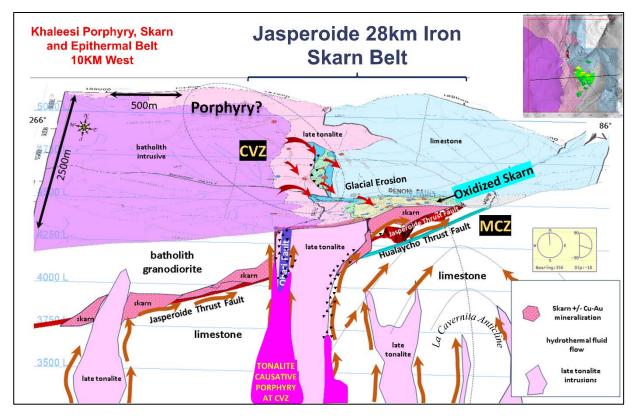


Figure 1-1. A schematic cross-sectional diagram looking on azimuth 356° and down 18° showing conceptual hydrothermal fluid flow from depth predominantly along late intrusion contacts and the Qhari Fault. As the fluids encounter the Jasperoide Thrust Fault fluid flowed laterally along the contact between the batholithic intrusive rock and the limestone where skarn formation is most favorable. Fluid flow also likely was channeled up favorable horizons on the limbs of the La Cavernita Anticline. At Montaña de Cobre the sulphides in the near surface skarn are highly oxidized. At depth down dip on the Jasperoide Fault, more sulphide resource would be expected. (C3 Metals, 2023)

#### 1.4 Deposit Types

The Yauri - Andahuaylas metallogenic belt was originally known for its' iron skarn and epithermal copper and gold deposits but is now rapidly emerging as an important porphyry copper-gold belt of southeastern Peru. The Yauri - Andahuaylas belt is host to numerous world class porphyry copper and porphyry-related skarn deposits that are spatially and temporally associated with Yauri – Andahuaylas batholith and the regionally significant Ferrobamba Formation. The Jasperoide Project is located in the "Golden Triangle" of southeastern Peru and is centrally located to Las Bambas (MMG), Haiquira (First Quantum Minerals), Cotabambas (Panoro Minerals) and the Constancia (Hudbay Minerals) copper-gold deposits (see Figure 1-2).

The Jasperoide Project comprises three skarn bodies 1) MCZ, 2) CVZ and 3) COZ that replace a westerly dipping dolomite limb in a north-south striking anticline. MCZ is an intensely oxidized and leached skarn with secondary copper species increasing with depth, comprising chrysocolla, malachite, azurite, brochantite, neotocite, copper-wad and copper-pitch and other secondary



copper species (see Figure 1-2). The supergene profile at MCZ is considered mature, comprising a leached and low-grade surface skarn that transitions to an oxidized skarn with well-developed secondary copper mineralization that continues downward to the unmineralized and commonly brecciated marble front.

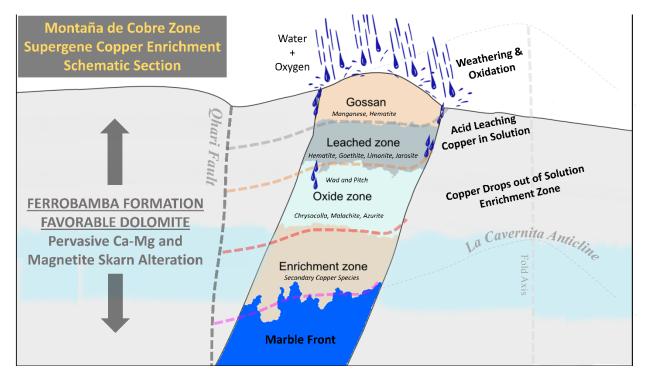
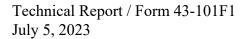


Figure 1-2. Schematic section through MCZ showing the interpreted supergene profile. (C3 Metals, 2023)

Historical and recent delineation drilling identified multiple porphyry vectors at Jasperoide that include:

- Broad zones of porphyry style alteration at MCZ, CVZ and COZ (argillic, advanced argillic and associated skarn alteration).
- Polymict hydrothermal breccias with copper-mineralized skarn and porphyry fragments.
- Late-stage epithermal gold-silver veins and breccias telescope the Ca-Mg and Iron-skarns.
- Geochemical anomalies coincident with Magnetic, IP-Resistivity or IP-Chargeability anomalies.

Jasperoide shows significant potential to host a large-scale copper-gold porphyry system, which are typically genetically linked to copper-rich skarns and low-, intermediate- and high-sulphidation epithermal gold-silver mineralization that occurs at Jasperoide. A schematic representation of a porphyry copper deposit model and its corresponding alteration and mineralogy is presented in Figure 1-3 (after Sillitoe, 2010).



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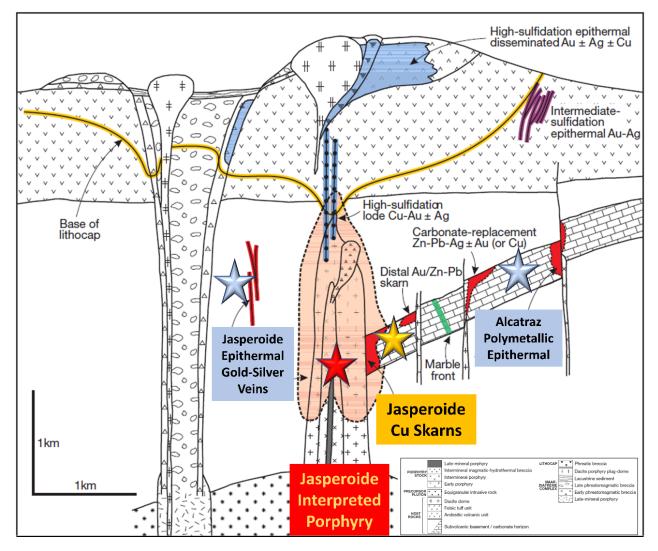


Figure 1-3. Porphyry Copper and Skarn System Schematic Model (after Sillitoe, 2010).



#### 1.5 Exploration

1.5.1 Hybrid Controlled Source Audio-Magnetotelluric Survey (2021-2022)

A Hybrid Controlled Source Audio-Magnetotelluric ("Hybrid CSAMT") survey test was completed over MCZ and the CVZ, which identified potential feeder structures linked to a potential causative copper-gold porphyry system at depth near to CVZ.

Highlights of this survey are as follows:

- Hybrid CSAMT geophysical data indicates a potential causative intrusion at depth central to mineralization at MCZ and CVZ.
- Strong resistivity features are identified at the intersection of the regional-scale Benoni and Qhari Faults.
- 3D geophysical modelling highlights a potential cluster of intrusive bodies linked to mineralizing fault conduits confirming earlier geological models for Jasperoide.
- 1.5.2 Airborne Geophysical Survey (2021)

During June 2021, New-Sense Geophysics S.A.C. ("NSG") of Lima, Peru conducted a high sensitivity helicopter-borne Magnetic (Cesium-3) and Gamma-ray Spectrometric (1024 channel) geophysical survey over the "Jasperoide Block" on the Project. The survey totalled 1,802.3 line-km (162.7 square km), flown along 100-m spaced lines using NSG's Stinger system attached to a helicopter.

Key highlights of this work are as follows:

- Reduced-to-pole (RTP) regional-scale aeromagnetic data shows a cluster of magnetic anomaly highs within the 30,000 Ha land package.
- Aeromagnetic data over the Jasperoide Project shows a linear magnetic anomaly that extends northward from the Jasperoide 39 license through the Jasperoide Project and northwards through the Cerro Ccopane-Orcopura Iron Project; an approximate 28 km contiguous iron skarn belt (see Figure 7-7)
- Potential for multiple magnetite-rich hydrothermal skarn and porphyry systems similar to Jasperoide, particularly at the Khaleesi Project Area where skarn, porphyry and epithermal style copper-gold mineralization has been field confirmed.
- At the Jasperoide 39 license area, a 750 metre by 250 metre outcropping magnetite skarn body is associated with epithermal style quartz breccias and stockwork veins, similar to MCZ, CVZ and COZ.
- Additional magnetic anomalies within the larger survey area are to be field checked as part of a future field program.



INDEPENDENT

MINING CONSULTANTS, INC.

#### 1.6 Drilling

The drillhole database for the Jasperoide Project area amounts to 123 drillholes and 30,198.6 metres of drilling. Table 1-1 summarizes the drilling by campaign.

Company	Dates	No. of Holes	Metres		
Southwestern Gold/Cyprus Minerals	1994-1995	14	2,689.2		
Cominco Peru S.R.L.	1995-1996	13	1,854.2		
Compañia Minera Ares S.A.C.	2009-2012	25	5,632.3		
C3 Metals Inc. – Phase 1	2021	38	10,533.2		
C3 Metals Inc. – Phase 2	2021-2022	33	9,489.7		
TOTAL	1994-2022	123	30,198.6		

Table 1-1. Summary of Drilling D	ata
----------------------------------	-----

Of this amount, 103 holes and 24,217.9 m of the drilling are in the MCZ for which this Mineral Resource estimate is prepared.

#### 1.7 Mineral Resources

Table 1-2 shows the Mineral Resource estimate for the Jasperoide Project. The Measured and Indicated Mineral Resources amount to 51.9 million tonnes at 0.50% copper and 0.20 g/t gold for 569.1 million pounds of contained copper and 326,800 ounces of contained gold. Inferred Mineral Resource is an additional 4.0 million tonnes at 0.32% copper and 0.11 g/t gold for 28.3 million pounds of contained copper and 14,600 ounces of contained gold. The Mineral Resource estimate is based on a copper price of US\$ 3.75 per pound.

Mineral				Contained	Contained
Resource	Tonnes	Copper	Gold	Copper	Gold
Category	(kt)	(%)	(g/t)	(mlbs)	(koz)
Measured	28,636	0.60	0.24	380.0	218.2
Indicated	23,304	0.37	0.15	189.1	108.6
Measured/Indicated	51,940	0.50	0.20	569.1	326.8
Inferred	4,005	0.32	0.11	28.3	14.6

**Table 1-2. Mineral Resource Estimate** 

Notes:

1. The Mineral Resource estimate has an effective date of 1 May 2023 and the estimate was prepared using the definitions in CIM Definition Standards (10 May 2014).

2. Mineral Resources are reported based on a conceptual constraining pit shell (CCPS) to demonstrate reasonable prospects for eventual economic extraction, as required by the definition of Mineral Resource in NI 43-101; mineralization lying outside of the pit shell is excluded from the Mineral Resource.

3. The CCPS used to calculate the Mineral Resource estimate uses a copper price of \$3.75/lb, a copper recovery of 75%, and open pit mining unit cost of \$2.35/t, processing costs of \$4.66/t plus \$0.137/lb copper, and G&A unit cost of \$1.37/t. Mineral Resources are reported at a cut-off grade of 0.14% copper, breakeven cut-off with these parameters.

4. Potential revenue from gold was not considered for the development of the CCPS; the Mineral Resource estimate is not dependent on recovering gold.

5. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

6. The quantity and grade of reported Inferred Mineral Resources in this estimate are uncertain in nature and there has been insufficient exploration to define these Inferred Mineral Resources as Indicated or Measured Mineral Resources.

7. All figures are rounded to reflect the relative accuracy of the estimate and therefore numbers may not appear to add precisely.

8. The Mineral Resource estimate is prepared by IMC of Tucson, AZ, under the direction of Michael G. Hester, FAusIMM, a Qualified Person.

The mineral resource estimate is based on the resource model developed during February and March 2023.

The Measured, Indicated, and Inferred Mineral Resources reported herein are contained within a conceptual constraining pit shell (CCPS) to demonstrate "reasonable prospects for eventual economic extraction" to meet the definition of Mineral Resources in NI 43-101.

#### **1.8** Interpretation and Conclusions

#### 1.8.1 Initial Mineral Resource Estimate

This study has developed an initial Mineral Resource estimate for the MCZ for C3 Metals' 100%owned Jasperoide Project in southern Peru. The Measured and Indicated Mineral Resource amounts to 51.9 million tonnes at 0.50% total copper and 0.20 g/t gold for 569.1 million pounds of contained copper and 326,800 ounces of contained gold. Inferred Mineral Resources is an additional 4.0 million tonnes at 0.32% total copper and 0.11 g/t gold for 28.3 million pounds of contained copper and 14,600 ounces of contained gold.

The MCZ deposit comprises a shallow-dipping copper-gold skarn that is oxidized to greater than 200 m vertical depth and with a variable true thickness of 50 m to 250 m. Copper oxide mineralization at MCZ increases significantly with depth, with multiple drill holes intersecting 30 m to 80 m thick zones of greater than 2.0% copper oxide mineralization. The MCZ Mineral Resource includes a high-grade core amounting to 15.9 million tonnes of Measured and Indicated Mineral Resource at 1.1% copper and 0.35 g/t gold at a 0.45% copper cut-off grade.

The Mineral Resource is amenable to open pit mining methods with a low to moderate strip ratio.

Metallurgical work on the project is limited to preliminary flotation and leach tests at this time. The main copper minerals identified in the resource area appear to be amenable to dissolution in sulphuric acid and recovery by solvent extraction/electrowinning (SX/EW) methods. C3 Metals has engaged Adam Johnston of Transmin Metallurgical Consultants to evaluate the metallurgical performance of copper mineralization and to develop a flowsheet for its processing for MCZ.

C3 Metals is undertaking Phase 1 sighter metallurgical testwork in 2023. Ongoing work that will be reported in 2023 includes bench-scale testing of samples from the resource to determine its physical and chemical properties, as well as its metallurgical response to various processing techniques. The results of the test work will be used to develop a flowsheet for the processing of the mineralization that will be optimized for its specific properties. The program also includes a series of partial leach extractions that could be used as a geochemistry proxy for copper grade recoverable by heap leaching.

There is a risk that the gold metal reported in the Mineral Resource estimate will not be recovered if the processing method ultimately chosen is conventional heap leaching with sulphuric acid.



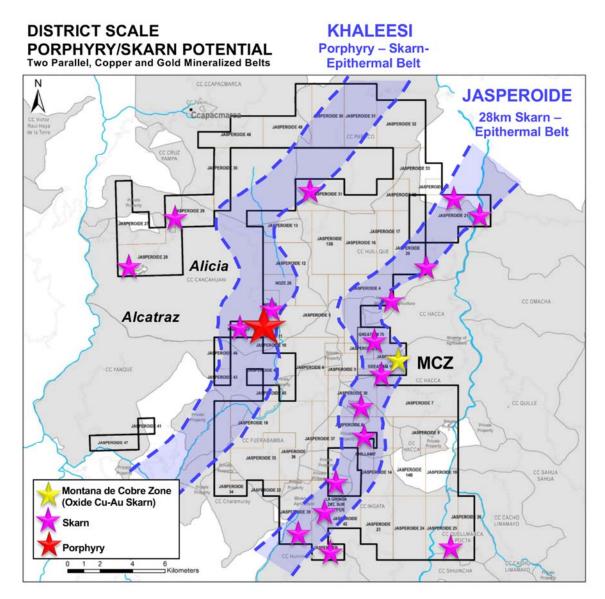
#### 1.8.2 Skarn Belts and Exploration Potential

The current target model for the Jasperoide Belt is stacked prograde and retrograde skarns with well-developed mineralogical zonation from prograde garnet-diopside to retrograde magnetite skarn.

MCZ is the first copper-gold skarn zone that C3 Metals has systematically explored along the 28 km Jasperoide Belt that extends along the eastern side of the Company's 300 sq. km (30,000-hectare) mineral concession and application package (Figure 1-4). Thirteen separate skarn occurrences have been mapped along the Jasperoide Belt to date.

A second, parallel belt of copper-gold mineralization (the "Khaleesi Belt") is located 10 km west of the Jasperoide Belt. The Khaleesi Belt hosts the Company's 100%-owned Khaleesi porphyry, skarn and epithermal copper-gold project. The Company is currently working through the Declaration de Impacto Ambiental (DIA) permitting process to enable exploration drilling at Khaleesi.





# Figure 1-4. C3 Metals' mineral concession package showing two parallel mineralized copper-gold skarn-porphyry belts and the location of the MCZ deposit. (C3 Metals, 2023)

C3 Metals' approximate 300 sq. km mineral concession package is located within the Andahuaylas-Yauri skarn/porphyry belt approximately 45 km east of MMG's Las Bambas mine and First Quantum Minerals' Haquira project, 40 km northwest of Hudbay Minerals' Constancia and Pampacanchca mines and 100 km northwest of Glencore's Antapaccay mine (Figure 1-5).

The proximity of nearby copper mines and development projects provides various development options. These include the potential to develop a standalone heap leach - SX/EW (solvent extraction and electrowinning) mining operation that exploits higher grade supergene copper mineralization early on, or potential partnerships with nearby mines and development projects.



#### Jasperoide Copper-Gold Project Mineral Resource Estimate

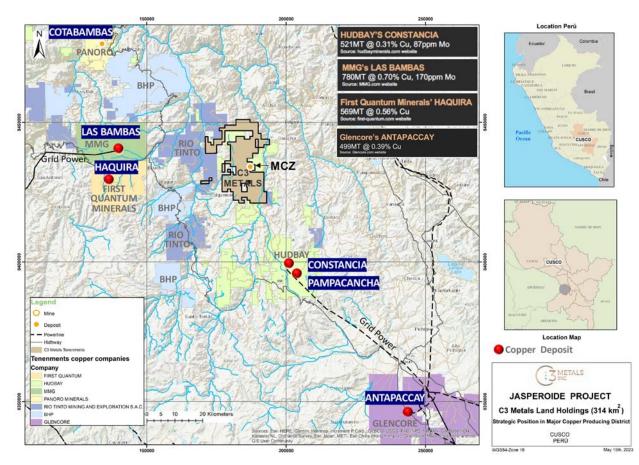


Figure 1-5. Regional map showing C3 Metals' mineral concession package in relation to other large-scale operations, development projects and exploration projects. (C3 Metals, 2023)

The MCZ deposit is strategically located within 60 km of two large scale heap leach copper development projects at Haquira (First Quantum) and Cotabambas (Panoro) and two large scale copper flotation mines at Las Bambas (MMG) and Constancia (Hudbay). Production at Haquira is planned from near-surface secondary copper mineralization that is amenable to heap leaching and from primary copper-gold mineralization amenable to a concentrator flotation circuit. Panoro Minerals are evaluating a heap leaching operation that supports a 17-year mine life (source, panoro.com and first-quantum.com websites).

The Andahuaylas-Yauri Belt is locally covered by talus and debris, and glaciers were effective agents of erosion at Jasperoide with locally thick zones of glacial till left behind by the retreating glaciers. It is interpreted that MCZ and CVZ skarns were once adjoined and that glaciers eroded away the "magnetite skarn bridge" that once linked the two skarn bodies.

A total 13 additional skarn prospects have been identified along the northeast-southwest trending Jasperoide Belt. Porphyry alteration (phyllic and argillic) has been mapped south of the Jasperoide camp and high sulphidation breccias appear to bisect the skarns. Each of these prospects will be evaluated, ranked and drill tested if warranted.



#### Jasperoide Copper-Gold Project Mineral Resource Estimate

On the western side of C3 Metals' mineral concession package is outcropping porphyry, skarn and epithermal style mineralization, referred to as the Khaleesi Belt, and is a parallel copper-gold mineralized corridor located approximately 10 km west of the Jasperoide Belt. The Khaleesi Belt hosts the Alicia Porphyry and Skarn prospect (outside C3 Metals' tenement area), which was drill tested in 2012 by Straits Minerals. South of Alicia is the Alcatraz polymetallic vein system, which is located less than 1 km from the porphyry and skarn mineralization at Khaleesi.

Future targets for drill testing include:

#### Jasperoide Belt

- The Jasperoide Belt comprises copper and gold mineralization that is broadly contemporaneous with magnetite-dominated iron-rich skarns, telescoped epithermal veins and an interpreted porphyry.
- 28 km iron-skarn belt extends 15 km north and 13 km south of MCZ deposit.
- Thirteen copper-gold mineralized skarn prospects have been identified to date.
- Informal miners are actively exploiting a 3 km area of near surface magnetite / garnet skarn with copper oxide and sulphide mineralization (Figure 1-6 in C3 Metals' Jasperoide 39 and 40 tenement areas.





# Figure 1-6. Photo showing informal mine workings over a 3 km strike length, located south of MCZ deposit on C3 Metals' Jasperoide 39 and 40 concessions. (C3 Metals, 2023)

#### Khaleesi Belt

- Parallel porphyry, skarn and epithermal belt located 10 km west of the MCZ deposit and the Jasperoide Belt.
- Outcropping porphyry, skarn and epithermal copper and gold mineralization has been identified at the Khaleesi prospect.
- Khaleesi appears to be spatially and genetically associated with the Alicia porphyry and skarn prospect, 2.5 km to the northwest.

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• Discrete zone of porphyry and skarn alteration at Khaleesi measuring 1,000 m by 1,000 m, where surface samples have confirmed high-grade copper-gold mineralization in porphyry, skarn and polymetallic vein style mineralization (Figure 1-7).

KHALEESI PROJECT

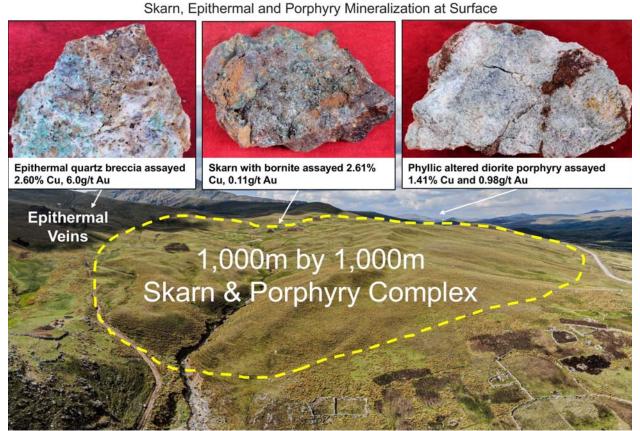


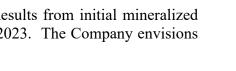
Figure 1-7. Examples of the highest priority exploration targets on the Khaleesi belt within C3 Metals' mineral concession package. (C3 Metals, 2023)

1.8.3 Ongoing Work

MCZ is the first of 13 identified skarn prospects to be evaluated for drill testing along the 28 km Jasperoide Belt. Extensive zones of copper and gold mineralization has already been identified on C3 Metals' landholdings, extending northeast and southwest of Jasperoide. The Company believes the MCZ maiden Mineral Resource estimate represents only a small portion of the broader discovery potential on the property.

A modification to the existing Jasperoide drill permit is underway to extend the permitted area and provide additional drill platforms and holes. The Company is also advancing drill permits for its highest priority targets on the Khaleesi Belt.

Metallurgical test work on the MCZ deposit has commenced. Results from initial mineralized materials leach characteristics are expected in the second half of 2023. The Company envisions





the MCZ deposit as being potentially amenable to a low-strip open pit, copper heap or vat leach operation given the high-grade, near-surface nature of the deposit.

#### 1.9 Recommendations

Further mineral exploration and drilling are recommended at Jasperoide within the drill permitted DIA area. MCZ has been "disconnected" from CVZ, due to glacial erosion, and the source of the hydrothermal fluids is interpreted to be west and northwest of MCZ. Some recommendations will require new drill core and would be included in a program designed to increase both the size and confidence of resources at the MCZ and to undertake the additional metallurgical leach tests and responses of the different material types.

Proposed exploration activities at Jasperoide copper-gold belt should be directed at potentially:

- Increasing the volume of copper-gold oxide skarn by additional drilling to evaluate the extension of oxide skarn to the northwest, west and southwest of MCZ.
- Expanding MCZ metallurgical test work to include systematic sequential assays and leach columns. Evaluate process alternatives to increase copper leaching recovery, and reduce acid consumption.
- Scout holes to evaluate the strike potential of the sulphide-rich (pyrrhotite > pyrite > chalcopyrite matrix) brecciated skarn at CVZ; DDH JAS4350-02 intersected 43.5 m at 0.32% Cu.
- Testing for porphyry and stacked skarns of multiple coincident IP-chargeability / HSAMT / Magnetic anomalies that are proximal to and below MCZ.
- Deep hole targeting a coincident IP-chargeability / HSAMT / Magnetic anomaly below CVZ, testing for a blind porphyry and stacked skarn potential.
- Scout holes at COZ testing a large copper-in-soil anomaly proximal to a magnetite skarn.
- Comprehensive mapping and sampling along the 28-km skarn belt, northeast and southwest of MCZ, CVZ and COZ.

Proposed exploration activities at Khaleesi copper-gold belt should be directed at:

• Systematic evaluation of the Khaleesi porphyry, epithermal and skarn belt, with a focus on mapping the Ferrobamba – Intrusive contact and completing grid soils over a 10km strike length.

A total of 4,000 meters of drilling is proposed for the Jasperoide Skarn Belt. Initial drilling (2,000 meters) is recommended to potentially expand copper-gold oxide mineralization at MCZ, upgrade existing Inferred Mineral Resources and undertake the second-round metallurgical test work. A total of 2,000m of drilling is recommended at CVZ and COZ, to test multiple sulphide-rich skarn bodies and two areas displaying significant porphyry alteration.

The total cost of the recommended work program is estimated at CAD\$ 2,500,000 (Table 1-3).



Item	Budget (\$CAD)
General & Administrative	75,000
Staff Salaries	225,000
Community & Government Relations	75,000
Camp Costs (Local Labour, Health & Safety)	145,000
Metallurgy Technical Services	250,000
Drilling (4000m HQ) & Surveys	1,000,000
Mapping and Sampling (5,000 Samples)	375,000
Assays – Drill Core	98,000
Assays – Surface	175,000
Field Support (Software, Vehicles, Misc.)	82,000
Program Total	2,500,000

 Table 1-3. C3 Metals Inc. – Estimated Budget for Recommended Work

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#### 2.0 Introduction

#### 2.1 Issuer and Terms of Reference

This Technical Report was prepared for C3 Metals Inc. ("C3 Metals" or the "Issuer" or the "Company") and its subsidiaries, C3 Metals Peru S.A.C. and Molino Azul S.A.C. The most recent Technical Report was issued 31 March 2022 for the purpose of describing exploration work conducted by C3 Metals and to report the results of C3 Metals' Phase 1 drilling program. C3 Metals is listed on the TSX Venture Exchange ("TSX-V") and trades under the symbol "CCCM".

C3 Metals is an exploration stage junior mining company engaged in the identification, acquisition, evaluation, and exploration of mineral properties in Peru and Jamaica.

On 26 February 2020, the Company (then as Carube Copper Corp.) completed the acquisition of a 100% interest in Latin America Resource Group ("LARG").

On 5 August 2020, Carube Copper Corp. ("Carube") changed its name to C3 Metals Inc., changed its TSX-V ticker symbol from CUC to CCCM, and began trading under the new name and symbol on 10 August 2020 (C3 Metals news release dated 6 August 2020).

The purposes of this Technical Report are as follows:

- Describe the results of the C3 Metals' Phase 1 and Phase 2 drilling programs.
- Present the first Mineral Resource estimate for the Jasperoide Project.
- Describe exploration potential and targets for the next phases of exploration.

This report has been prepared by Independent Mining Consultants, Inc. (IMC) of Tucson, Arizona, Atticus Geoscience Peru (Atticus), and Transmin Metallurgical Consultants of the United Kingdom.

IMC's scope of work included:

- Validation of the sampling database, including review of QA/QC procedures and results.
- Preparation of the Mineral Resource block model.
- Mineral Resource estimate.
- Overall report preparation.

Atticus's scope of work included:

- Details of regional, local, and property geology.
- Review and description of the exploration programs.

Transmin's scope of work included:

- Review of historical metallurgical test programs.
- Consulting on work scope for metallurgical testing.

#### 2.2 **Sources of Information**

The main sources of information for this Technical Report include:

- The drillhole database compiled and maintained by C3 Metals and their consultants. •
- Various geologic solids that were developed by C3 Metals' personnel.
- Assay QC Assessment reports for the Phase 1 and Phase 2 drilling that were prepared by Hackman.
- The report "NI 43-101 Technical Report on the Jasperoide Copper-Gold Project -• Cusco Region, Peru" prepared by Caracle Creek and dated 31 March 2022.
- Various news releases issued by C3 Metals.
- General information on Peru was accessed on the Peruvian Government website.
- Digital data and information for Peru is available online at Instituto Geologico, Minero y Metalurgico (INGEMMET), Peru's government geological library.
- An online interactive database to view geological and concession information, GEOCATMIN, is available through INGEMMET.
- Information about Peruvian mining rights and the cadastre system is available online through SIDEMCAT.
- Additional information was reviewed and acquired through public online sources including SEDAR and various corporate websites.

Much of the information used for this report was developed and maintained by C3 Metals' personnel. IMC, Atticus, and Transmin are independent of C3 Metals. In addition to generating much of the content for this report, they have also reviewed the available data for reasonableness and consistency.



#### 2.3 **Qualified Persons and Site Inspections**

Table 2-1 shows the Qualified Persons for this Technical Report and their respective areas of responsibility.

Table 2-1. Qualified Persons Responsibilities				
<b>Qualified Person</b>	Company	Report Section(s) of Responsibility		
Michael G. Hester	IMC	1.1,1.2,1.6,1.7,1.8.1,1.8.3,1.9,2,3,4,5,6,10,11,12.1,12.2,12.3,		
		14,15,16,17,18,19,20,21,22,23,24,25.1,25.3,26,27		
Simon Mortimer	Atticus	1.3,1.4,1.5,1.8.2,7,8,9,12.4,25.2		
Adam Johnston	Transmin	13		

Table 2-1	. Qualified	Persons	Res	oonsibilities

Michael Hester is Vice President and Principal Mining Engineer at Independent Mining Consultants, Inc. and a Qualified Person as defined by NI 43-101. Mr. Hester has over 44 years of experience developing mineral resource models, estimating Mineral Resources, developing open pit mine plans, estimating equipment requirements for open pit mining operations, developing mine capital and operating cost estimates, performing economic analysis of mining operations and managing various preliminary economic assessments, pre-feasibility, and feasibility studies.

Mr. Simon Mortimer, Principal Geologist at Atticus Geoscience Peru, is a professional geologist (FAIG #7795, Australia), with experience in geology, mineral exploration, Mineral Resource and Mineral Reserve estimation and classification, geological modelling, and mineral economics.

Adam Johnston, Chief Metallurgist at Transmin Metallurgical Consultants, Fellow AusIMM, Chartered Professional (Metallurgy), has over 25 years of experience in extractive metallurgy and has worked on testing, design, construction, commissioning, and operation of a wide variety of processes on six continents.

The QP's for this Technical Report are independent of C3 Metals as defined by NI 43-101.

QP site inspections were conducted as follows:

A personal inspection (site visit) to the Project was completed by Mr. Simon Mortimer on 5 and 6 November 2021. Mr. Mortimer spent a total of 26 hours examining the Property. During the site visit, access to the Project was confirmed, drill hole platforms were examined, drill core was examined, and the exploration data capture procedures were reviewed. Mr. Mortimer conducted a second site visit on 13 May 2023 to review the exploration completed to date.

Michael Hester and Adam Johnston have not been to the property.

#### 2.4 Units of Measurement

The units of measure used in this report are as per the International System of Units (SI) or their derivatives except for Apothecary and Imperial units that are commonly used in the mining industry (e.g., troy ounces (oz) and pounds (lb)). All dollar figures quoted in this report refer to United States dollars (US\$ or \$) unless otherwise noted.



## **3.0** Reliance on Other Experts

The QP's for this Technical Report have not relied on other experts for any of the content of this report.



### 4.0 **Property Description and Location**

#### 4.1 **Property Location**

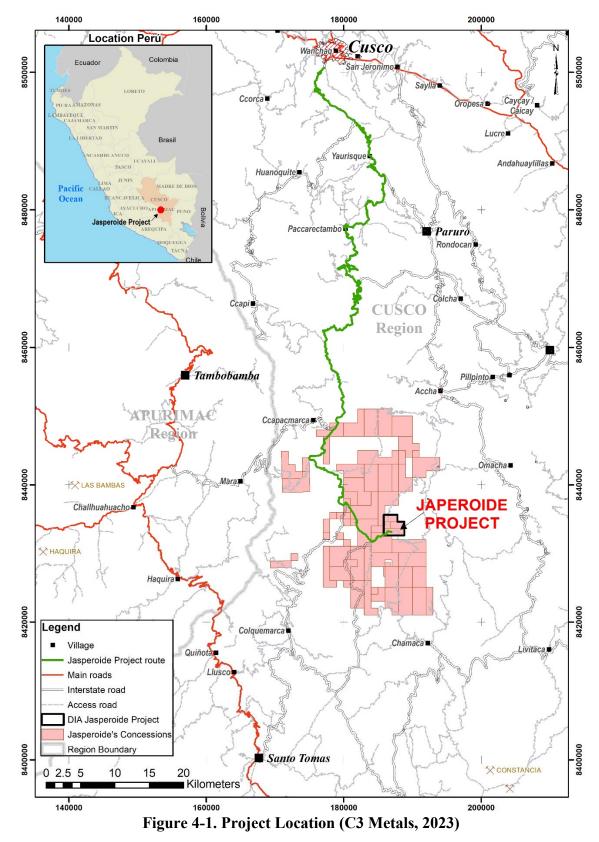
The Jasperoide Copper-Gold Project is located in the districts of Omacha, Colquemarca, Capacmarca, Chamaca, and Accha, provinces of Chumbivilcas and Paruro, Department of Cusco, approximately 600 km southeast of Lima and 70 km south of the City of Cusco (Figure 4-1). The closest town to the project area is Capacmarca, 20 km northwest of the Project. The location of the project is 14° 09' 18" S, 71° 55' 04" W. A general UTM coordinate for the central project area is: 187647mE, 8433202mN (WGS84 19L).

#### 4.2 Land Area and Mining Claim Description

The Project consists of 62 mining concessions covering about 31,422.18 ha in three separate blocks. Figure 4-2 shows the relative location of the concessions. Table 4-1 shows legal location information for the concessions, including the province and district. Table 4-2 shows the concession holders, the size in hectares, and the status. It shows that 48 of the concession have been granted title ('Titulado'), 12 are in process ('Tramite'), and 2 will be auctioned.

All known mineralization, economic or potentially economic, that is the focus of this Report is located within the boundary of the property concessions.

#### Jasperoide Copper-Gold Project Mineral Resource Estimate





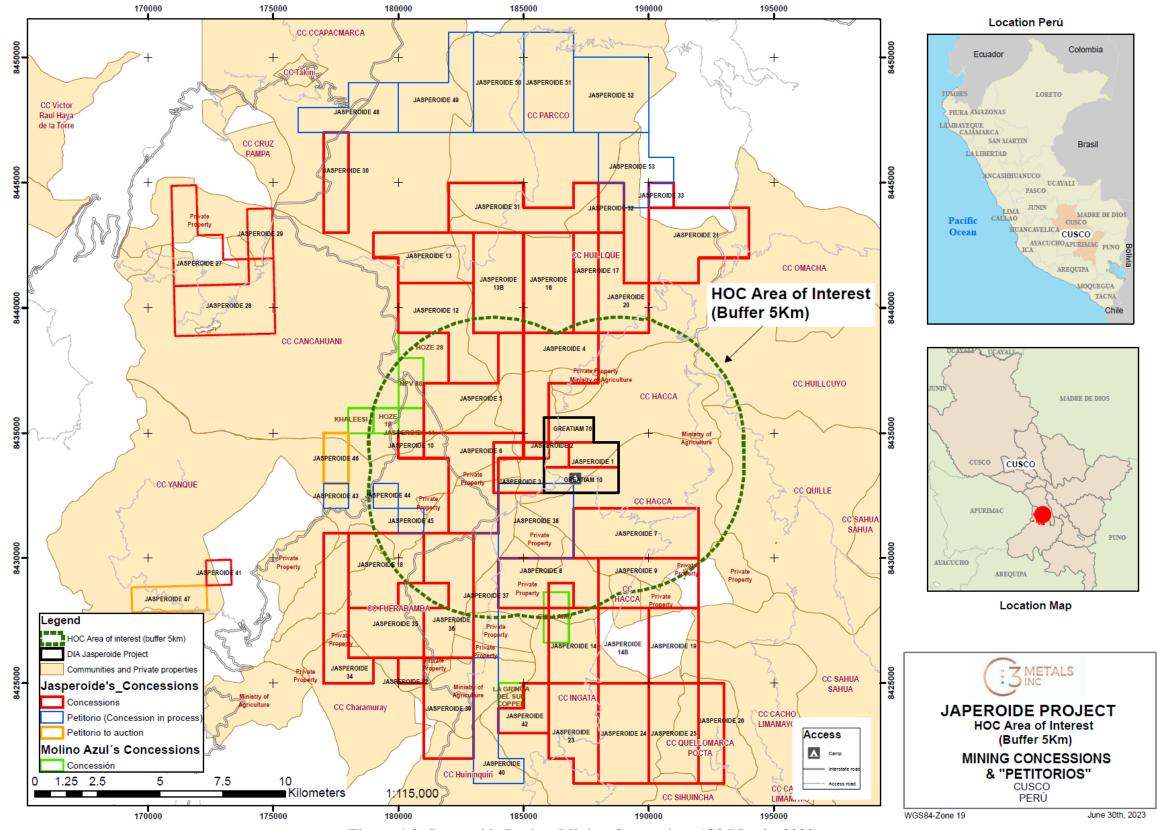


Figure 4-2. Jasperoide Project Mining Concessions (C3 Metals, 2023)

**INDEPENDENT** MINING CONSULTANTS, INC.

	Table 4-1. Location Details for Mining Concessions				
N°	Name	Map	Zone	Province	District
1	Jasperoide 1	29-S	19	Paruro	Omacha
2	Jasperoide 2	29-S	19	Chumbivilcas / Paruro	Omacha / Capacmarca
3	Jasperoide 3	29-S	19	Chumbivilcas / Paruro	Omacha / Capacmarca / Colquemarca / Chamaca
4	Jasperoide 4	29-S	19	Chumbivilcas / Paruro	Omacha / Capacmarca
5	Jasperoide 5	29-S	19	Chumbivilcas	Capacmarca / Colquemarca
6	Jasperoide 6	29-S	19	Chumbivilcas	Capacmarca / Colquemarca
7	Jasperoide 7	29-S	19	Chumbivilcas / Paruro	Omacha / Chamaca
8	Jasperoide 8	29-S	19	Chumbivilcas	Colquemarca / Chamaca
9	Jasperoide 9	29-S	19	Chumbivilcas / Paruro	Omacha / Chamaca
10	Jasperoide 10	29-S	19	Chumbivilcas	Colquemarca
11	Jasperoide 12	29-S	19	Chumbivilcas	Capacmarca / Colquemarca
12	Jasperoide 13	29-S	19	Chumbivilcas	Capacmarca
13	Jasperoide 13B	29-S	19	Chumbivilcas	Capacmarca
14	Jasperoide 14	29-S	19	Chumbivilcas	Chamaca
15	Jasperoide 14B	29-S	19	Chumbivilcas	Chamaca
16	Jasperoide 16	29-S	19	Chumbivilcas / Paruro	Omacha / Capacmarca / Accha
17	Jasperoide 17	29-S	19	Paruro	Omacha
18	Jasperoide 18	29-S	19	Chumbivilcas	Colquemarca
19	Jasperoide 19	29-S	19	Chumbivilcas / Paruro	Omacha / Chamaca
20	Jasperoide 20	29-S	19	Paruro	Omacha
21	Jasperoide 21	29-S	19	Paruro	Omacha / Accha
22	Jasperoide 22	29-S	19	Chumbivilcas	Colquemarca
23	Jasperoide 23	29-S	19	Chumbivilcas	Chamaca
24	Jasperoide 24	29-S	19	Chumbivilcas	Chamaca
25	Jasperoide 25	29-S	19	Chumbivilcas	Chamaca
26	Jasperoide 26	29-S	19	Chumbivilcas	Chamaca
27	Jasperoide 27	29-R	18	Chumbivilcas	Capacmarca
28	Jasperoide 28	29-R	18	Chumbivilcas	Capacmarca
29	Jasperoide 29	29-R	18	Chumbivilcas	Capacmarca
30	Jasperoide 30	29-S	19	Chumbivilcas	Capacmarca
31	Jasperoide 31	29-S	19	Chumbivilcas / Paruro	Omacha / Capacmarca / Accha
32	Jasperoide 32	29-S	19	Paruro	Omacha
33	Jasperoide 33	29-S	19	Paruro	Omacha / Accha
34	Jasperoide 34	29-S	19	Chumbivilcas	Colquemarca
35	Jasperoide 35	29-S	19	Chumbivilcas	Colquemarca
36	Jasperoide 36	29-S	19	Chumbivilcas	Colquemarca
37	Jasperoide 37	29-S	19	Chumbivilcas	Colquemarca
38	Jasperoide 38	29-S	19	Chumbivilcas / Paruro	Omacha / Colquemarca / Chamaca
39	Jasperoide 39	29-S	19	Chumbivilcas	Colquemarca / Chamaca
40	Jasperoide 40	29-S	19	Chumbivilcas	Colquemarca / Chamaca

#### **Table 4-1. Location Details for Mining Concessions**



I			1	I	
41	Jasperoide 41	29-R	18	Chumbivilcas	Colquemarca
42	Jasperoide 42	29-S	19	Chumbivilcas	Colquemarca / Chamaca
43	Jasperoide 43	29-S	19	Chumbivilcas	Colquemarca
44	Jasperoide 44	29-S	19	Chumbivilcas	Colquemarca
45	Jasperoide 45	29-S	19	Chumbivilcas	Colquemarca
46	Jasperoide 46	29-S	19	Chumbivilcas	Colquemarca
47	Jasperoide 47	29-R	18	Chumbivilcas	Colquemarca
48	Jasperoide 48	29-S	19	Chumbivilcas	Colquemarca
49	Jasperoide 49	29-S	19	Chumbivilcas / Paruro	Capacmarca / Accha
50	Jasperoide 50	29-S	19	Chumbivilcas / Paruro	Capacmarca / Accha
51	Jasperoide 51	29-S	19	Paruro	Accha
52	Jasperoide 52	29-S	19	Paruro	Omacha / Accha
53	Jasperoide 53	29-S	19	Paruro	Omacha / Accha
54	Greatiam 10	29-S	19	Chumbivilcas / Paruro	Omacha / Capacmarca / Chamaca
55	Greatiam 70	29-S	19	Chumbivilcas / Paruro	Omacha / Capacmarca
56	NPV 88	29-S	19	Chumbivilcas	Colquemarca
57	La Gringa del Sur Copper	29-S	19	Chumbivilcas	Colquemarca / Chamaca
58	Khaleesi i	29-S	19	Chumbivilcas	Colquemarca
59	Chillami7	29-S	19	Chumbivilcas	Chamaca
60	Hoze 28	29-S	19	Chumbivilcas	Capacmarca / Colquemarca
61	Hoze 18	29-S	19	Chumbivilcas	Colquemarca
62	Jasperoide 11	29-S	20	Chumbivilcas	Colquemarca

Table 4-2. Mining Concession Title Holder, Size, and Status

Code	Name	Title Holder	На	Status	Registered
010035704	Jasperoide 1	C3 Metals Perú SAC	200.00	D.M. Titulado D.L. 708	5/02/2004
010304904	Jasperoide 2	C3 Metals Perú SAC	100.00	D.M. Titulado D.L. 708	29/09/2004
010649507	Jasperoide 3	C3 Metals Perú SAC	400.00	D.M. Titulado D.L. 708	13/12/2007
010258117	Jasperoide 4	C3 Metals Perú SAC	628.83	D.M. Titulado D.L. 708	31/10/2017
010258017	Jasperoide 5	C3 Metals Perú SAC	1000.00	D.M. Titulado D.L. 708	31/10/2017
010257917	Jasperoide 6	C3 Metals Perú SAC	899.27	D.M. Titulado D.L. 708	31/10/2017
010254617	Jasperoide 7	C3 Metals Perú SAC	819.99	D.M. Titulado D.L. 708	31/10/2017
010257817	Jasperoide 8	C3 Metals Perú SAC	688.06	D.M. Titulado D.L. 708	31/10/2017
010254717	Jasperoide 9	C3 Metals Perú SAC	800.00	D.M. Titulado D.L. 708	31/10/2017
010294818	Jasperoide 10	C3 Metals Perú SAC	100.00	D.M. Titulado D.L. 708	25/07/2018
010088021	Jasperoide 12	C3 Metals Perú SAC	1000.00	D.M. Titulado D.L. 708	3/05/2021
010140921	Jasperoide 13	C3 Metals Perú SAC	649.34	D.M. Titulado D.L. 708	9/07/2021
010141021	Jasperoide 13B	C3 Metals Perú SAC	800.00	D.M. Titulado D.L. 708	9/07/2021
010140821	Jasperoide 14	C3 Metals Perú SAC	488.75	D.M. Titulado D.L. 708	9/07/2021
10140721	Jasperoide 14B	C3 Metals Perú SAC	600.00	D.M. Titulado D.L. 708	9/07/2021
010189821	Jasperoide 16	C3 Metals Perú SAC	800.00	D.M. Titulado D.L. 708	2/09/2021
010189921	Jasperoide 17	C3 Metals Perú SAC	388.06	D.M. Titulado D.L. 708	2/09/2021



10190021	Jasperoide 18	C3 Metals Perú SAC	694.85	D.M. Titulado D.L. 708	2/09/2021
10190121	Jasperoide 19	C3 Metals Perú SAC	600.00	D.M. Titulado D.L. 708	2/09/2021
010218421	Jasperoide 20	C3 Metals Perú SAC	600.00	D.M. Titulado D.L. 708	19/10/2021
10218521	Jasperoide 21	C3 Metals Perú SAC	601.01	D.M. Titulado D.L. 708	19/10/2021
10218621	Jasperoide 22	C3 Metals Perú SAC	92.86	D.M. Titulado D.L. 708	19/10/2021
10223621	Jasperoide 23	C3 Metals Perú SAC	700.00	D.M. Titulado D.L. 708	25/10/2021
10223721	Jasperoide 24	C3 Metals Perú SAC	800.00	D.M. Titulado D.L. 708	25/10/2021
10223821	Jasperoide 25	C3 Metals Perú SAC	800.00	D.M. Titulado D.L. 708	25/10/2021
10223921	Jasperoide 26	C3 Metals Perú SAC	400.00	D.M. Titulado D.L. 708	25/10/2021
10224021	Jasperoide 27	C3 Metals Perú SAC	617.02	D.M. Titulado D.L. 708	25/10/2021
10224121	Jasperoide 28	C3 Metals Perú SAC	785.91	D.M. Titulado D.L. 708	25/10/2021
010224221	Jasperoide 29	C3 Metals Perú SAC	200.00	D.M. Titulado D.L. 708	25/10/2021
010224321	Jasperoide 30	C3 Metals Perú SAC	400.00	D.M. Titulado D.L. 708	25/10/2021
010224421	Jasperoide 31	C3 Metals Perú SAC	1000.00	D.M. Titulado D.L. 708	25/10/2021
010224521	Jasperoide 32	C3 Metals Perú SAC	168.98	D.M. Titulado D.L. 708	25/10/2021
010224621	Jasperoide 33	C3 Metals Perú SAC	100.00	D.M. Titulado D.L. 708	25/10/2021
010237621	Jasperoide 34	C3 Metals Perú SAC	700.00	D.M. Titulado D.L. 708	3/11/2021
010237421	Jasperoide 35	C3 Metals Perú SAC	800.00	D.M. Titulado D.L. 708	3/11/2021
010237821	Jasperoide 36	C3 Metals Perú SAC	900.00	D.M. Titulado D.L. 708	3/11/2021
010237521	Jasperoide 37	C3 Metals Perú SAC	500.00	D.M. en Trámite D.L. 708	3/11/2021
010237121	Jasperoide 38	C3 Metals Perú SAC	900.00	D.M. en Trámite D.L. 708	3/11/2021
010237221	Jasperoide 39	C3 Metals Perú SAC	800.00	D.M. Titulado D.L. 708	3/11/2021
010237321	Jasperoide 40	C3 Metals Perú SAC	600.00	D.M. en Trámite D.L. 708	3/11/2021
010237721	Jasperoide 41	C3 Metals Perú SAC	100.00	D.M. Titulado D.L. 708	3/11/2021
010215822	Jasperoide 42	C3 Metals Perú SAC	300.00	D.M. Titulado D.L. 708	1/08/2022
010050223	Jasperoide 43	C3 Metals Perú SAC	100.00	D.M. en Trámite D.L. 708	23/03/2023
010050123	Jasperoide 44	C3 Metals Perú SAC	100.00	D.M. en Trámite D.L. 708	23/03/2023
010050023	Jasperoide 45	C3 Metals Perú SAC	100.00	D.M. en Trámite D.L. 708	23/03/2023
010097723	Jasperoide 46 (*)	C3 Metals Perú SAC	200.00	D.M. en Trámite D.L. 708	2/05/2023
010097823	Jasperoide 47 (*)	C3 Metals Perú SAC	300.00	D.M. en Trámite D.L. 708	2/05/2023
010117123	Jasperoide 48	C3 Metals Perú SAC	600.00	D.M. en Trámite D.L. 708	04/05/2023
010117223	Jasperoide 49	C3 Metals Perú SAC	800.00	D.M. en Trámite D.L. 708	04/05/2023
010117323	Jasperoide 50	C3 Metals Perú SAC	800.00	D.M. en Trámite D.L. 708	04/05/2023
010117423	Jasperoide 51	C3 Metals Perú SAC	800.00	D.M. en Trámite D.L. 708	04/05/2023
010117523	Jasperoide 52	C3 Metals Perú SAC	900.00	D.M. en Trámite D.L. 708	04/05/2023
010117623	Jasperoide 53	C3 Metals Perú SAC	600.00	D.M. en Trámite D.L. 708	04/05/2023
10158605	Greatiam 10	Inversiones La Bruja SAC	300.00	D.M. Titulado D.L. 708	11/06/2005

10243904	Greatiam 70	Inversiones La Bruja SAC	200.00	D.M. Titulado D.L. 708	12/07/2004
010160821	NPV 88	Molino Azul SAC	200.00	D.M. Titulado D.L. 708	2/08/2021
040008121	La Gringa del Sur Copper	Molino Azul SAC	100.00	D.M. Titulado D.L. 708	5/07/2021
050015618	Khaleesi i	Molino Azul SAC	100.00	D.M. Titulado D.L. 708	1/06/2018
080000815	Chillami7	Molino Azul SAC	200.00	D.M. Titulado D.L. 708	5/01/2015
010061518	Hoze 28	Molino Azul SAC	300.00	D.M. Titulado D.L. 708	23/02/2018
010061618	Hoze 18	Molino Azul SAC	100.00	D.M. Titulado D.L. 708	23/02/2018
010313718	Jasperoide 11	Molino Azul SAC	100.00	D.M. Titulado D.L. 708	1/08/2018

(\*) concessions(petitorios) to be auctioned

#### 4.3 Agreements and Encumbrances

Certain concessions that comprise the Project are subject to two underlying Net Smelter Return royalties ("NSR Royalties") as summarized below.

C3 Metals Peru S.A.C. signed an Option Agreement with Inversiones La Bruja S.A.C. on 31 August 2017 for the Greatiam 10 and 70 mining concessions, allowing C3 Metals Peru to acquire 100% share ownership of Inversiones La Bruja S.A.C. Under the agreement, C3 Metals Peru is obligated to a minimum spend of USD\$ 500,000 in the first 3 years (36 months) with a total exploration spend of USD\$ 2.0 million to 31 August 2025. C3 Metals Peru must also make cash payments totalling USD \$2.0 million to 31 August 2025.

During the quarter ended August 31, 2021, C3 Metals had incurred cumulative exploration expenditures exceeding the US\$ 2.0 million requirement. C3 Metals has also provided US\$ 750,000 in cash payments. As of the Effective Date of this report, a balance of US\$ 1,250,000 in cash payments is required to exercise the option on or before August 23, 2025.

On 18 October 2021, C3 Metals announced that it had completed the acquisition of 100% interest in certain Jasperoide concessions from Hochschild, through its 100% owned subsidiary Compañía Minera Ares S.A.C. ("Minera Ares") (C3 Metals news release dated 18 October 2021). C3 Metals granted a 2% net smelter return (NSR) royalty in favour of Minera Ares in respect of the Hochschild Jasperoide mineral concessions, subject to the right of the Company to purchase 1% of the NSR (thereby reducing the NSR to 1%) for a price of US\$ 1 million at any time, replacing the previously granted 1.5% NSR royalty that had no buyback provision. Figure 4-2 shows the area of interest for this agreement.

The QP for this section is not aware of any other royalties, agreements or encumbrances related to the Project.

#### 4.4 **Project Land Tenure**

C3 Metals has confirmed to the QP for this section that the mining concessions (*see* Table 4-1, Table 4-2, and Figure 4-2) remain in good legal and regulatory standing with no outstanding liens or debt obligations.



The process and requirements for permitting exploration work in Peru are detailed below (*see* Section 4.10). The QP has not independently verified the following information which is in the public domain and can be sourced from official Peruvian Government websites.

Details of the Concessions, as provided by C3 Metals and available online for examination through the Peruvian Government, have been reviewed by the QP for this section on the government web site.

In 2022, the annual holding costs for the 51 concessions that comprise the Property were US\$ 113,603.58 (Table 4-3) and the 2023 holding costs for 62 concessions are US\$ 103,564.50 (Table 4-4).

All annual concession payments for the calendar year must be paid before end of June the following year. As such, payments for 2023 can be paid any time before 30 June 2024. Concessions remain valid as long as annual fees do not remain unpaid for a 2-year period.



1	Validities and Penalties 2022								
Concession	Year	Ha	Validity 2021	Validity 2022	Penalty	Total			
Greatiam 10	2005	300.00		\$900.00	\$6,915.04	\$7,815.04			
Greatiam 70	2004	200.00		\$600.00	\$4,610.02	\$5,210.02			
Jasperoide 1	2004	200.00		\$600.00	\$4,610.02	\$5,210.02			
Jasperoide 2	2004	100.00		\$300.00					
Jasperoide 3	2007	400.00		\$1,200.00	\$9,220.05	\$10,420.05			
Jasperoide 4	2017	628.83		\$1,886.48		\$1,886.48			
Jasperoide 5	2017	1000.00		\$3,000.00		\$3,000.00			
Jasperoide 6	2017	899.27		\$2,697.80		\$2,697.80			
Jasperoide 7	2017	1000.00		\$3,000.00		\$3,000.00			
Jasperoide 8	2017	688.06		\$2,064.17		\$2,064.17			
Jasperoide 9	2017	800.00		\$2,400.00		\$2,400.00			
Jasperoide 10	2017	100.00		\$300.00		\$300.00			
Jasperoide 12	2021	1000.00		\$3,000.00		\$3,000.00			
Jasperoide 13	2021	700.00		\$2,100.00		\$2,100.00			
Jasperoide 13B	2021	800.00		\$2,400.00		\$2,400.00			
Jasperoide 14	2021	600.00		\$1,800.00		\$1,800.00			
Jasperoide 14B	2021	600.00		\$1,800.00		\$1,800.00			
Jasperoide 15	2021	300.00		\$900.00		\$900.00			
Jasperoide 16	2021	800.00		\$2,400.00		\$2,400.00			
Jasperoide 17	2021	400.00		\$1,200.00		\$1,200.00			
Jasperoide 18	2021	800.00		\$2,400.00		\$2,400.00			
Jasperoide 19	2021	600.00		\$1,800.00		\$1,800.00			
Jasperoide 20	2021	600.00		\$1,800.00		\$1,800.00			
Jasperoide 21	2021	1000.00		\$3,000.00		\$3,000.00			
Jasperoide 22	2021	100.00		\$300.00		\$300.00			
Jasperoide 23	2021	700.00		\$2,100.00		\$2,100.00			
Jasperoide 24	2021	800.00		\$2,400.00		\$2,400.00			
Jasperoide 25	2021	800.00		\$2,400.00		\$2,400.00			
Jasperoide 26	2021	400.00		\$1,200.00		\$1,200.00			
Jasperoide 27	2021	700.00		\$2,100.00		\$2,100.00			
Jasperoide 28	2021	900.00		\$2,700.00		\$2,700.00			
Jasperoide 29	2021	600.00		\$1,800.00		\$1,800.00			
Jasperoide 30	2021	400.00		\$1,200.00		\$1,200.00			
Jasperoide 31	2021	1000.00		\$3,000.00		\$3,000.00			
Jasperoide 32	2021	200.00		\$600.00		\$600.00			
Jasperoide 33	2021	100.00		\$300.00		\$300.00			
Jasperoide 34	2021	700.00		\$2,100.00		\$2,100.00			
Jasperoide 35	2021	800.00		\$2,400.00		\$2,400.00			

Table 4-3. Summary of Annual Holding Costs – 2022



Jasperoide 36	2021	1000.00		\$3,000.00		\$3,000.00
Jasperoide 37	2021	700.00		\$2,100.00		\$2,100.00
Jasperoide 38	2021	900.00		\$2,700.00		\$2,700.00
Jasperoide 39	2021	1000.00		\$3,000.00		\$3,000.00
Jasperoide 40	2021	900.00		\$2,700.00		\$2,700.00
Jasperoide 41	2021	600.00		\$1,800.00		\$1,800.00
NPV 88	2021	200.00		\$600.00		\$600.00
La Gringa del Sur Copper	2021	100.00		\$300.00		\$300.00
Khaleesi I	2018	100.00	\$300.00	\$300.00		\$600.00
Chillami 7	2015	200.00	\$600.00	\$600.00		\$1,200.00
Hoze 28	2018	300.00	\$300.00	\$900.00		\$1,200.00
Hoze 18	2018	100.00	\$300.00	\$300.00		\$600.00
Jasperoide 11	2018	100.00	\$300.00	\$300.00		\$600.00
ΤΟΤΑ	TOTAL			\$86,748.44	\$25,355.13	\$113,603.58

# Table 4-4. Summary of Annual Holding Costs – 2023

Validities and Penalties 2023								
Concession	Year	На	Validity 2023	Penalty	Total			
Greatiam 10	2005	300.00	\$900.00	-	900.00			
Greatiam 70	2004	200.00	\$600.00	-	600.00			
Jasperoide 1	2004	200.00	\$600.00	-	600.00			
Jasperoide 2	2004	100.00	\$300.00	-	300.00			
Jasperoide 3	2007	400.00	\$1,200.00	\$9,386.67	10,586.67			
Jasperoide 4	2017	628.83	\$1,886.48	-	1,886.48			
Jasperoide 5	2017	1000.00	\$3,000.00	-	3,000.00			
Jasperoide 6	2017	899.27	\$2,697.80	-	2,697.80			
Jasperoide 7	2017	819.99	\$2,459.96	-	2,459.96			
Jasperoide 8	2017	688.06	\$2,064.17	-	2,064.17			
Jasperoide 9	2017	800.00	\$2,400.00	-	2,400.00			
Jasperoide 10	2017	100.00	\$300.00	-	300.00			
Jasperoide 12	2021	1000.00	\$3,000.00	-	3,000.00			
Jasperoide 13	2021	649.34	\$1,948.01	-	1,948.01			
Jasperoide 13B	2021	800.00	\$2,400.00	-	2,400.00			
Jasperoide 14	2021	488.75	\$1,466.25	-	1,466.25			
Jasperoide 14B	2021	600.00	\$1,800.00	-	1,800.00			
Jasperoide 16	2021	800.00	\$2,400.00	-	2,400.00			
Jasperoide 17	2021	388.06	\$1,164.17	-	1,164.17			
Jasperoide 18	2021	694.85	\$2,084.54	-	2,084.54			
Jasperoide 19	2021	600.00	\$1,800.00	-	1,800.00			
Jasperoide 20	2021	600.00	\$1,800.00	-	1,800.00			



2023           2023	100.00           100.00           100.00           200.00           300.00           600.00           800.00           800.00           900.00           600.00	\$300.00 \$300.00 \$300.00 \$600.00 \$900.00 \$1,800.00 \$2,400.00 \$2,400.00 \$2,400.00 \$2,700.00 \$1,800.00	- - - - - - - - - - - - -	300.00 300.00 300.00 600.00 900.00 1,800.00 2,400.00 2,400.00 2,700.00 1,800.00
2023           2023           2023           2023           2023           2023           2023           2023           2023           2023           2023           2023           2023           2023	100.00           100.00           200.00           300.00           600.00           800.00           800.00           800.00	\$300.00 \$300.00 \$600.00 \$900.00 \$1,800.00 \$2,400.00 \$2,400.00 \$2,400.00	- - - - -	$\begin{array}{r} 300.00\\ 300.00\\ 600.00\\ 900.00\\ 1,800.00\\ 2,400.00\\ 2,400.00\\ 2,400.00\\ 2,400.00\end{array}$
2023           2023           2023           2023           2023           2023           2023           2023           2023           2023           2023	100.00           100.00           200.00           300.00           600.00           800.00	\$300.00 \$300.00 \$600.00 \$900.00 \$1,800.00 \$2,400.00 \$2,400.00	- - - - -	300.00 300.00 600.00 900.00 1,800.00 2,400.00 2,400.00
2023           2023           2023           2023           2023           2023           2023           2023           2023	100.00           100.00           200.00           300.00           600.00           800.00	\$300.00 \$300.00 \$600.00 \$900.00 \$1,800.00 \$2,400.00	- - - - -	300.00 300.00 600.00 900.00 1,800.00 2,400.00
2023           2023           2023           2023           2023           2023           2023	100.00           100.00           200.00           300.00           600.00	\$300.00 \$300.00 \$600.00 \$900.00 \$1,800.00	- - - - -	300.00 300.00 600.00 900.00 1,800.00
2023 2023 2023 2023 2023	100.00 100.00 200.00 300.00	\$300.00 \$300.00 \$600.00 \$900.00	-	300.00 300.00 600.00 900.00
2023 2023 2023	100.00 100.00 200.00	\$300.00 \$300.00 \$600.00	-	300.00 300.00 600.00
2023 2023	100.00 100.00	\$300.00 \$300.00	-	300.00 300.00
2023	100.00	\$300.00	-	300.00
			-	
2023	100.00	\$300.00	-	500.00
				300.00
2018	100.00	\$300.00	-	300.00
2018	100.00	\$300.00	-	300.00
2018	300.00	\$900.00	-	900.00
2015	200.00	\$600.00	-	600.00
2018	100.00	\$300.00	-	300.00
2021	69.70	\$209.09	-	209.09
2021	200.00	\$600.00	-	600.00
2021	300.00	\$900.00	-	900.00
2021	100.00	\$300.00	-	300.00
2021	600.00	\$1,800.00	-	1,800.00
2021	800.00	\$2,400.00	-	2,400.00
2021	900.00	\$2,700.00	-	2,700.00
2021	500.00	\$1,500.00	-	1,500.00
2021	900.00	\$2,700.00	-	2,700.00
2021	800.00	\$2,400.00	-	2,400.00
2021	700.00	\$2,100.00	-	2,100.00
2021	100.00	\$300.00	-	300.00
2021	168.98	\$506.95	-	506.95
2021	1000.00	\$3,000.00	-	3,000.00
2021	400.00	\$1,200.00	-	1,200.00
2021	200.00	\$600.00	-	600.00
2021	785.91	\$2,357.73	-	2,357.73
2021	617.02	\$1,851.06	-	1,851.06
2021	400.00	\$1,200.00	-	1,200.00
2021	800.00	\$2,400.00	-	2,400.00
2021	800.00	\$2,400.00	-	2,400.00
2021	700.00	\$2,100.00	-	2,100.00
2021	92.86	\$278.59	-	278.59
	2021         2018         2018         2018	2021         92.86           2021         700.00           2021         800.00           2021         800.00           2021         800.00           2021         400.00           2021         617.02           2021         785.91           2021         2021           2021         200.00           2021         1000.00           2021         100.00           2021         100.00           2021         100.00           2021         100.00           2021         900.00           2021         900.00           2021         900.00           2021         900.00           2021         900.00           2021         900.00           2021         900.00           2021         900.00           2021         900.00           2021         200.00           2021         200.00           2021         200.00           2021         69.70           2018         100.00           2018         100.00           2018         100.00           2018	2021         92.86         \$278.59           2021         700.00         \$2,100.00           2021         800.00         \$2,400.00           2021         800.00         \$2,400.00           2021         400.00         \$1,200.00           2021         617.02         \$1,851.06           2021         785.91         \$2,357.73           2021         200.00         \$600.00           2021         400.00         \$1,200.00           2021         200.00         \$600.00           2021         1000.00         \$3,000.00           2021         1000.00         \$3,000.00           2021         1000.00         \$3,000.00           2021         100.00         \$3,000.00           2021         100.00         \$3,000.00           2021         900.00         \$2,100.00           2021         900.00         \$2,700.00           2021         900.00         \$2,700.00           2021         900.00         \$2,700.00           2021         900.00         \$2,400.00           2021         900.00         \$2,400.00           2021         200.00         \$2,00.00           2021	2021         92.86         \$278.59         -           2021         700.00         \$2,100.00         -           2021         800.00         \$2,400.00         -           2021         800.00         \$2,400.00         -           2021         800.00         \$1,200.00         -           2021         617.02         \$1,851.06         -           2021         785.91         \$2,357.73         -           2021         200.00         \$600.00         -           2021         200.00         \$600.00         -           2021         200.00         \$1,200.00         -           2021         1000.00         \$3,000.00         -           2021         1000.00         \$3,000.00         -           2021         100.00         \$3,000.00         -           2021         100.00         \$2,100.00         -           2021         900.00         \$2,700.00         -           2021         900.00         \$2,700.00         -           2021         900.00         \$2,700.00         -           2021         900.00         \$2,400.00         -           2021         900.00 </td

#### 4.5 Mining Law and Mineral Rights in Peru

The mining industry in Peru is regulated by laws such as the General Mining Law, Mining Canon Law, the Law Regulating Environmental Liabilities of Mining, and the General Law of the Environment.

Under Peruvian law, the Peruvian State is the owner of all natural resources which includes the mineral resources in the ground. The rights to explore for and develop these mineral resources are granted by means of the "Concessions System". Mining concessions have the nature of immoveable goods.

The General Mining Law of Peru was changed in the mid-1990s to foster the development of the country's mineral resources. The law defines and regulates different categories of mining activities according to stage of development (prospecting, development, exploitation, processing, and marketing). Titles over mineral claims are controlled by INGEMMET (Geological, Mineral and Metallurgical Survey of Peru).

In Peru, mineral concessions are granted following receipt of a paper application specifying the coordinates of the claim boundaries, based on UTM Zone 18 South (datum WGS 1984) coordinates. All pre-2016 claims were staked using the PSAD 1956 datum but were subsequently converted to the new WGS 1984 coordinate system. All new concessions must use the new grid and must be at least 100 ha (1 square km) in area and oriented in a north-south or east-west direction. Pre-existing concessions, based on the old system ('punto de partida' or starting point system), can be at any orientation. Where new claims overlap with older concessions converted to the new system, the older concession has precedence.

Mining concessions are considered immovable assets and are therefore subject to being transferred, optioned, leased and/or granted as collateral (mortgaged) and, in general, may be subject to any transaction or contract not specifically forbidden by law. Mining concessions may be privately owned and the participation in the ownership of the Peruvian State is not required. Buildings and other permanent structures used in a mining operation are considered real property accessories to the concession on which they are situated.

#### 4.5.1 Ownership of Mining Rights

According to General Mining Law mining concession is irrevocable as long as the titleholder fulfils the legal obligations required to maintain it in force. However, the titleholder shall comply with the entire obligation in order to maintain the mining concession valid. General Mining Law provides that mining concessions can be extinguished only by:

- expiration as a consequence of a failure by a titleholder to pay the mining validity fee and/or penalties for two years (consecutive or not);
- abandonment as a consequence of the breach of the mining procedure rules applicable to a mining claim;
- nullity in the case that a mining concession was claimed by an individual or entities that have restrictions according to the mining law;



- resignation in the case that the titleholder requests the extinction of the mining right; and;
- cancellation in the case that a mining concession overlaps with priority rights, or when the right is unassailable.

Pursuant to the General Mining Law, mining rights may be forfeited only due to a number of circumstances defined by law (*i.e.*, non-payment of the maintenance fees and/or noncompliance with the Minimum Production Obligation). The right of concession holders to sell mine production freely in world markets is established. Peru has become party to agreements with the World Bank's Multilateral Investment Guarantee Agency and with the Overseas Private Investment Corporation.

#### 4.5.2 Annual Fees and Obligations

The mining concession shall be maintained by paying validity fees and complying with the corresponding minimum production obligation ("MPO"). Regarding the obligation to pay the validity fees, the price of these administrative fees depends on the condition of the title-holders (small, artisanal or general regime). Validity fees shall be paid annually to maintain mining concessions in force. The non-compliance of validity fees payment for two consecutive years causes the mining concession to expire.

Pursuant to article 39 of the General Mining Law, title holders of mining concessions pay an Annual Maintenance Fee (Derecho de Vigencia). The Derecho de Vigencia is due on June 30 of each year and is paid once a year in advance and is calculated at US\$3.00 per hectare. Failure to pay Derecho de Vigencia for two consecutive years causes the expiration ('caducidad') of the mining concession. However, according to article 59 of the General Mining Law, payment for one year may be delayed with penalty and the mining concessions remain in good standing. The outstanding payment for the past year can be paid on or before the following June 30 along with the future year.

Concession owners must pay US\$3.00 per hectare to file each claim, plus an administrative fee. An annual holding fee of US\$3.00 per hectare is required to maintain the claims, once granted, for the first six years, after which the owner is assessed at twice the annual rate, in addition to the annual holding fee, if the property has not been put into production.

#### 4.6 Mineral Tenure

There are four types of mining concessions that INGEMMET can grant to individuals, private or public companies, which include Mining, Production/Beneficiation, General Labor, and Mining Transport concessions. With respect to each concession type, the following activities are permitted:

- Mining Concessions: Are classified as mining claims ('Petitorio Minero') during the application phase, and a mining concession ('Concesión Minera') after title has been granted.
- Production or Beneficiation Concessions: Enables the title holder to carry-out processing, refining, and concentrating activities.



- General Labor Concessions: Enables the title holder to provide ancillary services to a Mining Concession title holder.
- Mining Transport Concession.

Mining concessions can vary in size from a minimum of 100 ha to a maximum of 1000 ha, and each can be granted separately for metallic and non-metallic minerals. A granted mining concession has an indefinite term if the following conditions are met:

- Annual fees (or 'Derecho de Vigencia') are paid in full before end of 2<sup>nd</sup> quarter of the calendar year, currently US\$3.00/ha. If payment is missed by two years running, the concession is deemed cancelled/invalid.
- Minimum expenditure or production levels are met. The minima are divided into two classes:
- Achieve Annual Production levels or Minimum Annual Investment by the first semester of Year 11, where the clock starts a year after the concession was granted. It is possible to pay a penalty for non-production on a sliding scale, as defined by a new Legislative Decree effective 2019.
- Alternatively, no penalty is payable if a Minimum Annual Investment is made of at least 10 times the amount of the penalty.

Mining concessions can be cancelled if annual fees or applicable penalties are not paid for two consecutive years or if production targets are not met within 30 years after the concession was granted.

The QP for this section has viewed the Public Mining Registry, which grants title of the concession for each mining tenement held by C3 Metals, including all pending and tender applications, all are in good standing according to the Public Mining Registry.

## 4.7 Surface Rights and Legal Access

Mining concessions constitute a different right from surface land over it. Owners of surface lands are not authorised to perform mining activities, unless they have a valid mining concession title granted by the INGEMMET. Surface rights are not included in mineral rights, and permission must be obtained in writing from owners and a two third majority of community members when surface rights are owned by local communities, before commencing drilling activities.

Over the past ten years the Peruvian government has been encouraging companies to work closer with surface landowners and nearby indigenous communities. The concession holder is required to obtain majority approval from the community or go through an acquisition process with the Peruvian state if surface lands are government owned.

Surface rights at the three zones within the Jasperoide Project belong to the community of "Comunidad Campesina de Hacca" district of Omacha in the Province of Paruro, Department of Cusco. In August 2019, the community signed a three-year surface access agreement with LARG.



The agreement allows access to land for proposed exploration and drilling activities on the Jasperoide property for three years beginning November 30, 2020, the day the company received the Start of Activities resolution from the Ministry of Energy and Mines. And Drilling.

In addition to providing employment for local people, improving community health services, and providing support for community activities, the surface access agreement includes:

- Payment of US\$ 925 for each platform, up to 40 platforms.
- Payment of US\$ 230 for each km of new drill access road.
- Payment of US\$ 3,700 over 3 years to compensate for land use related to infrastructure and water use.
- Improvement and maintenance of the Huillcuyoc Hacca Paclla highway, to a total of US\$ 92,300 over 3 years.

The QP for this section is unaware of any other significant factors or risks that could affect the title or access to perform work on the Project.

#### 4.8 Small-Scale Production

Small title-holders are entities or individuals holding concessions in an area of less than 2,000 ha with no more than 350 tonnes per day ("tpd") of production and must pay a validity fee of US\$1.00 per hecatres. The general regime applicable for entities or persons who do not qualify as small or artisanal miners pay a validity fee of US\$3.00 per hectare. Validity fees must be paid annually to maintain mining concessions in force. Non-compliance of validity fee payment for two consecutive years results in the extinction of the mining concession.

The Mining Law obligates mining concessions holders to move into production. Currently, two regimes of minimum annual production exist, depending on the date of the mining concession title. Holders of mining concessions that were granted before 2008 will be obliged to achieve minimum annual production from 2019. The two regimes are as follows:

• Legislative Decree No. 1054 (granted in June 2008) this regime established that mining concessions holders – qualifying under the general regime – need to reach a minimum annual production, equivalent to one tax unit (approximately US\$ 1,160) per year per hectare. If the holder of mining concession cannot reach such minimum annual production on the first semester of the eleventh year since the year in which the concessions was granted, the holder will be required to pay a penalty equivalent to 10% of the applicable minimum production per year per hectare until the fifteenth year. After the period of 15 years, the mining concessions may remain in force for an additional period of up five additional years in the case of: (i) the holder paying the applicable penalty and securing investments in the mining concession of 10 times the applicable penalty that should be paid; or (ii) events of force majeure. If the minimum production is not reached after this period has lapsed, the mining concession will inevitably expire.



• Legislative Decree No. 1320 – (granted in 2017 and in force in 2019) according to this new disposition, mining concessions holders shall reach the minimum annual production, equivalent to one tax unit (approximately US\$ 1,250) per year per hectare. If the holder of a mining concession cannot reach the minimum annual production in the first quarter of the eleventh year since the year in which the concession was granted, the holder will be required to pay a penalty equivalent to 2% of the applicable minimum production per year per hectare until the fifteenth year. If the holder cannot reach the minimum annual production in the first quarter of the sixteenth year since the year in which the concessions was granted, holder will be required to pay a penalty equivalent to 5% of the applicable minimum production per year per hectare until the twentieth year. If the holder cannot reach the minimum annual production in the first quarter of the sixteenth year of the twentieth year. If the holder cannot reach the minimum annual production in the first quarter of the twentieth year since the year in which the concessions was granted, the holder cannot reach the minimum annual production in the first quarter of the twentieth year since the year in which the concessions was granted, the holder will be required to pay a penalty equivalent to 10% of the applicable minimum production per year per hectare until the thirtieth year. Finally, if the holder cannot reach the minimum annual production until during this period, the mining concession will be automatically expired.

If minimum production within a 15-year term from the day in which the mining concession was granted is not achieved, the mining concession will be cancelled unless a qualified force majeure event occurs and is approved by the Mining Authority. The titleholder may also maintain the title by paying the applicable penalties and providing evidence of a minimum investment of at least ten times the amount of the applicable penalties. In this last case, the mining concession will not be cancelled up to a maximum term of five additional years (total term 20 years). If minimum production is not reached in the 20-year term, the concession title will be inevitably cancelled. Concession taxes are payable by June 30<sup>th</sup> each year.

While the holder of a mining concession is protected under the Peruvian Constitution and the Civil Code, it does not confer ownership of land and the owner of a mining concession must deal with the registered landowner to obtain the right of access to fulfill the production obligations inherent in the concession grant. It is important to recognize that all transactions and contracts pertaining to a mining concession must be duly registered with the Public Registry in the event of subsequent disputes at law.

#### 4.9 Artisanal Miners

Artisanal concession holders are entities or individuals holding concessions of less than 1000 hectares and production is capped at 25 tpd. Annual mining license fees are US\$ 0.50 per hectare.

## 4.10 Water Rights

Water rights are governed by Law 29338, the 2009 Water Resources Law, and are administered by the National Water Authority (ANA) which is part of the Ministry of Agriculture. There are three types of water rights, which cannot be transferred:

- License is a right granted in order to use the water for a specific purpose in a specific place. The license is valid until the activity for which it was granted has been completed.
- Permission is a temporary right, granted during periods of surplus water availability.



• Authorization is a right granted for a specified quantity of water and for a specific purpose. The grant period is two years, which may be extended for an additional year, for example in the case of diamond drilling.

No water rights are currently owned by C3 Metals or its related companies since the expiration of a Water Permit in December 2022. C3 Metals is currently processing a new permit for the authorization of three water points.

# 4.11 Permits

Exploration and mining activities are subject to various Peruvian mining laws, regulations and procedures guided by the Peruvian Political Constitution. Mining Activities in Peru are subject to the provisions of the Uniform Code of the General Mining Law ("General Mining Law"), which was approved by Supreme Decree No. 014-1992-EM (4 June 1992) and its subsequent amendments and regulations, along with other related supreme decrees, laws, directives, and ministerial resolutions.

## 4.11.1 Non-Invasive Exploration Activities

For non-invasive prospecting activities the regulations of SUPREME DECREE No. 019-2020-EM of July 30, 2020, apply and supersede the previous SUPREME DECREE No. 042-2017-EM enacted during the year 2017. Article 10.1 defines the following prospecting activities as not requiring prior environmental certifications or permits if "instruments or equipment that can be transported without causing greater alteration than that caused by the ordinary traffic of people and smaller vehicles" are being used:

- Geological, geophysical, geotechnical, geochemical, and topographic surveys.
- Collection of small quantities of samples of rocks and surface minerals through channels, pits, trenches, and other similar techniques.

The above specifically excludes all kinds of drilling activities.

## 4.11.2 Invasive Exploration Activities

Companies must obtain a government permit prior to commencing any drilling or major earth moving programs, such as road, drill pad construction or trenching. Depending on the scale of work intended, exploration programs must be presented to the Ministry of Mines, which then will grant an approval to initiate activities provided the paperwork is in order. All major ground disturbances must be remediated and re-contoured following completion of the work activities.

In order to conduct mineral exploration activities, a company is required to comply with the following requirements:

- Resolution of approval of the Environmental Impact Declaration.
- Provide a detailed and completed work program.



- A statement from the concession holder indicating that it is owner of the surface land, or if not, that it has authorization from the surface landowners to conduct exploration activities.
- Water License, Permission or Authorization to use water.
- Valid mining concessions.

In the event of mining, companies must complete an environmental impact study that includes a social relations plan, certification that there are no archaeological remains in the area, and a draft mine closure plan. Closure plans must be accompanied by payment of a monetary guarantee.

In April 2012, Peru's Government approved the "Prior Consultation Law" that requires prior consultation with indigenous communities before any infrastructure or projects, in particular mining and energy projects, are developed in their areas.

Mining companies are also required to separately obtain water rights from the National Water Authority and surface lands rights from individual landowners.

#### 4.11.3 Environmental Permitting

The Ministry of the Environment ('MINAM, Ministerio del Medio Ambiente') is the regulating authority for environmental issues. The administrative authority for the mining sector is the Directorate of Mining Environmental Affairs ('DGAAM, Dirección General de Asuntos Ambientales Mineros') of the Ministry of Energy and Mines. A summary of environmental requirements for mining exploration programs is provided in Table 4-5.

With respect to exploration activities, the Environmental Technical Sheet (FTA or Ficha Técnica Ambiental') to exploration activities with less than 10 drilling platforms or surface disturbance of up to 10 ha. As long as it complies with the environmental protection criteria established. An Environmental Impact Declaration (DIA or 'Declaración de Impacto Ambiental') must be obtained for Category 1 exploration activities, which have a maximum of 40 drilling platforms or surface disturbance of up to 10 hectares. A semi-detailed Environmental Impact Study (EIAsd, 'Estudio de Impacto Ambiental Semi-Detallada') is required for Category II exploration programs which have more than 40 drilling platforms or surface disturbance of greater than 10 hectares. The environmental authority has 90 working days to evaluate it.

A mining company must also prepare and submit a Closure Plan (Plan de Cierre) for each component of its operation. The Closure Plan must outline what measures will be taken to protect the environment over the short, medium, and long term from solids, liquids and gases generated by the mining operation.

The General Mining Law of Peru has in place a system of sanctions or financial penalties that can be levied against a mining company that does not comply with the environmental regulations.

The total permitting process, including preparation of the study by a registered environmental consulting company, can take 6-12 months, depending on response times between government and company.

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A full detailed Environmental Impact Study (EIAd) must be presented for mine construction projects and permitting can exceed one year.

Category	Description	Application requirements	Aproval Time
PROSPECTING (NO PERMIT REQUIRED)	Mineral exploration activities such as geological and geophysical studies, topographic surveys, and collection of small quantities of rocks and minerals from surface or trenches utilizing small portable equipment	No authorization required	Not applicable
ENVIRONMENTAL TECHNIC	Mineral exploration with less than 10 drill platforms with less than 10 ha of surface disturbance and less than 50 m of tunnels. As long as it meets the environmental protection criteria without affecting the criteria environmental protection: i) Does not involve Indigenous or native peoples. ii) They are not located in fragile ecosystems (e.g., wetlands)., etc.	Required information as shown in Appendix I of Environmental Regulations for Mining Exploration (RM № 108-2018- MEM/DM)	10 working days
САТЕGORY I (DIA)	Mineral exploration with up to 40 drill platforms with less than 10 ha of surface disturbance and less than 50 m of tunnels	Required information as shown in Appendix I of Environmental Regulations for Mining Exploration (RM № 108-2018- MEM/DM)	~90 working days
CATEGORY II (EIAsd)	Mineral exploration with more than 40 up 700 drill platforms, and greater than 10 ha of surface disturbance, and/or construction of more than 50 m of tunnels	Prepare a semi detailed Environmental Impact Evaluation (EIAsd) report as per Appendix I of Environmental Regulations for Mining Exploration (RM № 108-2018- MEM/DM)	90 working days

## Table 4-5. Summary of Environmental Requirements for Mining Exploration Programs



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#### 4.12 Mining Royalties and Mining Taxes

## 4.12.1 Royalties

Mining royalties ('regalía minera') are defined by Law No. 28258 of 2004 (3 June 2004), which was modified by Law No. 28323 (10 August 2004) and Law No. 29788 (28 September 2011) and their respective regulations. The mining royalty is calculated on the value of concentrates or their equivalent on the following scale:

- <US\$ 60 million annually: 1.0%,
- US\$ 60–US\$ 120 million annually: 2.0%,
- >US\$ 120 million annually: 3.0%.

In 2011 the government of Peru introduced a "windfall profits tax, which has 17 operational margin brackets with payments ranging from 2.00-8.40%. Miners with a 0-10% operational margin will pay the least while those with an operational margin of 85% and more will pay considerably higher windfall taxes.

## 4.12.2 Taxation and Foreign Exchange Controls

The Tax Administration Superintendent is the entity empowered under the Peruvian Tax Code to collect federal government taxes. The Tax Administration Superintendent can enforce tax sanctions, which can result in fines, the confiscation of goods and vehicles, and the closing of a taxpayer's offices.

The corporate tax rate in Peru is 29.5% on net profits, with approximately 50% of this is distributed by the National Government to the regional and local governments in the area of direct and indirect influence of the mine.

Personal income tax is 39% and withholding tax for dividends paid to non-resident companies is 5%, subject to existing tax treaties between the countries involved in the transaction. There are currently no restrictions on the ability of a company operating in Peru to transfer dividends, interest, royalties, or foreign currency into or out of Peru or to convert Peruvian currency into foreign currency.

Temporary Net Assets Tax, which applies to companies' subject to the General Income Tax Regime, imposes a 0.4% tax on any asset exceeding one million Peruvian soles (approximately US\$ 305,000). Taxpayers must file a tax return during the first 12 days of April and the amounts paid can be used as a credit against Income Tax. Companies which have not started productive operations or those that are in their first year of operation are exempt from the tax.

The general rate of Value Added Tax ("VAT") is 18% (16% of VAT itself plus 2% of municipal promotion tax). VAT is applicable to (1) Sale of goods within the country; (2) Rendering or first use of services within the country; (3) Construction contracts; (4) The first sale of real estate made by constructors; and (5) Import of goods. For all transactions, the vendor is subject to VAT, except in the case of importation of goods or services rendered abroad, but economically used within



Peru, for which VAT is self-assessed by the importers and users, respectively. The VAT law follows a debit/credit system, and input VAT may be offset by output VAT. Should excess input VAT be obtained in a particular month, it shall offset output VAT obtained during the following months, until it is exhausted.

## 4.13 Current Permits

In December 2020, C3 Metals announced that it had received authorization from the Peruvian Ministry of Energy and Mines for drilling on the Project. The authorization allowed the Company to undertake exploration activities as defined in the approved drill permit (Declarción Impacto Ambiental or DIA) including trench and channel sampling, the construction and drilling from 40 platforms, associated drill sumps and gutters, and the provision of track and road access (C3 Metals news release 11 December 2020).

The drill permit allows for 40 drill pads (Figure 4-3) and is good for 34 months from December 2020 to October 2023 (C3 Metals news release 11 December 2020).

In September 2022, the Peruvian Ministry of Energy and Mines was informed of our need to suspend activities for a period of 11.5 months (September 15<sup>th</sup>, 2022, to August 30<sup>th</sup>, 2023), which will allow us to restructure the location of some platforms through a modification of our DIA. With this suspension, our permit will extend till November 2024.

C3 Metals is in the process of permitting additional drill pad locations with this environmental impact statement - DIA Modification, an environmental permit that was approved in March 2023, and is now awaiting the Resolution of drilling start activities.

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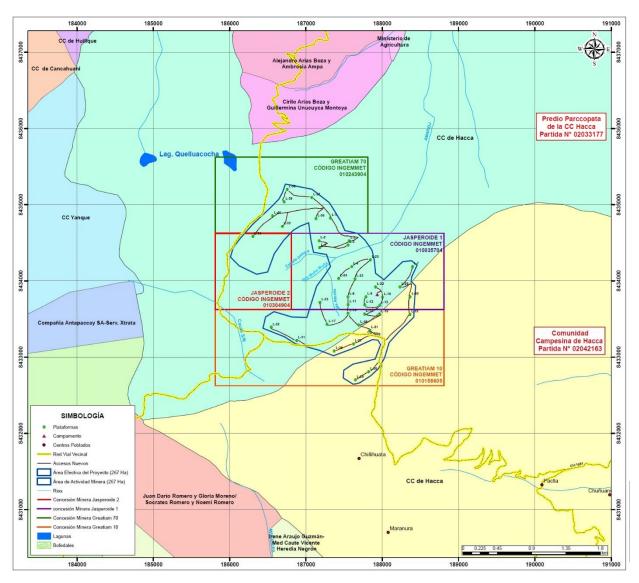


Figure 4-3. Current Permitted Drill Platforms (C3 Metals, 2021)

## 4.14 Community Consultation

In 2017, LARG had signed a surface access agreement with local communities allowing LARG and its agents to conduct exploration activities for at least three years. The current community agreement, now under the name of C3 Metals Peru S.A.C., has commitments that started when the drilling permit was issued and is therefore current until December 2023.

# 4.15 Environmental Studies

At the exploration stage, the Government of Peru does not require any extensive studies related to the environment (*i.e.*, Environmental Impact Assessment) which are required for more advanced stage projects planning for a mining operation. C3 Metals does not have nor has it applied for an environmental permit or completed environmental studies.



#### 4.16 Environmental Liabilities

The QP for this section is not aware of any environmental liabilities associated with the Project. The QP for this section is also unable to comment on any remediation which may have been undertaken by previous companies. C3 Metals has not applied for any environmental permits on the Project and has been advised that none of the exploration work completed to date requires an environmental permit. For all exploration work in Peru, any disturbance done to the land must be remediated.

## 4.17 Other Significant Factors and Risks

Historically, Peru has been and is a mining country with the largest reserves of silver, lead and molybdenum in Latin America, Peru is a second-place producer of copper and silver and is first place in production of gold, tin, lead and zinc. Mining activity therefore constitutes one of the main sources of revenue in the country and in 2020, it represented approximately 9% of the national GDP and approximately 62% of the total value of Peruvian exports.

Peru has passed more than 30 years of legal and political stability which has aided its growth in mining and in turn mining's contribution to its free market economic model. During 2021-2022 during President Castillo's government a number of populist and progressist ideas were discussed and tried to be implemented on the mining sector but the Peruvian Congress and national institutions where reluctant to accept them.

As it is known, President Castillo was impeached and Vice President Dina Boluarte assumed the presidency and is working to push the country back into the economic stability that it had for more than 30 years. The current Prime Minister of Peru under the leadership of Boluarte is working on several proposals that will be implemented to improve mining regulations, including the acceleration of mining and environmental permits.

The QP for this section is not aware of any other significant factors that may affect access, title, or the right or ability to perform the proposed work program on the Jasperoide Copper-Gold Project.

# 5.0 Accessibility, Climate, Local Resources, Infrastructure and Physiography

## 5.1 Accessibility

The Project is located approximately 160 road kilometres south of the City of Cusco, Peru (*see* Figure 4-1). Access to the Project is via paved road from Cusco for 33 kilometers on the Cusco-Paruro highway to the town of Yaurisque (Road 117), and then by approximately 125 km of well-maintained gravel road (Roads 119 and 120) to the Capacmarca turnoff. About 12 km past Capacmarca, the route continues on unmaintained dirt roads heading east off the maintained Las Bambas gravel road, leading into the Jasperoide project area.

The Project area is also accessed via the town of Accha, by driving approximately 22km south along an unsealed gravel road that parallels the Rio Velille river. The total travel time from Cusco to the Project, in wet or dry season, is approximately four hours.

The City of Cusco, the capital of the Department of Cusco with a population of 428,000 (2017 census), can be accessed via numerous daily flights from Lima or other centres around the country. Flight time from Lima to Cusco is 1 hour and 15 minutes. Cusco can also be reached by paved highway from Lima. Road distance from Lima to Cusco is approximately 1,300 kilometres.

#### 5.2 Climate

The climate of the Jasperoide project area comprises a wet summer season between December and March with slightly higher temperatures and a dry winter season during May to August with colder temperatures. The area receives 600 to 800 mm of rainfall per year with about 70% of that falling during the summer months. Temperature is highly variable, which can fall as low as -20°C in the winter months and rise to above 20°C in the summer months, with the daily average at 12.5°C.

Given its excellent accessibility and climate, the project is amenable to year-round operation.

#### 5.3 Local Resources and Infrastructure

The town of Capacmarca has a population of 4,813 (2005 census). The people are predominantly indigenous citizens and Quechua is the principal language spoken. Basic accommodations, including restaurants, food markets, and hotels are available in Capacmarca. A Mara district Police Station is located about 10 km west of Capacmarca on the Apurimac-Mara highway.

Historical drilling by Southwestern Gold, Cominco, and Minera Ares were mainly supported by field camps set up about 1.5 km south of MCZ (formerly the Cerro Huinihuini prospect area).

Exploration and drilling supplies can be sourced in Cusco and locally grown food and basic supplies can be obtained in the town of Capacmarca, approximately 10 km northwest of the project.

Casual labour is available from the nearby community of Hacaa within the eastern portion of the project.

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Water is available for drilling and for an up to 40-person field camp that is already in place on the property. Within the Project, several seasonal rivers exist within the canyons ('Quebrada'), which could be utilized if a permitted reservoir were to be constructed. To obtain water from a naturally occurring water source (*i.e.*, river, lake, catchment basin), the concession holder would have to apply for a water usage permit according to the 2009 Water Resources Law ('Ley de Recursos Hídricos') and the draft National Water Resources Management Strategy of 2004 ('Estrategia Nacional para la Gestión de los Recursos Hídricos Continentales del Perú') (*see* Section 4.10).

## 5.4 Physiography

The Jasperoide Cu-Au Project is situated along the eastern margins of the Cordillera Occidental of the southern Peruvian Andes. The Project area is characterized by gentle to moderate topography with low rolling hills separated by deeply incised valleys. Elevation ranges from 3800 to 4600 MASL. Outcrop exposure on the Property averages about 5-10% with highly variable cover material (*i.e.*, colluvium, slopes, skirt debris, alluvial fillings, or unconsolidated gravel terraces).

Natural vegetation is sparse, consisting mostly of grasses and shrubs. A few small plots of land have been cultivated by local farmers. Animal life is scarce and confined mainly to insects, lizards, invertebrates, and the occasional bird.

#### 5.5 Surface Rights

The General Mining Law of Peru guarantees the owner of mining concessions the right-of-access to the surface area required for their exploration and exploitation (*see* Section 4.7). This access right is normally obtained by a voluntary agreement between the mineral claim owner and the surface owner. The mining company may obtain the rights of way through the civil court system, if necessary, by agreeing to indemnify the surface owner for the court determined value of the surface area.

Current surface rights that cover the Project area are held by local communities, individuals, and the government (Figure 5-1). The Project is currently at the exploration stage and ownership of surface rights are usually not contemplated or necessary until a decision to mine has been made.

The Project area has sufficient size to accommodate a mining operation without any negative impact on the environment.

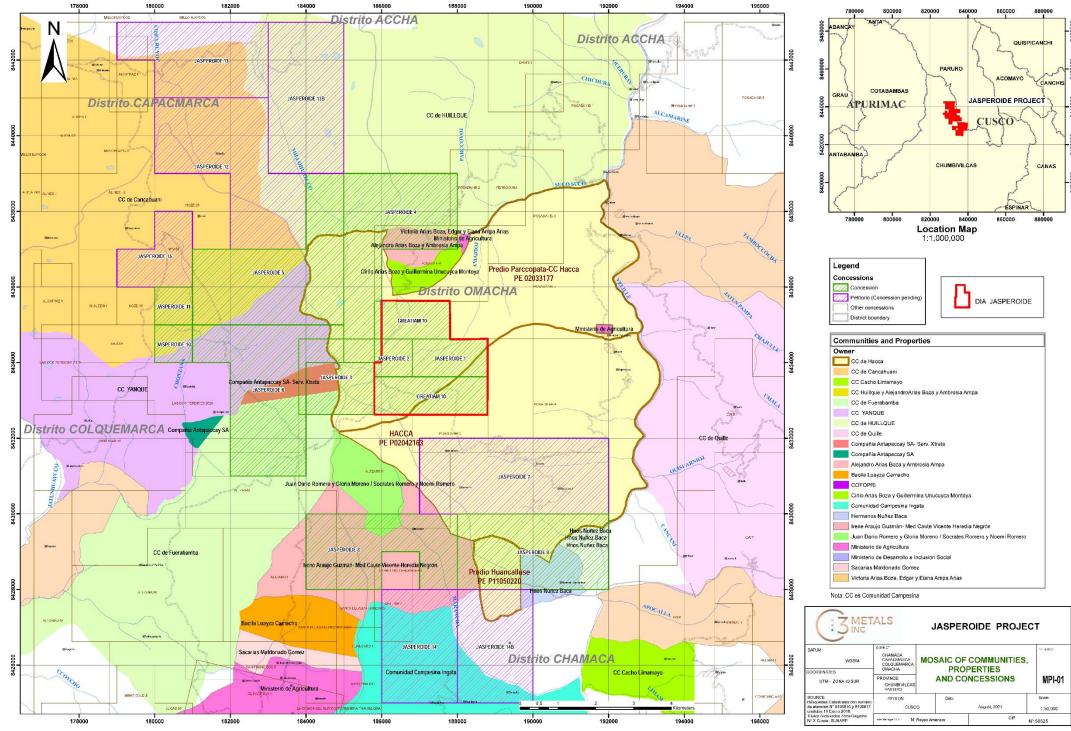


Figure 5-1. Details of Surface Rights Owners and Mining Concessions (C3 Metals, 2021)

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# 6.0 History

## 6.1 General History

The presence of shallow small open pits and evidence of gold washing activities at MCZ are believed to originate from artisanal gold mining activities conducted during the late 1970s (Jasper et al., 2021).

Information pertaining to older historical prospecting at Jasperoide (pre-1990) was not reviewed as part of this Technical Report. Historical work at Jasperoide was successful in identifying areas of skarn alteration containing high grade Cu-Au mineralization associated with several skarn types. The majority of historical exploration work targeted what was referred to as the Cerro Huinihuini prospect, named after the high hill - Cerro Huinihuini. This prospect is now referred to as MCZ, one of three principal areas in the Jasperoide Cu-Au Project.



Figure 6-1. (Left) Photograph of historical workings at MCZ. (Right) Cerro Huinihuini prospect photo. (Hochschild, September 2010)

The general chronology of exploration programs from 1992 to 2016 is summarized in Table 6-1. From 1994 to 2012, three major exploration drilling campaigns were conducted at the Project by Southwestern Gold & Cyprus Amax Minerals Company, Cominco Peru, and Compañía Minera Ares (Hochschild Mining PLC). Table 6-2 summarizes the campaigns that resulted in a total of 10,175.7 m of drilling in 52 holes.

Prior to this current Technical Report, no Mineral Resource estimate has been calculated for any copper-gold mineralization within the Project area.

Daniad	Comments	Wents Trues	Description	Carrier	
Period	Company	Work Type	Description	Source	
		Diamond drilling	2,689.0 m in 14 holes; 988 core samples		
	Southwestern	Geological mapping	1:1000 scale at Cerro Huinihuini/SW zone; 1:5000 and 1:25000 scale identified NW skarn target		
1992-1995	Gold Corp and Cyprus Amax Minerals	Rock-chip sampling	150 rock chip samples	Corey, 2019 Myers, 2009	
		Soil sampling	109 soil sample		
	Company	Trenching	26 trenches totalling 4,143 m; 485 channel samples		
		Geophysics-ground	48.7 line-km IP/Resistivity; 46.45 line-km magnetics		
		Petrographic studies			
1995-1996	Southwestern Gold and Cominco Peru SRL	Diamond drilling	1,854.2 m in 13 holes	Corey, 2019 Myers, 2009	
2005	Zaman Corporation	none	no significant work completed	Corey, 2019	
		Diamond drilling	5,632.3 m in 25 holes		
		Geological mapping			
2009-2012	Compañía Minera Ares SAC (Hochschild Mining PLC)	Geophysics - ground	44.5 line-km (15 lines) IP/Resistivity; 180 line-km (67 lines) magnetics	Corey, 2019 Minera Ares, 2012	
		Metallurgy	flotation, cyanide leaching, bottle roll leach tests on composite samples from drill core		
2014-2016	Inversiones La Bruja SAC	drill core re-logging	reinterpreted existing drill hole information	Corey, 2019	

 Table 6-1. Summary of Historical Exploration Programs (1992-2016)



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Period	Company	Holes	No. Holes	Metres	Samples	Comments	Source
1994-1995	Southwestern Gold Corp/Cyprus Amax Minerals Company	H-1 to 14	14	2,689.20	988	targeting high-grade copper - gold skarn at Cerro Huinihuini	Corey, 2019 Myers, 2009
1995	Cominco Peru SRL	HU-1 to 13	13	1,854.20	731	targeting magnetite and garnet skarn at Cerro Huinihuini	Corey, 2019 Myers, 2009
2011	Compañía Minera Ares SAC (Hochschild Mining PLC)	JADD11-01 to 20	20	3,726.57	1,534	focused on Jasperoide 1, 2 and 3 and the Cerro Huinihuini area	Corey, 2019 Minera Ares, 2012
2012	Compañía Minera Ares SAC (Hochschild Mining PLC)	JADD12-01 to 05	5	1,905.75	791	focused on Jasperoide 1, 2 and 3 with 1 hole at Cerro Huinihuini and 4 holes (one hole abandoned) outside of main area targeting porphyry	Corey, 2019 Minera Ares, 2012
	Total:	<u> </u>	52	10,175.72	4,044		

## Table 6-2. Historical Drilling (1994-2012)

#### 6.2 Property Ownership

From 1992 to 1995, Southwestern Gold Corporation ("SWG") explored the project with joint-venture partner Cyprus Amax Minerals Company, conducting the first comprehensive exploration program at Jasperoide (Corey, 2019).

In late 1995, SWG optioned the Jasperoide project to Cominco Peru S.R.L. ("Cominco") who worked on the project until 1997.

In 2005, Zamin Corporation ("Zamin") acquired mining concessions Greatiam 10 and Greatiam 70 but completed no significant work on the project.

In 2009, Compañía Minera Ares SAC (Hochschild Mining PLC) ("Minera Ares") acquired mining concessions Jasperoide 1, 2, and 3 from SWG (Corey, 2019) and worked on the project until 2012.

In 2014, Peruvian company Inversiones La Bruja S.A.C. acquired mining concessions Greatiam 10 and Greatiam 70 from Zamin but completed no significant work on the project.



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In 2017, Latin America Resource Group ("LARG"), through its wholly owned Peruvian subsidiary KA ORO S.A.C., optioned the Jasperoide 1, 2, and 3 concessions and the Greatiam 10 and Greatiam 70 concessions from Inversiones La Bruja S.A.C. Title ownership of eight concessions (Jasperoide 4 to Jasperoide 11) was transferred to LARG from KA ORO S.A.C., increasing the total concessions held by LARG to 13 which covered 7,000 hectares (Corey, 2019).

In August 2019, Carube Copper Corporation ("Carube") and LARG announced that they had entered into a non-binding Letter of Intent ("LOI") to merge their respective businesses, whereby Carube would acquire all of the issued and outstanding shares of LARG (C3 Metals news release dated 27 August 2019). Carube and LARG entered into a definitive share purchase agreement dated 9 December 2019 and announced the finalized share purchase agreement and acquisition in February 2020 (C3 Metals news release dated 27 February 2020).

On 5 August 2020, Carube changed its name to C3 Metals Inc., changed its TSX-V ticker symbol from CUC to CCCM, and began trading under the new name and symbol on 10 August 2020 (C3 Metals news release dated 6 August 2020).

On 15 July 2021, C3 Metals announced that it had entered into a Binding Heads of Agreement dated 13 July 2021 to acquire 100% of Hochschild Mining PLC's interest in the Jasperoide Cu-Au Property (C3 Metals news release dated 15 July 2021). Consolidation of the ownership in Jasperoide was executed through an amendment of the original Master Agreement which had been signed in 2017 by LARG. The transaction, between the Company's wholly-owned subsidiary C3 Metals Peru S.A.C., Hochschild Mining PLC, and Compañía Minera Ares S.A.C., a wholly owned subsidiary of Hochschild, was finalized as of 18 October 2021 (C3 Metals news release dated 18 October 2021).

# 6.3 Historical Exploration

Much of the following descriptions of historical mineral exploration work has been extracted from Corey (2019). Historical results have not been verified by the QP for this section and should not be relied on.

Historical drilling, focused on skarn-hosted copper-gold mineralization at MCZ, was completed by previous operators between 1994 and 2016, prior to 2017 when the Project was acquired by C3 Metals Inc.

6.3.1 1992 to 1995: Southwestern Gold Corporation/Cyprus Amax Minerals Company

In 1992, Southwestern Gold Corporation acquired the mineral rights for the area that hosts the magnetite copper-gold magnetite skarn at MCZ and surrounding areas. SWG subsequently entered into a joint venture agreement with Cyprus Amax Minerals Company ("Cyprus"), whereby the local Peruvian subsidiary of SWG, Minera del Suroeste S.A. ("Misosa"), conducted the technical aspects of the exploration studies.

From July 1994 to January 1995 a systematic exploration program was carried out at and around MCZ to evaluate the potential for economic gold-copper-iron skarn and epithermal gold-silver mineralization. This first comprehensive exploration program at Jasperoide included geologic



mapping, rock-chip and soil sampling, surface trenching, IP/resistivity and magnetic geophysical surveys, and petrographic studies. Southwestern drilled 14 diamond core holes (H-1 to H-14) totaling 2,689 m on the copper-gold skarn MCZ. These holes are represented by the black circles on Figure 6-1.

Prior to drilling, SWG completed detailed geologic mapping (1:1000 and 1:200 scale) of the main MCZ area, including a second target called the SW Zone. A total of 26 trenches (4,143 m) were excavated by hand and tractor for additional mapping-sampling. A total of 1,802 rock-chip, soil, and trench samples were taken.

In late 1994, 48.7 line-km of IP/resistivity and 46.45 line-km of magnetics were completed by the joint venture through contractor Arce Geofisicos. The ground surveys consisted of 17 lines of variable spacing from 50 m to 300 m covering an area of 2.7 km x 3.3 km.

Reconnaissance mapping (1:5000 and 1:25000 scale) and sampling identified a new garnetmagnetite target 3.2 km north-west of MCZ (NW Zone) and other magnetite occurrences along the Huinihuini access road.

This work was successful in that it confirmed the occurrence of copper  $\pm$  gold mineralization within skarn and also evidence of late-stage superimposed epithermal-related gold mineralization within chalcedonic quartz veins, blocks, and narrow zones (2 m) of massive siliceous jasperoid. Both oxide and sulphide copper minerals with associated pyrite were identified, suggesting that some degree of near surface leaching of copper likely occurred indicating potential for high-grade mineralization at the base of leaching forming a supergene enrichment zone. SWG also reported up to 1 g/t Au (and 1% Cu) from jasperoid, indicating metasomatic alteration, which suggested the potential for sediment-hosted, replacement-type mineralization (Corey, 2019).

Skarn-hosted copper  $\pm$  gold mineralization was reportedly intersected in 6 of the 14 drill holes. Mineralization consisted primarily of oxide minerals, however, one drill hole intersected significant chalcopyrite and bornite. Significant drill results (Myers, 2009) include: 113 m of 1.13% Cu, 0.32 g/t Au in hole H-1; 148.43 m of 0.62% Cu, 0.22 g/t Au in hole H-14; 218.86 m of 0.48% Cu, 0.35 g/t Au in hole H-10. Narrow intersections of high-grade Au mineralization were also intersected such as 1.23 m of 27.2 g/t Au from drill hole H-10. These results are also depicted on Figure 6-1.

A total of 109 soil samples, 150 surface rock chip samples, 485 channel samples, 988 diamond drill core samples (1,732 samples) were assayed during this exploration campaign. Assays were performed for Cu, Au and Ag, and some 37% of the samples were additionally assayed for Pb, Zn, Mo, Sb, Bi, As and Hg.

Figure 6-3 shows high-grade (>1% Cu) copper mineralization between 13.5 to 32.6 m thick was intersected over a lateral distance of over 350 metres in holes H-1, H-8, H-14, and also Cominco hole HU-3. The mineralization is interpreted to occur at the base of the skarn in contact with limestone (marble) and may represent a zone of supergene enrichment due to near surface leaching.

The QP for this section is not aware of any additional information on the sampling/assaying procedures or of any QA/QC programs in effect for this drilling.



6.3.2 1995 to 1996: Cominco Peru S.R.L.

In late 1995, Southwestern Gold optioned the Jasperoide project to Cominco Peru S.R.L. During 1996, Cominco conducted a re-interpretation of the geological database and then extended the sampling grids of previous studies to the east of MCZ covering a grid of 600 x 1300 metres.

During June and July 1996, a drilling campaign was carried out at MCZ comprising 13 vertical boreholes (HU-1 to HU-13) totalling 1,854.2 m ranging from 92 to 228 m depth (Figure 6-2 and Figure 6-3). A total of 218 samples were obtained from 731 m of drill core and assayed for Cu and Au. The QP for this section is not aware of any additional information on the sampling/assaying procedures or of any QA/QC programs in effect for this drilling.

6.3.3 2005: Zamin Corporation

In 2005, Zamin Corporation acquired mining concessions Greatiam 10 and Greatiam 70. No significant work was completed (Corey, 2019).



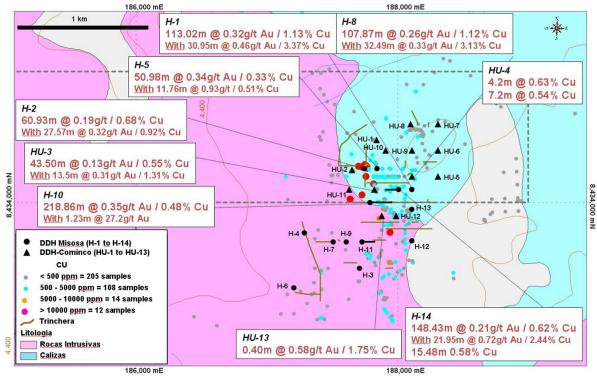


Figure 6-2. Southwestern Gold/Cyprus and Cominco Drilling (Myers, 2009)

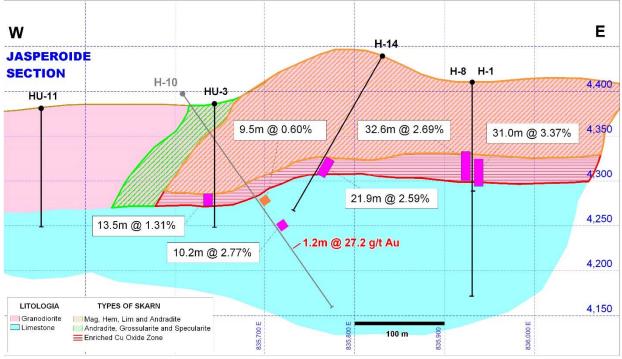


Figure 6-3. High Grade Copper Intercepts (Myers, 2009)



## 6.3.4 2009 to 2012: Compañia Minera Ares S.A.C (Hochschild Mining PLC)

In 2009, Compañía Minera Ares S.A.C. ("Minera Ares") acquired concessions Jasperoide 1, 2, and 3 from Southwestern Gold. Minera Ares conducted exploration over a three-year period from 2010-2012 including surface geological mapping, ground geophysics, diamond drilling and metallurgical testwork of drill core composite samples. The resultant geologic interpretation is shown on Figure 6-4.

## 6.3.4.1 Ground Geophysics (2010)

In 2010, Minera Ares completed 15 lines of induced polarization (IP) geophysics totalling 44.55 line-km and 67 lines of ground magnetics totalling 180 line-km of survey (Figure 6-5). The surveys were carried out by Arce Geofísicos. The results of this work identified high-chargeability and high magnetic anomalies interpreted to be coincident with skarn-hosted Cu-Au mineralization. Several prominent structural features were inferred from the geophysics, pre-mineral north-south structures and northeast and east-west structures interpreted to be related to mineralization. Several geophysical anomalies were targeted for diamond drilling.

Two of the survey lines of IP-Resistivity (line 900 and 1200), covered the southern portion of MCZ (Figure 6-6). The two interpreted chargeability cross-sections along IP line 900 and location of historical drill holes JADD11-01, 05, 03 and 04 with reported assay results provided in Figure 6-7.

6.3.4.2 Geological Mapping (2011)

In 2011, geological mapping at a 1:2000 was carried out at MCZ and at a 1:10000 scale for the surrounding areas with total coverage of about 1,650 hectares. During this campaign rock samples were collected as part of a verification program.



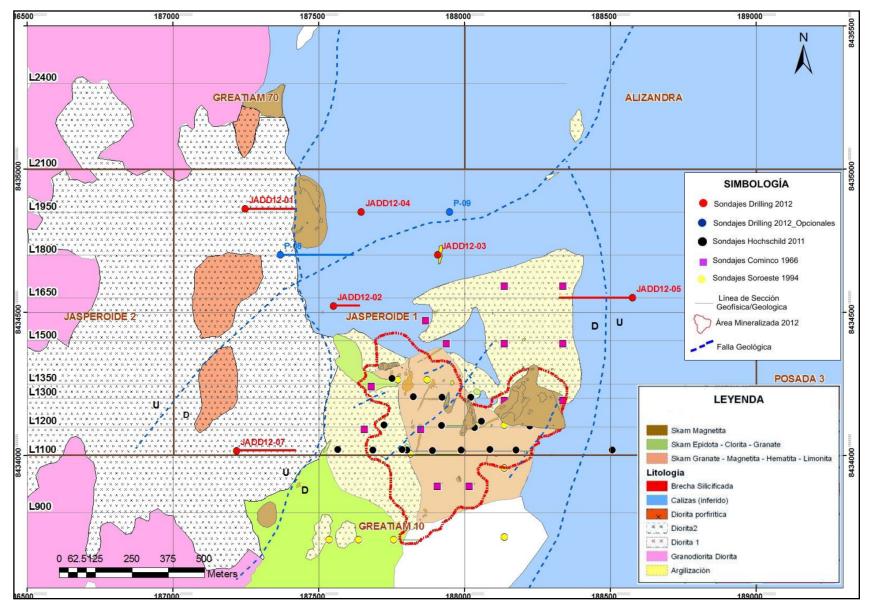


Figure 6-4. Interpreted Geology for the Cerro Huinihuini Prospect (Minera Ares, 2012)

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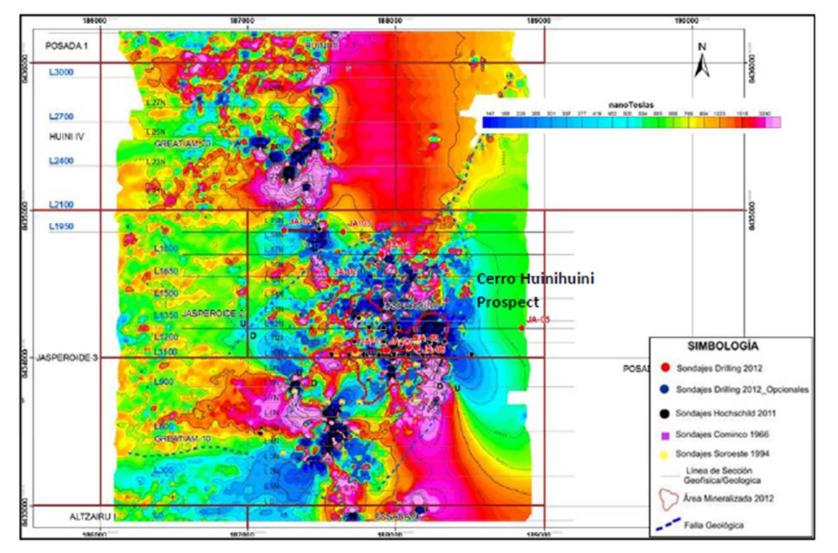


Figure 6-5. Reduced to Pole (RTP) Magnetic Image and Location of Survey Lines over the Cerro Huinihuini Prospect (Minera Ares, 2010)



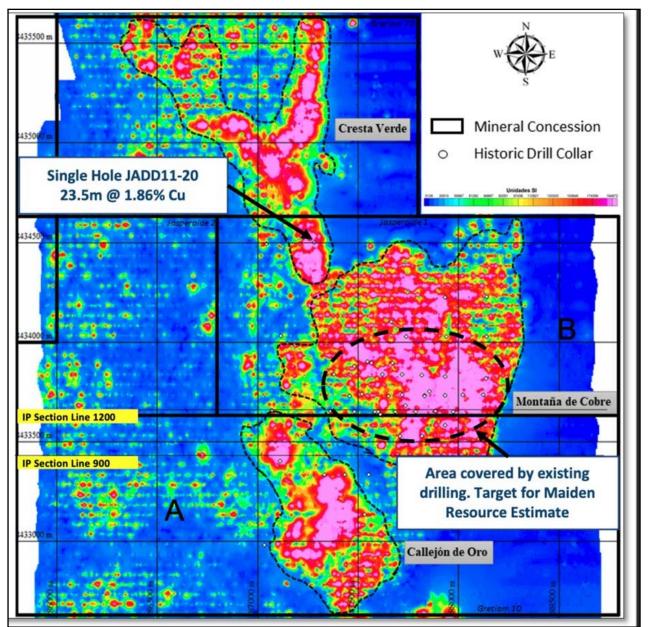


Figure 6-6. Ground Magnetic Analytical Signal Image over the Greatium 10 & 70 and Jasperoide 1 & 2 Concessions Showing High-Priority Area Targeted for Phase 1 Drilling and Maiden Mineral Resource Estimate (Minera Ares, 2011)



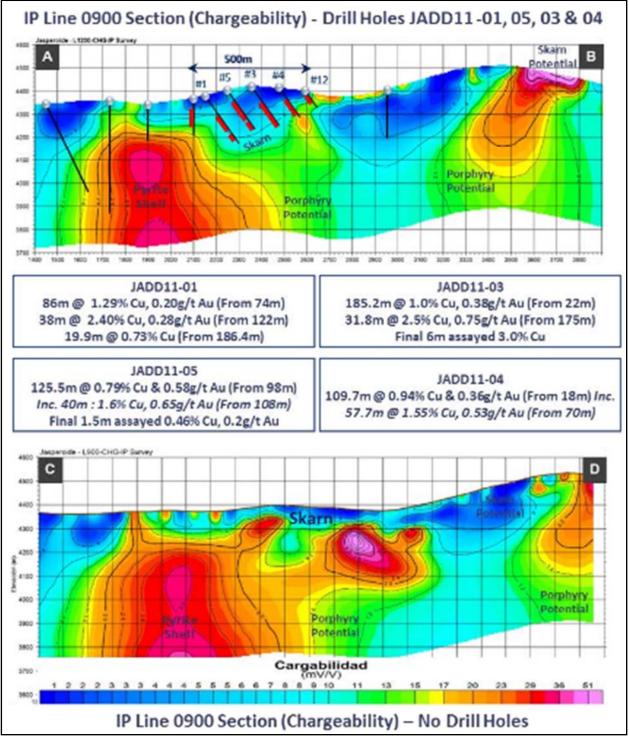


Figure 6-7. IP Line 900 Section Showing Chargeability Highs, Location of Drill Holes JADD-10, 03, 04, and 05 (Top Panel) with Highlights of the Drilling (Minera Ares, 2011)



6.3.4.3 Diamond Drilling Program (2011)

In 2011, Minera Ares completed a diamond drilling program of 20 holes (JADD11-01 to JADD11-20) for a total of 3,726.57 metres; 1,534 core samples were submitted for Cu and Au analyses. The holes were located to better define the area of known skarn-hosted mineralization within the MCZ area. The JA series holes on Figure 6-8 are from the 2011 program. The drilling corroborated Cu-Au grades within skarn reported by previous drilling and confirmed continuity of skarn-hosted mineralization.

## 6.3.4.4 Diamond Drilling Program (2012)

In 2012, Minera Ares completed a diamond drilling program totalling five holes (JADD12-01 to JADD12-05; one of the holes was aborted) for 1,905.75 metres; 791 core samples were submitted for Cu and Au analysis. Hole JADD12-03 (155.05 m) was drilled at MCZ and four others (JADD12-01, 02, 04, 05) were completed outside of the main prospect area, testing for buried porphyry-type mineralization adjacent to the skarn.

Holes JADD12-01, 02, 04, and 05 were drilled to 440.0 m, 387.8 m, 422.5 m, and 500.4 m, respectively, and intersected argillic-altered diorite along sections spaced approximately 400 metres. No porphyry-type alteration or mineralization was intersected by these holes. Drill section 1300N (Figure 6-9) shows hole JADD12-02 and section 1100N (Figure 6-10) shows holes JADD12-03 and 04, overlain on interpreted geology and geophysics. Hole JADD12-03 confirmed previous core assay results at the main zone, intersecting 155.0 m at 0.74% Cu, 0.15 g/t Au, and 18 g/t Ag. JADD12-04 intersected weakly altered diorite containing sporadic unmineralized endoskarn to the limestone contact at approximately 306 m down-hole (Jasper et al., 2021).

Table 6-3 summarizes significant drill intercepts for the various historical drilling campaigns. These are from the SWG and Minera Ares drilling. Most of the Cominco drilling was outside of the main deposit area.

6.3.5 2014 to 2016: Inversiones La Bruja S.A.C.

Inversiones La Bruja acquired concessions Greatiam 10 and Greatiam 70 from the previous owner, Zamin Corporation. In 2016, Inversiones La Bruja reinterpreted the existing drill hole information. No significant work was completed, and no other information or data is available from this work program.

#### 6.4 Historical Production

Other than the small-scale artisanal mining activity discussed in Section 6.1, there is no recorded historical production from the Property.

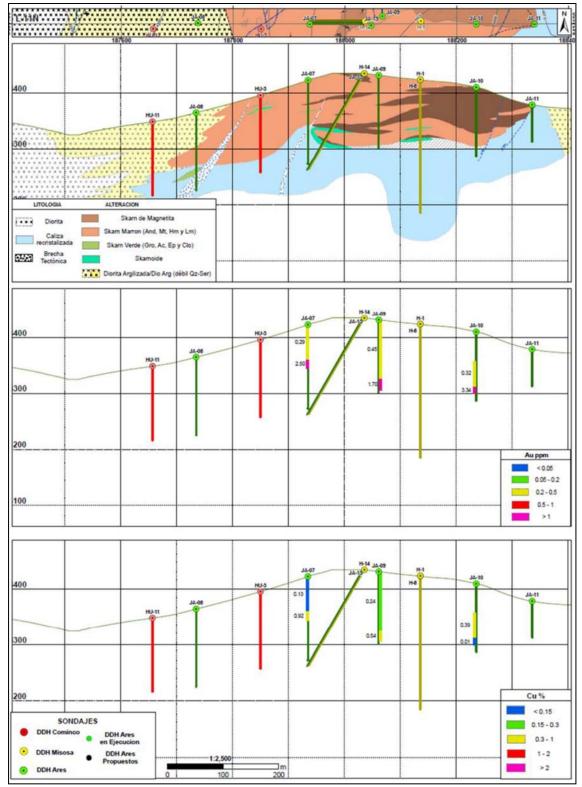


Figure 6-8. Drill Section Showing Interpreted Geology and Au (ppm) and Cu (%) Assay Results for 2011 Drilling Program (Minera Ares, 2011)



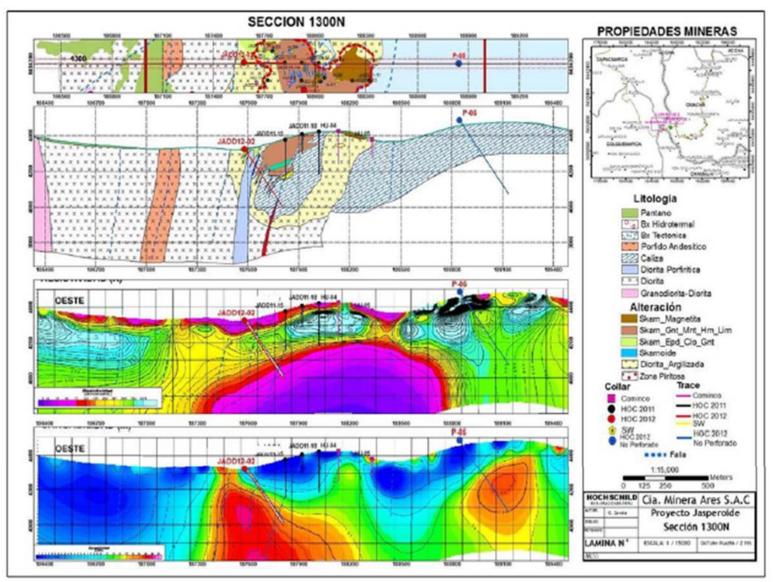


Figure 6-9. Compiled Cross Sections from Minera Ares 2012 Exploration Work Showing Geological and Geophysical Interpretation for Drill Section Line 1300N and Drill Hole JADD12-02 (Minera Ares, 2012)

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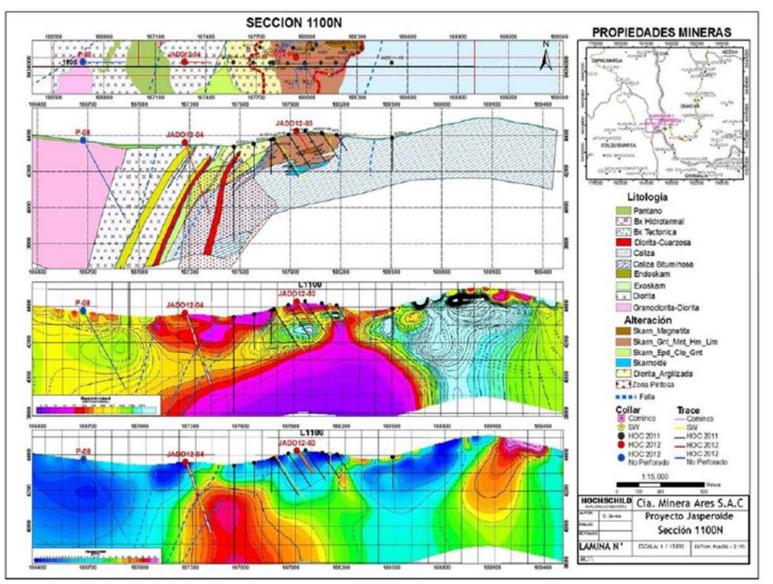


Figure 6-10. Compiled Cross Sections from Minera Ares 2012 Exploration Work Showing Geological and Geophysical Interpretation for Drill Section Line 1100N and Drill Hole JADD12-03 (Minera Ares, 2012)

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Table 6-3. Selected Drill Core Intercepts for Historical Drilling (Corey, 2019)								
Drill Hole	From (m)	To (m)	Length (m)*	Cu (%)	Au (g/t)	Target		
H-01	3.03	116.05	113.02	1.13	0.32	Skarn		
Incl	72.70	116.05	43.35	2.55	0.56	Skarn		
H-08	1.82	109.69	107.87	0.97	0.14	Skarn		
Incl	68.69	109.69	41.00	2.57	0.39	Skarn		
H-10	134.77	251.79	117.02	0.59	0.56	Skarn		
H-14	113.02	149.95	36.93	1.73	0.54	Skarn		
JADD11-01	74.00	160.00	86.00	2.44	0.72	Skarn		
Incl	122.00	160.00	38.00	2.40	0.28	Skarn		
JADD11-03	22.00	207.20	185.20	1.00	0.39	Skarn		
Incl	119.50	158.00	38.50	2.01	0.89	Skarn		
JADD11-04	18.00	127.70	109.70	0.94	0.36	Skarn		
Incl	70.00	127.70	57.70	1.55	0.53	Skarn		
JADD11-05	98.00	223.55	125.55	0.79	0.58	Skarn		
Incl	108.00	148.00	40.00	1.59	0.65	Skarn		
JADD11-07	48.00	80.00	32.00	1.59	0.65	Skarn		
JADD11-09	1.50	126.00	124.50	0.64	0.29	Skarn		
Incl	72.00	126.00	54.00	0.96	0.34	Skarn		
JADD11-10	70.00	110.30	40.30	3.54	0.33	Skarn		
Incl	86.00	110.30	24.30	5.76	0.09	Skarn		
JADD11-13	20.00	184.00	164.00	0.72	0.22	Skarn		
Incl	120.00	184.00	64.00	1.24	0.34	Skarn		
JADD11-15	124.00	215.80	91.80	0.72	0.23	Skarn		
Incl	164.00	215.80	51.80	1.05	0.33	Skarn		
JADD11-20	19.00	42.50	23.50	1.86	0.00	Skarn		
Incl	24.00	38.00	14.00	2.78	0.01	Skarn		
JADD12-03	37.10	152.00	114.90	0.97	0.37	Skarn		
Incl	90.00	152.00	62.00	1.61	0.46	Skarn		
Incl	103.50	138.00	34.50	2.55	0.69	Skarn		

 Table 6-3. Selected Drill Core Intercepts for Historical Drilling (Corey, 2019)

\*drill core intercepts are reported as lengths and do not represent true widths.

# 7.0 Geological Setting and Mineralization

# 7.1 Tectonic Setting

Geographically, the Jasperoide Cu-Au Project is located is the Western Andean Cordillera (Cordillera Occidental) of south-central Peru (Figure 7-1).

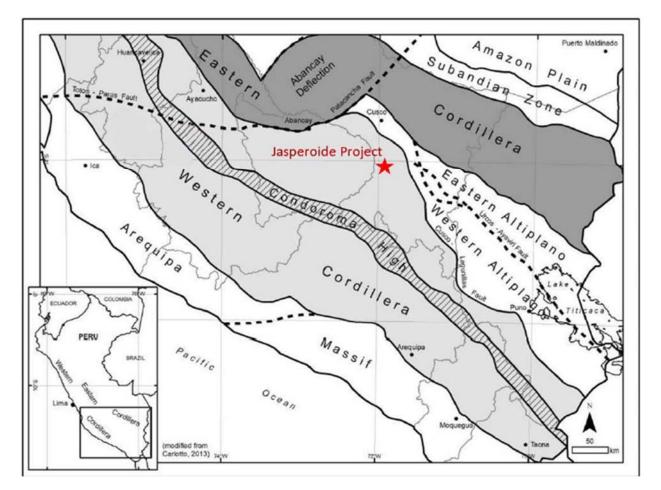


Figure 7-1. Geographic and Tectonic Setting of the Jasperoide Project (from Jasper et al., 2021)

The Andean Cordillera is the result of three major orogenic cycles: Precambrian, Palaeozoic to Early Triassic and Late Triassic to present. Although the two earlier cycles were important as they set up the crustal architecture of western South America, it is most recent and still ongoing orogenic event that has produced the most significant copper and gold deposits found to date within the Peruvian Cordillera. The tectonic domains and main mineralization belts of Peru are shown in Figure 7-2.



#### Jasperoide Copper-Gold Project Mineral Resource Estimate

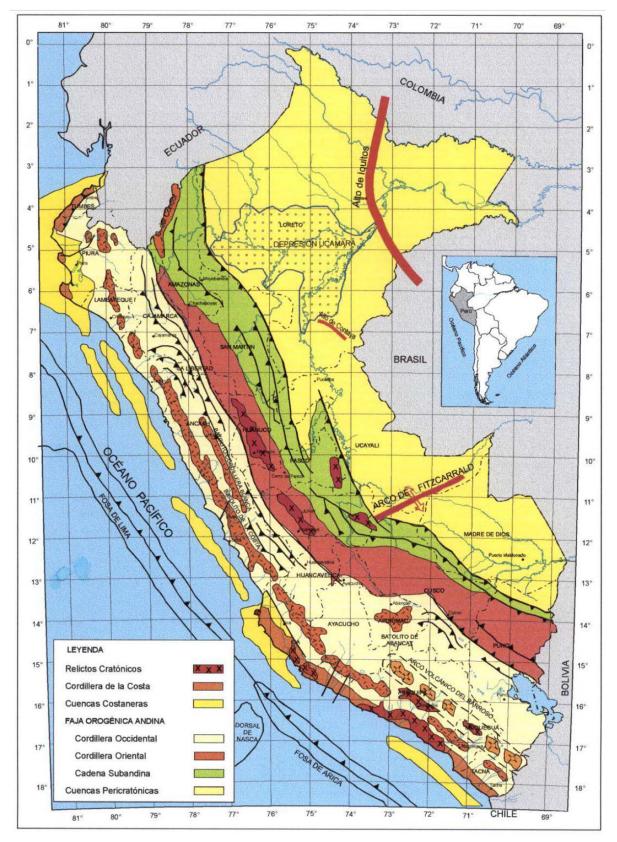


Figure 7-2. Simplified Tectonic Domains of Peru (INGEMMET 2000; Marzo, Lima - Peru)

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The latest tectonic cycle commenced with the opening of the South Atlantic in the Triassic. Beginning in the Triassic and continuing until the Late Cretaceous, a thick sequence of clastic sediments and limestones was deposited in shallow to deep water marine environments throughout southern Peru. This deposition probably involved at least two basin-forming extensional events, each associated with important intrusive and volcanic activity. Two magmatic belts / arcs, one closely following the present coastline and the other well inboard passing through the Cusco-Puno departments, developed in various diachronous pulses throughout the Mesozoic.

The Late Cretaceous-Early Tertiary marked the beginning of a new compressional tectonic cycle (Andean Cycle) that was punctuated by numerous alternating volcanic, magmatic, and deformational and uplift events. These were essentially driven by the subduction of the Nazca Plate eastward under the South America Plate. The geometry and character of these tectonic events was intricately linked to variations in the dip of the subducting Nazca Plate, plus changes in the relative convergence rate and azimuth. Discrete compressive episodes have been recognized, comprising: Peruvian (84-79 Ma), Incaic I (59-55 Ma), Incaic II (43-42 Ma), Incaic III (30-27 Ma), Incaic IV (22 Ma), Quechua I (17 Ma), Quechua II (8-7 Ma), Quechua III (5-4 Ma) and the Quechua IV (early Pleistocene).

Orogeny and uplift resulted in widespread regression and the Mesozoic and older sequences were intruded in the Palaeocene-Early Eocene by a batholithic complex associated with important porphyry and skarn copper mineralization along the present southern Peruvian coastline. Manifestations of this pre-Incaic Orogeny copper belt in southern Peru include the Toquepala, Quellaveco, Cuajone and Cerro Verde porphyries, which are distributed along a northwest-southeast striking regional structural corridor known as the Incapuquio Fault Zone, which extends approximately 175 km northwest from the Peru-Chile border area.

Incaic II orogenic activity, commencing in the Mid to Late Eocene and continuing into the Oligocene, was accompanied by the development of copper-gold-molybdenum mineralised systems in the Apurimac, Cusco and Puno such as Tintaya-Antapaccay, Las Bambas and Los Chancas. This orogeny formed broad fold structures with NW-SE to NNW-SSE strikes in the earlier sequences.

Deposition of significant volumes of continental volcanic sequences commenced in the Oligocene-Lower Miocene with the eruption of the Tacaza Group. Later pulses of volcanic activity throughout the Neogene deposited several lava and pyroclastic sequences. The latest of these include the Barroso Group, which ranges in age between Miocene-Pliocene and Pliocene. The Neogene events were particularly productive with respect to emplacement of large gold deposits, the Lower Miocene to the Lower Pliocene being the most significant mineralizing period in this part of Peru.

With reference to the INGEMMET (Geological, Mining, and Metallurgical Institute of Peru) Metallogenic Zones of Peru, the Jasperoide Project lies within Metallogenic Zone XIV, the Andahuaylas-Yauri Belt ("AYB") of southern Peru (Figure 7-3), which is recognized as a porphyry copper and skarn belt (Perelló et al., 2003). The AYB can be traced for more than 300 km and generally strikes northwest-southeast. Perelló, et al. (2003), recognized that the location of the AYB roughly corresponds with, and is likely related to, a transition between steep (to the north) and flat (to the south) subduction of the Nazca Plate during the Eocene-Oligocene. This transition can be seen as a change from a normal northwest-southeast orientation to an almost east-



Jasperoide Copper-Gold Project Mineral Resource Estimate

west orientation of the 100 km and 200 km depth contours of the subducting Nazca Plate (Figure 7-4).

The Jasperoide Cu-Au Project is situated in the central part of the Andahuaylas-Yauri Belt (Figure 7-3) on the southeast margin of the Abancay Deflection (Figure 7-4). The AYB hosts copper-gold-molybdenum camps/deposits, including Las Bambas, Los Chancas, Cotambambas and Tintaya, that are related to the Eocene-Oligocene age Andahuaylas-Yauri Batholith (Figure 7-5).

The AYB is a northern extension of the copper-rich belt of the same Eocene-Oligocene age that strikes broadly north-south in Chile (Figure 7-4). In Chile, this belt broadly follows the well-known "West Fissure" structure, along which lie deposits of similar age such as Escondida, Zaldivar, and Chuquicamata.



#### Jasperoide Copper-Gold Project Mineral Resource Estimate

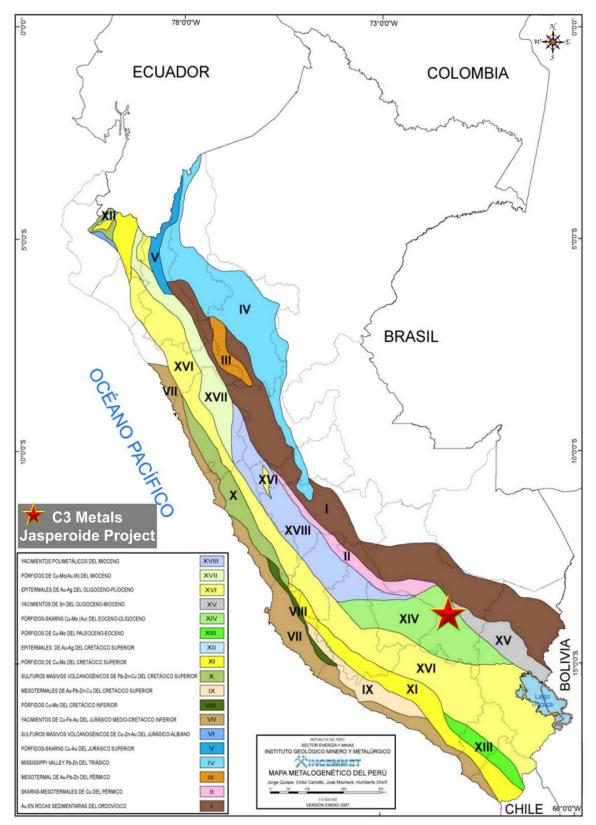


Figure 7-3. Geological Setting of the Jasperoide Property Relative to INGEMMET Metallogenic Zones (after Perelló et al., 2003)



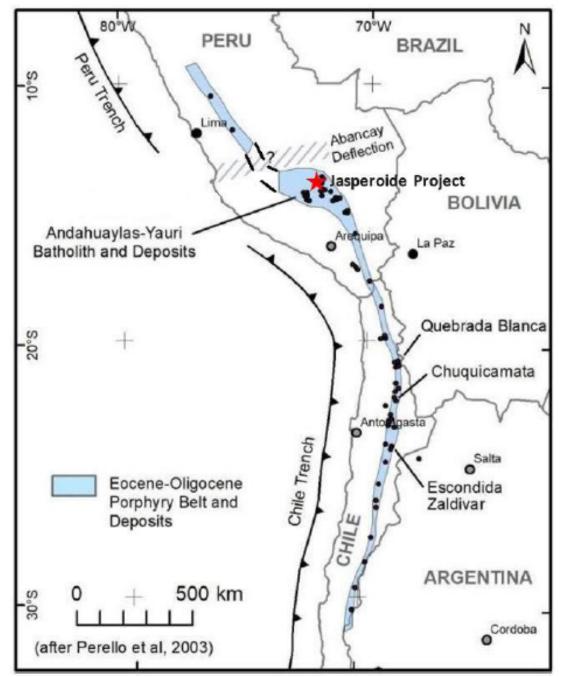
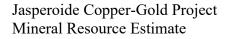


Figure 7-4. Geotectonic Setting of the Jasperoide Cu-Au Project Within the Eocene-Oligocene Metallogenic Belt and the Andahuaylas-Yauri Porphyry-Skarn Belt and Principal Deposits (after Perelló et al., 2003)



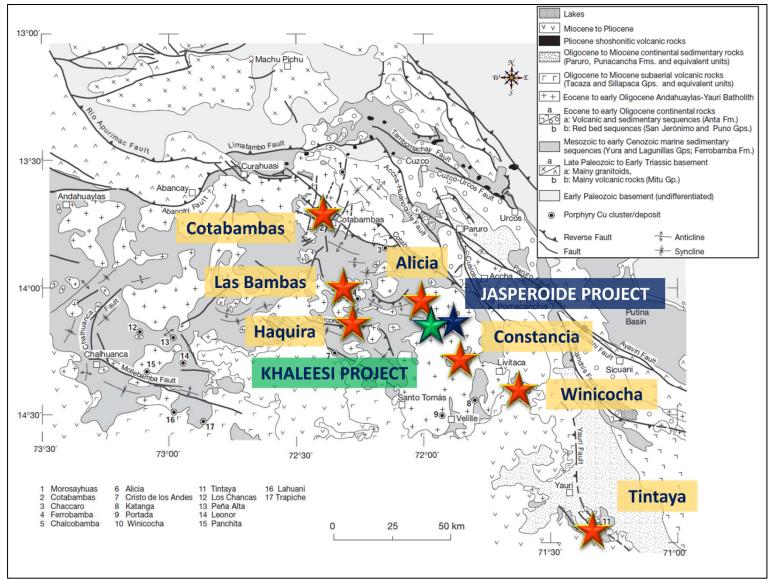


Figure 7-5. Regional Geology of the Andahuaylas-Yauri Belt. Red Dots are Porphyry Cu and Skarn Deposits (after Perelló et al., 2003)

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#### 7.2 **Geologic Setting**

The presence of significant Cu-Au-Fe skarn mineralization throughout the Jasperoide Property and to the northeast and southwest is distinctive of the INGEMMET metallogenic zone XIV, which is characterized by Cu (+/-Mo) porphyry deposits and Cu-Au-Fe skarn deposits, otherwise referred to as the "Andahuaylas-Yauri Belt" of porphyry and skarn mineral deposits (see Figure 7-3).

In the Jasperoide region, dismembered blocks of Precambrian metamorphic rocks form the basement. Mesozoic sequences, comprising several thousand metres of mainly Jurassic-Cretaceous marine clastic sediments and limestones, were deposited in a broad marine shelf to deep water environment on this basement (Jasper et al., 2021).

Stratigraphically the following units are recognised within the region (from older to youngest):

- Yura Group (Middle Jurassic to Lower Cretaceous) clastic sedimentary sequences.
- Ferrobamba Formation (Middle to Upper Cretaceous) dark limestones with fossils and chert nodules.

During the Eocene to Early Oligocene calcareous sediments of the Ferrobamba Formation were intruded by the Andahuaylas-Yauri Batholith (see Figure 7-5), that broadly corresponds in time with the Incaic Orogeny. This orogeny folded the earlier Mesozoic sequences into moderate to tight folds with northwest-southeast to east-west-striking axial planes. More or less synchronous with the intrusion of the Batholith and the Incaic Orogeny, continental red beds, and fluviatile clastic sediments and volcanics were deposited in northwest-southeast striking fault-controlled basins around the eastern margins of the currently outcropping magmatic belt.

The Andahuaylas-Yauri Batholith was emplaced south of the "Abancay Deflection" (see Figure 7-4) which records a tectonic realignment of structural orientations from northwest-southeast to east-west and northeast-southwest in response to a change in subduction dynamics. The batholith records at least three phases of emplacement broadly dated between 48 and 32 Ma (Bonhomme and Carlier, 1990; Carlier et al., 1996). The first phase was characterized by intrusion of calcalkaline gabbro and diorite, the second stage by quartz diorite and granodiorite, and a third phase of high-level subvolcanic intrusions during the Late Eocene–Early Oligocene which are spatially associated with extensive skarn mineralization (Figure 7-6). The contact between the Andahuaylas-Yauri Batholith and the older Ferrobamba limestone is host to numerous Cu-Mo-Au porphyry and Cu-Au skarn deposits and occurrences.

Post-Early Oligocene continental volcanism deposited several thousand metres of volcanics and pyroclastic in several pulses throughout the Neogene. These magmatic pulses were associated regionally with high-level epithermal gold camps/mines in southern Peru such as Orcopampa, Arcata, Antapite, Ares, Cailloma, La Rescatada, etc.



#### 7.3 Property Geology

The Jasperoide Project is located at the western contact between a large raft of Cretaceous Ferrobamba Formation sedimentary / chemical rocks and intrusive rocks of Paleocene to Early Oligocene (*see* Figure 7-5; Figure 7-6). The stratigraphy of the Ferrobamba Formation is well documented by Perelló et al., 2003, which shows key stratigraphic horizons in the Ferrobamba Formation are host to multiple world class skarn deposits. The strongest skarn alteration and highest-grade mineralization are generally coincident with the upper dolomite and lower impure limestone units of the Ferrobamba Formation, which act like "sponges" to hydrothermal fluids.

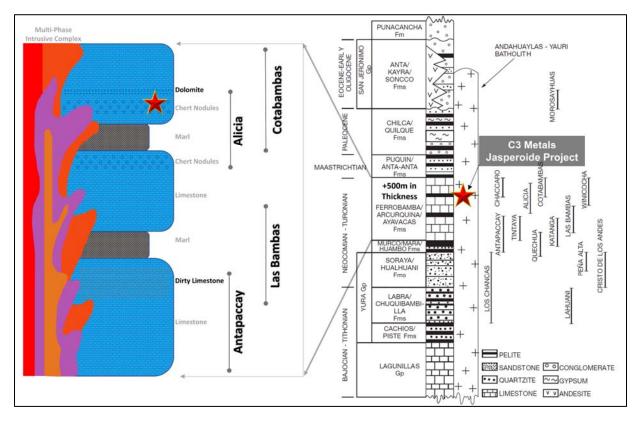


Figure 7-6. Stratigraphy and Mineralization of the Andahuaylas-Yauri Belt, Peru (after Perelló et al., 2003)

The intrusive / carbonate contact zone at the Jasperoide Project displays broad zones of pervasive prograde and retrograde skarn alteration that extends for at least 15 km north-northeast of MCZ and over 13 km south-southwest of COZ. This 28 km zone of semi-contiguous skarn alteration is cumulatively herein referred to as the "Jasperoide Belt" and Jasperoide Project is centrally located to the belt (*see* Figure 7-7). Approximately 10 km west of Jasperoide Project is a second and parallel copper-gold mineralized belt, host to the Alicia Porphyry & Skarn and Alcatraz Polymetallic Projects (see Figure 7-7).



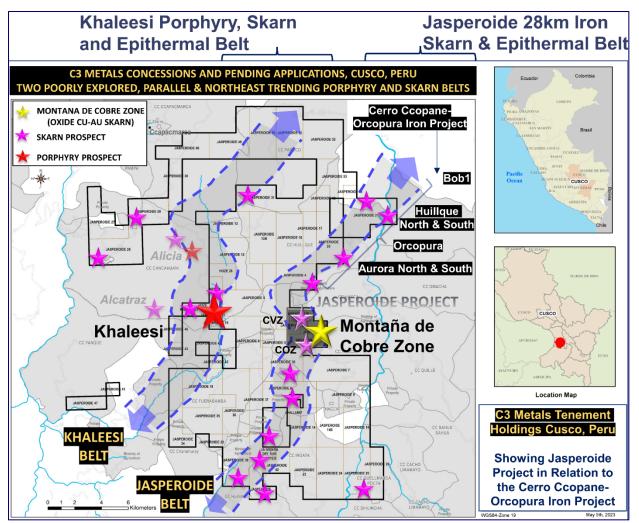


Figure 7-7. C3 Metals 2023 tenement holdings, showing the Jasperoide and Khaleesi porphyry, skarn and epithermal copper-gold belts (C3 Metals, 2023)

Cuervo Resources Inc. ("Cuervo") explored the northeast extension of the Jasperoide Belt from 2008 to 2013 and historically referred to this as the Cerro Ccopane-Orcopura Iron Project "CCOIP". Cuervo drill tested four magnetite skarn bodies along the CCOIP trend, which from south to north include Aurora, Orcopura, Huillque and Bob1 (Figure 7-8). Cuervo commissioned B.J. McKay Ltd. ("BJML") to undertake and produce a National Instrument 43-101 ("NI 43-101") compliant Technical Report for CCOIP in 2013 (*Refer to Preliminary Resource Estimate of the Cerro Ccopane-Orcopura Iron Project, Cusco, Peru Cuervo Resources Inc (B.J. McKay Ltd. 2013)*.

"The overall resource of the Ccopane-Orcopura property is 632.0 Mt. There is an indicated resource, at Orcopura, of 55.6 Mt at a grade of 46.75% Fe using a cut-off grade of 20.0% Fe and an inferred resource of 576.4 Mt at a grade of 43.44% Fe using a weighted cut-off grade of 13.4% Fe at Orcopura, Huillque, Aurora and Bob 1. The Bob 1 iron deposit contains an inferred resource of 453.5 million tonnes (Mt) at a grade of 41.96% Fe using a 10% cut-off grade."

The Mineral Resource estimate is historical in nature and the QP for this section has not done sufficient work to classify the historical estimate as current Mineral Resources or Mineral

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Reserves. C3 Metals is not treating the historical estimate as current Mineral Resources or Mineral Reserves.

The Cerro Ccopane-Orcopura Iron Project appears to be contiguous with the Jasperoide skarn system, which has similarly developed along the western limb of a north-south striking anticline, herein referred to as La Cavernita Anticline. It is unclear what volume of the Ca-Mg and Fe-skarns occur within the Company's tenement holdings, as that area is not currently permitted for mineral exploration activities.

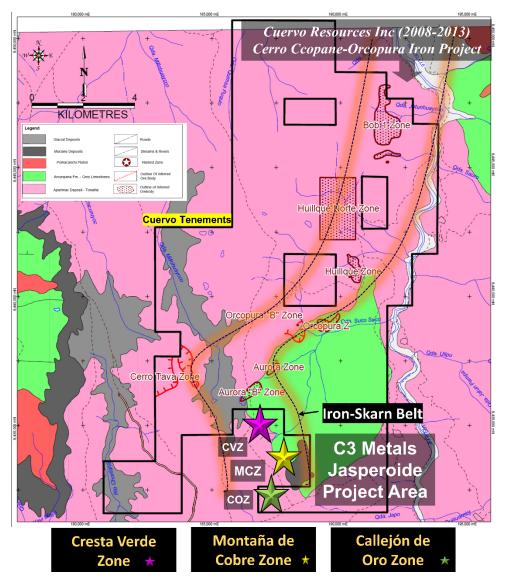


Figure 7-8. Cuervo's Cerro Ccopane-Orcopura Iron Skarn and Jasperoide Projects (C3 Metals, 2023)

### 7.3.1 Jasperoide Project Geology

A multi-phase tonalite porphyry intrusive complex exploited the contact between a large granodiorite batholith in the western project area and carbonate and siliciclastic rocks of the Ferrobamba Formation in the eastern property (see Figure 7-9). At least three phases of porphyritic intrusions are recognized, confirmed in outcrop or in drill core.

Polymict breccias are common at the porphyry – skarn or skarn – marble contacts, C3 Metals observed a fragment of diorite porphyry containing disseminated chalcopyrite, confirming that late stage brecciation occurred during the waning stages of the hydrothermal system.

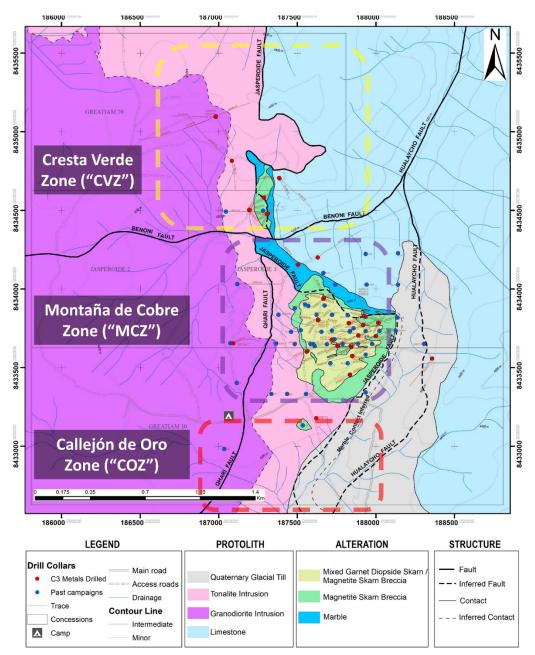


Figure 7-9. Prospect scale geology map of the Jasperoide Project area showing three prominent zones of skarn alteration and copper-gold mineralization (C3 Metals, 2023)

#### 7.3.2 Alteration

Alteration styles recognized include prograde and retrograde skarn, porphyry style potassic, phyllic and propylitic alteration, epithermal style low, intermediate and high sulphidation and abundant pyrite. Three zones of pervasive skarn-style Ca-Mg alteration with telescoped late-stage magnetite alteration have been defined at the Jasperoide Project, namely the MCZ, CVZ and COZ. Skarn alteration intensity and mineralogy are controlled by one or all of the following 1) favorable stratigraphy, dolomite & dirty limestone of Ferrobamba Formation, 2) depth and distance from intrusive rock / carbonate rock contact, 3) structural setting and preparedness of the host rock. Skarn alteration at Jasperoide is stratabound and replaces dolomite and dirty limestones of the Ferrobamba Formation.

Geologic Event	Interpreted Alteration & Mineralization Timeline				
Prograde Skarn	Garnet $\rightarrow$ Diopside; Wollastonite; Pervasive Alteration of Dolomite				
Retrograde Skarn	$Magnetite \rightarrow Phlogophite \rightarrow Actinolite \rightarrow Epidote \rightarrow Chlorite; Prehnite$				
<b>Reducing Conditions</b>	Semi-Massive Pyrrhotite; Brecciated Skarn; Sulphide-Rich				
Intermediate Argillic	$Quartz \rightarrow kaolinite \rightarrow halloysite \rightarrow smectite \rightarrow illite \rightarrow specularite \rightarrow pyrite$				
High Sulphidation	Telescoped; epithermal; vuggy quartz breccia; pyrite; enargite				
Porphyry Copper	Telescoped; Chalcopyrite, Trace Bornite				
Low & Int Sulphidation	Telescoped; Quartz, Hematite, Calcite, Mushketovite,				
FeOx / Sulfate minerals	Skarn Oxidized & Leached; Goethite, Jarosite, Limonite, Manganese				
Supergene Profile	Enrichment Process, Secondary Copper Species				

 Table 7-1. Relative chronology of the alteration and mineralization; Note, alteration and mineralization go from older on the top to younger on the bottom

SWIR spectrometer analyses was undertaken on drill core and surface samples from Jasperoide Project area (Khashgerel Bat-Erdene et al., 2022), identifying the following minerals: garnet, diopside, wollastonite, tremolite, actinolite, phlogophite, epidote, prehnite, chlorite, muscovite, illite, calcite, ankerite, dolomite, smectite, nontronite, vermiculite, saponite, kaolinite, halloysite, zeolite and gypsum. Skarn alteration minerals become progressively more varied and abundant towards the contact between the intrusive and carbonate rocks. Proximal magnetite-chalcopyrite-pyrite skarn grades to a distal and less well-mineralized garnet and pyroxene skarn which is locally overprinted by propylitic and low temperature epithermal alteration mineralogy.

At CVZ, secondary biotite replaces hornblende in monzodiorite and a green selvage to garnet endoskarn, tentatively identified as scapolite. Low temperature clay alteration (illite, smectite, nontronite, vermiculite, saponite, kaolinite, and halloysite), with associated silicificationspecularite, and abundant pyrite, overprinting epidote-chlorite (retrograde skarn) at MCZ is classified as intermediate argillic alteration and is porphyry system-related.

Jasperoide is highly prospective for porphyry Cu-(Au-Mo) mineralization, interpreted beneath or proximal to CVZ.



The following alteration assemblages occur at the Jasperoide Project.

#### 7.3.2.1 Prograde Skarn

Prograde skarn comprises, a) garnet-diopside (endo and exoskarn), b) garnet-scapolite (endoskarn), and c) wollastonite-tremolite-calcite (limestone exoskarn), see Figure 7-10. Scapolite requires verification by XRD or thin section petrography.



Figure 7-10. HQ <sup>1</sup>/<sub>2</sub> core sample JAS2700-03 (125.20m): MCZ garnet-diopside skarn telescoped by magnetite pseudomorphs after specular hematite in veins. Intensely oxidized with secondary malachite and chrysocolla, and suspected copper wad. (C3 Metals, 2023)

#### 7.3.2.2 Retrograde skarn

Retrograde skarn comprises, magnetite, phlogophite, actinolite-tremolite, epidote, prehnite, chlorite and calcite+/- chalcopyrite, pyrrhotite and pyrite. It is leached of copper sulphides and enriched in secondary copper species.

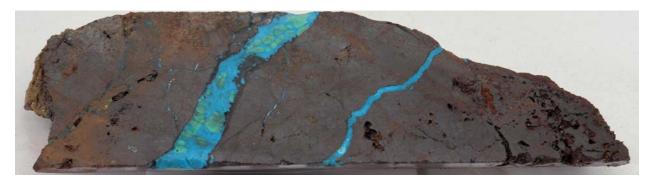


Figure 7-11. HQ <sup>1</sup>/<sub>2</sub> core sample JAS2750-06 (122.76m): MCZ massive magnetite skarn, intensely oxidized with secondary malachite, chrysocolla, and suspected chalcocite. (C3 Metals, 2023)



#### 7.3.2.3 Potassic

Secondary biotite replacing hornblende in monzodiorite is inferred from visual observations in JAS4050-02 and JAS4350-02 at CVZ and verified by thin section petrography (Figure 7-12)

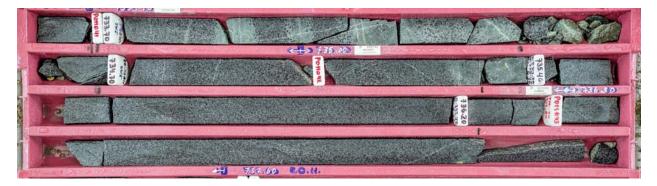


Figure 7-12. HQ <sup>1</sup>/<sub>2</sub> core wet photo, JAS4050-02, Box202 (733.60m - 737.60m): Secondary biotite replacing hornblende in a tonalite at CVZ, verified by thin section petrography. (C3 Metals, 2023)

### 7.3.2.4 Intermediate Argillic

Texturally destructive muscovite alteration occurs in a large zone of intermediate argillic alteration (Figure 7-13) characterized by low temperature (<220° C) clay minerals (illite, chlorite, smectite, nontronite, vermiculite, saponite, kaolinite, and halloysite), associated silicification, specularite and abundant pyrite alteration. This alteration assemblage is likely porphyry-related, with Perello et al., (2004) describing similar overprinting alteration relationships at the Cotabambas porphyry.



Figure 7-13. (Left) Looking east towards MCZ and showing the Qhari Fault (Right) the subvertical, north-south striking, strike-slip fault of poorly constrained offset, showing intense intermediate style clay-sericite alteration at surface. (C3 Metals, 2023)



#### Jasperoide Copper-Gold Project Mineral Resource Estimate

#### 7.3.2.5 Low and High Sulphidation

Multi-stage breccias and epithermal style veining occur proximal to the Benoni Fault and near to the Qhari Fault on section line JAS2700. Epithermal style alteration is characterized by low-sulphidation chalcedonic quartz breccias, high sulphidation quartz breccias (see Figure 7-14) and late-stage calcite veins.



# Figure 7-14. (Left) chalcedonic quartz breccias at MCZ (Right) subvertical, north-south striking, high-sulphidation quartz breccias. (C3 Metals, 2023)

#### 7.3.2.6 Carbonate

Dolomite alteration was found in drill core at Jasperoide and in outcrop at Khaleesi. In some cases the dolomite was mixed with smectite, making it difficult to identify in hand specimens.

Recrystallization of limestone occurs proximal to the contact with nearby intrusions, resulting in a well-developed "marble front" that diminishes away from the intrusive contact.

#### 7.3.2.7 Propylitic

Chlorite-epidote alteration is common within intrusive rocks and telescoping garnet-diopside skarn alteration.

#### 7.3.3 Structural Geology

Massive uplift and severe deformation of carbonate and siliciclastic rocks is evident throughout the Property, with metre- to kilometre-scale open or isoclinal folding and recumbent folds confirmed in the field and using drone and satellite imagery.

Four key structural elements are deemed most important for mineralization at Jasperoide, namely the La Cavernita Anticline, Jasperoide Thrust Fault, Hualaycho Thrust Fault, and the Qhari Fault. Additionally, hydrothermal fluids exploited the north-northeast to south-southwest contact between the tonalite intrusive complex and carbonate lithologies of the Ferrobamba Formation. The Benoni Fault is possibly the most prominent fault on the property, but its controls on mineralization are less obvious at this early stage in the exploration development of the Project.



#### Jasperoide Copper-Gold Project Mineral Resource Estimate

#### 7.3.3.1 La Cavernita Anticline

The La Cavernita Anticline at current levels of exposure is comprised of Ferrobamba Limestone and is named after one of several small caverns that occur in its core and on its east limb. The anticline has a subvertical axial plane and the Benoni Fault appears to offset the Las Cavernita Anticline left-laterally approximately 150 meters in plan view (Figure 7-15 and 7-17). South of the Benoni Fault, at MCZ, the Jasperoide Thrust Fault has decapitated the La Cavernita Anticline placing intrusive rock (now endoskarn) over the top of the anticline. Glacial erosion removed the central section of the skarn body (Figure 7-16), that was interpreted to once connect CVZ to MCZ. North of the Benoni Fault the anticline hosts several small caverns in the limestone bedding (Figure 7-18).

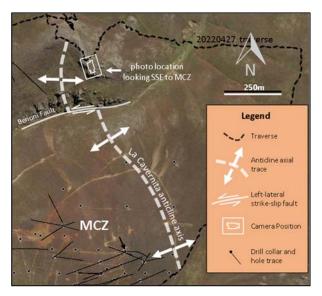


Figure 7-15. Plan view showing the trace of the La Cavernita Anticline on an orthophoto. Note the left-lateral offset of the anticline axis on the Benoni Fault (C3 Metals, 2023)



Figure 7-16. A photograph shot from the location marked in (1A) looking to the south to Montaña de Cobre. Note that the anticline axis traces to the east of the main skarn body. Mineralized endoskarn lies in the hangingwall of the Jasperoide Fault where the anticline has been decapitated. (C3 Metals, 2023)



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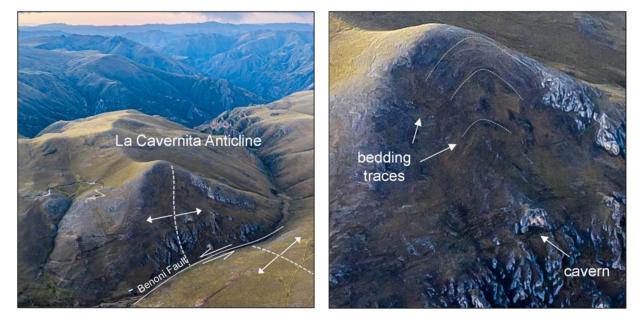


Figure 7-17. Aerial view looking North showing the axial trace of the La Cavernita Anticline. (C3 Metals, 2023)

Figure 7-18. Cropped view of same image in Figure 7-17 with bedding traces drawn out for emphasis. One of several small caverns is pointed out in the core of the anticline. (C3 Metals, 2023)

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#### 7.3.3.2 Jasperoide Thrust Fault (Conceptual)

The Jasperoide Thrust Fault has placed batholithic granodioritic intrusive rock onto sedimentary rock (Ferrobamba Limestone at the surface) across the property. In Figure 7-19, a cross-section is presented in which all drill holes have been plotted with downhole lithologies shown in three classifications: Quaternary (including colluvium and glacial till), intrusive rock, and sedimentary rock. A triangulated surface is shown in red that divides intrusive rock above from sedimentary rock below. This modeled surface is an approximate "90% solution," meaning that there are some limestone intercepts locally enclosed in intrusive rock above this surface, and there are some intrusive rock intercepts below this surface. In most cases the intrusive rock in these deep intercepts beneath the fault surface are believed to post-date and locally crosscut the dividing interface between intrusive and sedimentary rock (the thrust fault surface). At MCZ, there is chaotic brecciation combined with intense alteration and deep weathering at the contact between the igneous and sedimentary protoliths that make identifying this dividing surface in drill holes confidently a challenge. The chaotic brecciation at the base of the skarn is in part thought to be caused by the movement of the younger Hualaycho Thrust Fault beneath the Jasperoide Thrust Fault (discussed below). A curious aspect of the Jasperoide Thrust Fault is that it rapidly steepens on the north side of the property in the CVZ area.



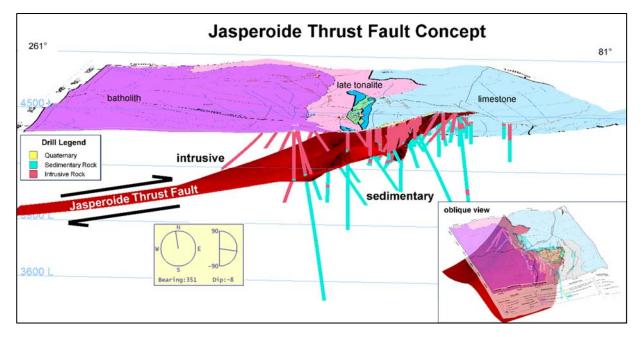


Figure 7-19. Cross-section looking on azimuth 351° and down 8°. The surface that divides intrusive rock from sedimentary rock across the property is considered to be a fault termed the Jasperoide Thrust Fault. The surface is more complicated at Montaña de Cobre where skarn alteration and weathering have modified this interface. (C3 Metals, 2023)

#### 7.3.3.3 Hualaycho Thrust Fault (Conceptual)

On the north end of the property, in the CVZ area, the Jasperoide Fault steepens rapidly, perhaps by getting caught up in the west limb of the La Cavernita Anticline (Figure 7-20). The Hualaycho Fault, which has been mapped on the surface east of MCZ, is perceived to have initiated beneath the Jasperoide Fault where it got caught up in the west limb of the La Cavernita Anticline, rapidly steepening the Jasperoide Thrust Fault in that area and causing the movement along it to halt in favor of breaking through at depth along the Hualaycho Thrust Fault. These two thrust faults achieve their maximum separation (modeled up to 400 m) in the northern area of the property. At MCZ these two surfaces have highly variable separation distances. In the COZ area these two faults likely become one entity which appears to be subparallel to the topographic surface in that area. At MCZ the chaotic, highly disrupted surface of the Jasperoide Fault has probably in part been caused by the forcing of the rock mass in the hangingwall of the Hualaycho Thrust Fault. This disruption of the rock mass would have provided enhanced structural preparation for later hydrothermal fluids to cause skarn alteration and mineralization as the fluids entered the broken rock (Figure 7-21).



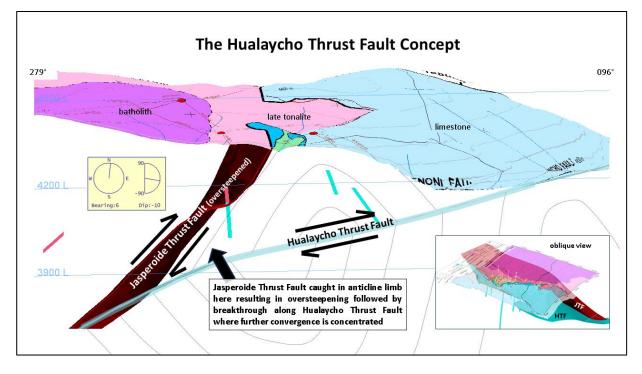
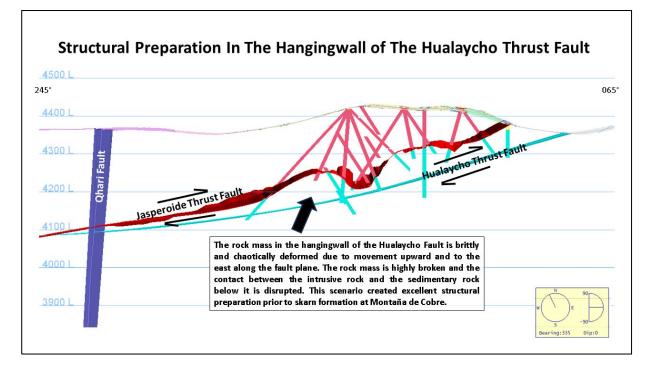


Figure 7-20. Cross-section looking on azimuth 6° and down 10°. The Hualaycho Thrust Fault is shown here in the Cresta Verde area taking up the convergent deformation and receiving transfer from the Jasperoide Thrust Fault which locked up after steepening into the west limb of the La Cavernita Anticline. Bedding planes in the sedimentary rocks are shown schematically to illustrate the perceived sense of movement, although its magnitude of offset is not constrained. (C3 Metals, 2023)





#### Figure 7-21. Cross-section on Montaña de Cobre line JAS2700 showing drill holes classified by protolith as in Fig 1, the topographic surface, the Jasperoide Thrust Fault, and the Hualaycho Thrust Fault. Note the contorted Jasperoide Thrust Fault plane in the hangingwall of the Hualaycho Thrust Fault. (C3 Metals, 2023)

#### 7.3.3.4 Qhari Fault

The Qhari Fault (Figure 7-21) is a subvertical, roughly north-south striking probably strike-slip fault of poorly constrained offset that cuts the younger tonalite as well as the batholithic intrusive rock at the surface. In the subsurface it should cut through both the Jasperoide Thrust Fault and the Hualaycho Fault. It is apparently a late fault as where it is exposed at the surface west of MCZ it is intensely clay altered and locally mineralized with sulphides. This fault seems to have exerted some control on the emplacement of the younger tonalite unit which is a steep tabular body that cuts the thrust faults just as the Qhari Fault does. The Qhari Fault also appears to have continued movement after the emplacement of the younger tonalite intrusion allowing the hydrothermal fluids to cause intense clay alteration of the intrusive rock.



# 7.4 Mineralization

Two styles of copper mineralization occur at the Jasperoide Project, 1) hypogene or primary copper mineralization at CVZ, COZ and less common at MCZ and 2) secondary copper or "supergene enrichment" at MCZ.

#### 7.4.1 Secondary or Supergene Copper Mineralization

Supergene enrichment process at MCZ has left behind an intensely "leached cap", which is low grade and locally devoid of copper mineralization. The upper 25-50 meter thick leached zone comprises a mixture of intensely oxidized Ca-Mg and Fe-skarns with significant hematite, goethite, jarosite and manganese. Secondary copper species are difficult to identify in the leached zone. Malachite, chrysocolla, brochantite, chalcocite, azurite and other secondary copper species are well developed in the underlying magnetite skarn and skarn breccias, and form a zone of copper pooling proximal to the marble front (Figure 7-22 and Figure 7-23)

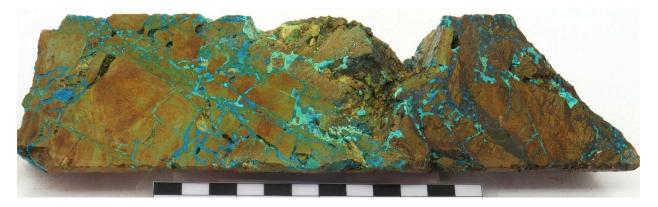


Figure 7-22. DDH JAS2750-07 (106.70m), crackle breccia flooded with secondary copper. (C3 Metals, 2023)

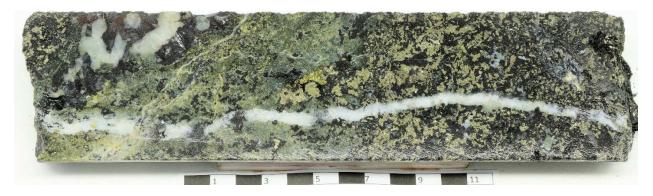


Figure 7-23. Copper pooling in JAS2650-06, interval 109.0 – 113.0 m assayed 4 m at 12.8% copper. (C3 Metals, 2023)



#### 7.4.2 Hypogene Copper Mineralization

MCZ is generally intensely oxidized, and sulphide mineralization is rarely observed in drill core. C3 Metals JAS2700-05 is the only drill hole that intersected significant primary chalcopyrite mineralization. Like CVZ and COZ, the MCZ was initially mineralized with significant pyrite.



#### Figure 7-24. JAS2700-05 (270.00m) Prograde garnet-diopside-phlogopite skarn telescoped by retrograde epidote-magnetite-specularite-calcite alteration. Estimated 15% fresh pyrite and 1% chalcopyrite as infill. (C3 Metals, 2023)

7.4.3 Epithermal Gold Mineralization

Epithermal gold mineralization is associated with centimeter to meter scale epithermal-style quartz veins with pyrite mineralization.



Figure 7-25. H-10 (210.9-212.1m): Assayed 27.2g/t Au. This vein shows classic colloformcrustiform banding. (C3 Metals, 2023)



Figure 7-26. JADD11-03 (180-182m): Assayed 8.4g/t Au and 0.60% Cu. Interpreted as a brecciated epithermal vein overprinting the skarn. (C3 Metals, 2023)



7.4.4 Mineralization Model

Much of the mineralization at Jasperoide is hosted within magnetite-garnet skarn, and lesser in cross-cutting low, intermediate and high sulphidation epithermal veins, all related to an interpreted porphyry copper-gold system. The model in Figure 7-27 suggests a fold and thrust belt intruded by a multiphase intrusive complex, with pervasive skarn alteration of the favorable dolomite and impure limestone units that occur in the upper and lower Ferrobamba Formation, respectively. Jasperoide proper (MCZ, CVZ and COZ) is host to multiple skarns and potentially stacked skarns at depth. The skarn bodies are telescoped by low-, intermediate-, and high-sulphidation epithermal vein systems, generally occurring as the porphyry hydrothermal system wanes.

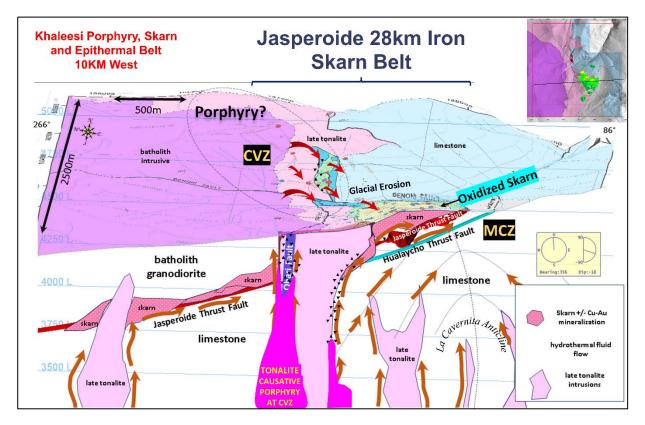


Figure 7-27. A schematic cross-sectional diagram looking on azimuth 356° and down 18° showing conceptual hydrothermal fluid flow from depth predominantly along late intrusion contacts and the Qhari Fault. As the fluids encounter the Jasperoide Thrust Fault fluid flowed laterally along the contact between the batholithic intrusive rock and the limestone where skarn formation is most favorable. Fluid flow also likely was channeled up favorable horizons on the limbs of the La Cavernita Anticline. At Montaña de Cobre the sulphides in the near surface skarn are highly oxidized. At depth down dip on the Jasperoide Fault, more sulphide ore would be expected. (C3 Metals, 2023)

# 8.0 Deposit Types

The Yauri - Andahuaylas metallogenic belt was originally known for its' iron skarn and epithermal copper and gold deposits but is now rapidly emerging as an important porphyry copper-gold belt of southeastern Peru. The Yauri - Andahuaylas belt is host to numerous world class porphyry copper and porphyry-related skarn deposits that are spatially and temporally associated with Yauri – Andahuaylas batholith and the regionally significant Ferrobamba Formation. The Jasperoide Project is located in the "Golden Triangle" of southeastern Peru and is centrally located to Las Bambas (MMG), Haiquira (First Quantum Minerals), Cotabambas (Panoro Minerals) and the Constancia copper-gold deposits (Hudbay Minerals) (see Figure 1-5).

The Jasperoide Project comprises three skarn bodies 1) MCZ, 2) CVZ and 3) COZ that replace a westerly dipping dolomite limb in a north-south striking anticline. MCZ is an intensely oxidized and leached skarn with secondary copper species increasing with depth, comprising chrysocolla, malachite, azurite, brochantite, neotocite, copper-wad and copper-pitch and other secondary copper species (see Figure 8-1). The supergene profile at MCZ is considered mature, comprising a leached and low-grade surface skarn that transitions to an oxidized skarn with well-developed secondary copper mineralization that continues downward to the unmineralized and commonly brecciated marble front.

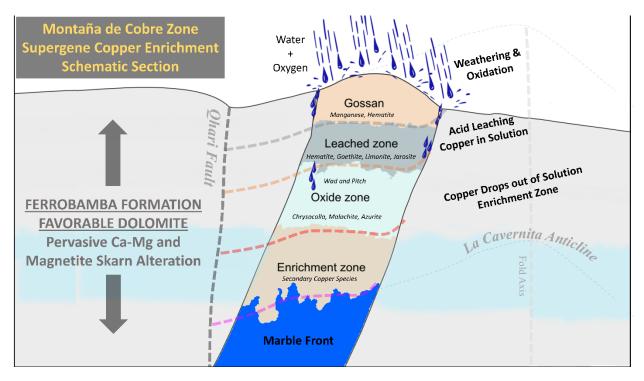


Figure 8-1. Schematic section through MCZ showing the interpreted supergene profile. (C3 Metals, 2023)

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Historical and recent delineation drilling identified multiple porphyry vectors at Jasperoide, that include:

- Broad zones of porphyry style alteration at MCZ, CVZ and COZ (argillic, advanced argillic and associated skarn alteration).
- Polymict hydrothermal breccias with copper-mineralized skarn and porphyry fragments.
- Late-stage epithermal gold-silver veins and breccias telescope the Ca-Mg and Iron-skarns.
- Geochemical anomalies coincident with Magnetic, IP-Resistivity or IP-Chargeability anomalies.

Jasperoide shows significant potential to host a large-scale copper-gold porphyry system, which are typically genetically linked to copper-rich skarns and low-, intermediate- and high-sulphidation epithermal gold-silver mineralization that occurs at Jasperoide. A schematic representation of a porphyry copper deposit model and its corresponding alteration and mineralogy is presented in Figure 8-2 (after Sillitoe, 2010).

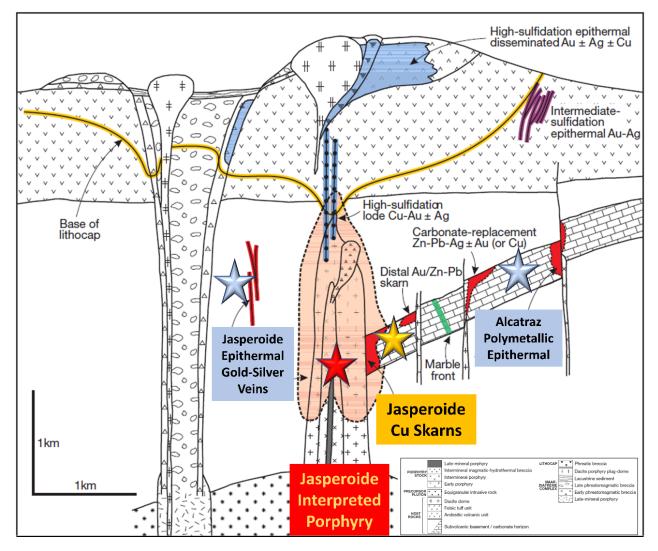


Figure 8-2. Porphyry Copper and Skarn System Schematic Model (after Sillitoe, 2010).

# 9.0 Exploration

Exploration work completed on the Project by C3 Metals and previously by LARG is summarized in Table 9-1 and described below. The 2021 Jasperoide exploration drilling and development programs by C3 Metals comprise the first major exploration activities since 2012. A comprehensive exploration database has been compiled for the Jasperoide Project by C3 Metals that includes surface exploration and drilling data generated by different exploration companies since 1994. Historical exploration (pre-2017) is described in Section 6.

The Project is active with exploration work as of the Effective Date including regional mapping, development of a 3D geologic block model and planned diamond drilling to test for coppersulphide in skarn and potential porphyry mineralization. Additionally, sighter metallurgical test work is underway, the results of which will be used for finalizing the next phase of drilling at Jasperoide.

# 9.1 2017-2018

Exploration completed by C3 Metals began with the Project option in 2017 under the name of LARG. Initial work consisted primarily of extensive re-logging of existing drill core (52 drill holes) to better define the distribution of skarn-type mineralization and alteration and identify zonation within the Project area (Corey, 2019). No other information is known about this relogging program.

In 2017 and 2018, LARG completed preliminary metallurgical studies to provide further information regarding recovery characteristics related to mineral chemistry and grain-size distribution (*see* Section 13).



Period	Company	Work Type	Description	Source		
	Latin		extensive re-			
201-	America	Data Compilation	logging of	G 2010		
2017	Resource	Drill core re-logging	existing drill	Corey, 2019		
	Group		core (52 holes)			
			bottle roll leach			
	Latin		tests on 5 new			
2018	America	Metallurgy	composites	Corey, 2019		
2010	Resource	in the analysis	from previous	20109, 2019		
	Group		core samples			
			statistical			
		Data review	analysis of			
		Duta leview	historic data			
		Soil geochemical surveys	multi-element			
		Son geoenennear surveys	across			
		Trenching	epithermal vein			
		Trenening	-			
		Geological mapping	systems district-scale			
		Geological mapping				
			ground			
		Geophysical survey	magnetic;	Corey, 2019		
2020	C3 Metals		ground IP (2			
2020	Inc.		lines)			
			compilation of			
		3D Geological modelling	all data and			
			information			
			re-sampling of			
			7 historical			
		Drill core re-sampling	drill holes			
			(Hochschild:			
			2011-2012)			
		Satellite Survey	24 square km area; colour	PhotoSat, 2020		
		Satellite Survey	orthophoto	1 notosat, 2020		
			ormophoto			
			detailed 1:1000			
		Geological mapping	and 1:2000			
			scale	Jasper et al., 2021		
2021			entire project			
		Soil geochemical survey	area			
			heliborne			
			magnetic and			
			radiometric			
	C3 Metals	Airborne geophysics	survey; 1,802.3	New Sense, 2021		
	Inc.		line-km, 100-m			
			spacing			
			IP/Resistivity			
			survey; 46.3			
			line-km, 11			
		Ground geophysics	lines covering	Arce Geofísicos, 2021		
		Ground geophysics	drill permitted			
			area; 2D & 3D			
			inversions			
		ļ	111001510115			

Table 9-1. Summary	of Exploration	Work Complete	d on the Proiect b	v C3 Metals Inc.
i ubic / it Summary	or Exploration		a on the ridgeet h	

Period	Company	Work Type	Description	Source
		Diamond drilling	Phase 1 program (Feb Nov.); 10,235.45 m in 37 holes (10 sections)	C3 Metals, 2021
		Diamond drilling	Phase 2 drill program, comprising a total 6,811 metres in 20 drill holes. Program; November 2021 to May 2022	C3 Metals, 2022
	HSAMT Geophysics	A Hybrid CSAMT geophysical survey December 2021- February 2022	C3 Metals, 2022	

#### **9.2 Exploration (2020)**

In 2020, C3 Metals completed a comprehensive surface exploration mapping and sampling program, which included statistical analysis of historical surface exploration data, multi-element soil geochemical surveys, trenching across epithermal style vein systems, district scale geological mapping and geophysical surveys. C3 Metals also continued its data compilation work, adding to its exploration database, completing a stereo satellite survey to produce a digital elevation model (DEM) and orthophoto, and developing a 3D geological block model for the Jasperoide Copper Project (C3 Metals news releases 30 September 2020 and 15 January 2021). No reports were generated for this exploration work with reporting done exclusively through a series of news releases by C3 Metals (available at c3metals.com/news-media/news/).

At MCZ, a 2011 ground magnetic survey completed over a nine square km area outlined a strong magnetic high with a coincident IP chargeability anomaly measuring  $\sim$ 1.3 x 1 kilometres (C3 Metals news release 30 September 2020) (Figure 9-1). Mapping and surface geochemical surveys over this region identified extensive outcrops of garnet-diopside and massive magnetite skarn hosting strong copper mineralization. Proximal to the skarn, a diorite porphyry shows strong endoskarn and phyllic-style alteration with porphyry-style B-type veins. Rock chips, channel and limited soil sampling delineated a broad copper and gold anomaly measuring 1,000 x 800 m coincident with the 2011 geophysical anomalies (C3 Metals news release 30 September 2020).

At CVZ, ground geophysical surveys similarly identified strong coincident magnetic and chargeability highs, coincident with the dimensions of outcropping skarn. Surface mapping and

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sampling were carried out over this area. Significant strike potential remains to be tested at CVZ, where a porphyry system is interpreted (C3 Metals news release 30 September 2020).

At the COZ, located approximately 500 m southwest of MCZ, a limited program of surface mapping, trenching and channel sampling identified meter-scale quartz-chalcopyrite veins trending northeast towards MCZ. This target has not been drill-tested.

#### 9.2.1 Historical Drill Core Re-Logging and Re-Sampling

In late 2020, C3 Metals completed a historical diamond drill core re-logging and re-sampling program. The re-sampling program focussed on core from seven drill holes that were drilled by Hochschild in 2011-12, totaling approximately 645 metres (C3 Metals news releases 30 September 2020 and 15 January 2021).

The program was initiated to confirm the distribution and tenor of the skarn hosted copper-gold mineralization and to verify historical results for future resource calculations. Results from the program confirmed the significant copper intercepts in all seven resampled holes (Table 9-2).

Results from the re-logging and re-sampling program are summarized in the following bullet points:

- A strong correlation was noted between the spatial distribution of the mineralization and grades in comparison to the historical and 2020 re-sampled half core.
- Broad intervals of strong copper and gold assays verified in all historical drill holes, including:
- JADD11-03: 136.0 m grading 0.76% Cu and 0.35 g/t Au (historical half core) versus JADD11-03: 136.0 m grading 0.75% Cu and 0.35 g/t Au (re-sampled half core).
- Significant zones of high-grade copper and gold assays were also verified, including:
  - o JADD11-04: 24.0 m grading 2.96% Cu and 0.70 g/t Au (historical half core) versus
  - o JADD11-04: 24.0 m grading 2.76% Cu and 0.67 g/t Au (re-sampled half core).

The seven drill holes that were selected were based on alteration and copper-gold mineralization styles considered representative of the broader hydrothermal system at Jasperoide.

#### 9.2.2 Geological Block Model

All historical Jasperoide drill core (52 holes for 10,175 m) was re-logged and the structural and geological data incorporated into a 3D geological block model. The geology model provides the Company an opportunity to rapidly progress the structural and lithological understanding of the subsurface geology at Jasperoide and will be utilized in all aspects of drill hole design and targeting (C3 Metals news release 30 September 2020).



Composite weighted Average Copper and Gold Assays (C5 Metals, 2021)							
Drill Hole	From (m)	To (m)	Interval (m)*	Historical Cu (%)	Historical Au (g/t)	Repeat Cu (%)	Repeat Au (g/t)
JADD11-03	22.00	158.00	136.00	0.76	0.35	0.75	0.35
JADD11-04	72.00	127.70	55.70	1.59	0.54	1.52	0.55
Incl	96.00	120.00	24.00	2.96	0.7	2.76	0.67
JADD11-05	98.00	223.55	125.55	0.79	0.59	0.8	0.4
JADD11-09	1.50	126.00	124.50	0.64	0.29	0.69	0.31
JADD11-13	58.00	184.00	126.00	0.82	0.25	0.81	0.28
JADD11-15	164.00	215.80	51.80	1.05	0.33	0.97	0.32
JADD11-20	13.00	39.00	26.00	1.67	0.01	1.85	0.01

Table 9-2. Comparison of 2020 Re-Sampled Half Core to Historical Results; Composite Weighted Average Copper and Gold Assays (C3 Metals, 2021)

\*core intervals are reported as down-hole core lengths and are not considered true widths.

#### 9.2.3 Stereo Satellite Survey

In December 2020, PhotoSat (Vancouver, BC, Canada) produced a satellite survey of 24 square km for the Project. A colour orthophoto was also produced covering 140 sq. km. The Jasperoide 1 m stereo satellite survey and 50 cm precision orthophoto were produced from 50 cm pixel resolution WorldView-2 and WorldView-3 stereo satellite photos. The satellite photos were acquired on November 13, 14, and 25, 2020.

The 1 m precision satellite survey and 50 cm precision orthophoto were produced using PhotoSat's proprietary Geophysical Satellite Processing system. PhotoSat claims that its processing system currently produces the highest quality and best accuracy stereo satellite surveys and precision orthophotos in the world. PhotoSat expects the relative accuracy of the 1 m satellite survey, over distances of up to 5 km, to be better than 20 cm for level areas of bare ground. According to PhotoSat, its process has been tested by comparing to tens of thousands of ground control points during accuracy tests and this process and verified this with over 1,000 client projects.

The actual accuracy of each project depends on the angles of the satellite photos and the quality and density of the ground control points. Areas of the satellite survey that are extremely foreshortened or occluded on the satellite photos due to very steep topography will be interpolated from the surrounding elevation data.

To assess the accuracy of the Jasperoide Project, PhotoSat best fits the survey and orthophoto to 5 client supplied ground control points. Using this methodology, the elevation RMSE of the PhotoSat survey is 13 centimetres. The relative horizontal accuracy of PhotoSat's precision orthophotos is generally better than 50 cm over distances of 10 kilometres (PhotoSat, 2020).



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#### 9.2.4 Camp Construction

In late 2020, C3 Metals awarded a contract to a local Peruvian company to construct a minimum 30-person camp to include insulated structures, a drill logging and core sampling facility, core storage facility, electricity, water and fuel storage, and internet access. Drill site access trails and pad construction proceeded in parallel with camp construction and drill collar locations were surveyed and marked in the field (C3 Metals news release 11 December 2020).

#### 9.3 Exploration (2021-2022)

The 2021 work program was designed by C3 Metals Peru S.A.C. and field activities were conducted by Q2A E.I.R.L. ("Q2A") personnel during the period 1 July to 30 September 2021. The program included geological mapping, chip channels and rock sampling, and a soil geochemical survey over an area measuring approximately 3500m in NW-SE dimension by 2500m in NE-SW dimension. A "rock library" comprising characteristic lithologies and mineralization styles delineated during the field activities was set up at the field camp and includes a digital inventory and photographs of cut and uncut samples also established (Jasper et al., 2021).

#### 9.3.1 Geological Mapping

Geological mapping of selected areas with a higher potential for skarn mineralization, in particular contact areas of intrusive and calcareous lithologies, was conducted at a 1:1000 scale, whereas areas with lesser exploration potential were mapped at a 1:2000 scale. Mapping control was done using a hand-held GPS for position location and each mapped area covered about 10 hectares (Jasper et al., 2021). Mapping and sampling confirmed previous results and interpretations of an extensive skarn alteration system at Jasperoide, with hypogene copper sulphides and supergene secondary copper enrichment.

#### 9.3.2 Trenching and Selective Surface Rock Sampling

Selected surface trenches were excavated, geologically logged and systematically sampled in order to aid the geological understanding of skarn mineralization and its controls. Geological mapping was aided by systematic rock chip channel sampling along selected outcrops. Sampling was conducted perpendicular to stratification and structures. All sample areas were first cleaned with a brush before being sampled. Sampling widths varied from 0.50 m to 2.0 metres (Jasper et al., 2021). Assays confirm previous results, confirming an extensively leached skarn at surface, telescoped by epithermal veins and breccias.

#### 9.3.3 Soil Geochemical Survey

A systematic soil sampling survey was conducted along a grid covering approximately 800 hectares. Lines were 300 m spaced with sample stations separated by 25 metres. Sampling lines were directed in a southwest-northeast direction. Sample stations were located by hand-held GPS location methods with a nominal accuracy of  $\pm 2$  metres (Jasper et al., 2021). Grid soils defined a large copper and gold in soil anomaly that extends from COZ through to CVZ and only a portion of this extensive multi-element soil geochemical anomaly has been drill tested.



#### 9.3.4 Interpretation and Conclusions – Q2A 2021

Q2A summarized the results of their 2021 contract exploration program and described results in their final report (Jasper et al., 2021):

- At MCZ, diorite display weak silicification, veinlets of magnetite and disseminated pyrite. Diorite locally displays argillic and endoskarn alteration. Copper assays elevated in the brown skarn and decrease in the green skarn.
- At MCZ, stratiform mineralized bodies thin towards the north and south and appear to plunge towards the southwest. Hydrothermal mineralizing fluids reportedly have a SW to NE flow direction.
- At CVZ, magnetite-hematite endoskarn bodies with an up to 50 m wide halo within the intrusive lithologies. Diorite is endoskarn-altered with pyrite and locally chalcopyrite mineralization.
- At CVZ, a thick zone of garnet-diopside and magnetite skarn is mapped at surface. The CVZ is identical to the MCZ, but is not oxidized.
- At COZ, significant endoskarn alteration occurs in a dry and natural stream bed, evidenced by a strong presence of pyrite and siliceous breccias and porphyry style alteration.
- 9.3.5 Recommendations Q2A 2021

Q2A made several recommendations following their 2021 contract exploration program (Jasper et al., 2021):

- At CVZ, apply 3D geophysical modelling methods that have successfully been applied in similar geological settings and mineralization styles elsewhere in Peru. These methods combine the responses/readings of several geophysical survey methods such as magnetometry, chargeability and resistivity (IP) in zones with known mineralization as delineated by surface mapping, trenching and diamond drilling. The value ranges of the readings of each of the above-mentioned geophysical methods obtained for the areas with known mineralization are recorded. Zones where these "anomalous" value ranges of several different geophysical methods coincide or "overlap" in three-dimensional space may represent targets for skarn mineralization.
- Apply filters (algorithms) to process the geophysical database and delineate the threedimensional shape of the lithological domains and their contacts. As with the 3D modelling of the mineralized skarn targets mentioned above, specific coincident geophysical responses of several geophysical methods together with the knowledge of the surface and depth distribution of specific lithologies as defined by geological mapping on surface and diamond drilling at depth are evaluated.
- Metallic Quotients method. Useful for areas located distant from the intrusive contactlimestone where the presence of distal skarn mineralization is inferred. Historical and

current geochemical results from surface sampling and drilling can be used for this purpose.

- Relog and resample drill core in its entirety by applying the same detailed procedures as carried out at the drill core produced by the ongoing drilling activities.
- It is suggested to carry out a thorough and systematic review and reorganization of the entire historical digital and analogue data base to allow for transfer of selective data into the "modern day" data base that is currently being established by C3 Metals.

# 9.4 Airborne Geophysical Survey (2021)

Over a period of 14 days (14 flights) in June 2021, New-Sense Geophysics S.A.C. ("NSG") of Lima, Peru (headquartered in Toronto, Canada) conducted a high sensitivity helicopter-borne Magnetic (Cesium-3) and Gamma-ray Spectrometric (1024 channel) geophysical survey over the "Jasperoide Block" on the Project (Figure 9-1 and Figure 9-2). The survey totalled 1,802.3 line-km (162.7 square km), flown along 100-m spaced lines using NSG's Stinger system attached to a helicopter (New-Sense, 2021).

The airborne ancillary equipment included digital recorders, a fluxgate magnetometer, radar and laser altimeters and a GPS receiver, which provided accurate real-time navigation and subsequent flight path recovery. Ground equipment included a magnetic base station with GPS time synchronization and a PC-based field workstation, which was used to check the data quality and completeness daily.

Key highlights of this work are as follows:

- Reduced-to-pole (RTP) regional-scale aeromagnetic data shows a cluster of magnetic anomaly highs within the 30,000 Ha land package.
- Aeromagnetic data over Jasperoide Project shows a linear magnetic anomaly that extends northward from Jasperoide 39 license through Jasperoide Project and northwards through the Cerro Ccopane-Orcopura Iron Project; an approximate 28 km contiguous iron skarn belt (see Figure 7-7).
- Potential for multiple magnetite-rich hydrothermal skarn and porphyry systems similar to Jasperoide, particularly at the Khaleesi Project Area where skarn, porphyry and epithermal style copper-gold mineralization has been field confirmed.
- At the Jasperoide 39 area, a 750 metre by 250 metre outcropping magnetite skarn body is associated with epithermal style quartz breccias and stockwork veins, similar to MCZ, CVZ and COZ zones at the Jasperoide Project.
- Additional magnetic anomalies within the larger survey area are to be field checked in future field programs.



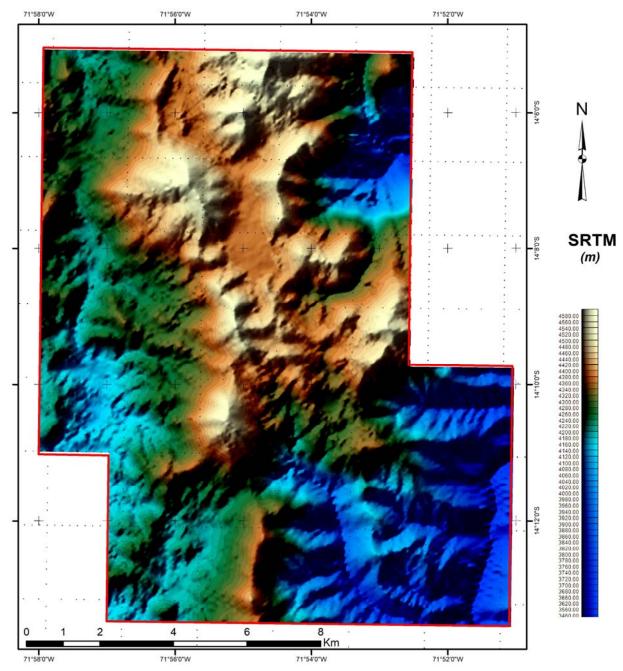


Figure 9-1. Location Map Depicting Jasperoide Block (Red) over a SRTM1 – South American North Grid- Resolution of 30m (Shuttle Topography Mission Grid) from Geosoft Public DAP Server (Also Available from <u>http://www2.jpl.nasa.gov/srtm</u>) (New-Sense, 2021)

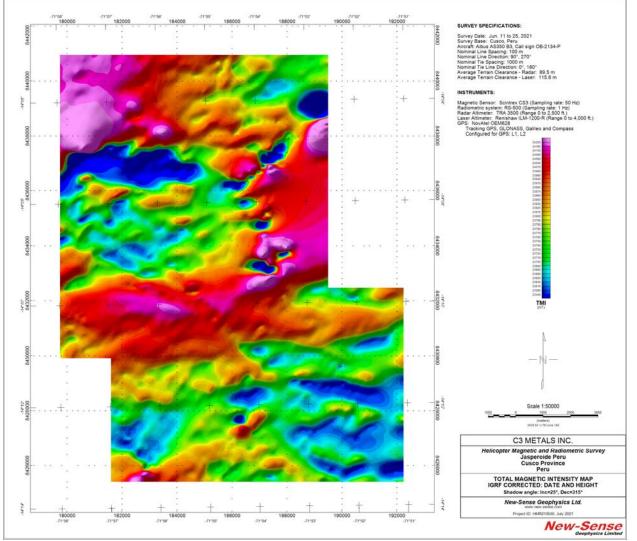


Figure 9-2. Total Field Magnetics (TMI) for the Jasperoide Block (New-Sense, 2021)

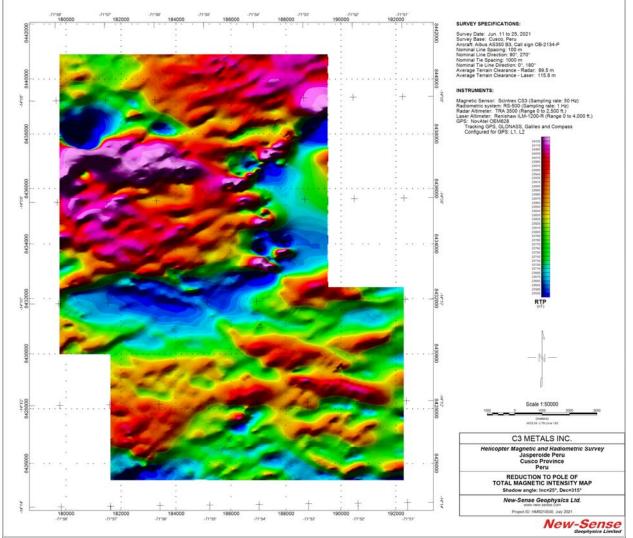


Figure 9-3. Reduced to Poll (RTP) for the Jasperoide Block (New-Sense, 2021)

# 9.5 Ground Induced Polarization Survey (2021)

In follow up to its 2010 ground Induced Polarization ("IP") geophysical survey, Arce Geofísicos (Lima, Peru) was contracted by C3 Metals to complete a ground-based IP survey between 28 July and 8 September 2021. A total of 46.3 line-km was completed with readings every 100 m along 300 m spaced lines (11 lines-oriented northeast-southwest) to cover the drill permitted area in the Jasperoide area (Figure 9-4).

9.5.1 2D and 3D Inversions

Ten 2D inversion resistivity models and ten 2D inversion chargeability models were generated along with twelve 3D resistivity models and twelve 3D inversion chargeability models. The 3D inversions of the induced polarisation survey were generated and used to guide drill-testing of



coincident chargeability highs (sulphides) and magnetic anomalies (magnetite-rich bodies) thought to be associated with near surface and sulphide porphyry and skarn targets.

A 3D image was generated by combining 3D chargeability and resistivity models (Figure 9-5). From this image it was confirmed that most of the chargeability anomalies on the northeast portion of the survey area are in a high resistivity compact rock, while the responses in the central part of the survey area are related to low resistivities (Arce Geofísicos, 2021).

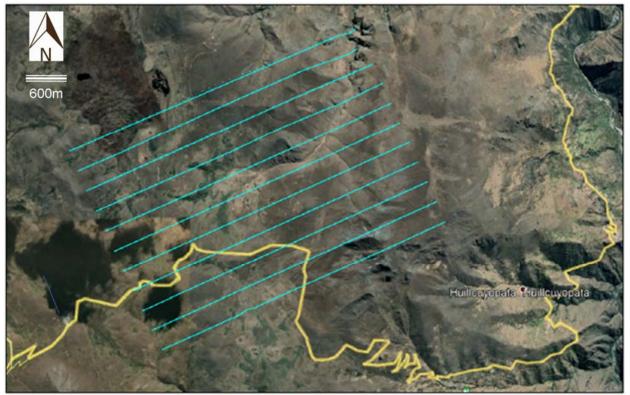
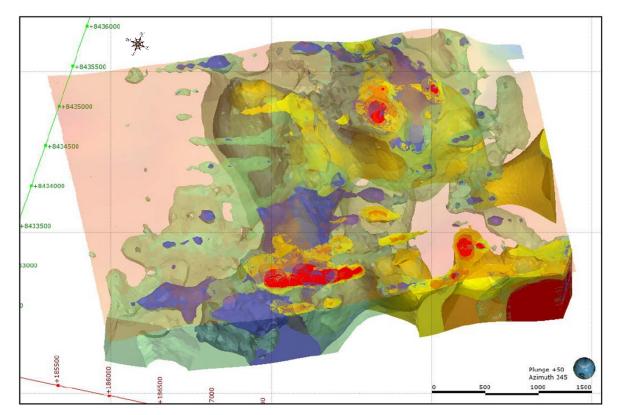


Figure 9-4. Location of the 11 Geophysical Survey Lines for IP and GPS Measurements (Arce Geofísicos, 2021)





#### Figure 9-5. 3D Inversion Results Interpreted and Modelled by Arce Geofísicos Survey. Chargeability (Yellow 15-25 mV/V, Orange 25-35 mV/V, Red >35 mV/V) and Resitivity (Blue <150 ohm-meters and Green 150-250 ohm-meters) Distribution (Arce Geofísicos, 2021)

# 9.6 Hybrid Controlled Source Audio-Magnetotelluric Survey (2021-2022)

A Hybrid Controlled Source Audio-Magnetotelluric ("Hybrid CSAMT") survey test was completed over MCZ and CVZ, which identified potential feeder structures linked to a potential causative copper-gold porphyry system at depth near to CVZ.

Survey highlights:

- Hybrid CSAMT geophysical data indicates a potential causative intrusion at depth central to mineralization at MCZ and CVZ.
- Strong resistivity features are identified at the intersection of the regional-scale Benoni and Qhari Faults.
- 3D geophysical modelling highlights a potential cluster of intrusive bodies linked to mineralizing fault conduits confirming earlier geological models for Jasperoide.

HSAMT is used as an exploration tool to identify resistive and conductive features that typically correlate to structure, zones of silicification and clay alteration, to depths of over 2 km. Data from this survey has outlined regionally important structures which appear to relate to the large, nearby copper deposits at Constancia and Las Bambas (C3 January 12, 2022).



# 10.0 Drilling

## 10.1 General

The drillhole database provided for this Mineral Resource estimate amounted to 123 drillholes and 30,198.6 metres of drilling. Table 10-1 summarizes the drilling by campaign. Figure 10-1 shows the hole locations and orientations, also by campaign.

Table 10-1. Summary of Drining Data								
Company	Dates	No. of Holes	Metres					
Southwestern Gold/Cyprus Minerals	1994-1995	14	2,689.2					
Cominco Peru S.R.L.	1995-1996	13	1,854.2					
Compañia Minera Ares S.A.C.	2009-2012	25	5,632.3					
C3 Metals Inc. – Phase 1	2021	38	10,533.2					
C3 Metals Inc. – Phase 2	2021-2022	33	9,489.7					
TOTAL	1994-2022	123	30,198.6					

<b>Table 10-1</b>	. Summary	of Drilling Data
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The following sections describe the various campaigns.

## 10.2 Southwestern Gold Corporation/Cyprus Minerals Company (SWG)

During 1994 and 1995 SWG drilled 14 diamond core holes (H1 to H14) totaling 2,689.2 m on the high-grade copper-gold skarn target that was known at that time as the Cerro Huinihuini prospect, now MCZ. The location of the holes is shown in light blue on Figure 10-1. Seven of the holes are south and southwest of the main resource area as it is currently defined by the denser drilling and seven of the holes are in the main resource area (only six are visible as there are two vertical holes on the same drill pad).

# 10.3 Cominco Peru S.R.L.

During June and July 1996, a drilling campaign was carried out at MCZ prospect comprising 13 vertical boreholes (HU-1 to HU-13) totalling 1,854.2 m ranging from 92 to 228 m depth. The location of these holes is shown in green on Figure 10-2. Note that 6 of the holes are north of the main resource area, 2 are just south of the main area, 2 are just west of the main area and 1 is east of the main area. The remaining 2 holes are in the main resource area. Most of these holes are relatively weakly mineralized, but are important as they assist in establishing boundaries for the main resource area.



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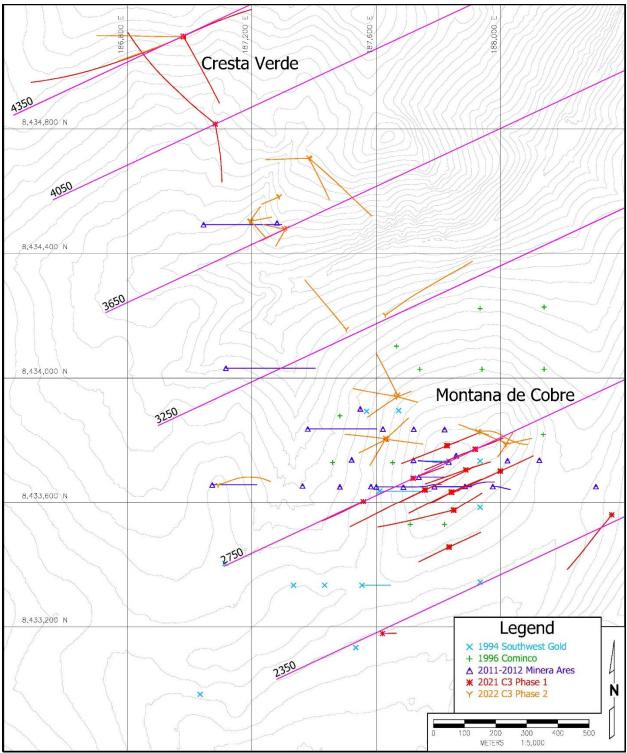


Figure 10-1. Hole Locations by Drilling Campaign (IMC, 2023)

## 10.4 Compañia Minera Ares S.A.C.

In 2011, Minera Ares completed a diamond drilling program of 20 holes (JADD11-01 to JADD11-20) for a total of 3,726.57 metres. The holes were located to better define the area of known skarnhosted mineralization within MCZ. The drilling corroborated Cu-Au grades within skarn reported by previous drilling and confirmed continuity of skarn-hosted mineralization.

In 2012, Minera Ares completed a diamond drilling program totalling five holes (JADD12-01 to JADD12-05; one of the holes was aborted) for 1,905.75 metres. Hole JADD12-03 (155.05 m) was drilled in MCZ and four others (JADD12-01, 02, 04, 05) were completed outside of the main prospect area to test for buried porphyry-type mineralization adjacent to the skarn. The Minera Ares holes are shown in blue in Figure 10-1 and most of them are in the main resource area. Additional information on this drilling, including cross sections, is included in Section 6.3.4.4.

### 10.5 C3 Metals

## 10.5.1 Phase 1 Drilling

On 11 December 2020, C3 Metals announced that it had received authorization from the Peruvian Ministry of Energy to commence drilling on the Jasperoide Copper Project. The authorization included the construction and drilling from 40 platforms within a 34-month period.

The Phase 1 drilling program began 1 February 2021 and was completed by 18 November 2021 (C3 Metals news release 25 May 2021), initially targeting the high-grade copper-gold skarn and porphyry targets at the southern MCZ on sections JAS2300, 2350, 2600, 2650, 2700, 2750, 2800 and 2900. Phase 1 drilling also targeted mineralization at CVZ along section JAS4050 and JAS4350. Figure 10-2 shows the collar locations of the phase 1 holes superimposed on the ground magnetic analytical signal image.

The Phase 1 drilling program totalled 10,235.45 m in 37 drill holes along 10 section lines and confirmed broad intervals of high-grade copper-gold mineralization.



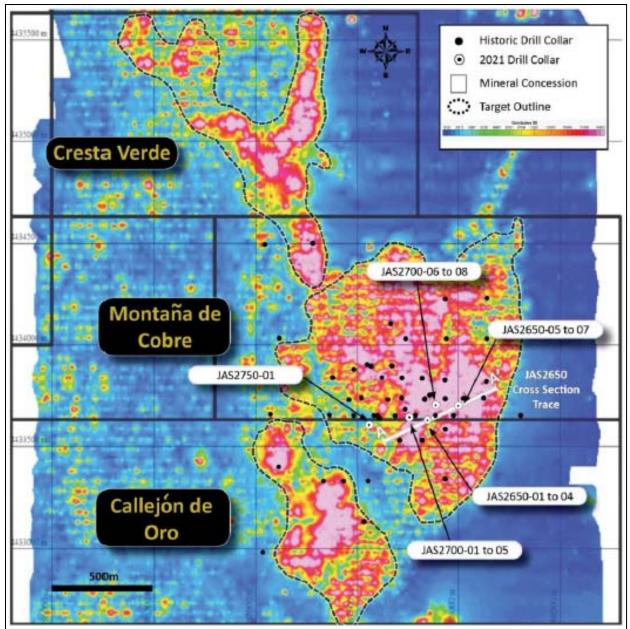


Figure 10-2. Drill Hole Section and Collar Locations for the Phase 1 Drilling Program Superimposed on the Ground Magnetic Analytical Signal Image (C3 Metals, 2021)

#### 10.5.1.1 Phase 1 Results – Montaña de Cobre Zone

Table 10-2 summarizes significant intersections at MCZ. The lengths on the table are intercept lengths and may not be representative of the true width of the mineralized areas.

Initially, two drill hole fans were completed on section line JAS2650 (1,741.1 m), confirming that skarn alteration and mineralization are well developed for over 450 m laterally with the system open to the west, north, south and at depth (Figure 10-3). Drilling indicated that the skarn horizon dips 15 to 25 degrees westward and is vertically zoned with respect to alteration and mineralization. Holes JAS2650-01,02, 04 and 07 were drilled as step-out holes, JAS2650-03 and 06 as infill holes and JAS2650-05 is a scissor hole to JAS2650-03. Infill holes were required to ensure the reliability of high-grade results reported by previous operators which could carry considerable influence in future resource calculations.

Drilling confirmed a moderate to strongly leached exoskarn (Low Grade Domain) is followed at depth by a strongly oxidized magnetite skarn that is massive or brecciated (Low to Medium Grade Domain) and transitions into an enrichment zone at depth (High Grade Domain). Secondary copper species observed to date include malachite, azurite, chalcocite and chrysocolla (Figure 10-4). Copper sulphide mineralization is rare but has been observed at deeper levels in the system (+175 m depth) and comprises chalcopyrite in veins and as coarse disseminations.

Drill holes JAS2650-05, 06 and 07 intersected a high-grade zone of copper mineralization at the eastern skarn zone area. Each hole intersected a breccia with significant secondary copper species, and all located proximal to the marble contact. Drill hole JAS2650-06 intersected 16.00 m (99.20-115.20 m) grading 6.39% Cu; JAS2650-05 intersected 17.10 m (128.00–145.10 m) grading 6.69% Cu; and JAS2650-07 intersected 10.00 m (112.00-122.00 m) grading 4.23% Cu (Figure 10-5). Drilling results on section JAS2650 intersected alteration and mineralization which indicated about 450 m of laterally continuous copper-gold skarn mineralization (C3 Metals news release 27 July 2021).

Two drill fans comprising eight holes were completed on section line JAS2700 (1,552.9 m), confirming well-developed skarn and copper-gold mineralization for +500 m laterally. The system remains open to the west, north and at depth (Figure 10-6) with results from section JAS2700 supporting the interpretation of a strongly mineralized domain dipping 15 to 25 degrees westward. Observed alteration and mineralization zonation appears consistent with the geology seen at major copper mines operating in the district (*i.e.*, a skarn system overprinted by epithermal style veining, all related to an interpreted porphyry system at depth).

Drill holes JAS2700-01, 02 and 03 intersected strongly oxidized garnet diopside and magnetite skarn consistent with the geology observed on previous section line JAS2650. Copper mineralization is dominated by secondary copper species that include malachite, chalcocite, chrysocolla and azurite, occurring as disseminations, fracture coatings, open space filling and in veins (Figure 10-7). Assays confirmed broad zones of pervasive and high-grade copper-gold mineralization.

An interpreted "Feeder Structure" logged in drill hole JAS2700-04 is characterized by an intensely silicified, vuggy textured and oxidized polymictic breccia (Figure 10-8). As this style of alteration is typically genetically linked to a porphyry copper system, identifying these primary channel ways



for mineralizing hydrothermal fluids is critical to the planning of deeper drill holes. Airborne magnetics (recently completed), Induced Polarization (on-going), surface mapping & sampling and all drilling data will be used to design deeper holes to test for additional skarn horizons and the interpreted porphyry system at depth (C3 Metals news release 27 July 2021).

Drilling along section JAS2750 consisted of drill hole JAS2750-01 to 07 and targeted both epithermal and skarn mineralization (Figure 10-9). Assay results from drilling along this confirmed the presence of epithermal alteration and mineralization and the mineralized skarn system. Based on these results, it was recommended that MCZ be further infill drilled to better understand its dimensions and work toward a Mineral Resource estimate.



Hole	From	То	Length	Cu (%)	Au (g/t)	Ag (g/t)	Mineralization Zone		
JAS2500-01	35.90	46.90	11.00	0.40	0.23	0.81	Skarn		
JAS2500-02	No Significant Assays								
JAS2600-01	25.50	79.12	53.62	0.28	0.12	1.41	Skarn		
JAS2600-01	88.78	98.06	9.28	0.18	0.06	0.69	Skarn		
JAS2600-01	124.85	142.70	17.85	0.46	0.23	2.39	Skarn		
JAS2600-02	23.20	52.71	29.51	0.30	0.15	1.03	Skarn		
JAS2600-02	60.10	73.20	13.10	0.39	0.22	1.37	Skarn		
JAS2600-02	78.70	106.50	27.80	0.20	0.07	0.60	Skarn		
JAS2600-03	32.90	46.95	14.05	0.28	0.19	2.78	Skarn		
JAS2600-03	52.67	151.35	98.68	0.38	0.21	2.29	Skarn		
JAS2600-03	156.85	162.80	5.95	0.18	0.53	0.60	Skarn		
JAS2600-03	191.40	193.13	1.73	0.14	13.95	4.58	Epithermal		
JAS2600-03	194.70	206.17	11.47	0.24	0.09	0.60	Skarn		
JAS2600-03	230.75	265.37	34.62	0.21	0.09	0.54	Skarn		
JAS2600-03	268.30	287.80	19.50	0.39	0.10	0.69	Skarn Sulphide		
JAS2600-03	308.62	313.00	4.38	0.69	0.20	0.70	Skarn Sulphide		
JAS2650-01	41.0	170.0	129.00	0.49	0.37	2.25	Skarn		
Including	109.0	161.0	52.00	0.78	0.67	3.15	Skarn		
JAS2650-02	11.0	36.8	25.80	0.27	0.10	3.84	Skarn		
JAS2650-02	85.0	93.0	8.00	0.31	0.12	0.96	Skarn		
JAS2650-02	112.9	223.0	110.09	0.36	0.26	1.88	Skarn		
JAS2650-03	12.0	19.0	7.00	0.27	0.08	0.86	Skarn		
JAS2650-03	25.0	46.0	21.00	0.38	0.18	1.07	Skarn		
JAS2650-03	70.4	124.4	54.05	1.17	0.45	1.86	Skarn		
JAS2650-03	154.9	181.0	26.10	2.19	0.69	3.97	Skarn		
JAS2650-04	15.0	22.0	7.00	0.37	0.20	1.52	Skarn		
JAS2650-04	31.0	178.2	147.20	0.40	0.17	1.42	Skarn		
JAS2650-05	8.4	83.0	74.60	0.20	0.18	1.61	Skarn		
JAS2650-05	92.6	145.8	53.24	3.11	0.46	2.79	Skarn		
Including	116.0	145.8	29.84	4.96	0.56	3.34	Skarn		
Includes	128.0	145.1	17.10	6.69	0.59	3.71	Skarn		
JAS2650-05	156.6	164.3	7.70	1.49	0.02	3.11	Skarn		
JAS2650-05	178.0	195.0	17.00	2.10	0.61	4.79	Skarn		
JAS2650-06	1.7	119.0	117.30	1.31	0.15	3.19	Skarn		
Including	59.0	119.0	60.00	2.38	0.14	3.31	Skarn		
Includes	77.0	115.5	38.50	3.50	0.12	4.32	Skarn		
Includes	99.2	115.2	16.00	6.39	0.06	2.48	Skarn		

Table 10-2. Summary o	of Significant Montaña	de Cobre Drill Interce	pts for Phase 1 Drilling
	significant intontana		

	-	-		Cu	Au	Ag	Mineralization
Hole	From	То	Length	(%)	(g/t)	(g/t)	Zone
JAS2650-07	13.0	26.9	13.90	0.26	0.16	4.12	Skarn
JAS2650-07	42.6	52.0	9.45	0.18	0.21	0.84	Skarn
JAS2650-07	79.0	122.0	43.00	1.67	0.14	1.90	Skarn
Including	103.9	122.0	18.10	3.72	0.02	2.76	Skarn
Includes	112.0	122.0	10.00	4.23	0.02	2.57	Skarn
JAS2700-01	35.00	50.00	15.00	0.41	0.15	1.68	Skarn
JAS2700-01	79.00	181.00	102.00	0.61	0.23	1.60	Skarn
JAS2700-02	22.10	50.00	27.90	0.21	0.06	0.86	Skarn
JAS2700-02	68.44	168.25	99.81	0.90	0.34	2.30	Skarn
JAS2700-02	184.60	201.10	16.50	0.46	0.37	1.37	Skarn
JAS2700-02	210.71	223.35	12.64	0.26	0.00	0.84	Skarn
JAS2700-03	60.00	80.65	20.65	0.26	0.12	3.15	Skarn
JAS2700-03	87.29	206.00	118.71	1.15	0.37	1.94	Skarn
Including	106.05	136.00	29.95	2.57	0.50	3.03	Skarn
JAS2700-04	52.80	65.85	13.05	0.50	0.07	1.20	Skarn
JAS2700-04	70.31	99.98	29.67	0.13	0.17	2.44	Epithermal
JAS2700-04	109.85	165.00	55.15	NSA	0.27	2.96	Epithermal
JAS2700-04	165.00	205.20	40.20	0.73	0.23	1.35	Skarn
JAS2700-05	56.50	64.70	8.20	0.25	0.03	0.89	Skarn
JAS2700-05	70.60	88.00	17.40	0.32	0.15	1.79	Skarn
JAS2700-05	89.10	115.60	26.50	NSA	0.41	30.10	Epithermal
JAS2700-05	119.80	206.60	86.80	0.42	0.32	1.18	Skarn
JAS2700-05	226.00	267.50	41.50	0.31	0.12	4.82	Skarn
JAS2700-06	21.52	256.70	235.18	0.67	0.34	2.19	Skarn
Including	64.40	164.80	100.40	0.84	0.32	2.72	Skarn
JAS2700-07	0.45	21.40	20.95	0.28	0.13	1.69	Skarn
JAS2700-07	28.45	79.40	50.95	0.48	0.17	1.54	Skarn
JAS2700-07	85.85	129.30	43.45	2.21	0.49	3.27	Skarn
Including	113.50	128.50	15.00	5.44	0.39	6.65	Skarn
JAS2700-08	4.10	15.30	11.20	0.25	0.12	2.83	Skarn
JAS2700-08	21.30	108.60	87.30	0.97	0.35	1.90	Skarn
Including	62.10	68.35	6.25	1.44	0.56	1.84	Skarn
Including	83.79	108.60	24.81	2.00	0.61	2.10	Skarn
JAS2750-01	55.65	72.40	16.75	1.36	0.47	0.96	Skarn
JAS2750-02	60.56	73.80	13.24	0.24	0.23	0.80	Skarn
JAS2750-02	84.15	90.00	5.85	0.61	0.18	0.94	Skarn
JAS2750-02	115.68	136.40	20.72	0.70	0.78	0.23	Skarn

Hole	From	То	Length	Cu (%)	Au (g/t)	Ag (g/t)	Mineralization Zone
JAS2750-03	61.40	85.00	23.60	0.42	0.12	2.15	
JAS2750-03	86.00	93.60	7.60	NSA	0.43	2.65	Epithermal
JAS2750-03	95.30	98.40	3.10	0.21	1.32	5.50	Epithermal
JAS2750-03	101.30	106.60	5.30	2.91	0.56	16.26	Epithermal
JAS2750-03	117.20	133.75	16.55	1.60	0.58	5.23	Epithermal
JAS2750-04	13.10	19.14	6.04	0.27	0.14	0.50	Skarn
JAS2750-04	66.10	189.25	123.15	1.28	0.50	3.27	Skarn
JAS2750-05	0.45	229.90	229.45	0.99	0.43	2.34	Skarn
Including	69.20	92.64	23.44	1.98	0.96	3.69	Skarn
Including	130.40	210.40	80.00	1.89	0.78	4.15	Skarn
JAS2750-06	0.80	104.80	104.00	0.90	0.32	1.77	Skarn
JAS2750-06	121.30	133.90	12.60	1.57	0.29	1.70	Skarn
JAS2750-07	1.50	107.60	106.10	0.99	0.28	2.74	Skarn
JAS2750-07	122.30	147.95	25.65	1.23	0.03	0.88	Skarn
JAS2800-01	16.30	26.13	9.83	0.29	0.46	2.43	Skarn
Including	25.90	26.13	0.23	0.27	13.65	2.47	Epithermal
JAS2800-01	57.85	64.40	6.55	0.34	0.03	3.18	Skarn
JAS2800-01	69.20	74.10	4.90	0.28	0.14	1.34	Skarn
JAS2800-01	83.00	131.20	48.20	1.24	0.43	1.82	Skarn
Including	107.07	121.20	14.13	2.98	1.08	3.65	Skarn
JAS2800-02	3.00	10.25	7.25	0.33	0.10	3.41	Skarn
JAS2800-02	19.20	50.90	31.70	0.39	0.09	2.06	Skarn
JAS2800-02	56.40	63.00	6.60	0.33	NSA	1.62	Skarn
JAS2800-03	36.00	58.00	22.00	0.35	0.21	0.94	Skarn
JAS2800-03	58.00	78.60	20.60	0.21	0.53	5.20	Epithermal
JAS2900-01	0.00	12.85	12.85	0.21	0.16	0.89	Skarn
JAS2900-01	41.20	62.55	21.35	0.23	0.06	0.86	Skarn
JAS2900-01	75.75	101.40	25.65	0.25	0.08	0.83	Skarn
JAS2900-01	138.67	225.80	87.13	0.36	0.15	1.49	Skarn

Note: True width of down-hole intersections reported are estimated to be approximately 60-90% of the down-hole lengths.



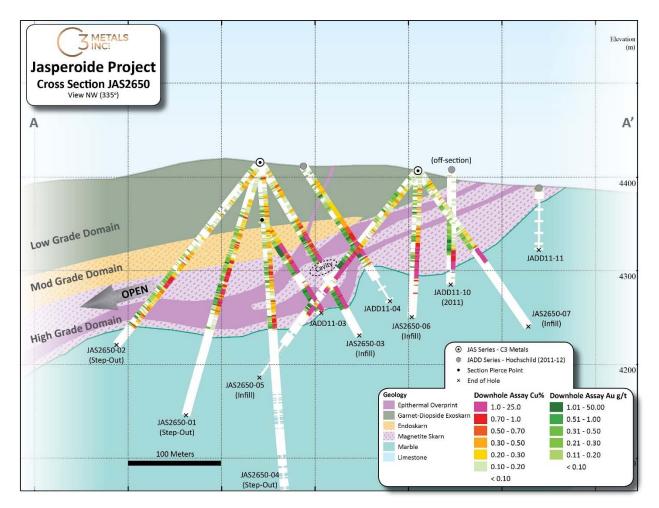


Figure 10-3. Cross Section JAS2650 from Phase 1 Drilling with Generalized Geology and Historical Drill Holes with a <u>+</u>50 m Window (C3 Metals, 2021)

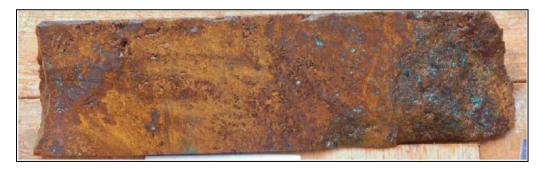


Figure 10-4. Drill Core from Hole JAS2650-03 (~178 m) Showing Oxidized Magnetite Skarn with Malachite, Interval 178.0-179.2 m Assayed 1.2 m Grading 2.2% Cu and 0.61 g/t Au (C3 Metals, 2021)

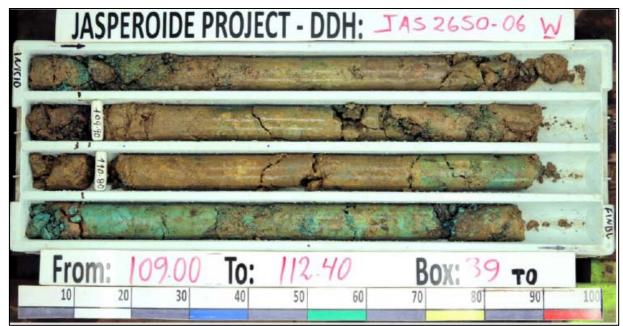


Figure 10-5. Core from Drill Hole JAS2650-06, Interval 109.0-112.4 m, Showing Strong Secondary Copper Mineralization. The Interval 109.0-113.0 m Assayed a Weighted Average of 4.0 m Grading 12.8% Cu (C3 Metals, 2021)



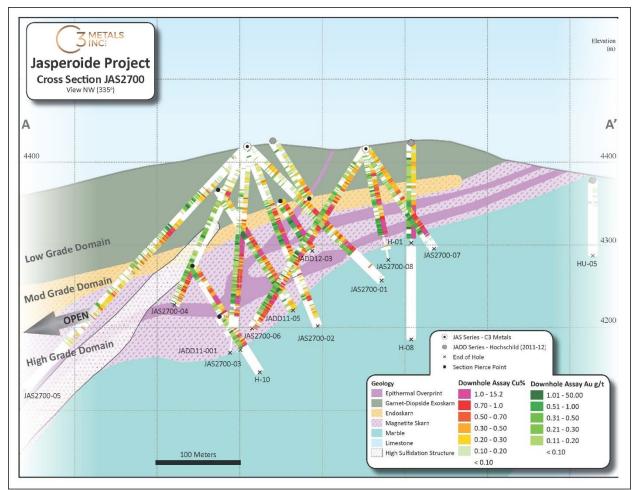


Figure 10-6. Cross Section JAS2700 from Phase 1 Drilling with Generalized Geology and Historical Drill Holes with a <u>+</u>50 m Window (C3 Metals, 2021)

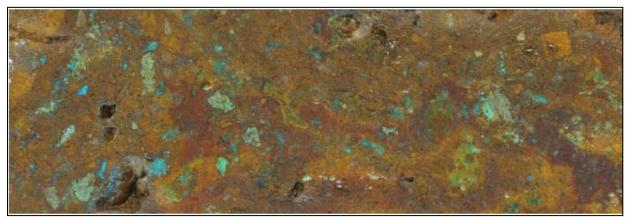


Figure 10-7. Core from Drill Hole JAS2700-02 (~123.25 m) Showing a Strongly Oxidized Breccia with Significant Secondary Copper Mineralization; Interval 123.0-123.9 m (0.92 m) Assayed 5.76% Cu and 0.36 g/t Au (C3 Metals, 2021)



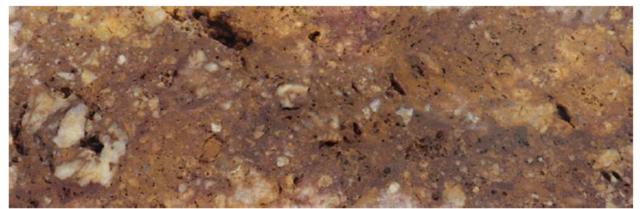


Figure 10-8. Core from Drill Hole JAS2700-04 (~84.2 m) Showing a Vuggy and Intensely Silicified Polymictic Breccia which is Part of an Intercept that Assayed 0.13% Cu, 0.17 g/t Au and 2.44 g/t Ag over 29.7 m (from 70.3 to 100.0 m) (C3 Metals, 2021)

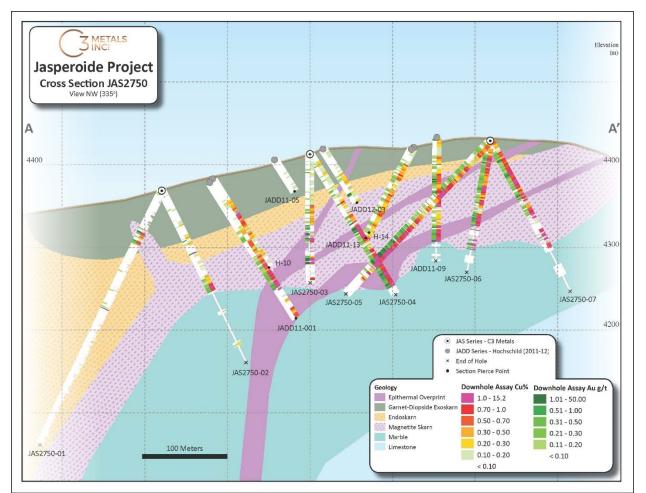


Figure 10-9. Cross Section JAS2750 from Phase 1 Drilling with Generalized Geology and Historical Drill Holes with a ±50 m Window (C3 Metals, Inc.)

#### 10.5.1.2 Phase 1 Results – Cresta Verde

Table 10-3 summarizes significant intersections at CVZ. The lengths on the table are intercept lengths and may not be representative of the true width of the mineralized areas.

Drill Hole	From (m)	To (m)	Length (m)	Cu (%)	Target
JAS4050-01	185.80	240.35	54.55	0.13	Skarn - Sulphide
JAS4050-02	230.00	241.30	11.30	0.10	Skarn - Sulphide
and	269.80	276.00	6.20	0.28	Skarn - Sulphide
and	292.70	339.00	46.30	0.15	Skarn - Sulphide
and	354.30	363.90	9.60	0.10	Skarn - Sulphide
and	382.90	387.40	4.50	0.13	Skarn - Sulphide
and	393.20	400.40	7.20	0.17	Skarn - Sulphide
and	461.90	466.95	5.05	0.22	Skarn - Sulphide
JAS4350-01			No Significa	nt Assays	
JAS4350-02	157.90	169.70	11.80	0.17	Skarn - Sulphide
and	178.15	196.25	18.10	0.20	Skarn - Sulphide
and	224.00	229.85	5.85	0.12	Skarn - Sulphide
and	260.00	303.50	43.50	0.32	Sulphide Breccia Zone
Incl	266.55	291.40	24.85	0.45	Sulphide Breccia Zone
JAS4350-02	313.80	365.45	51.65	0.12	Sulphide Breccia Zone
and	397.90	414.50	16.60	0.17	Diorite - Sulphide
and	641.70	651.50	9.80	0.15	Diorite - Sulphide
JAS4350-03	84.50	92.80	8.30	0.65	Skarn - Sulphide
and	121.00	126.50	5.50	0.11	Skarn - Sulphide
and	135.05	141.20	6.15	0.30	Skarn - Sulphide
and	147.30	154.55	7.25	0.22	Skarn - Sulphide
and	213.55	232.70	19.15	0.25	Sulphide Breccia Zone
and	261.70	328.00	66.30	0.21	Sulphide Breccia Zone
Incl	262.90	276.70	13.80	0.31	Sulphide Breccia Zone
Incl	302.60	324.80	22.20	0.30	Sulphide Breccia Zone
and	334.70	352.50	17.80	0.13	Sulphide Breccia Zone

Table 10-3. Significant Core Assay Intersection from Phase 1 Drilling at Cresta Verde Zone

Note: True width of down-hole intersections reported are estimated to be approximately 60-90% of the down-hole lengths.

At CVZ (Figure 10-10), located about 600 m northwest of MCZ, drilling targeted high-grade copper-gold skarn and porphyry mineralization. This area contains outcroppings of massive magnetite skarn hosted copper-gold mineralization which follows a string magnetic anomaly that extends for approximately 3 km. The potential of this area was not systematically explored; one historical drill hole intersected 23.5 m grading 1.86% Cu from 19 m (hole JAD11-20) (C3 Metals news release 11 December 2020).



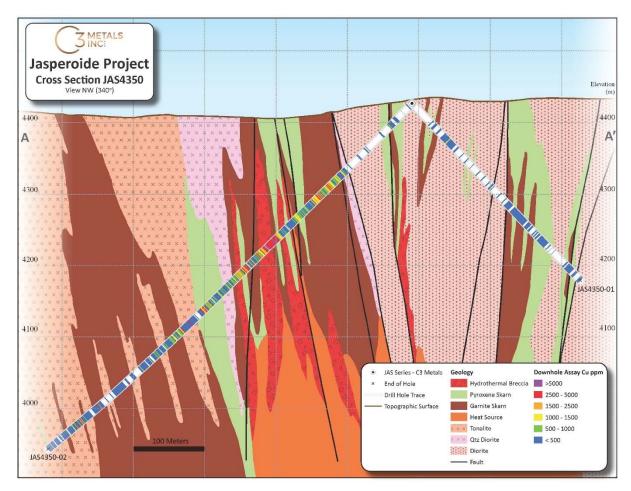


Figure 10-10. Cross Section JAS4350 from Phase 1 Drilling (Cresta Verde Zone) with Generalized Geology and Historical Drill Holes with a <u>+</u>50 m Window (C3 Metals, 2021)



#### 10.5.2 Phase 2 Drilling

A second phase of diamond drilling began 18 November 2021 and was completed during the 4<sup>th</sup> quarter of 2022. The Phase 2 program was focusing on increasing the Jasperoide skarn horizon footprint and testing the down-dip potential of the skarn horizons and stepping out from known gold and copper mineralization to demonstrate the potential of the system. Table 10-4 summarizes mineralized drill intercepts for Phase 2 drilling.

Phase 2 drilling comprised 6,811 metres in 20 drill holes, and successfully delineated additional near surface high-grade oxide copper-gold mineralization at MCZ and tested copper-sulphide skarn and porphyry targets at CVZ. Phase 2 drilling program highlights include Hole JAS2900-02 that intersected 81.55 metres at 0.89% copper, 0.25 g/t gold from 21 metres, including 21.14 metres at 2.79% copper and 0.59% gold (See Table 10-4).

Phase 1 and 2 drilling successfully defined a cohesive mineralized skarn body at the MCZ that extends for 650 m along strike and is strongly oxidized from surface to over 250 m in depth. MCZ supergene enriched body is shallow-dipping, skarn hosted and has a variable true thickness of 50 m to 250 m.

There are good results for holes drilled on sections JAS2700 to JAS3000, holes intended to infill and extend the main MCZ. Less mineralization was encountered in holes drilled north of MCZ, toward the CVZ area.



Hole	From	То	Length	Cu (%)	Au (g/t)	Ag (g/t)	Mineralization Zone
JAS2700-09	2.00	116.40	114.40	1.25	0.42	1.33	Skarn
including	94.60	116.40	21.80	6.30	1.04	3.91	Skarn
JAS2700-10	2.00	11.00	9.00	0.22	0.23	2.36	Skarn
JAS2700-10	15.10	38.60	23.50	0.21	0.24	0.62	Skarn
JAS2700-10	46.00	68.50	22.50	0.26	0.19	0.72	Skarn
JAS2700-10	98.80	104.40	5.60	5.23	0.10	0.77	Skarn
Including	100.10	102.90	2.80	10.29	0.03	1.12	Skarn
JAS2700-11	2.10	43.30	41.20	0.24	0.14	1.83	Skarn
JAS2700-11	48.10	78.40	30.30	0.17	0.23	0.29	Skarn
JAS2700-11	82.55	87.70	5.15	1.12	0.11	0.14	Skarn
JAS2800-04	38.60	56.75	18.15	0.36	0.46	1.49	Skarn
JAS2800-04	64.60	124.00	59.40	0.48	0.18	1.17	Skarn
JAS2800-05	60.10	103.10	43.00	0.30	0.02	2.39	Skarn
JAS2800-06	2.20	16.30	14.10	0.35	0.13	3.20	Skarn
JAS2800-07	58.80	122.70	63.90	1.19	0.01	2.40	Skarn
JAS2800-07	140.50	146.40	5.90	0.51	0.01	0.86	Skarn
JAS2900-02	21.00	102.55	81.55	0.89	0.25	1.94	Skarn
Including	81.40	102.55	21.15	2.79	0.59	1.94	Skarn
JAS2900-03	38.70	77.30	38.60	0.54	0.26	1.68	Skarn
JAS2900-04	13.20	45.40	32.20	0.46	0.22	1.85	Skarn
JAS2900-04	54.65	71.85	17.20	0.40	0.14	2.18	Skarn
JAS2900-04	123.30	141.51	18.21	0.61	0.14	0.59	Skarn
JAS2900-05	13.00	29.80	16.80	0.27	0.11	0.80	Skarn
JAS2900-05	39.00	49.00	10.00	0.31	0.07	1.03	Skarn
JAS2900-05	62.15	74.80	12.65	0.34	0.07	1.15	Skarn
JAS2900-05	106.85	117.10	10.25	0.61	0.13	1.87	Skarn
JAS2900-05	152.50	185.40	32.90	0.35	0.17	0.82	Skarn
JAS2900-06	9.00	116.50	107.50	0.38	0.13	1.04	Skarn
Including	10.40	36.80	26.40	0.28	0.16	0.71	Skarn
Including	39.90	45.90	6.00	0.57	0.12	1.66	Skarn
Including	52.10	67.45	15.35	0.46	0.06	0.94	Skarn
Including	70.70	116.50	45.80	0.45	0.17	1.20	Skarn
JAS2900-06	146.55	149.50	2.95	1.50	0.24	2.51	Skarn

Table 10-4. Summary of Significant Montaña de Cobre Drill Intercepts for Phase 2 Drilling

Hole	From	То	Length	Cu	Au	Ag	Mineralization		
1462000.01	12.10	50.00	20.50	(%)	(g/t)	(g/t)	Zone		
JAS3000-01	12.10	50.60	38.50	0.36	0.09	1.79	Skarn		
Including	12.10	37.90	25.80	0.42	0.09	2.18	Skarn		
JAS3000-02	5.00	40.60	35.60	0.36	0.15	1.51	Skarn		
Including	28.40	39.20	10.80	0.49	0.14	1.02	Skarn		
JAS3000-03	0.00	33.50	33.50	0.30	0.13	0.98	Skarn		
JAS3000-04	0.00	60.70	60.70	0.26	0.09	3.62	Skarn		
Including	30.10	56.20	26.10	0.32	0.11	6.02	Skarn		
JAS3000-04	93.00	99.40	6.40	0.24	0.03	3.77	Skarn		
JAS3000-05	30.30	66.00	35.70	0.62	0.37	2.31	Skarn		
Including	34.40	44.80	10.40	1.04	0.75	4.42	Skarn		
JAS3000-06		No Significant Assays							
JAS3250-01				No Significar	nt Assays				
JAS3275-01				No Significar	nt Assays				
JAS3650-01				No Significar	nt Assays				
JAS3650-02	73.40	77.75	4.35	0.29	0.01	2.38	Skarn		
JAS3650-03	38.90	43.10	4.20	0.66	0.01	0.81	Skarn		
JAS3725-01				No Significar	nt Assays				
JAS3725-02		No Significant Assays							
JAS3725-03		No Significant Assays							
JAS3750-01		No Significant Assays							
JAS3750-02		No Significant Assays							
JAS3800-01				No Significar	nt Assays				
JAS3800-02				No Significar	nt Assays				
JAS3800-03				No Significar	nt Assays				



10.5.3 C3 Metals' Procedures

The document "Jasperoide Diamond Drill Core Processing Protocols" (Hackman et al., 2021) provides a detailed description of the procedures and methods used for drill core handling and is summarized below. These protocols were implemented post hole JAS2700-03. Holes completed prior to April 2021 followed similar protocols outlined in two documents: 1) Recepción, Movimiento y Almacenamiento de Testigos de Perforación and 2) Verificación de Tacos y Toma de Recuperación de Corridas de Perforación (Hackman et al., 2021).

## 10.5.3.1 Drilling

A single truck-mounted Sandvik DE710 drill rig was used for the Phase 1 program. Drilling took place in two 12-hour shifts and ran on a 12 hours per day, 7 days a week operational schedule. The drilling was contracted to AK Drilling International SA (Lima, Peru). The drill rig is said to be capable of drilling near to 1000 metre core lengths. The average end of hole for Phase 1 drilling is 273 metres but that included two holes greater than 700 metres; if these two longer holes are removed then the average length is 250 metres.

All drilling used triple tube in order to maintain the contractually required 95% recovery rate. Drill core diameters varied between PQ, HQ and NQ depending on depth of hole.

On completion of each hole, the casing is removed, and the hole location preserved using tightfitting PVC pipe that is marked to identify the hole. The hole is kept open as it may be necessary to return to the same hole for follow up drilling and/or geophysical survey. Cementing is planned as part of the future reclamation activity.

### Drilling Monitoring

Daily drilling reports were submitted to the drill rig geologist at the end of each shift. This includes daily drilling production, consumables, down-hole surveys hole conditioning, reaming and operational problems (if any) encountered. Relevant data are collected to monitor drilling activities to assist in understanding the condition of the core and improving the drilling and recovery of the core. In addition, it also assists in controlling direct drilling costs.

### Drill Hole Setup

The C3 Metals exploration team set up the drill platforms in advance and according to the plan submitted for the permit. It was the responsibility of the drilling contractors with the support of the C3 Metals team to locate the drill collar and align the rig according to the drilling plan generated by C3 Metals.

Drill hole collar locations were originally located using a handheld Garmin GPSMAP 64csx which has a general accuracy of +/-2 to 4 metres. The C3 Metals team aligned the drill rig using a Brunton Compass in areas of no or minor magnetism. In areas with stronger magnetism, alignment of the rig was done using planned GPS coordinates with the aid of physical pegs and flagging tape; 2 pegs in front, 2 pegs behind the collar peg and white line powder as a guideline on the drill pad.



#### Core Orientation and Drill Hole Surveys

Core orientation was measured using a Reflex ACT II instrument. Downhole survey was carried out to monitor drill hole direction (azimuth) and declination (dip) at each metre, as ground conditions allow. The drill crew is responsible for drawing the core orientation line on the core. Prior to drawing the orientation line, drillers should wash the core to provide a clean surface for marking.

Core orientation tools were not in used at the beginning of the campaign. The ground condition, generally highly fractured and clayey, could not provide reliable information for the efforts in Bottom of Hole (BOH) markings. However, core orientation tools were implemented in the middle of the Phase 1 campaign, for HQ3 and NQ3, specially over the competent interval and last half-length programmed.

Post-drilling, high accuracy surveys of collars was done using the LEICA TS06 Power 5 Series Total Station unit. Downhole surveying was contracted to SPT Stockholm Precision Tool (Cajamarca, Peru), using a north-seeking Gyromaster survey tool to obtain downhole deviation. C3 Metals uses the 0 metre measurement from the SPT survey tool as the final orientation of the hole.

The drill crew from AK Drilling International SA was responsible for the operation of both the downhole survey and core orientation tools.

### 10.5.3.2 Core Tray Mark-Up

Metal core tray mark-up is conducted in a manner to ensure that correct information is added at the appropriate time to ensure that all relevant data is displayed for easy reference and retrieval of core. This procedure is a shared responsibility between the drillers and the C3 Metal geological/geotechnical team.

The drillers, using a permanent marking pen, mark the hole and tray number on the end of the box, place start and finish labels on the top of the box, and write N/S or D/S on the top of box to denote whether the drilling shift is day shift or night shift.

The C3 Metals team checks the drillers' mark-up when they are at the drill rig site. Meterage details are written on the side and end of box in permanent marking pen following core depth mark-up. Engraving of information onto the core trays is done in the core yard. Details are engraved onto the end of the box, positioned at lower right-hand corner with start and finish identifiers engraved onto the top of the trays. Information written on then end of the trays is transferred to the front of the tray, including repeating of the engraving so as to increase security of information and to readily allow for stacking of trays and reading of information from any direction.

### 10.5.3.3 Core Mark-Up and Block Markings

Driller mark-up of the core is undertaken to carry through information that otherwise could be lost to the geologist by their subsequent treatment of the core at later stages.



The drillers are to mark the core with a cross, using a China marker (white/yellow colour – any colour other than red), at any breaks in the core which occur when they are handling the core. These are unnatural breaks and so are to be ignored in the geotechnical logging.

## Core Block Markings

This procedure is a shared responsibility between the drillers and the C3 Metals' geological/geotechnical team. The drillers mark-up of the plastic core blocks in order to record information regarding drilling run-lengths and hole depths (recorded in metres).

Following determination of drilling metre marks on the core and the recovered core length for each run, C3 Metals' personnel write onto plastic tags the hole name, driller's hole depth, drilling runlength, and recovered core length and then staple the plastic tags onto the underside of the plastic core blocks. Core blocks are then placed back into the tray with the permanent marker details facing up and the plastic tag facing down.

## 10.5.3.4 Core Handling at the Drill Rig

Drillers carefully remove the core lifter from the barrel so that they minimize the chance of twisting and crushing the core behind the core catcher. Care is taken in transferring the core from splits to tray to minimise the breaking and crumbling of clayey and highly fractured segments. It is important not to pack core tightly into the trays – leave between 5 cm and 10 cm at the end of each tray gutter - so that core is easy to remove and return to the trays by core yard personnel. Each trays gutter space left is filled with corrugated paper to pad the core during transport. Once the core is in the trays C3 Metals' personnel takes responsibility of the core.

### 10.5.3.5 Transport of Core (Rig to Core Yard)

Pickup and transporting of the core are conducted twice daily, safely moving core from the rig to the core yard for further processing. Road/track and weather conditions and cramped rig pads are such that the risk of dropping core trays is high. Minimising the chance of accidents is the key consideration in designing protocols for each hole/rig. A flowsheet is provided in Figure 10-11 which shows the pathway from core pick up at the drilling platform to core sampling and database capture.

For transport, drill core boxes are covered with a box cover, corresponding to PQ, HQ, NQ core sizes and fastened/tied up by a couple of rubber "suspenders". The core boxes are secured to the transport vehicle using at least two flat-straps with ratcheted tie-down mechanisms – a maximum of 8 core boxes is transported per trip. Once at the core shed, the core trays are immediately placed on the core racks.



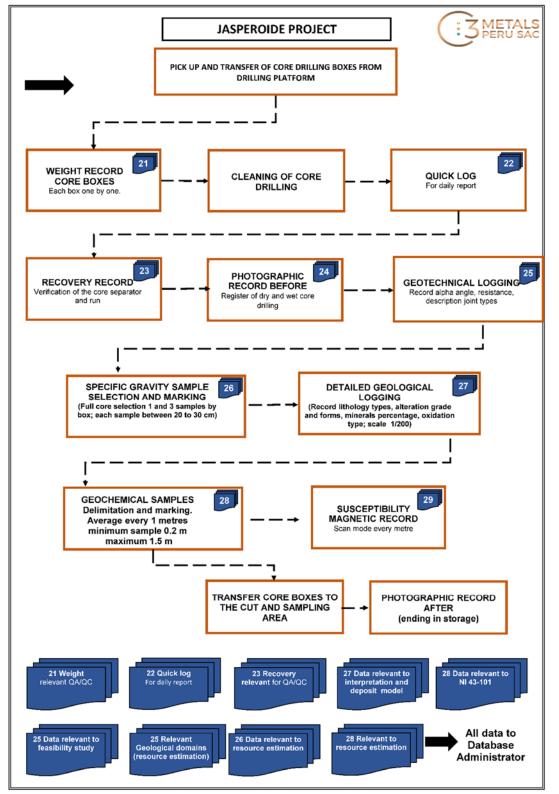


Figure 10-11. Flowsheet for Core Handling from Pick Up at the Drilling Platform to Final Sampling and Database Capture (C3 Metals, 2021)



# 10.5.3.6 Drill Core Handling and Sample Preparation

At the core yard, C3 Metals' geologists/geotechnicians wash the core in order to remove drill mud, grease and gel and prepare it for taking reliable measurement, accurate geological observations, and photos.

The core is not to be picked up during washing and therefore only the exposed up-side of the core is gently washed. A minimum amount of water is used to avoid soft material from the core being washed into the bottom of the core tray. The core start and end depth for each tray is determined by measuring from core blocks. The core lengths and hole details are written on the end and sides of the tray. The core yard geologist inspects the cleanliness and state of the core during this process.

# 10.5.3.7 Core Photography

Wet core photography is taken to keep a record of the geology for later use if the total core is consumed and for easy/quick reference during interpretation and ongoing evaluation. The core is made wet and photographed using a digital camera with the same lighting conditions maintained throughout the process. A single tray per photo is to be taken, with a header board containing hole name, tray number, depths ("From" and "To"), a scale bar showing 10 cm increments, drill hole survey details, and date drilled. The naming convention for the photo jpg files is "HoleID\_ Tray-No\_Tray -DFrom\_Tray-DTom\_Before-Cut\_Wet.jpg" (*e.g.*, JAS2700-03\_Box021\_150.50m-154.50m\_Before-Cut\_Wet.jpg).

# 10.5.3.8 Core Tray Weights

Whole core tray weights are taken as a quality assurance measure for specific gravity values. The trays are weighed immediately following the wet core photography and the data entered directly into the computer.

# 10.5.3.9 Daily Progress Log

A daily progress log was kept, ensuring that information from the drilling was up to date, to assess how the hole is progressing with respect to targets and anticipated geology, and inform management and offsite personnel of the drilling progress. The senior geologist recorded into the daily log such features such as:

- Suspected mineralized veins/intervals
- Gross geological units
- Dikes
- Significant structures (faults, shears, mylonite zones)
- Significant alteration looking for zoning pattern

The most significant information from the progress log was plotted by hand on the current progress drill hole cross section.



## 10.5.3.10 Geotechnical Logging and Core Preparation

## Metre Marks

Metre marks and depths were marked on the core as a reference for recording all geological and structural information and as a reference for determining sample intervals.

Metre marks and hole depths in the poorly recovered soil and weathered zones, at the beginning of the hole, are made to rely heavily on the core block depths. Metre marks in competent core are to be measured from the first core block in the fresh rock and the core block depths used as a check for core-loss and adjustment of the metre marks only if required. Metre marks and confirmation of hole depths are conducted by measuring:

- solid segments of core, being sure not to measure gaps where core can be pieced back together and
- broken pieces of core where the length of core assigned to a broken section is done by estimating the length if the core was solid (bunching up pieces).
- where metre marks (depths) between the measured core depth and the recorded core block depths differ by <20 cm the metre marks are to be honoured and continued.

Any discrepancies >20 cm (significant) between measured depths and core blocks that persists for more than two drilling runs (2 core blocks) were noted and the senior geologist advised of the issue before proceeding with the metre marking. If the issue could not be resolved by assessing the core and determining core loss, poor core reconstruction and/or incorrect core block location then check driller's sheets for incorrect core block details. If the issue could not be resolved, then discuss with driller (get driller to check the depth of hole if still being drilled) and assess which is more appropriate depth to use for determining depths for remainder of hole. Any discrepancies in drill hole details are recorded in the file.

Hole depths were written in black permanent ink on the core (if not clay) and on the top side of the core tray channel divider (when tray is aligned the same way as reading a book). The interval of core in each tray was corrected if it differed significantly (>20 cm) from the original marking of "From-to" depths on the end of the core trays once the depths were determined and verified.



#### Sample Interval Determination

Sample intervals were determined in order to select material to dispatch for assay and to record geological and geotechnical data. Geologists assigned a sample interval based on type of alteration/mineralization intercepts, following one of three sampling regimes depending on the geology encountered:

- Non-mineralised intervals: Core is sampled at nominal 3.0 m intervals with sample breaks adjusted to concur with noticeable geology or alteration changes. To achieve this and keep relatively uniformity in sample sizes, a minimum sample length of 2.0 m and maximum length of 4.0 m is allowed. This sampling regime applies to sections of core with no obvious mineralisation, veining, disseminated sulphides, etc.
- Altered and potentially skarn or structurally controlled mineralised intervals: Core is sampled at nominal 1.0 m intervals with sample breaks adjusted to concur with noticeable geology, mineralisation, veining and/or alteration changes. To achieve this and keep relatively uniformity in sample sizes, a minimum sample length of 0.5 m and maximum length of 1.5 m is allowed. This sampling regime applies to sections of core that may be mineralised and would typically show signs of mineralisation in the form of any combination of fine veining, disseminated sulphides, alteration, etc.
- **Porphyry mineralised veins**: Core is sampled at nominal 3.0 m intervals with sample breaks adjusted to concur with noticeable geology or alteration changes. To achieve this and keep relatively uniformity in sample sizes, a minimum sample length of 2.0 m and maximum length of 4.0 m is allowed. This sampling regime applies to sections of core that may be mineralised and would typically show signs of mineralisation in the form of any combination of fine veining, disseminated sulphides, alteration, etc.

Other guidelines used in the determination of the sampling interval include:

- Sampling intervals are always terminated when a change in mineralization, lithology, and alteration was noted.
- The sampling interval may be shortened to 1.0 m (can be a minimum of 0.5 m or up to 1.5 m) for other thin and variably mineralised zones, including skarn.
- The sampling interval is always terminated when the core size is reduced.
- The sampling interval is always terminated when core changed from good recovery to core loss.

Standard three-ticket "TRM" sampling books and sample number sequences are used to mark the sample intervals in the core box. Alternatively, the sample number may be written on a core block or on flagging tape.

#### Rock Quality Designator and Discontinuity Characteristics

Rock Quality Designator ("RQD") measurements are collected to assist in determining engineering properties used in defining mining parameters:

- RQD measurements were taken, utilizing sample intervals as the total core length. Lengths of core were measured without gaps due to poor re-piecing of core together.
- Only natural breaks were used in determining the cumulative length of core for RQD measurement. That is, un-natural or handling breaks, such as driller's breaks, were ignored in determining if a length of core was greater or less than 10 cm in length.
- Segments of core greater than 10 cm in length were measured and added together to get the length of +RQD<sub>10</sub> metres.
- Fracture/discontinuity characteristics were recorded as per protocols.
- The RQD value was recorded in the paper version of "Recovery RQD Internal Core Loss Log" logging sheet along with the number of pieces of core included in the +RQD<sub>10</sub> measurement against the sample run intervals recorded for determining the recovery data.

#### Magnetic Susceptibility Measurement

Magnetic Susceptibility ("MagSus") measurements were taken using a handheld Terraplus KT-10 unit (or similar) to assist in the interpretation of the geology and understanding of the drill core characteristics. MagSus readings were collected using the following procedures:

- Sample intervals for MagSus readings correspond with the sample intervals and sample numbers in the sample number and recovery sheets. The sample number sequence also takes into consideration the QA/QC sample numbers for coarse blank, pulp blank, duplicates and standards inserted.
- Magnetic Susceptibility readings were taken from three separate locations within each sample interval and recorded on MagSus sheet in SI units x10<sup>-3</sup>.
- Representative core was selected for each sample interval and the core was isolated from other core or from metal objects to insure that nothing interfered with the MagSus measurement.
- Prior to measurement of the core, a measurement is made in the air in order to calibrate the unit.
- Constant magnetic measurements were made over the representative core interval.
- The MagSus reading was recorded on the paper record sheet and entered into the electronic database.



Two methods were used for measuring MagSus, dependent on the magnetic character of the drill core:

- 1. Highly magnetic core/dense sulphide:
  - a. use "scanner" mode.
  - b. push the pin gently on the core and after the "beep" the "scanner" mode will start, stop the readings after 5-10 seconds and record results.
- 2. Non-magnetic core/no significant sulphide:
  - a. use "measure core" mode.
  - b. choose the core size of the sample.
  - c. select "measure" from the main screen.
  - d. push the pin gently on the core and after the "beep" the "measure" mode will start and will stop automatically record results.

#### Total Core Recovery

Total Core Recovery was conducted to determine if there were any sections of entire core loss that may influence the quality and quantity of data being determined from the core. The length of the recovered core was measured between sample breaks being careful not to include gaps in the core that were there because the core was rotated across breaks when being placed in the tray. The drill run details, depth from and depth to points, and the measured recovered length of core was recorded on the paper "Core Recovery by sample length" logging sheet and later entered into the computer database.

#### Internal Core Loss

Internal solid core loss is conducted to determine if there is any scrubbing, washing or partial loss of core that may influence the quality and quantity of the data being determined from the core. Intervals of scrubbed, washed, plucked, or preferentially recovered material are to be determined by measuring lengths of core according to the following categories:

- None no evidence of loss; logged as 1.
- Trace some evidence of loss (*i.e.*, small pits and washing up to 1 mm in depth); logged as 2.
- Moderate pits washing and gouging on core surface and along fractures/faults that visibly scars the core (*i.e.*, 1-3 mm in depth); logged as 3.
- Severe substantial core loss, gouging that has a deform appearance of core from significant washing of soft materials; logged as 4.



Information is recorded on a paper logging sheet and then transferred into the electronic database.

## Core Cutting Line

A core cutting line is drawn along the long axis of the core and used to ensure consistency in subsampling for assay analysis. The core cutting line is marked by the geologist with a continuous red/blue China marker (chinagraph) on the core. This is conducted at the same time as geological or vein logging.

The logging geologist ensures that the cutting line equally bisects the dominant veining or mineralising event in the core so as to reduce the intra-core sampling precision error and introduce a bias. Care was taken to ensure that the cutting line is preserved and transferred as a marking-pen line on the packing tape used to hold pieces of core together for cutting.

### 10.5.3.11 Core Logging

Core logging was undertaken to record the geological characteristics and gross physical properties of the drill core including lithology (geology), mineralization, alteration, and structure. The logging geologist marked sections of the core to be logged in the alteration, mineralisation, and veining logs using green and blue China markers to designate these features. Logging information was entered directly into the logging software.

The core was logged by the Senior Geologist and a geotechnician, and information was entered into LogChief by MaxGeo with a DataShed 5 Database Management system (DBMS) running on SQL Server. QA/QC evaluation of the core assays is completed by Duncan Hackman from Hackman & Associates (Australia) using their own reporting software with Stewart Control Charts etc. (*see* Section 11).

# 10.5.3.12 Dry Core Photography

Dry core photography was taken to keep a visual record of the geology for later use if the total core is consumed and for easy/quick reference during interpretation and ongoing evaluation. A single tray per photo was taken with the following displayed on the header board: hole name, tray number, depths ("From" and "To"), a scale bar showing 5 cm increments, drill hole survey details, and date drilled. Care was taken to be sure that any information recorded on the core and core blocks was clearly visible in the photograph (such as sample numbers, SG samples taken, samples taken for petrology determination, etc.) by including a core block or flagging tape with the details written on it at the position taken. The naming convention for the dry photo jpg file is "HoleID\_Tray\_DFrom-Tray-DTo\_Dry.jpg" (*e.g.*, JAS2700-02\_92\_342.50-347.70\_Dry.jpg).

## 10.5.3.13 Final Core Photography

Post core cutting and sampling, and to show the flat surface of the core, photos are taken of the core trays. A single tray per photo was taken with the following displayed on the header board: hole name, tray number, depths ("From" and "To"), a scale bar showing 10 cm increments, drill hole survey details, and date drilled.

#### 10.5.4 Summary of Drilling Information

It is the opinion of the QP for this section that sampling data collected by drilling is adequate for the purpose of estimating Mineral Resources for the Project. The QP does not know of any drilling, sampling, or recovery factors that would materially impact the accuracy and reliability of the results.

# **11.0** Sample Preparation, Analyses and Security

## 11.1 Southwestern Gold Corporation/Cyprus Minerals Company (SWG)

A total of 109 soil samples, 150 surface rock chip samples, 485 channel samples, 988 diamond drill core samples (1,732 samples) were assayed during this 1994-1995 exploration campaign. Assays were performed for Cu, Au and Ag, and some 37% of the samples were additionally assayed for Pb, Zn, Mo, Sb, Bi, As and Hg. Details of sample preparation, analyses and security are not known.

Only two of the 14 holes have significant mineralization, and they are comparable to nearby holes from the other drilling campaigns. The remaining holes are outside of the main resource area or near the perimeter of the area and do not have significant mineralization. As such, they provide important information to bound the MCZ mineralized area.

#### 11.2 Cominco Peru S.R.L.

A total of 13 vertical boreholes (HU-1 to HU-13) totalling 1,854.2 m was drilled in this 1996 campaign. A total of 218 samples were obtained from 731 m of drill core and assayed for Cu and Au. The QP for this section does not know the details of sample preparation, analyses, or security. All the holes are outside or near the perimeter of the main MCZ resource area and weakly mineralized. Again, they provide information to bound the mineralized area and guidance for additional exploration.

### 11.3 Compañia Minera Ares S.A.C.

## 11.3.1 Sampling

The sampling method during the 2012 drilling campaign was systematic with most samples being 2 or 2.5 m in length. Sampling was mostly within visibly Cu mineralized zones. It is also reported (Corey, 2019) that samples were only collected where core recoveries were >50% with no sampling done where recovery was <50% as this was considered to not be representative.

## 11.3.2 QA/QC Protocols

It is also reported that QA/QC protocols included the insertion of a certified Cu-Au standard purchased from CDN Resource Laboratories Ltd., and a blank (unmineralized) standard into every batch of 20 samples. The QA/QC data was not available to the QP for this section to review.

#### 11.3.3 Sample Preparation and Analysis

Original assay certificates for the Minera Ares samples are available. The samples were submitted to the ALS sample preparation lab in Cusco, Peru. The samples were crushed to 70% passing 2 mm and then pulverized to 85% passing 75 microns. The pulps were sent to the ALS analytical lab in Lima, Peru. Total copper analysis was by four acid digestion and AA finish (Cu-AA62). Gold analysis was by a 30 g fire assay and AA finish (Au-AA23). A 35 element multi-element analysis was also done using aqua regia digestion and ICP-AES finish (ICP-41).

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11.3.4 C3 Metals Re-Assay of Minera Ares Pulps

During 2020 C3 Metals selected remaining half core from mineralized zones in 7 Minera Ares holes for assaying to provide a check of the Minera Ares results. This resulted in 359 sample pairs with Minera Ares and C3 Metals' assays for copper and gold. The QP for this section reviewed the data and overall, the results showed a good comparison for copper and gold.

There was a noted possible weakness in the re-assay program for the copper assays. The assaying used a multi-element procedure that consisted of aqua regia digestion and ICP-AES finish (ICP-41). Aqua regia is a mixture of hydrochloric and nitric acid (two acids). Total copper analysis is usually based on four acid, or occasionally three acid, digestion. More details of this program are discussed in Section 9.2.1 of this report.

The QP for this section is of the opinion that the Minera Ares assays are adequate for Mineral Resource estimation purposes.

## 11.3.5 C3 Metals' Mapping, Rock Chip and Grid Soils Program

In 2021 a geological mapping and sampling program was undertaken by C3 Metals Peru over the DIA permitted area. Exploration activities focused on mapping the intrusive and carbonate rock contact zone at a 1:1,000 scale and completing a grid-based soil sampling survey along 300-meter spaced lines with soil samples collected at 25-meter intervals. Soil grid lines oriented in a southwest-northeasterly direction in order to bisect the mineralized trend and sample stations were located by conventional hand-held GPS location methods with a nominal accuracy of  $\pm 2$  m.

For the soil sampling program, a total of 891 original samples were collected in addition to the 78 control samples that were inserted for QA/QC purposes, resulting in a total of 969 samples that were prepared in five batches for dispatch to the ALS Global sample preparation facility in Arequipa (Batch 028, Batch 029, Batch 031, Batch 032, and Batch 033). The wet weight of each soil sample was recorded by Q2A staff. Soil geochemistry defined a copper in soil anomaly measuring 3,500 m in north-south dimension and varies from 200 m to 750 m in true width.

A total 310 rock samples were collected, and 47 control samples (QA-QC) were inserted, adding a total of 357 samples that were prepared in two batches for dispatch to the ALS Global sample preparation facility in Arequipa (Batch 038 and Batch 040). The wet weight of each rock chip channel sample was recorded by Q2A staff. Rock chip and rock chip channel samples returned anomalous copper, gold, silver, cobalt, lead and zinc geochemistry, consistent with historic assays.



So Au_ppm AR-ICPMS	Cu_ppm	Ro Au ppm	ock
		Au ppm	C
AR-ICPMS		PPm	Cu_ppm
	AR-ICPMS	FA-AAS	4A-ICPMS
891	891	310	310
0.001	15	0.005	5
1	10000	0.237	9660
0.014	176.4	0.011	471.6
0.002	53.8	0.005	168.75
0.9995	9992.5	0.2345	9657.5
0.004	95.4	0.0075	560.775
0.0622	553.9	0.0217	894.8
0.0005	14.076	0.0025	2.644
0.0005	19.26	0.0025	6.41
0.001	21.82	0.0025	9.81
0.001	30.1	0.0025	27.975
0.005	125.5	0.01	588.75
0.0228	408.4	0.022	1140
0.059	701	0.035	1700
0.303	1795.8	0.115	4657.1
	0.001           1           0.014           0.002           0.9995           0.004           0.0622           0.0005           0.0005           0.001           0.001           0.005           0.005           0.005           0.001           0.005           0.0228           0.059           0.303	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $

 Table 11-1. Summary Statistics of Surface Gold and Copper Assays

 for 2021 Mapping and Sampling Program

(\*) Maximum assay result for soil sample is the Upper Detection Limit of Analysis Method. Over range method was not requested for soil sample assay.

## 11.4 C3 Metals – Phase 1 Drilling

C3 Metals' Phase 1 diamond drilling program began 1 February 2021 and was completed by 18 November 2021 (C3 Metals news release 25 May 2021), totalling 10,235.45 m in 37 drill holes and along 10 section lines. This program followed systematic industry-standard chain-of-custody, core handling, sampling, and QA/QC procedures which are summarized in the following sections. Documents related to the policies and procedures (*e.g.*, Hackman et al., 2021) were provided to and reviewed by the QP for this section. A QA/QC review of the Phase 1 drilling program was prepared for C3 Metals' by Hackman (2021), providing the majority of content that follows.

A total of 4,048 half core (Alpha Samples) and 406 QA/QC (standards, coarse blanks, and pulp blanks) samples were submitted for preparation at the ALS prep-lab in Arequipa who then sent the samples for analysis at the ALS Lab in Lima, Peru. ALS Minerals is part of ALS Limited, one of the largest assay testing companies in the world; the company trades on the Australian Stock Exchange, under the symbol ALQ and its headquarters are located in Brisbane, Australia. ALS Peru is ISO/IEC 17025:2017 accredited by the Standards Council of Canada and uses GEMS system as their Laboratory Information Management System ("LIMS") to track samples.

The Issuer and the QP's for this Technical Report are all independent of ALS.



## 11.4.1 Sample Preparation Methods

#### 11.4.1.1 Core Cutting

Core cutting, using a diamond blade table saw, was undertaken to acquire a sample to be sent off to the lab for analysis and a reference sample to be stored in the core tray for further use. Original core samples are 50% (half) of the core while core duplicates are 25% of the remaining half core.

Core may appear competent in the tray; however, the core-sawing action is such that a lot of the core may disintegrate during the cutting. Prior to cutting, core is prepared as follows:

- wrap whole pieces of core in plastic wrap, ensuring to transfer the cutting line onto the wrapping.
- wrap around the plastic wrap and core with packing tape.
- transfer the cutting line onto the outside of the packing tape (do this before wrapping is completed).

Core is cut along the cutting line using a core saw to generate two longitudinal segments of equal size. Core is cut on the metre marks (sectional direction) to generate clean breaks at these points for assisting in the sampling process. After cutting, both sections of core are placed back in the tray with the cut surface positioned horizontally and facing up. If core cannot be cut without introducing loss by washing away clayey and oxidized material, then a core cradle is used to hold core together during the cutting process.

When the core is strongly weathered, oxidized or clayey in nature, and does not hold together in the core saw sample by using a chisel/paint-scraper/cleaver to split the core along the cutting line. Where core has deteriorated due to handling and/or within strong fracture zones, sample by selecting 50% of the broken pieces so that the sampled material is representative of the drilled interval. Care is taken as to not cross-contaminate between tray channels.

To be sure the sample is totally collected, fine material in the bottom of the tray is collected using a brush and scoop. A chisel is used to cut and sample clayey material that would be washed away during core sawing, again using a brush and scoop to collect fine materials at the bottom of the core tray.

After each core section was cut and sampled, the diamond saw blade was cleaned using a pumice stone or other cleaning block.

#### 11.4.1.2 Sample Handling

Sampling and dispatching are integrated processes where samples from different holes can be dispatched together to make up the ideal dispatch size of 216 (drill core plus QA/QC) samples. The QC sample insertion rates relate to the requirements per dispatch. The rate of QC samples per every 50 total samples was used as a guideline to assist in getting the overall QC numbers close to correct. The following procedure was in place for C3 Metals' sample preparation procedure:



- Calico bags (cotton sample bags) were numbered with sample number, and 2 sample tags inserted into the bag with the core sample.
- SG samples are placed in the same sample calico bag and the SG sample and assay sample number are logged in the database.
- Calico bagged samples are weighed to the nearest 10 g accuracy and weights entered into the database.
- Calico bags are zip-tied with security ties.

# 11.4.1.3 Sample Dispatch, Security and Storage

After the core is logged and sampled on the Property and placed in polyweave bags, the samples are stored on site in a safe and secure location until shipped to the lab. The core yard and sample storage area is under 24-hour guard.

Core samples were shipped to the ALS sample preparation lab in Arequipa by contracted courier service with consignment documentation: Guia Remission (carbon copy - 2 copies) containing details of the consignment and a lab submission form containing instructions for ALS. A second copy and lab submission form were stamped by ALS as receipts.

Dispatching is undertaken to send samples from site and to confirm that samples have arrived in their entirety and intact at their destination, as described by C3 Metals:

- The plastic sample bags are placed into polyweave sacks for transporting and the polyweave bags weighed (weight of bag is no more than 20 kg each). Polyweave sacks are annotated with an identifying number, the sample numbers within the bag, and the total weight of the bag. The polyweave bag number and sample numbers are then entered into the database.
- The total number of samples in a dispatch should match the optimum number of samples that the laboratory likes to deal with within their system; for ALS Peru this is 216 samples which comprises 208 core samples and 8 QA/QC samples. For small batches (<150 samples) ensure that there is a minimum of 5 certified standards, two coarse blanks, two duplicates and one pulp blank included in the batch (batches <100 samples were avoided). Sample batches of less than 150 were only dispatched if results were urgently required.
- Dispatch sheets were clearly completed noting the sample locations where duplicates were to be generated.
- The dispatch sheet should be placed in a sealed plastic bag and includes with the samples in the polyweave bag.
- Following each dispatch a copy of the sample dispatch sheet and sampling sequence is entered into the database.



- All polyweave bagged samples to be dispatched are laid-out in sequence and photographed clearly showing the sample numbers on the bag.
- When the samples arrive at the preparation lab, each of the polyweave bags is weighed and compared to the weight of the same polyweave bag as recorded at the Jasperoide Property.

After assaying in Lima, core sample pulps and rejects are held at ALS for 90 days and 45 days, respectively. Once the lab notifies C3 Metals that the pulps and rejects need to be destroyed or removed, the samples are collected by C3 Metals' storage contractor ABIL Corporation S.A.C. (Lima, Peru) who transport the material to the core storage facility located on the Jasperoide Property. Core is stored off the ground, either cross-piled on pallets or in the core shed which has roofing to protect the boxes from the elements.

11.4.2 Sample Preparation and Analysis

Original half-core, quartered core duplicate and QA/QC blanks and standards were submitted to ALS Peru S.A.'s preparation lab located in Arequipa who completed the sample preparation and then couriered the sample pulps to ALS Global Laboratories ("ALS") located in Lima, Peru for analyses. ALS Peru S.A. is accredited under ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories.

The Phase 1 drilling was shipped to ALS in 14 batches, JAS-001 to JAS-014. At ALS Arequipa, core samples were weighed, dried, crushed, quartered, and pulverized, producing a final 1.5 kg pulp sample of 90% passing 75 microns or 200 mesh. Table 11-2 and Figure 1-11 describe the procedures.

Client Profile Template: C3M-001										
Comments	Step Number on Flow Chart	Preparatio n Code	Description							
	1	LOG-22	Sample login – Rcd w/o BarCode							
	2	DRY-21	High Temperature Drying for 12 hours							
	3	WEI-22	Dry Weight							
Codes to be in the Sample Submittal Form	4	CRU-36	Fine Crushing – 85% <2mm							
codes to be in the sample submittal rorm	5	SPL-21x	Addnl Crush Split for HYP-PKG							
	8	SPL-21	Split sample – riffle splitter							
	9	WEI-23	Wt. of split before pulverization							
	10	PUL-36a*	Pulverize 1500g to 90% < 75um							
	6	LOG-22d	Sample login – Rcd w/o BarCode dup							
Codes for taking the Coarse Duplicate	7	SPL-21d	Split sample – duplicate							
codes for taking the coarse Duplicate	8	SPL-21	Split sample - riffle splitter - Apply to samples with $>1.5$ kg							
	10	PUL-36ad*	Pulverize 1500g to 90% < 75um - dup							
	11	LOG-24	Pulp Login – Rcd w/o Barcode							
Codes for taking the Pulps Duplicates	12	SPL-34	Pulp Splitting Charge							
	13	SPL-34a	Pulp Splitting Charge 2 (Adittional Pulp)							
Post preparation	14	??	Hold Pulps & Crusher Rejects for standard time – C3M to confirm before disposing							

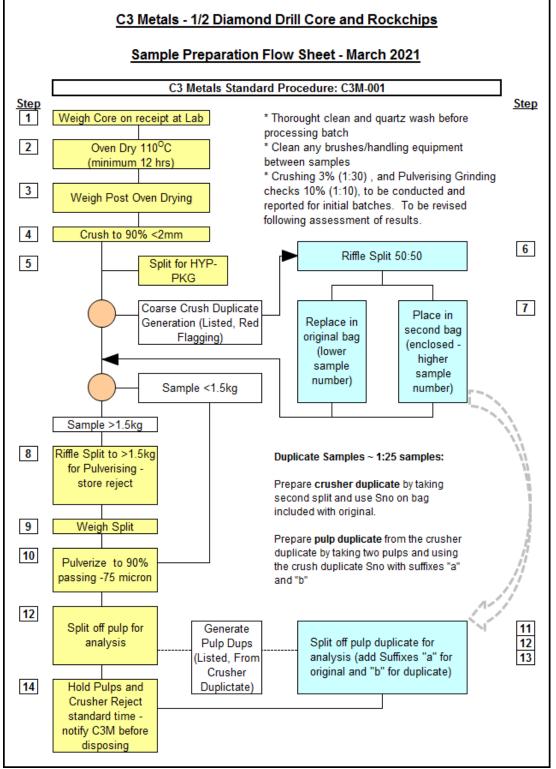


Figure 11-1. Sample Preparation Flow Sheet (C3 Metals, 2021)

Assay charges were taken from the -75 micron sample-pulps and analysed at the ALS Lima Laboratory for:

- Au by 30 g Fire Assay (ALS method Au-AA23). Lower Limit 0.005 ppm Au, upper limit 10.0 ppm Au. ALS description:
  - A prepared 30 g sample is fused with a mixture of lead oxide, sodium carbonate, borax, silica, and other reagents as required, inquarted (alloyed) with 6 mg of gold-free silver and then cupelled to yield a precious metal bead.
  - The bead is digested in 0.5 mL dilute nitric acid in the microwave oven, 0.5 mL concentrated hydrochloric acid is then added, and the bead is further digested in the microwave at a lower power setting. The digested solution is cooled, diluted to a total volume of 4 mL with de-mineralized water, and analyzed by atomic absorption spectroscopy against matrix-matched standards.
- ME (multi-element) suite by Four Acid Digestion with ICP-MS Finish 48 Elements plus 12 common RE elements (ALS method ME-MS61r). Lower Limit 0.2ppm Cu, upper limit 10,000 ppm Cu. ALS description:
  - A prepared sample (0.25 g) is digested with perchloric, nitric, hydrofluoric, and hydrochloric acids. The residue is topped up with dilute hydrochloric acid and analyzed by inductively coupled plasma-atomic emission spectrometry. Following this analysis, the results are reviewed for high concentrations of bismuth, mercury, molybdenum, silver, and tungsten and diluted accordingly. Samples meeting this criterion are then analyzed by inductively coupled plasma-mass spectrometry. Results are corrected for spectral inter-element interferences.

With additional assay undertaken where:

- Initial ME-MS61r Cu > 1%: re-assayed by an ore grade method, Four Acid Digestion with ICP-AES finish (ALS method Cu-OG62). Lower Limit 0.001% Cu, upper limit 50% Cu. ALS description:
  - A prepared sample (0.4 g) is digested with perchloric, nitric, hydrofluoric, and hydrochloric acids. The residue is topped up with dilute hydrochloric acid and analyzed by inductively coupled plasma-atomic emission spectrometry.

ALS included and reported their QC results which included:

- Crusher Grind Tests (1:30 insertion rate).
- Pulverise Grind Tests (1:10 insertion rate).
- Solution Blanks, insertion rates:

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- Au stream 1:15.
- Cu ME-MS61r stream 1:10.
- o Cu OG62 stream 1:10.
- Assay Repeats, insertion rates:
  - Au stream 1:30.
  - Cu ME-MS61r stream 1:15.
  - o Cu OG62 stream 1:10.
- Certified Reference Standards, insertion rates:
  - Au stream 1:15.
  - Cu ME-MS61r stream 1:10.
  - Cu OG62 stream 1:5.

ALS also implemented a quality assurance protocol where a blank quartz wash was pulverised between samples when clayey material was being processed (material adhering to the bowl). ALS does not have the means within their LIMS program to digitally report on when this protocol was employed, however they periodically released scans of the worksheets which shows the barren washes to cluster where high moisture samples are located within batches.

#### 11.4.3 Quality Control Measures

C3 Metals inserted the following QC samples into their batches at irregular spacing that conform to the overall rates as stated:

- Coarse Blanks, 4 per 100 routine samples. Material description:
  - o Grey limestone, no visible sulphides. Occasional calcite veins.
  - o Sourced from Matahuaylla quarry, localized 4 km to SE of the Jasperoide Project.
  - o Particle size range (mm): Min 20 mm, max 60 mm, average 45 mm.
- Pulp Blanks, 2 per 100 routine samples. These were inserted immediately after a certified reference standard. C3 Metals have utilized the OREAS-24d blank for batches JAS-001 to JAS-014.
- Certified Reference Standards, 4 per 100 routine samples.
- Coarse Crush duplicate sample (a ½ split of post crusher material, riffle split and assigned the subsequent sample ID number from that which is assigned to the source material), 4 per 100 routine samples.
- Pulp duplicate samples (a second pulp collected post pulverizing, assigned the same sample ID number (with the letter "b" added as a suffix) as the original pulp ID (which is assigned the letter "a" as a suffix), 4 per 100 samples.



• All standards, pulp blanks and coarse blanks are laid-out and photographed for record. Any markings on the standards, pulp blanks are removed (by alcohol) before placing to respective pre-numbered sample bags.

11.4.3.1 Certified Reference Material

A summary of the certified reference material ("CRM") standard and blank samples used in QA/QC procedures for the Phase 1 drilling program are summarized in Table 11-3. These were procured from ORE Research & Exploration Pty Ltd.

useu in QA/QC for rinase f urining.												
CRM	Certified Elements	Cu (%)	Au (ppm)	Source	Analytical	Comments						
OREAS 24d	blank	-	-	olivine tholeiitic basalt	4-acid digestion with ICP-OES or ICP-MS finish; Au by fire assay	very low gold of <1 ppb						
OREAS 59d	Cu-Au-As- Co-Fe-Mo- Ni-S-Ag	1.47	0.801	iron ore copper gold (IOCG) ore	Aqua Regia Digestion	breccias rich in magnetite and disseminated sulphide mineralization						
OREAS 520	Cu-Au-As- Co-Fe-Mo- Ni-S-Ag	0.293	0.176	blend of iron oxide copper- gold ore and magnetite- bearing waste rock		breccia comprising strongly altered and replaced felsic volcanic fragments in magnetite- sulphide matrix						
OREAS 521	Cu-Au-As- Co-Fe-Mo- Ni-S-Ag	0.607	0.376	blend of iron oxide copper- gold ore and magnetite- bearing waste rock	4-acid digestion with ICP-OES or ICP-MS finish; Au by fire assay	breccia comprising strongly altered and replaced felsic volcanic fragments in magnetite- sulphide matrix						
OREAS 522	Cu-Au-As- Co-Fe-Mo- Ni-S-Ag	0.916	0.574	blend of iron oxide copper- gold ore and magnetite- bearing waste rock4-acid digestion with ICP-OES or ICP-MS finish; Au by fire assay		breccia comprising strongly altered and replaced felsic volcanic fragments in magnetite- sulphide matrix						
OREAS 523	Cu-Au-As- Co-Fe-Mo- Ni-S-Ag	1.72	1.04	blend of iron oxide copper- gold ore and magnetite- bearing waste rock	4-acid digestion with ICP-OES or ICP-MS finish; Au by fire assay	breccia comprising strongly altered and replaced felsic volcanic fragments in magnetite- sulphide matrix						

 Table 11-3. Summary of Certified Reference Material (standards and blank)

 used in QA/QC for Phase 1 drilling.



CRM	Certified Elements	Cu (%)	Au (ppm)	Source	Analytical	Comments
OREAS 524	Cu-Au-As- Co-Fe-Mo- Ni-S-Ag	2.53	1.54	blend of iron oxide copper- gold ore and magnetite- bearing waste rock	4-acid digestion with ICP-OES or ICP-MS finish; Au by fire assay	breccia comprising strongly altered and replaced felsic volcanic fragments in magnetite- sulphide matrix
OREAS 701	Cu-Au-As- Co-Fe-Mo- Ni-S-Ag	0.491	1.11	high-grade skarn tungsten- magnetite ore	4-acid digestion with ICP-OES or ICP-MS finish; Au by fire assay with AAS or ICP-OES finish	skarn mineralization associated with limestone unit

The insertion frequency and positions of the copper CRMs is pre-set by C3 Metals. Ideally the senior geologist aims for at least 5 reference standards of  $\sim 1\%$  Cu grade and 3 standards of higher grade (2% to 5% Cu) per dispatch. It is the senior geologist's responsibility to assign the reference standards to the batch, evenly distributing (but not regularly) the different standards throughout the batch. As a guide 2 to 3 standards per 50 samples will ensure the ideal insertion rate for a batch.

# 11.4.3.2 Certified Pulp Blanks

At least two certified pulp blanks (OREAS-24d blank) were included in each sample dispatch. These were inserted following certified Cu standards and their insertion rates and positions are pre-set as laid out by C3 Metals. As a guide, 1 pulp blank was inserted per 50 samples to ensure the ideal insertion rate for a batch.

## 11.4.3.3 Coarse Blanks

Coarse blanks were inserted into areas of the hole intersection where mineralisation is suspected. Ideally, the senior geologist aims for a minimum of two coarse blanks per batch – inserted within (suspected) mineralised portions of intersections; however this can be increased depending on the length of the interval and the number of suspected mineralised intervals with a batch. The ideal overall insertion rate of coarse blanks for a (suspected) mineralised batch is 1:25 (4%); however this can be less if no favourable intervals are included, or more if the batch contains a large number of favourable intervals. As a guide, 1 coarse blank per 50 samples will ensure an adequate insertion rate for a batch.

## 11.4.3.4 Field and Pulp Duplicates

The field duplicates numbers and locations are determined by the geologist and are to be focused within suspected mineralized intervals. Ideally 6 duplicates are to be included in each batch. As a guide, 2 duplicates per 50 samples will ensure adequate insertion rate per batch.

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Pulp duplicates were generated from the original samples at ALS laboratory and reported as part of the lab's QA/QC procedures.

11.4.4 QA/QC Investigations

The monitoring for potential sample mix-up, sub-sample splitting and comminution compliance showed no issues of concern.

## 11.4.4.1 Sample Drying Testwork

C3 Metals had early concerns regarding the ALS standard oven drying time which were allayed through drying time testwork. A test program was undertaken on all samples within batches JAS-008 to JAS-011, where samples were weighed following 12 hrs of oven drying then returned for a further 36 hrs of drying before being re-weighed. The testing indicated that samples are appropriately dried for sample preparation and analysis following 12 hrs, as weights are identical for almost all samples at the two weighing points with the observed deviations being very small (non-material) for those that differ (Table 11-4).

Batch	Water content	Count of samples returning additional % weight loss between 12hr and 48hr drying time											
	coment	0%	0 to 1%	1 to 2%	2 to 5%	7%	7.5%						
JAS-008	0 to 10%	95	2										
	10 to 20%	151											
	20 to 30%	20											
	30 to 40%	1											
JAS-008 To	otal	267	2										
JAS-009	0 to 10%	162	4	1									
	10 to 20%	92	5		1								
	20 to 30%	11	2	2									
JAS-009 To	otal	265	11	3	1								
JAS-010	0 to 10%	167	4										
	10 to 20%	75	6		1								
	20 to 30%	19	1	1	1								
	30 to 40%	1		1									
	40 to 50%	1											
JAS-010 To	otal	263	11	2	2								
JAS-011	0 to 10%	117	12										
	10 to 20%	112	4	2			1						
	20 to 30%	14				1							
JAS-011 To	otal	243	16	2		1	1						
То	otal	1038	40	7	3	1	1						

#### Table 11-4. Additional Water Loss between 12 hr and 48 hr Oven Drying Duration, Split by Sample Water Content

## 11.4.4.2 Iron and Copper Precision Tests

A minor concern was identified regarding the marginally high Fe and Cu variance between duplicate samples in the routine 4AD-OES analysis. It was determined that the issue is method/sample-matrix related, so does not present in every duplicate pair assayed, and is perceived to have minimal impact on the robustness and reliability of any evaluation of the Project, including Mineral Resource estimation.



To investigate this issue, alternative analytical methods on nine duplicate samples (ALS incident report no. 1081267) were performed.

- Issue the routine QC duplicates analyses show a marginally higher variance than anticipated in both Fe and Cu grades (refer section on precision, below) and ALS suggested that this is most likely due to digestion issues manifesting in the routine ME-MS61r method for samples with high Fe content.
- Investigation nine coarse crush and pulp duplicate pairs were re-assayed by the following ALS methods:
  - ME-OG62 (method described above). Fe lower limit 0.01% and upper limit 100%.
  - ME-XRF21u (lithium borate fusion, XRF). Cu lower limit 0.001% and upper limit 1.5%. Fe lower limit 0.007% and upper limit 74.8%.
  - The original analysis by ME-MS61r was included in the analysis of results.
- Findings ALS concluded that for:
  - Fe duplicate pairs:
    - For ME-XRF21u: maximum % difference of duplicates is 3.5% (avg. 1%).
    - For ME-OG62, maximum % difference of duplicates is 6% (avg. 2%).
    - For ME-MS61r, maximum % difference of duplicates is 9% (avg. 4%).
  - Cu duplicate pairs:
    - For ME-XRF21u: maximum % difference of duplicates is ≤ 3.0% (avg. 2.5%).
    - For ME-OG62, maximum % difference of duplicates is ≤ 6.5% (avg. 2%).
    - For ME-MS61r, maximum % difference of duplicates is ≤ 9% (avg. 3%).

The precision improvement for both elements is found on methods designed specifically for high grade iron analyses and this is due to the digestion method applied (with fusion by ME-XRF21u being the best method option).

Although ALS did not implement an extensive (and therefore conclusive) test program there is enough evidence to support their conclusion that the complete digestion of Fe is impacting on the reliability of assays. C3 Metals has included method checks as part of their umpire laboratory testwork.

Given that the observed variance increase in the duplicates dataset is not extreme or pervasive, it is considered of low risk regarding any observations made from, or use of the Cu or Fe assay

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dataset. C3 Metals has opted not to change their primary analytical method from the current ALS ME-MS61r method.

11.4.5 Quality Control Assessment and Observations

C3 Metals undertakes a complete QC assessment on receipt of each analytical batch results when issued as complete by ALS (consisting of emailed CSV files and PDF certificates). Assay results are held in quarantine until QC evaluation and any required follow-up reviews verify their reliability. The following is a compilation of the QC evaluation undertaken for batches JAS-001 to JAS-014.

#### 11.4.5.1 Assay Generation

The following description and tables present details of the analytical batches and checks undertaken regarding data integrity and sample preparation.

Table 11-5 presents the details of samples and QC dispatched for batches JAS-001 to Jas-014. All samples dispatched were received at ALS. All samples flagged to be generated at the laboratory were created (coarse crusher and pulp duplicates).

Table 11-5. Sample Dispatch Details												
Batch_ID	Hole_ID	Alpha	Stds	Coarse	Pulp	Crusher	Pulp	Sample Numbers				
		Samples		Blanks	Blanks	Dups	Dups					
JAS_Batch-001	JAS2650-03	225	9	9	4	9	9	P000001-P000256				
JAS_Batch-002	JAS2650-04	416	16	18	8	17	17	P000257 - P000731				
JAS_Batch-003	JAS2650-01	342	14	13	8	13	13	P000732 - P001121				
JAS_Batch-004	JAS2650-02	283	12	12	5	12	12	P001122 - P001445				
JAS_Batch-005	JAS2650-05	323	12	13	6	12	12	P001446 - P001811				
JAS_Batch-006	JAS2650-06	198	8	8	5	9	9	P001812 - P002039				
JAS_Batch-007	JAS2650-07	246	10	9	5	9	9	P002040 - P002318				
JAS_Batch-008	JAS2700-01	259	11	10	5	10	10	P002319 - P002613				
JAS_Batch-009	JAS2700-02	268	10	12	5	11	11	P002614 - P002919				
JAS_Batch-010	JAS2700-03	268	12	10	6	11	11	P002920 - P003226				
JAS_Batch-011	JAS2700-04	253	9	10	5	10	10	P003227 - P003513				
JAS_Batch-012	JAS2700-05	494	20	20	9	20	20	P003514 - P004076				
JAS_Batch-013	JAS2700-06	318	13	13	7	13	13	P004077 - P004440				
JAS_Batch-014	JAS2700-07	155	6	6	3	6	6	P004441-P004616				

<b>Fable 11-5</b>	Sample Dis	patch Details
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Samples were submitted to ALS Arequipa, Peru for sample preparation and pulps couriered to ALS Lima for analysis. Table 11-6 provides a summary of the lab job ID and turnaround time (averaged 6 weeks) for Batches JAS-001 to JAS-014.



Batch	ALS Lab Job	Da	ite	Turn around
Datch	ALS Lab Job		Completed	(days)
JAS_BATCH-001	AR21069869	31-03-21	21-04-21	21
JAS_BATCH-002	AR21069867	31-03-21	07-05-21	37
JAS_BATCH-003	AR21073562	31-03-21	12-05-21	42
JAS_BATCH-004	AR21082700	06-04-21	21-05-21	45
JAS_BATCH-005	AR21089496	13-04-21	18-05-21	35
JAS_BATCH-006	AR21096248	20-04-21	16-05-21	26
JAS_BATCH-007	AR21096246	20-04-21	19-05-21	29
JAS_BATCH-008	AR21103314	07-05-21	18-06-21	42
JAS_BATCH-009	AR21110589	18-05-21	25-06-21	38
JAS_BATCH-010	AR21118498	18-05-21	30-06-21	43
JAS_BATCH-011	AR21118499	18-05-21	30-06-21	43
JAS_BATCH-012	AR21129428	31-05-21	06-07-21	36
JAS_BATCH-012	AR21137999	31-05-21	22-07-21	52
JAS_BATCH-013	AR21132012	26-05-21	07-07-21	42
JAS_BATCH-014	AR21138378	01-06-21	15-07-21	44

Table 11-6. Laboratory Job IDs, Dates and Turnaround Times

Table 11-7 describes the sample types within, and analytical methods undertaken on the batches and reported by ALS. All samples were inserted, assayed and reported as protocols directed.

The percent difference between the dispatch weights recorded at site and the received weights of samples recorded at ALS is provided in Table 11-8. There are a number of samples where these differ, which were investigated, and observations reported (see Table 11-13). There is a possibility that two sample pairs have been swapped (4 samples, Batches JAS-002 and Jas-005), either in dispatching or receipting, however there is no material differences in the grades of the pairs and therefor no action was taken in correcting the data. The site and ALS were notified of the mixups, and both have stated that they will remind staff of the necessity to be vigilant when dispatching/receipting samples.



	laskeine somele Gunt										Sizing	Distribut	ion (nur	nber of	tests in	each	
				Inclusion sample Count							perc	entage or	materia	l passin	ng categ	ory)	
Batch Lab job				C3M Inse	rted Qua	lity Cont	rol Sample	2S	ALS Inserted QC Samples			Number of tests -2mm			-	75micro	'n
Datch	Lab job	Method	Routine Samples	sTDs (CRMs)	Coarse Blanks	Pulp Blanks	Coarse Crush Dups	Pulp Dups	STDS	Blanks	Repeat Assay	-2mm	-75 um	> 85%	> 85% < 90%	> 90% < 95%	> 95%
		Au - Au-AA23	225	<u>s</u> 4%	4%	2%	4%	4%	5%	5%	4%	14	28	14	0	27	1
JAS_BATCH-001	AR21069869	Cu - ME-MS61r	172	3%	5%	2%	4%	4%	13%	11%	8%		20				
-		Cu - Cu-OG62	53	5%			3%	3%	28%	17%	10%						
		Au - Au-AA23	416	3%	4%	2%	4%	4%	6%	6%	4%	21	49	21	0	46	3
JAS_BATCH-002	AR21069867	Cu - ME-MS61r	405	3%	4%	2%	4%	4%	10%	8%	6%						
		Cu - Cu-OG62	11	21%			0%	0%	64%	36%	14%						
		Au - Au-AA23	341	4%	3%	2%	3%	3%	6%	6%	4%	15	39	15	0	35	4
IAS BATCH 002	AR21073562	Au-GRA21	1	0%	0%	0%	0%	0%	200%	200%	0%						
JAS_BATCH-003	AK21073502	Cu - ME-MS61r	330	4%	3%	2%	3%	3%	11%	9%	6%						
		Cu - Cu-OG62	12	0%			8%	8%	85%	38%	8%						
		Au - Au-AA23	282	4%	4%	2%	4%	4%	6%	7%	3%	12	37	12	0	24	13
JAS BATCH-004	AR21082700	Au - Au-GRA21	1	0%	0%	0%	0%	0%	400%	400%	100%						
JA5_DATCH-004		Cu - ME-MS61r	280	4%	4%	2%	4%	4%	12%	10%	6%						
		Cu - Cu-OG62	3	0%			0%	0%	200%	33%	0%						
		Au - Au-AA23	323	3%	4%	2%	3%	3%	7%	8%	3%	11	40	11	0	19	21
JAS_BATCH-005	AR21089496	Cu - ME-MS61r	259	2%	4%	2%	3%	3%	16%	12%	5%						
		Cu - Cu-OG62	64	8%			3%	3%	24%	14%	7%						
		Au - Au-AA23	198	4%	4%	2%	4%	4%	8%	9%	3%	9	24	9	0	22	2
JAS_BATCH-006	AR21096248	Cu - ME-MS61r	164	3%	4%	3%	3%	3%	13%	11%	6%						
		Cu - Cu-OG62	34	8%			8%	8%	20%	20%	8%						
		Au - Au-AA23	246	4%	3%	2%	3%	3%	6%	6%	3%	12	29	12	0	29	0
JAS_BATCH-007	7 AR21096246	Cu - ME-MS61r	226	3%	4%	2%	3%	3%	12%	10%	7%						
		Cu - Cu-OG62	20	13%			4%	4%	25%	25%	8%						
		Au - Au-AA23	259	4%	3%	2%	3%	3%	7%	7%	3%	10	33	10	0	30	3
JAS_BATCH-008	AR21103314	Cu - ME-MS61r	240	3%	4%	2%	3%	3%	11%	9%	7%						
		Cu - Cu-OG62	19	17%	-0/	201	4%	4%	17%	13%	13%						
	4.0011105.00	Au - Au-AA23	268	3%	4%	2%	4%	4%	6%	7%	3%	12	33	12	0	30	3
JAS_BATCH-009	AR21110589	Cu - ME-MS61r	236	2%	4%	2%	4%	4%	12%	9%	6%						
		Cu - Cu-OG62	32	11%	20/	20/	3%	3%	76%	30%	5% 4%	10	34	10	0		
		Au - Au-AA23	267	4%	3%	2%	4%	4%	7%	7%		12	34	12	0	33	1
JAS_BATCH-010	AR21118498	Au - Au-GRA21	1	0%	-0/	201	0%	0%	200%	200%	100%						
		Cu - ME-MS61r	219	2%	4%	2%	3%	3%	15%	9%	7%						
		Cu - Cu-OG62	49	13% 3%	3%	2%	5% 3%	5% 3%	40% 7%	18% 7%	5% 3%	9	30	9	0	30	0
JAS_BATCH-011	AR21118499	Au - Au-AA23	253			2%	3% 4%			7%	-	9	30	9	U	30	0
JA5_BATCH-011	AN21110433	Cu - ME-MS61r	242 11	1% 35%	4%	270	4% 0%	4% 0%	9% 106%	53%	6% 6%						
		Cu - Cu-OG62	246	4%	4%	1%	4%	4%	7%	7%	4%	11	32	11	0	32	0
JAS BATCH-012	AR21129428	Au - Au-AA23 Cu - ME-MS61r	240	2%	4%	1%	4%	4%	12%	9%	6%	11	52	11	U	52	
JA3_BATCH-012	AN21123420	Cu - Cu-OG62	10	2%	470	170	4% 0%	4%	86%	43%	7%						
		Au - Au-AA23	247	4%	3%	2%	4%	4%	8%	5%	3%	10	29	10	0	27	2
		Au - Au-GRA23	1	0%	370	270	0%	0%	400%	400%	100%	10	23	10	0	21	2
JAS_BATCH-012	AR21137999	Cu - ME-MS61r	245	2%	3%	2%	3%	3%	11%	8%	6%						
		Cu - Cu-OG62	3	50%	370	2/0	13%	13%	125%	63%	25%						
		Au - Au-AA23	315	4%	4%	2%	4%	4%	7%	8%	3%	16	38	16	0	37	1
		Au - Au-GRA21	315	0%		270	0%	0%	67%	67%	33%	10	50	10		,	
JAS_BATCH-013	AR21132012	Cu - ME-MS61r	272	3%	4%	2%	4%	4%	14%	10%	8%						
		Cu - Cu-OG62	46	5% 6%	470	270	2%	2%	20%	10%	6%						
		Au - Au-AA23	155	3%	3%	2%	3%	3%	8%	9%	3%	7	19	7	0	18	1
JAS_BATCH-014	AR21138378	Cu - ME-MS61r	133	2%	4%	2%	4%	4%	14%	11%	6%	, ,	- 25	. ,		10	<b>_</b>
	CUSTT202/0	Cu - IVIE-IVI3011	142	270	4/0	2/0	4/0	4/0	14/0	11/0	070	1					

# Table 11-7. ALS Report Details: Sample Type and Comminution Testwork

		Received wt relative to Dispatch wt (count of samples)														
Batch	-85%	-54%	-39%	-23%	-8%	8%	23%	39%	54%	69%	85%	100%	131%	270%	394%	873%
JAS_BATCH-001						223	2									
JAS_BATCH-002			1		1	408		1					1			1
JAS_BATCH-003				1	1	338	1		1							
JAS_BATCH-004	1			1		277		1							1	
JAS_BATCH-005					1	319		3								
JAS_BATCH-006						198										
JAS_BATCH-007			1			244										
JAS_BATCH-008					2	256					1					
JAS_BATCH-009				1		264	2	1								
JAS_BATCH-010						266	1	1								
JAS_BATCH-011					2	251										
JAS_BATCH-012						491				1		1				
JAS_BATCH-013			1			316										
JAS_BATCH-014		1	1		1	147		2	1					1		

Table 11-8. Percent Difference between	ALS Received Weight and	Site Dispatched Weight

Table 11-9 presents the percent water loss from samples within batches. A total of 7.5% of samples have lost more than 20% of mass following drying. This observation has no relevance regarding assay reliability; however, it is important in designing and refining sample preparation protocols.

	1 4,	% water loss (Percentage of samples)													
					% wa	ter los	s (Perce	entage	of sam	ples)					
Batch	2%	5%	8%	12%	15%	18%	22%	25%	28%	32%	35%	39%	42%	45%	
JAS_BATCH-001	10%	13%	21%	23%	15%	11%	3%	3%	0.4%	0.4%	0.4%	0.4%			
JAS_BATCH-002	26%	28%	19%	15%	7%	3%	1%	1%	0.2%	0.2%					
JAS_BATCH-003	18%	13%	26%	19%	13%	3%	4%	2%	1%	0%					
JAS_BATCH-004	5%	12%	19%	24%	21%	11%	5%	1%	1%						
JAS_BATCH-005	7%	28%	17%	12%	13%	7%	6%	2%	2%	3%	1%	0%	1%		
JAS_BATCH-006	7%	20%	19%	21%	10%	6%	5%	4%	1%	5%	2%	1%	2%		
JAS_BATCH-007	7%	35%	27%	13%	6%	5%	4%	2%	1%	0%					
JAS_BATCH-008	0.4%	11%	24%	24%	22%	10%	4%	2%	1%	0%					
JAS_BATCH-009	4%	26%	28%	18%	9%	9%	3%	1%	1%						
JAS_BATCH-010	7%	28%	25%	13%	11%	6%	5%	2%	1%	0%		0%		0.4%	
JAS_BATCH-011	2%	21%	25%	19%	17%	11%	4%	1%	1%						
JAS_BATCH-012	14%	27%	24%	16%	10%	4%	3%	2%	0.4%		0.2%	0.2%			
JAS_BATCH-013	6%	22%	26%	22%	12%	7%	3%	1%			1%				
JAS_BATCH-014	18%	19%	17%	17%	14%	6%	3%	3%	1%	3%		1%			

Table 11-9. Percent Water Loss on Sample Drying at ALS



## 11.4.5.2 Comminution and Subsampling

Table 11-10 and Table 11-11 present the sample comminution Quality Control sample results (grind tests) which show that equipment setup and run times are appropriate for the Jasperoide material and that samples adhere to protocol design.

D-1-1	Total			Per	cent	mate	rial p	assin	ng 2m	m (c	ount	of te	sts)	<u> </u>	
Batch	Tests	85	86	87	88	89	90	91	92	93	94	95	96	97	98
JAS_BATCH-001	14			1	2	3	1	4				1		2	
JAS_BATCH-002	21				3	1	1	2			9	2	1	2	
JAS_BATCH-003	15		2		3	2	1		3		1	2	1		
JAS_BATCH-004	12				1			1	1	4	1	3	1		
JAS_BATCH-005	11	1	1			1	1	2			1	3	1		
JAS_BATCH-006	9				1	1	3	1	1	1	1				
JAS_BATCH-007	12			1	1	3	2	3	1	1					
JAS_BATCH-008	10								3	3	3	1			
JAS_BATCH-009	12							1		1	2	5	1	1	1
JAS_BATCH-010	12				1		2	2	1	2	3	1			
JAS_BATCH-011	9						1		1	4	2		1		
JAS_BATCH-012	21				2	1	2	4	3	3	3		2		1
JAS_BATCH-013	16	1		1		4	1	5	1	2			1		
JAS_BATCH-014	7					1	2	1	1				2		

 Table 11-10. Crushing Comminution Quality Control Analysis

Datch	Total	Per	cent	mate	rial p	assin	ig 75i	um (c	ount	of te	sts)
Batch	Tests	90	91	92	93	94	95	96	97	98	99
JAS_BATCH-001	28	6	15	4	2			1			
JAS_BATCH-002	49	14	23	1	6	2	2	1			
JAS_BATCH-003	39	14	8	3	5	5	2	1	1		
JAS_BATCH-004	37	3		5	7	9	7	5	1		
JAS_BATCH-005	40	2	4	2	9	2	5	7	7	2	
JAS_BATCH-006	24	10	4	3	4	1	2				
JAS_BATCH-007	29	15	2	3	3	6					
JAS_BATCH-008	33	18	6	1	1	4	1	1	1		
JAS_BATCH-009	33	18	3	2	1	6	3				
JAS_BATCH-010	34	17	6	1	5	4	1				
JAS_BATCH-011	30	14	7	3	5	1					
JAS_BATCH-012	61	37	8	5	3	6	2				
JAS_BATCH-013	38	27	6	1		3	1				
JAS_BATCH-014	19	11	4	1		2	1				

Table 11-12 presents the -2 mm sample split weights, being the weight of samples presented to the LM2 mills for pulp generation. Protocols state that a target sample weight of  $\geq$ 1.5 kg is to be presented for pulverizing, which is the case for 87% of samples and that a weight of  $\geq$ 1.0 kg is the minimum acceptable sample size (98% of samples). Observations made as to why the 2% of prepulverizing samples did not achieve the minimum 1.0 kg weight are provided in Table 11-13. Small initial sample sizes and significant loss following drying are the two key causes of low-weight -2 mm sample material being presented for pulverizing.



				C	oarse C	rush Sp	olit wt	(kg, cou	int of s	amples	5)			
Batch	0.42	0.51	0.61	0.70	0.79	0.89	0.98	1.07	1.17	1.26	1.35	1.45	1.54	1.63
JAS_BATCH-001						2		1		9	27	148	38	
JAS_BATCH-002	1		1		2			1	3	10	35	261	101	
JAS_BATCH-003				2	3	3	5	6	13	12	9	194	95	
JAS_BATCH-004			2	2	4	2	2	3	2	5	101	147	11	
JAS_BATCH-005		3	1	2	4	1	3	9	5	7	49	219	20	
JAS_BATCH-006				2	3	1	6	3	2	3	6	128	44	
JAS_BATCH-007						1	1	3	2	3	1	150	84	
JAS_BATCH-008	1							2	1	6	4	175	70	
JAS_BATCH-009							1		3	3	5	199	57	
JAS_BATCH-010		2	1		1	3		2	5	7	7	170	70	
JAS_BATCH-011		1		1	2	1	3	4	7	6	5	156	67	
JAS_BATCH-012				2		2	1	3	7	10	8	298	155	7
JAS_BATCH-013							1	4	7	12	6	199	88	
JAS_BATCH-014						1	1			2	1	88	60	1

Table 11-12. I	Post Crushing	Snlit	Weight Quality	<b>Control Analysis</b>
1 abic 11-12. 1	i osi Crushing	Spnt	Weight Quanty	Control Analysis

 Table 11-13. QC Analysis Regarding Suspected Sample Mix-up

 and Low Sub-sampling Weight (see Table 11-8)

Batch		Rec Wt ↔ Di	spatch Wt (>5	% difference)		Coarse	Crush Split W	't <1.0kg
	Site Typo	Sample mixup or typo at site	Typo or mixup with contiguous sample	Suspected typo at LAB	Confirmed Typo at LAB -corrected	Low received sample weight	Significant loss on drying	Should not have been split
JAS_BATCH-001						2		1
JAS_BATCH-002	4	2				3		1
JAS_BATCH-003	11					8		
JAS_BATCH-004	5					12	1	
JAS_BATCH-005	3		2				13	
JAS_BATCH-006	1					5	9	
JAS_BATCH-007	1						2	
JAS_BATCH-008	3				1			
JAS_BATCH-009	4			1			1	
JAS_BATCH-010	2						6	1
JAS_BATCH-011	1					2	5	
JAS_BATCH-012	2					2	3	
JAS_BATCH-014	6					1	1	

## 11.4.5.3 Contamination and Carry-over

There are no significant contamination or carry-over issues portrayed in the coarse blank and pulp blank QC data (Figure 11-2. and 11-3). A sporadic correlation between previous sample copper grades and the grade of the coarse blank grades is observed however this in the range of 2 to 3 orders of magnitudes lower than grades of interest (*i.e.*, 0.001% Cu to 0.01% Cu).



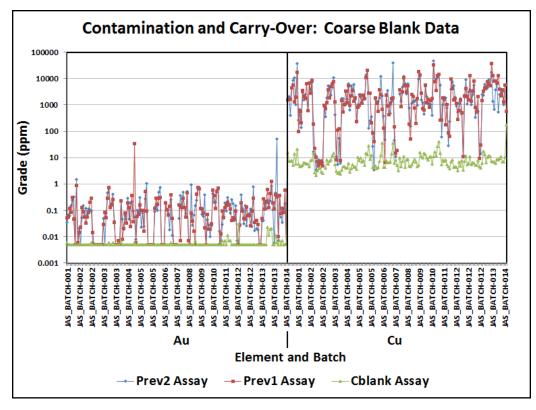


Figure 11-2. Coarse Blank QC Analysis (Hackman, 2021)

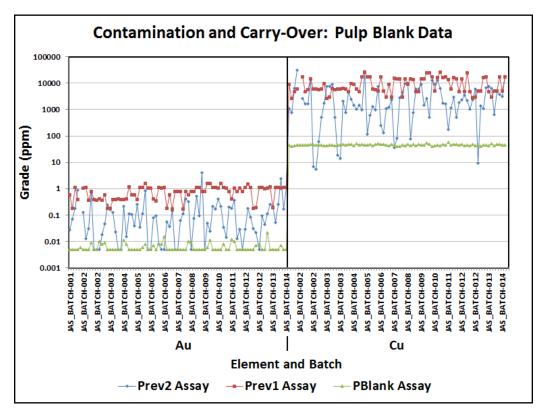


Figure 11-3. Pulp Blank QC Analysis (Hackman, 2021)



## 11.4.5.4 Accuracy and Precision

Hackman (2021) reported no material issues regarding the reliability of Cu and Au assay values discernible from the C3 Metals and ALS certified reference material standards (Figure 11-4 to Figure 11-7). Note that the 1 Standard Deviation performance gates of the OREAS standards (utilized by C3 Metals) are tight margins for commercial laboratories to achieve, as shown by the apparent spread of results for Cu in Figure 11-4.

Hackman (2021) has observed that a performance gate of 4% RSD is a more achievable representative of a commercial laboratory's ability (which agrees with the precision assessment presented in Figure 11-8 and Figure 11-9). This performance gate would compress the spread of plotted results observed in Figure 11-4 by 25% to 50%, resulting in a graphical presentation more like that presented in Figure 11-5, the ALS lab results from their internal standards.

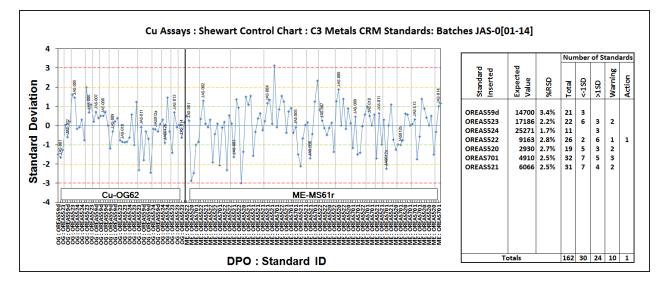


Figure 11-4. C3 Metals CRM Standards - Cu Shewart Control Chart (Hackman, 2021)

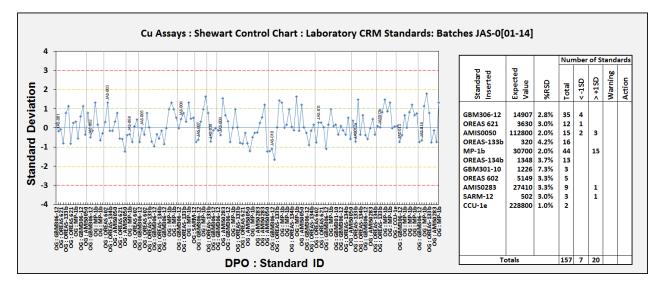


Figure 11-5. ALS Internal Standards - Cu Shewart Control Chart (Hackman, 2021)



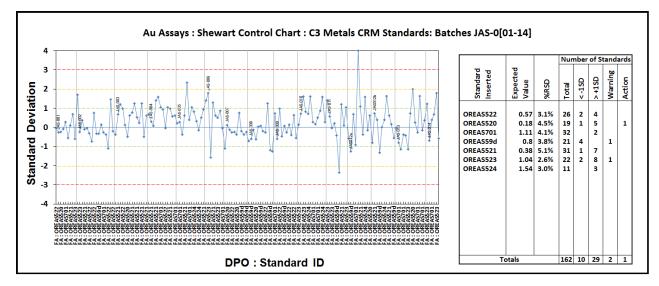


Figure 11-6. C3 Metals CRM Standards - Au Shewart Control Chart (Hackman, 2021)

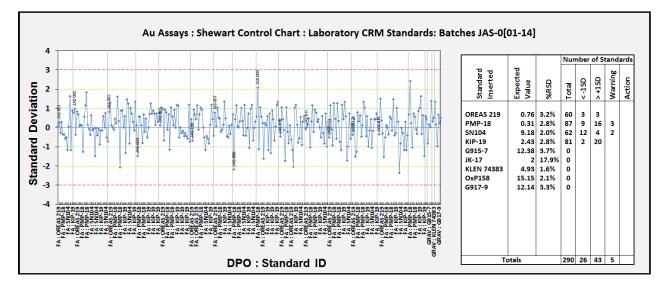


Figure 11-7. ALS Internal Standards - Au Shewart Control Chart (Hackman, 2021)

Hackman (2021) reported no material issues discernible from the Cu and Au coarse crush or pulp duplicate paired sample assays or the laboratory repeat assays (Figure 11-8 to Figure 11-11). Hackman (2021), in evaluating QC results for similar mineralisation styles as Jasperoide, observed better precision for Cu in coarse crush duplicate samples than reported for Jasperoide (90% of data <5% MPD; whereas JAS data shows 75% of data <5% MPD or 90% of data <7% MPD) and Fe grades (90% of data <4% MPD; whereas JAS data shows 60% of data <4% MPD or 90% of data <7% MPD). This prompted an investigation through ALS into the reliability of the 4-acid digest method employed by C3 Metals where it was suggested by the limited testwork that a more reliable digest (and analysis) is achievable through a lithium borate fusion and XRF analysis method. This suggestion agrees with proven geochemical understanding; however, given that the observed variance increase in the coarse duplicates dataset (over expected) is not extreme or pervasive, the increase is considered of low risk regarding any observations made from, or use of the ME-Ms61r



Cu and Fe assay dataset. C3 Metals has opted not to change their primary analytical method from the current ALS ME-MS61r method.

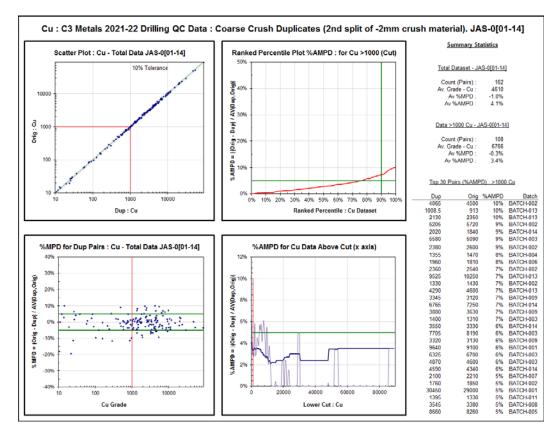


Figure 11-8. Cu in Coarse Crush Duplicates (Hackman, 2021)



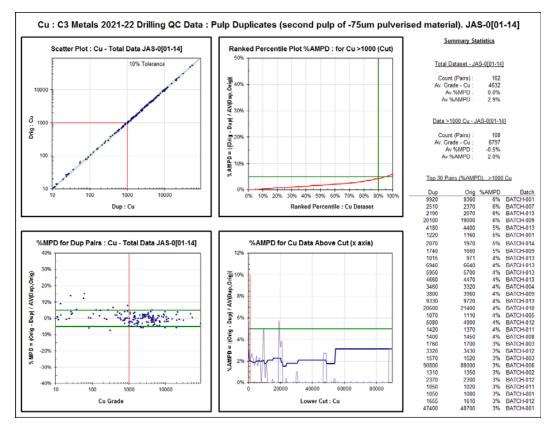


Figure 11-9. Cu in Pulp Duplicates (Hackman, 2021)



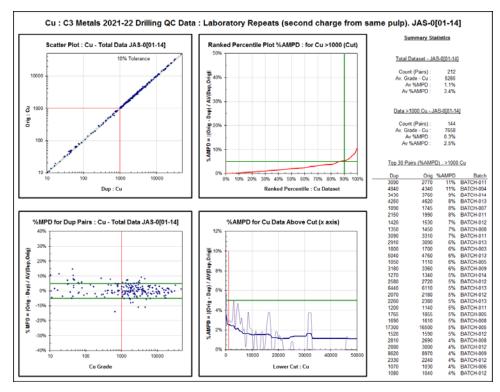


Figure 11-10. Cu in Laboratory Repeats (Hackman, 2021)

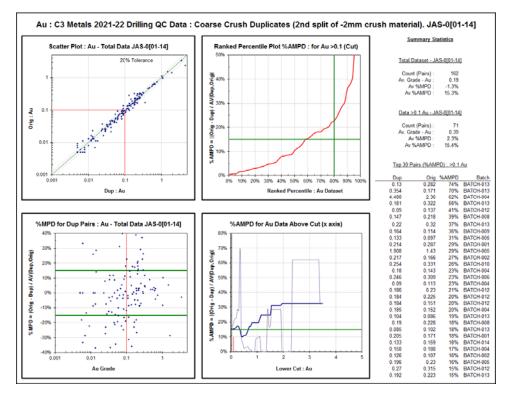


Figure 11-11. Au in Coarse Crush Duplicates (Hackman, 2021)

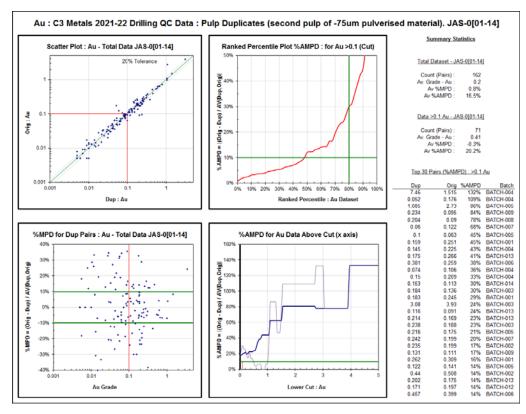


Figure 11-12. Au in Pulp Duplicates (Hackman, 2021)

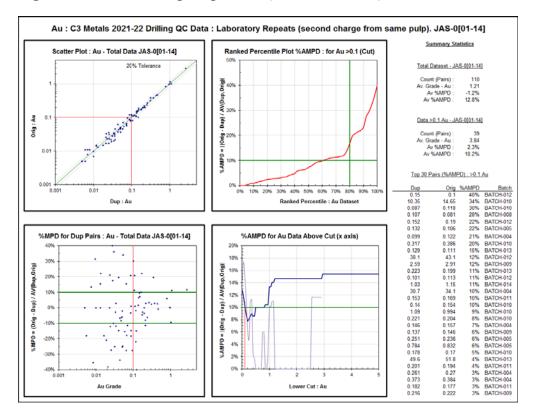


Figure 11-13. Au in Laboratory Repeats (Hackman, 2021)



11.4.6 Conclusions – QA/QC Phase 1 Drilling

Hackman (2021), independent consultant to C3 Metals, reported on the findings from the Phase 1 diamond drilling program.

Assessment of the QA/QC data for all 14 analytical assay batches submitted in the 2021 Phase 1 drilling program at Jasperoide, showed that there is no cause for withholding Mineral Resource estimates solely underpinned by assays from these batches, and in particular:

- Sample preparation, analysis protocols and QA/QC protocols were selected and modified (in the case of drying times and comminution testwork) from the ALS standard methods to be best suited for commercial production-rate assaying of Jasperoide style mineralisation.
- Communication with the two ALS Peru Laboratories was open and engaging and their response to queries was acceptable (regarding response time and investigative/corrective actions).
- There are no physical sample or assay reporting mix-ups.
- Samples are shown to be thoroughly dried.
- There are no significant crush, grind, or subsampling issues.
- There are no sample carryover or contamination issues.
- There is acceptable accuracy portrayed for both copper and gold assays.

There is acceptable precision portrayed for both copper and gold assays.

The QP for this section has reviewed the available reports and also conducted independent checks of the blanks, standards and duplicates. In the opinion of the QP for this section, sampling methods, preparation and analytical methods were adequate and appropriate for Mineral Resource estimation. In addition, sample handling and security measures were also appropriate and adequate with a well-established chain of custody from the Project to the laboratory.



## 11.5 C3 Metals – Phase 2 Drilling

C3 Metals' Phase 2 diamond drilling was completed during November 2022. The program resulted in 9489.7 m in 33 holes. This program followed systematic industry-standard chain-of-custody, core handling, sampling, and QA/QC procedures which are summarized in the following sections. A complete QA/QC review and report for the Phase 2 drilling program was prepared by Hackman, 2022, an independent consultant, providing the majority of content that follows. Documents and reports related to the policies and procedures were provided to and reviewed by the QP for this section.

As with the Phase 1 drilling, samples were submitted for preparation at the ALS prep-lab in Arequipa who then sent the samples for analysis at the ALS Lab in Lima, Peru.

11.5.1 Sampling, Sample Preparation and Analysis

The sampling, sample security, and sample preparation and analysis procedures are the same as was described in Section 11.4.1 and 11.4.2 for the Phase 1 drilling.

11.5.2 Quality Control Measures

The quality control measures implemented by C3 Metals are the same as described in Section 11.4.3 for the Phase 1 drilling.

11.5.3 Quality Control Assessments and Observations

C3 Metals undertakes a complete QC assessment on the receipt of each analytical batch results when received from ALS (consisting of emailed CSV files and PDF certificates). Assay results are held in quarantine until QC evaluation and any required follow-up reviews verify their reliability. The following is a compilation of the QC evaluation undertaken for batches JAS-015 to JAS-080.

## 11.5.3.1 Assay Generation

The following description and tables present details of the analytical batches and checks undertaken regarding data integrity and sample preparation.

Table 11-14 presents the details of samples and QC dispatched for batches JAS-015 to JAS-080. All samples dispatched were received at ALS. All samples flagged to be generated at the laboratory were created (i.e. coarse crush and pulp duplicates).

Samples were submitted to ALS Arequipa, Peru for sample prep and pulps couriered to ALS Lima for analysis. Table 11-15 presents the lab job ID and turnaround time for Batches JAS-015 to JAS-080, which averaged 5 weeks.



		<u>-14. San</u>	iple Di	spatch .	Details	– Phase	e 2 Dril	ling
Batch_ID	Hole_ID	Alpha	Stds	Coarse	Pulp	СС	Pulp	Sample Numbers
		Samples		Blanks	Blanks	Dups	Dups	
JAS_Batch-015	JAS2700-08	131	5	5	3	5	5	P00[4617 - 4765]
JAS_Batch-017	JAS2750-01	191	8	7	3	8	8	P00[4766 - 4982]
JAS_Batch-018	JAS2750-01	177	7	8	4	7	7	P00[4983 - 5185]
	JAS2750-02	157	5	6	2	7	7	P00[5199 - 5233]
JAS_Batch-019	JAS2750-03	31	1	1		1	1	P00[5239 - 5414]
	JAS2750-03	94	5	4	3	4	4	P00[5415 - 5630]
JAS_Batch-020	JAS2750-04	93	4	3	2	4	4	P00[0410 - 0000]
JAS Batch-021	JAS2750-04	105	4	4	2	4	4	P00[5631 - 5749]
JA5_Batch-021	JAS2750-05	85	3	4	2	3	3	P00[5750 - 5846]
IAS Batch 022	JAS2750-05	182	8	8	3	7	7	P00[5847 - 6054]
JAS_Batch-022	JAS2750-06	8						P00[6055 - 6061]
	JAS2750-01	10		1				P00[5186 - 5196]
JAS_Batch-023	JAS2750-02	5	1		1			P00[5197 - 5198] P00[5234 - 5238]
	JAS2750-06	123	5	5	3	5	5	P00[6063 - 6203]
JAS_Batch-024	JAS2750-07	66	2	3	1	3	3	P00[6204 - 6278]
	JAS2750-07	82	3	3	1	3	3	P00[6279 - 6370]
JAS_Batch-025	JAS2800-01	107	5	4	3	5	5	P00[6371 - 6494]
	JAS2800-01	86	3	3	2	3	3	P00[6495 - 6591]
JAS_Batch-026	JAS2800-01	103	5	4	2	5	5	P00[6592 - 6710]
	JAS2800-02	26	1	1	1	1	1	P00[6711 - 6740]
JAS Batch-027	JAS2800-02	132	4	6	2	5	5	P00[6741 - 6889]
JA5_Batch 027	JAS2900-03	33	2	0	1	1	1	P00[6890 - 6926]
JAS Batch-030	JAS2900-01	191	7	8	3	7	7	P00[6927 - 7142]
JA5_Batch-050		87	4	4	2	4	4	
JAS_Batch-032	JAS2900-01			5	2	4	4	P00[7143 - 7243]
	JAS2600-01	100	4	2		-	2	P00[7244 - 7358]
JAS_Batch-035	JAS2600-01	57	2		1	2	6	P00[7359 - 7422]
	JAS2600-02	134		5	2			P00[7423 - 7574]
JAS_Batch-036	JAS2600-02	18	1	1	1	1	1	P00[7575 - 7596]
	JAS2600-03	169	8	6	4	6	6	P00[7597 - 7789]
JAS_Batch-037	JAS2600-03	198	7	8	4	8	8	P00[7790 - 8014]
JAS_Batch-039	JAS4350-01	198	8	9	3	8	8	P00[8015 - 8240]
JAS_Batch-041	JAS4350-02	253	10	10	5	10	10	P00[8241 - 8528]
JAS_Batch-042	JAS4350-02	184	7	7	4	7	7	P00[8529 - 8737]
JAS_Batch-043	JAS4350-02	179	8	7	4	8	8	P00[8738 - 8943]
JAS_Batch-044	JAS4350-03	184	7	7	4	7	7	P00[8944 - 9152]
JAS_Batch-045	JAS4350-03	172	7	7	3	7	7	P00[9153 - 9348]
JAS_Batch-046	JAS4050-01	185	7	7	3	7	7	P0[09349 - 10057]
JAS_Batch-047	JAS4050-01	153	6	7	3	6	6	P0[10058 - 10232]
JAS Batch-048	JAS4050-01	47	2	2	1	2	2	P0[10233 - 10286]
-	JAS4050-02	142	6	5	3	6	6	P0[10287 - 10448]
JAS_Batch-049	JAS4050-02	188	8	7	5	8	8	P0[10449 - 10664]
JAS_Batch-050	JAS4050-02	185	7	7	3	7	7	P0[10665 - 10873]
JAS_Batch-051	JAS4050-02	148	6	7	3	6	6	P0[10874 - 11043]
JAS_Batch-052	JAS2350-01	180	7	8	3	7	7	P0[11044 - 11248]
	JAS2350-01	11						P0[11249 - 11259]
JAS_Batch-053	JAS2300-01	143	6	6	3	6	6	P0[11260 - 11423]
	JAS3800-01	30	1	1	1	1	1	P0[11424 - 11457]
	JAS3800-02	23	1	1		1	1	P0[11458 - 11483]
JAS_Batch-055	JAS2500-01	136	6	5	4	6	6	P0[11484 - 11640]
	JAS2500-02	27	1	1		1	1	P0[11641 - 11670]

Table 11-14. Sample Dispatch Details – Phase 2 Drilling

17	<u>ible 11-14. S</u>	_	spatch	Details	– Pilas	e z Dri	inng (C	1 (
Batch_ID	Hole_ID	Alpha Samples	Stds	Coarse Blanks	Pulp Blanks	CC Dups	Pulp Dups	Sample Numbers
	JAS2500-02	31	2	1	1	1	1	P0[11671 - 11706]
JAS_Batch-056	JAS2700-02	107	4	4	2	4	4	P0[11707 - 11827]
JA5_batch=050	JAS2700-09	51	2	2	1	3	3	P0[11828 - 11827]
	JAS2700-10	56	1	3	1	2	2	P0[11828 - 11880] P0[11887 - 11949]
JAS_Batch-058	JAS2700-10	78	3	2		3	3	P0[11887 - 11949] P0[11950 - 12036]
JA5_Batch-058					1			
	JAS3000-01	57	2	3	1	2	2	P0[12037 - 12101]
JAS_Batch-059	JAS3000-01	134	7	5	3	5	5	P0[12102 - 12255]
	JAS3000-02	55	2	2	1	2	2	P0[12256 - 12317]
JAS_Batch-060	JAS3000-03	44	1	3	1	2	2	P0[12318 - 12368]
	JAS3000-04	144	6	6	3	6	6	P0[12369 - 12533]
JAS_Batch-061	JAS3000-04	36	1	1		1	1	P0[12534 - 12572]
	JAS3000-05	155	6	6	3	7	7	P0[12573 - 12749]
	JAS3000-05	41	2	1	1	2	2	P0[12750 - 12796
JAS_Batch-062	JAS3800-03	93	5	4	3	3	3	P0[12797 - 12904]
	JAS3000-06	54	2	2	1	2	2	P0[12905 - 12965]
JAS_Batch-063	JAS3000-06	189	7	8	4	8	8	P0[12966 - 13181
JAS Batch-064	JAS3000-06	110	4	5	1	4	4	P0[13182 - 13305
	JAS2800-04	80	4	3	2	3	3	P0[13306 - 13397
	JAS2800-04	24	1	1	1	1	1	P0[13398 - 13425
JAS_Batch-065	JAS2800-05	78	3	3	1	3	3	P0[13426 - 13513
	JAS2800-06	88	3	3	2	4	4	P0[13514 - 13613
	JAS2800-06	18	1	1				P0[13614 - 13633
JAS_Batch-066	JAS2900-02	135	5	5	3	6	6	P0[13634 - 13787
	JAS2900-03	37	1	2		2	2	P0[13788 - 13829
Inc. Batab 067	JAS2900-03	24	1	1	1	1	1	P0[13830 - 13857
JAS_Batch-067	JAS2800-07	164	8	6	4	6	6	P0[13858 - 14045
JAS Batch-068	JAS2800-07	192	6	7	3	8	8	P0[14046 - 14261
	JAS2800-07	24	2	1	1	1	1	P0[14262 - 14290
JAS_Batch-070	JAS3250-01	80	2	4	1	3	3	P0[14291 - 14380
-	JAS2900-04	85	4	3	2	3	3	P0[14381 - 14477
	JAS2900-04	144	6	7	3	6	6	P0[14478 - 14643
JAS_Batch-072	JAS2900-05	44	2	1	1	2	2	P0[14644 - 14693
	JAS2900-05	164	6	7	3	7	7	P0[14694 - 14880
JAS_Batch-073	JAS2900-06	26	1	1		1	1	P0[14881 - 14909
JAS Batch-075	JAS2900-06	188	9	7	5	7	7	P0[14910 - 15125
JA5_batch 0/5	JAS2900-06	7		,		1	1	P0[15126 - 15133
JAS Batch-076	JAS3275-01	83	3	3	2	3	3	P0[15134 - 15227
JA5_batch-070	JAS4350-04	100	4	4	2	4	4	P0[15228 - 15227
		88	3	4	1	3	3	P0[15228 - 15341 P0[15342 - 15440
JAS_Batch-077	JAS4350-04					4	4	
	JAS4350-05	102	4	5	2			P0[15441 - 15557
	JAS4350-05	87	4	3	2	4	4	P0[15558 - 15657
JAS_Batch-078	JAS3750-01	44	2	2	1	1	1	P0[15658 - 15707
	JAS3750-02	33	1	1		2	2	P0[15708 - 15744
	JAS3650-01	25	1	1	1	1	1	P0[15745 - 15773
	JAS3650-01	52	2	2	1	2	2	P0[15774 - 15832
JAS_Batch-079	JAS3650-02	67	3	3	1	2	2	P0[15833 - 15908
	JAS3650-03	47	1	2	1	2	2	P0[15909 - 15961
	JAS3725-01	25	1	1		1	1	P0[15962 - 15989
	JAS3725-01	15	1		1	1	1	P0[15990 - 16007
JAS_Batch-080	JAS3725-02	23	1	1		1	1	P0[16008 - 16033
	JAS3725-03	31	1	1	1	1	1	P0[16034 - 16068

 Table 11-14. Sample Dispatch Details – Phase 2 Drilling (Continued)

Table 11-15. Laboratory Job IDs, Dates and TurnaroundTimes – Phase 2 Drilling

	2 Di lilling	Da	ate	Turn around
Batch	ALS Lab Job	Received	Completed	(days)
JAS_BATCH-015	AR21138379	01-06-21	12-07-21	41
JAS_BATCH-017	AR21145892	08-06-21	20-07-21	42
JAS_BATCH-018	AR21145897	18-06-21	23-07-21	35
JAS_BATCH-019	AR21162601	23-06-21	23-07-21	30
JAS_BATCH-020	AR21155836	15-06-21	23-07-21	38
JAS_BATCH-021	AR21161570	24-06-21	04-08-21	41
JAS_BATCH-022	AR21161583	24-06-21	03-08-21	40
JAS_BATCH-023	AR21161587	24-06-21	22-07-21	28
JAS_BATCH-024	AR21174343	08-07-21	17-08-21	40
JAS_BATCH-025	AB21174344	06-07-21	19-08-21	44
JAS BATCH-026	AR21187279	20-07-21	23-08-21	34
JAS_BATCH-027	AR21187281	20-07-21	27-08-21	38
JAS_BATCH-030	AR21194690	27-07-21	07-09-21	42
JAS_BATCH-032	AR21201548	03-08-21	23-09-21	51
JAS_BATCH-035	AR21209008	10-08-21	04-10-21	55
JAS_BATCH-036	AR21209007	10-08-21	28-09-21	49
JAS_BATCH-037	AR21216319	17-08-21	05-10-21	49
JAS_BATCH-039	AR21226931	27-08-21	07-10-21	40
JAS_BATCH-041	AR21231013	01-09-21	27-09-21	26
JAS_BATCH-042	AR21242106	10-09-21	12-10-21	32
JAS_BATCH-043	AR21250373	18-09-21	22-10-21	34
JAS_BATCH-044	AR21257990	25-09-21	22-10-21	27
JAS_BATCH-045	AR21257991	25-09-21	22-10-21	27
JAS BATCH-045	AR21273884	09-10-21	09-11-21	31
JAS_BATCH-047	AR21273883	09-10-21	11-11-21	33
JAS_BATCH-048	AR21213003	23-10-21	24-11-21	32
JAS_BATCH-049	AR21287385	23-10-21	24-11-21	32
JAS_BATCH-050	AR21301156	05-11-21	22-11-21	17
JAS_BATCH-051	AR21301157	05-11-21	22-11-21	17
JAS_BATCH-052	AR21317618	20-11-21	10-12-21	20
JAS_BATCH-053	AR21327865	01-12-21	18-12-21	17
JAS_BATCH-055	AR21347255	18-12-21	10-01-22	23
JAS_BATCH-055	AR22002149	04-01-22	28-01-22	23
JAS_BATCH-058	AR22002143	04-01-22	01-02-22	24
JAS_BATCH-059	AR22002150	15-01-22	16-02-22	32
JAS_BATCH-055	AR22011988 AR22011991	15-01-22	15-02-22	31
JAS_BATCH-060	AR2201001 AR22040055	17-02-22	16-03-22	27
JAS_BATCH-061	AR22040055 AR22040056	17-02-22	07-03-22	18
JAS_BATCH-062	AR22040056 AR22068142	18-03-22	13-04-22	26
JAS_BATCH-063	AR22068142	18-03-22	19-04-22	32
and the second				
JAS_BATCH-065	AR22095170	14-04-22	07-05-22	23
JAS_BATCH-066	AR22095171	14-04-22	13-05-22	29
JAS_BATCH-067	AR22125572	13-05-22	27-06-22	45
JAS_BATCH-068	AR22142008	30-05-22	11-07-22	42
JAS_BATCH-070	AR22172416	25-06-22	25-07-22	30
JAS_BATCH-072	AB22172417	25-06-22	09-08-22	45
JAS_BATCH-073	AR22186531	08-07-22	12-09-22	66
JAS_BATCH-075	AR22186533	08-07-22	15-08-22	38
JAS_BATCH-076	AR22204163	23-07-22	25-08-22	33
JAS_BATCH-077	AR22204164	23-07-22	01-09-22	40
JAS_BATCH-078	AR22240686	26-08-22	26-09-22	31
JAS_BATCH-079	AR22240688	26-08-22	26-09-22	31
JAS_BATCH-080	AR22240681	26-08-22	26-09-22	31



Table 11-16 describes the sample types within, and analytical methods undertaken on the batches and reported by ALS. All samples were inserted, assayed and reported as protocols dictated.

		<u> </u>	om	minu	luon	Test	work	(-P)	nase	<u>2 Dr</u>	mně	2					
						Inclus	ion samp	le Count				-	Distribut				
													entage or				
		Element		C3M Inse	rted Qua	lity Conti	rol Sampl	25	ALS Inse	erted QC	Samples	Numbe	r of tests	-2mm	-	75micro	n
Batch	Lab job	Method	Routine Samples	s TDS (CRMs)	Coarse Blanks	Pulp Blanks	Coarse Crush Dups	Pulp Dups	STICS	Blanks	Repeat Assay	-2 mm	-75 um	> 85%	> 85% < 90%	> 90% < 95%	> 95%
		Au - Au-AA23	131	3%	3%	2%	3%	3%	7%	7%	3%	7	16	7	0	16	0
JAS_BATCH-015	AR21138379	Cu - ME-MS61r	101	3%	4%	3%	4%	4%	17%	12%	7%						
		Cu - Cu-OG62	30	6%			0%	0%	41%	22%	6%						
		Au - Au-AA23	191	4%	3%	1%	4%	4%	8%	8%	4%	8	31	8	0	14	17
JAS_BATCH-017	AR21145892	Cu - ME-MS61r	184	1%	3%	1%	4%	4%	16%	11%	6%						
		Cu - Cu-OG62	7	42%			0%	0%	83%	50%	0%						
		Au - Au-AA23	177	3%	4%	2%	3%	3%	6%	4%	3%	6	23	6	0	8	15
JAS_BATCH-018	AR21145897	Cu - ME-MS61r	177	2%	4%	2%	4%	4%	16%	9%	7%						
		Cu - Cu-OG62	0	100%			0%	0%	50%	50%	0%						
		Au - Au-AA23	188	3%	3%	1%	4%	4%	8%	5%	3%	8	23	8	0	22	1
JAS_BATCH-019	AR21162601	Cu - ME-MS61r	181	2%	3%	1%	3%	3%	16%	8%	6%						
		Cu - Cu-OG62	7	20%			10%	10%	20%	20%	10%						
		Au - Au-AA23	187	4%	3%	2%	4%	4%	6%	3%	4%	9	23	9	0	22	1
JAS_BATCH-020	AR21155836	Cu - ME-MS61r	178	3%	3%	2%	4%	4%	10%	7%	6%						
		Cu - Cu-OG62	9	25%			0%	0%	33%	33%	8%						
		Au - Au-AA23	190	3%	4%	2%	3%	3%	9%	5%	4%	8	23	8	0	22	1
JAS_BATCH-021	AR21161570	Cu - ME-MS61r	136	4%	5%	3%	3%	3%	21%	14%	7%						
		Cu - Cu-OG62	54	0%			4%	4%	25%	14%	9%						
		Au - Au-AA23	190	4%	4%	1%	3%	3%	9%	5%	1%	8	22	8	0	21	1
JAS_BATCH-022	AR21161583	Cu - ME-MS61r	130	3%	5%	2%	4%	4%	20%	13%	8%						
		Cu - Cu-OG62	60	5%			2%	2%	36%	20%	8%						
		Au - Au-AA23	15	6%	6%	6%	0%	0%	28%	17%	6%	1	3	1	0	3	0
JAS_BATCH-023	AR21161587	Cu - ME-MS61r	15	0%	6%	6%	0%	0%	47%	29%	6%						
		Cu - Cu-OG62	0	100%			0%	0%	200%	200%	0%						
		Au - Au-AA23	189	3%	4%	2%	4%	4%	6%	4%	3%	10	23	10	0	23	0
JAS_BATCH-024	AR21174343	Cu - ME-MS61r	131	3%	5%	3%	3%	3%	18%	11%	8%						
		Cu - Cu-OG62	58	5%			5%	5%	19%	13%	6%						
		Au - Au-AA23	188	4%	3%	2%	4%	4%	7%	3%	3%	9	23	9	0	22	1
JAS_BATCH-025	AR21174344	Au - Au-GRA21	1	0%			0%	0%	200%	200%	100%						
JAG_BATCH 025		Cu - ME-MS61r	148	3%	4%	2%	4%	4%	18%	13%	8%						
		Cu - Cu-OG62	41	7%			2%	3%	38%	20%	11%	<u> </u>				<u> </u>	<u> </u>
		Au - Au-AA23	189	4%	3%	2%	4%	4%	5%	2%	4%	9	23	9	0	23	0
JAS_BATCH-026	AR21187279	Cu - ME-MS61r	171	2%	4%	2%	4%	4%	15%	9%	6%						
		Cu - Cu-OG62	18	21%			4%	4%	21%	21%	13%	L					<u> </u>
		Au - Au-AA23	191	3%	3%	2%	3%	3%	8%	5%	5%	10	24	10	0	20	4
JAS_BATCH-027	AR21187281	Cu - ME-MS61r	189	2%	3%	2%	3%	3%	12%	8%	6%						
		Cu - Cu-OG62	2	60%			0%	0%	180%	160%	0%						<u> </u>
		Au - Au-AA23	191	3%	4%	1%	3%	3%	6%	4%	3%	8	23	8	0	21	2
JAS_BATCH-030	AR21194690	Cu - ME-MS61r	189	2%	4%	1%	3%	3%	11%	8%	6%						
		Cu - Cu-OG62	2	60%			0%	0%	100%	40%	20%						<u> </u>
		Au - Au-AA23	187	4%	4%	2%	4%	4%	8%	4%	3%	11	23	11	0	22	1
JAS_BATCH-032	AR21201548	Cu - ME-MS61r	183	2%	4%	2%	3%	3%	12%	9%	6%						
		Cu - Cu-OG62	4	38%			13%	13%	138%	75%	13%						

## Table 11-16. ALS Report Details: Sample Type and Comminution Testwork – Phase 2 Drilling



							ion samp		DIII			Sizing	Distribut entage or	•			
		rt		C3M Inse	erted Qua	lity Cont	rol Sample	25	ALS Inse	erted QC	Samples	<u> </u>	r of tests	-2mm	_	75micro	
Batch	Lab job	Element Method	Routine Samples	sTDS (CRMs)	Coarse Blanks	Pulp Blanks	Coarse Crush Dups	Pulp Dups	STIDS	Blanks	Repeat Assay	-2 m m	-75 um	> 85%	> 85% < 90%	> 90% < 95%	> 95%
		Au - Au-AA23	191	3%	3%	1%	4%	4%	5%	2%	4%	8	23	8	0	20	3
JAS_BATCH-035	AR21209008	Cu - ME-MS61r	188	2%	3%	1%	3%	3%	15%	8%	7%						
		Cu - Cu-OG62	3	43%			14%	14%	71%	43%	14%						
		Au - Au-AA23	187	4%	3%	2%	3%	3%	9%	5%	3%	9	23	9	0	23	0
JAS_BATCH-036	AR21209007	Cu - ME-MS61r	183	3%	3%	2%	3%	3%	13%	9%	6%						
		Cu - Cu-OG62	4	43%			0%	0%	57%	43%	14%						
		Au - Au-AA23	197	3%	4%	2%	4%	4%	9%	4%	4%	10	22	10	0	18	4
JAS BATCH-037	AR21216319	Au - Au-GRA21	1	0%			0%	0%	100%	200%	100%						
		Cu - ME-MS61r	194	1%	4%	2%	4%	4%	14%	9%	7%						
		Cu - Cu-OG62	4	50%			0%	0%	75%	50%	0%						
		Au - Au-AA23	198	4%	4%	1%	4%	4%	4%	2%	3%	12	23	12	0	12	11
JAS_BATCH-039	AR21226931	Cu - ME-MS61r	198	1%	4%	1%	4%	4%	11%	9%	6%						
		Cu - Cu-OG62	0	100%			0%	0%	180%	140%	20%						
		Au - Au-AA23	253	3%	3%	2%	3%	3%	6%	3%	3%	12	30	12	0	23	7
JAS_BATCH-041	AR21231013	Cu - ME-MS61r	253	1%	4%	2%	4%	4%	10%	7%	6%						
		Cu - Cu-OG62	0	100%			0%	0%	67%	67%	0%						
		Au - Au-AA23	184	3%	3%	2%	3%	3%	5%	3%	3%	12	23	12	0	18	5
JAS_BATCH-042	AR21242106	Cu - ME-MS61r	184	1%	3%	2%	3%	3%	12%	8%	7%						
		Cu - Cu-OG62	0	100%			0%	0%	200%	100%	0%						
		Au - Au-AA23	179	4%	3%	2%	4%	4%	4%	2%	5%	13	24	13	0	6	18
JAS_BATCH-043	AR21250373	Cu - ME-MS61r	179	3%	3%	2%	4%	4%	14%	11%	6%						
		Cu - Cu-OG62	0	100%			0%	0%	250%	150%	50%						
		Au - Au-AA23	184	3%	3%	2%	3%	3%	8%	4%	4%	11	22	11	0	15	7
JAS_BATCH-044	AR21257990	Cu - ME-MS61r	184	2%	3%	2%	3%	3%	10%	6%	6%						
		Cu - Cu-OG62	0	100%		-	0%	0%	100%	50%	50%						
	1001057001	Au - Au-AA23	172	4%	4%	2%	4%	4%	6%	3%	4%	12	21	12	0	18	3
JAS_BATCH-045	AR21257991	Cu - ME-MS61r	172	4%	4%	2%	4%	4%	11%	8%	7%						
		Au - Au-AA23	185	3%	3%	1%	3%	3%	6%	3%	3%	10	23	10	0	17	6
JAS_BATCH-046	AR21273884	Cu - ME-MS61r	185	2%	3%	1%	3%	3%	11%	8%	6%						
_		Cu - Cu-OG62	0	100%		-	0%	0%	467%	167%	0%						
		Au - Au-AA23	153	3%	4%	2%	3%	3%	6%	3%	4%	15	20	15	0	13	7
JAS_BATCH-047	AR21273883	Cu - ME-MS61r	153	1%	4%	2%	4%	4%	11%	8%	6%						-
-		Cu - Cu-OG62	0	100%			0%	0%	175%	150%	0%						
		Au - Au-AA23	189	4%	3%	2%	4%	4%	6%	3%	3%	10	25	10	0	16	9
JAS BATCH-048	AR21287381	Cu - ME-MS61r	189	1%	3%	2%	4%	4%	11%	9%	7%						
		Cu - Cu-OG62	0	100%			0%	0%	100%	60%	20%						
		Au - Au-AA23	188	4%	3%	2%	4%	4%	6%	4%	3%	8	25	8	0	20	5
JAS_BATCH-049	AR21287385	Cu - ME-MS61r	188	3%	3%	2%	4%	4%	12%	10%	7%	-		-			
		Cu - Cu-OG62	0	100%			0%	0%	150%	150%	0%						
		Au - Au-AA23	185	3%	3%	1%	3%	3%	11%	7%	3%	10	24	10	0	17	7
JAS BATCH-050	AR21301156	Cu - ME-MS61r	185	1%	3%	1%	3%	3%	12%	9%	7%	10	24		, v		. ,
		Cu - Cu-OG62	0	100%	570	2/0	0%	0%	250%	75%	0%						
		04-04-0602	v	10070			070	070	25070	1570	0/0						

 Table 11-16. ALS Report Details: Sample Type and

 Comminution Testwork – Phase 2 Drilling (Continued)



							ion samp		DTIII			Sizing	Distribut	•			
	Lab job	Element Method	C3M Inserted Quality Control Samples ALS Inserted QC Sample							Samples		r of tests	-2mm				
Batch			Routine Samples	sTDS (CRMs)	Coarse Blanks	Pulp Blanks	Coarse Crush Dups	Pulp Dups	STIDS	Blanks	Repeat Assay	-2 mm	-75 um	> 85%	> 85% < 90%	> 90% < 95%	
		Au - Au-AA23	148	4%	4%	2%	4%	4%	5%	3%	4%	7	21	7	0	14	7
JAS_BATCH-051	AR21301157	Cu - ME-MS61r	148	2%	4%	2%	4%	4%	11%	8%	6%						
		Cu - Cu-OG62	0	100%			0%	0%	267%	100%	33%						
		Au - Au-AA23	180	3%	4%	1%	3%	3%	5%	2%	4%	13	20	13	0	12	8
JAS_BATCH-052	AR21317618	Cu - ME-MS61r	180	1%	4%	2%	4%	4%	12%	9%	7%						
		Cu - Cu-OG62	0	100%			0%	0%	40%	40%	0%				al passin - > 85% < 90%		
		Au - Au-AA23	184	3%	3%	2%	3%	3%	10%	11%	4%	13	23	13	0	00%         < 95%           0         14           0         12           0         14           0         16           0         16           0         17           0         17           0         15           0         15           0         17           0         19           0         21	9
JAS_BATCH-053	AR21327865	Cu - ME-MS61r	184	1%	3%	2%	3%	3%	16%	11%	6%						
		Cu - Cu-OG62	0	100%			0%	0%	200%	100%	25%						
		Au - Au-AA23	186	4%	3%	2%	4%	4%	5%	6%	3%	12	24	12	0	ng catego 75micro > 90% < 95% 14 12 12 14 16 18 18 17 15 15 14 15 17 19	8
JAS_BATCH-055	AR21347255	Cu - ME-MS61r	186	1%	3%	2%	4%	4%	13%	9%	7%						
		Cu - Cu-OG62	0	100%			0%	0%	200%	67%	17%				al passin 		
		Au - Au-AA23	189	4%	3%	2%	4%	4%	7%	7%	4%	15	26	15	0	18	8
JAS_BATCH-056	AR22002149	Cu - ME-MS61r	175	3%	4%	2%	4%	4%	11%	9%	7%						
		Cu - Cu-OG62	14	13%			0%	0%	69%	19%	19%						
		Au - Au-AA23	191	3%	4%	1%	3%	3%	10%	10%	3%	9	21	9	0	17	4
JAS_BATCH-058	AR22002150	Cu - ME-MS61r	187	1%	4%	1%	3%	3%	12%	8%	7%						8 8 4 7 9 8
		Cu - Cu-OG62	4	43%			0%	0%	129%	43%	0%				> 85%         > 90%           < 90%		
		Au - Au-AA23	189	4%	3%	2%	3%	3%	129%         43%         0%           5%         5%         9         22         9         0         15           9%         8%         6%	7							
JAS_BATCH-059	AR22011988	Cu - ME-MS61r	189	2%	3%	2%	3%	3%	9%	8%	6%						
		Cu - Cu-OG62	0	100%			0%	0%	80%	20%	20%				0		
		Au - Au-AA23	188	3%	4%	2%	4%	4%	6%	6%	4%	9	23	9	0	14	9
JAS_BATCH-060	AR22011991	Cu - ME-MS61r	188	2%	4%	2%	4%	4%	10%	8%	6%						
		Cu - Cu-OG62	0	100%			0%	0%	150%	50%	0%						
		Au - Au-AA23	191	3%	3%	1%	4%	4%	10%	10%	3%	8	23	8	0         14           0         12           0         14           0         14           0         14           0         14           0         14           0         14           0         14           0         16           0         16           0         17           0         15           0         14           0         15           0         15           0         15           0         17           0         15           0         17           0         15           0         17           0         17           0         17           0         17           0         19           0         21           0         19           0         19	15	8
JAS_BATCH-061	AR22040055	Cu - ME-MS61r	188	2%	3%	1%	4%	4%	12%	9%	5%						
		Cu - Cu-OG62	3	40%			0%	0%	180%	40%	0%					>85%         >90%           <90%	
		Au - Au-AA23	189	3%	4%	2%	4%	4%	8%	8%	4%	8	23	8	0	17	6
JAS_BATCH-063	AR22068142	Cu - ME-MS61r	189	3%	4%	2%	4%	4%	11%	9%	6%						
		Cu - Cu-OG62	0	100%			0%	0%	400%	200%	0%					Smicrom           > 90%           < 95%	
		Au - Au-AA23	188	4%	3%	2%	3%	3%	5%	6%	3%	8	23	8	0	19	4
JAS_BATCH-062	AR22040056	Cu - ME-MS61r	188	3%	3%	2%	3%	3%	12%	9%	6%						
		Cu - Cu-OG62	0	100%			0%	0%	400%	200%	0%					g catego 5micror 90% (95% 14 12 14 14 15 15 15 15 15 15 15 15 15 19 19 19	
		Au - Au-AA23	190	4%	4%	1%	3%	3%	6%	6%	4%	11	24	11	0	21	3
JAS_BATCH-064	AR22068144	Cu - ME-MS61r	190	2%	4%	1%	3%	3%	10%	8%	6%						
-		Cu - Cu-OG62	0	100%		-	0%	0%	200%	125%	25%						
		Au - Au-AA23	190	3%	3%	2%	4%	4%	6%	6%	4%	9	23	9	0	19	4
JAS_BATCH-065	AR22095170	Cu - ME-MS61r	182	2%	3%	2%	4%	4%	11%	9%	7%						
-		Cu - Cu-OG62	8	27%		-	0%	0%	82%	55%	9%						
		Au - Au-AA23	190	3%	4%	1%	4%	4%	7%	7%	3%	8	23	8	0	18	5
JAS-BATCH-066	AR22095171	Cu - ME-MS61r	179	2%	4%	2%	4%	4%	14%	10%	8%			_	-		
		Cu - Cu-OG62	11	25%			6%	6%	69%	38%	6%	1	1	I			

 Table 11-16. ALS Report Details: Sample Type and

 Comminution Testwork – Phase 2 Drilling (Continued)



			Inclusion sample Count								Sizing Distribution (number of tests in each						
	Lab job											percentage or material passing category)					
		Element Method	C3M Inserted Quality Control Samples ALS Inserted QC Samples								Samples	Number	r of tests	-2mm	2mm -75micron		
Batch			Routine Samples	sTDS (CRMs)	Coarse Blanks	Pulp Blanks	Coarse Crush Dups	Pulp Dups	STICS	Blanks	Repeat Assay	-2 mm	-75 um	> 85%	> 85% < 90%	> 90% < 95%	> 95%
		Au - Au-AA23	188	4%	3%	2%	3%	3%	6%	6%	4%	8	21	8	0	18	3
JAS_BATCH-067	AR22125572	Cu - ME-MS61r	175	4%	3%	2%	3%	3%	14%	11%	7%						
		Cu - Cu-OG62	13	0%			7%	7%	86%	36%	7%						
	4022142000	Au - Au-AA23	192	3%	3%	1%	4%	4%	5%	4%	4%	8	24	8	0	11	13
JAS_BATCH-068	AR22142008	Cu - ME-MS61r	192	3%	3%	1%	4%	4%	10%	8%	6%						
		Au - Au-AA23	189	4%	4%	2%	3%	3%	9%	5%	3%	8	23	8	0	14	9
JAS_BATCH-070	AR22172416	Cu - ME-MS61r	188	2%	4%	2%	3%	3%	11%	9%	5%						
		Cu - Cu-OG62	1	80%			0%	0%	240%	60%	0%						
		Au - Au-AA23	188	4%	4%	2%	4%	4%	8%	4%	2%	8	23	8	0	18	5
JAS_BATCH-072	AR22172417	Cu - ME-MS61r	185	2%	4%	2%	4%	4%	11%	10%	7%					-	
		Cu - Cu-OG62	3	57%			0%	0%	43%	43%	0%						
		Au - Au-AA23	190	3%	4%	1%	4%	4%	10%	5%	4%	8	23	8	0	18	5
JAS_BACH-073	AR22186531	Cu - ME-MS61r	187	1%	4%	1%	4%	4%	10%	9%	6%						
		Cu - Cu-OG62	3	63%			0%	0%	100%	63%	13%						
		Au - Au-AA23	188	4%	3%	2%	3%	3%	8%	4%	4%	8	23	8	0	19	4
JAS_BATCH-075	AR22186533	Cu - ME-MS61r	184	2%	3%	2%	3%	3%	15%	9%	5%						
		Cu - Cu-OG62	4	56%		-	0%	0%	78%	44%	11%						13 9 5 5
		Au - Au-AA23	190	3%	3%	2%	4%	4%	6%	4%	5%	12	22	12	0	11	11
JAS_BATCH-076	AR22204163	Cu - ME-MS61r	190	1%	3%	2%	4%	4%	9%	8%	7%						
		Cu - Cu-OG62	0	100%		-	0%	0%	75%	25%	25%						
		Au - Au-AA23	190	3%	4%	1%	3%	3%	5%	3%	3%	9	22	9	0	15	7
JAS_BATCH-077	AR22204164	Cu - ME-MS61r	190	2%	4%	1%	3%	3%	9%	9%	5%						
		Cu - Cu-OG62	0	100%		-	0%	0%	250%	200%	50%						
		Au - Au-AA23	189	4%	3%	2%	4%	4%	6%	3%	3%	8	23	236	0	406	168
JAS_BATCH-078	AR22240686	Cu - ME-MS61r	188	3%	3%	2%	4%	4%	14%	10%	7%						
		Cu - Cu-OG62	1	67%			0%	0%	233%	100%	0%						
		Au - Au-AA23	191	3%	4%	1%	3%	3%	5%	2%	4%	9	23	9	0	17	6
JAS_BATCH-079	AR22240688	Cu - ME-MS61r	190	3%	4%	1%	3%	3%	9%	7%	7%						
		Cu - Cu-OG62	1	50%			0%	0%	250%	200%	0%						
		Au - Au-AA23	69	4%	3%	3%	4%	4%	8%	4%	4%	3	9	3	0	8	1
JAS_BATCH-080	AR22240681	Cu - ME-MS61r	69	3%	3%	3%	4%	4%	19%	15%	5%		21     8     0     18     3       24     8     0     11     13       24     8     0     11     13       24     8     0     14     9       23     8     0     14     9       23     8     0     18     5       23     8     0     18     5       23     8     0     18     5       23     8     0     19     4       23     8     0     11     11       23     8     0     19     4       24     9     0     15     7       25     9     0     15     7       23     236     0     406     168       23     9     0     17     6				
-		Cu - Cu-OG62	0	100%		-	0%	0%	700%	200%	0%						pry) n > 95% 3 3 13 9 9 5 5 5 5 4 4 111 11 7 7 168 6 6

 Table 11-16. ALS Report Details: Sample Type and

 Comminution Testwork – Phase 2 Drilling (Continued)

Table 11-17 presents the percent difference between the dispatch weights recorded at site and the received weights of samples recorded at ALS. There are a number of samples where these differ, which were investigated and observations are reported in Table 11-22. There is a possibility that seven sample pairs have been swapped in batches JAS-0[27, 36, 39, 59, 60], either in dispatching or receipting, however there is no material differences in the grades of the suspect pairs and therefore no action was taken in correcting the data. Site and ALS were notified of the mix-ups and both have stated that they will remind staff of the necessity to be vigilant when dispatching/receipting samples.



Batch	Received wt relative to Dispatch wt (count of sar									
buttern	-50%	-40%	-25%	-5%	5%	25%	40%	50%	100%	>300%
JAS_BATCH-015	1				130					
JAS_BATCH-017					190				1	
JAS_BATCH-018					177					
JAS_BATCH-019			1	1	186					
JAS_BATCH-020					187					
JAS_BATCH-021					188	1				
JAS BATCH-022	1			1	188					
JAS_BATCH-023	_				15					
JAS_BATCH-024					187					
JAS BATCH-025				1	188					
JAS_BATCH-026				-	187	1				1
JAS_BATCH-027				3	186	1			1	
JAS_BATCH-030				5	184	-			2	
JAS_BATCH-030				1	185		1		2	
JAS_BATCH-032 JAS_BATCH-035				1	185	1	1			
						1				
JAS_BATCH-036			1	2	183			1		
JAS_BATCH-037				1	194		1			
JAS_BATCH-039	-	1			194			1	1	
JAS_BATCH-041					252					
JAS_BATCH-042					184					
JAS_BATCH-043					178	1				
JAS_BATCH-044					183				1	
JAS_BATCH-045	1	1		1	165			3	1	
JAS_BATCH-046					185					
JAS_BATCH-047	1			1	151					
JAS_BATCH-048					187				1	
JAS BATCH-049					187					
JAS_BATCH-050				1	183	1				
JAS BATCH-051				1	144		2			
JAS BATCH-052				1	176	3				
JAS BATCH-053			-		183	1				
JAS_BATCH-055					186	_				
JAS BATCH-056					187					
JAS_BATCH-058					190		1			
JAS_BATCH-058				1	190	1	1			
the state of the s			1			1		2	1	
JAS_BATCH-060		1	1	3	178	1		2	1	
JAS_BATCH-061				2	187			1	1	
JAS_BATCH-062				1	186	1				
JAS_BATCH-063	-				189					
JAS_BATCH-064				1	189					
JAS_BATCH-065	1	1		2	185				1	
JAS-BATCH-066					190					
JAS_BATCH-067			1	1	183	2		1		
JAS_BATCH-068					191					
JAS_BATCH-070				1	187				1	
JAS_BATCH-072				2	185			_		1
JAS_BATCH-073					190					
JAS_BATCH-075					184	3	1			
JAS_BATCH-076				1	188	1				
JAS_BATCH-077					190					
JAS BATCH-078	1				187	1				
JAS_BATCH-079	-				189	1	1			
JAS_BATCH-080					69	-	-			

 Table 11-17. Percent Difference between ALS Received Weight and

 Site Dispatched Weight – Phase 2 Drilling



Table 11-18 presents the percent water loss from samples within batches. Seven percent of samples have lost more than 20% of mass following drying. This observation has no relevance regarding assay reliability; however, it is important in designing and refining sample preparation protocols.

Datab	% water loss (Percentage of samples in batch)										
Batch	<2%	5%	10%	15%	20%	30%	>30				
JAS_BATCH-015	10%	24%	21%	30%	9%	7%					
JAS_BATCH-017	12%	51%	22%	13%	1%	2%					
JAS_BATCH-018	37%	44%	12%	6%							
JAS_BATCH-019	15%	29%	24%	27%	2%	4%					
JAS_BATCH-020	20%	20%	18%	38%	5%						
JAS_BATCH-021	7%	21%	39%	23%	9%	1%					
JAS_BATCH-022	11%	28%	46%	9%	6%						
JAS_BATCH-024	2%	16%	48%	14%	18%	1%					
JAS_BATCH-025		21%	43%	9%	16%	10%	1%				
JAS_BATCH-026	13%	44%	24%	8%	10%		1%				
JAS_BATCH-027	27%	18%	20%	17%	15%	2%	1%				
JAS_BATCH-030	1%	2%	32%	27%	37%	1%					
JAS_BATCH-032	7%	18%	39%	18%	17%	1%					
JAS_BATCH-035	7%	8%	45%	33%	7%	1%					
JAS_BATCH-036	6%	29%	37%	19%	8%	1%					
JAS_BATCH-037	74%	21%	2%	2%	1%						
JAS_BATCH-039	87%	10%	3%	1%							
JAS_BATCH-041	90%	8%	2%								
JAS_BATCH-042	99%	1%									
JAS_BATCH-043	100%										
JAS_BATCH-044	85%	11%	3%	1%							
JAS_BATCH-045	72%	19%	6%	2%	2%						
JAS_BATCH-046	84%	14%	3%	0%							
JAS_BATCH-047	84%	14%	1%	1%							
JAS_BATCH-048	41%	49%	5%	4%							
JAS_BATCH-049	61%	34%	4%	1%							

Table 11-18. Percent Water Loss on Sample Drying – Phase 2 Drilling



Batch	9	% water I	oss (Perc	entage of	f samples	in batch)	
Batch	<2%	5%	10%	15%	20%	30%	>30
JAS_BATCH-050	58%	35%	4%	3%			
JAS_BATCH-051	56%	39%	3%	1%	1%		
JAS_BATCH-052	68%	27%	4%	1%			
JAS_BATCH-053	17%	33%	22%	23%	3%	1%	1%
JAS_BATCH-055	23%	25%	13%	17%	10%	2%	9%
JAS_BATCH-056	3%	37%	26%	21%	6%	3%	3%
JAS_BATCH-058	9%	39%	12%	36%	4%	1%	
JAS_BATCH-059	17%	18%	23%	34%	6%	1%	1%
JAS_BATCH-060	8%	22%	16%	42%	10%	3%	
JAS_BATCH-061	15%	25%	20%	29%	10%		
JAS_BATCH-062	44%	37%	14%	4%	1%		
JAS_BATCH-063	54%	40%	4%	2%			
JAS_BATCH-064	53%	26%	6%	7%	5%	3%	1%
JAS_BATCH-065	19%	29%	13%	17%	17%	4%	
JAS-BATCH-066	17%	8%	18%	48%	8%	2%	
JAS_BATCH-067	27%	30%	14%	20%	6%	3%	
JAS_BATCH-068	64%	28%	6%	2%			
JAS_BATCH-070	25%	17%	11%	32%	13%	2%	
JAS_BATCH-072	7%	23%	27%	31%	11%	1%	
JAS_BATCH-073	7%	14%	23%	51%	5%		
JAS_BATCH-075	9%	24%	37%	27%	3%		1%
JAS_BATCH-076	59%	17%	14%	8%	2%		
JAS_BATCH-077	81%	16%	2%	1%			
JAS_BATCH-078	53%	23%	12%	5%	4%	2%	1%
JAS_BATCH-079	17%	28%	22%	18%	7%	7%	1%
JAS BATCH-080	22%	33%	22%	22%	1%		

# Table 11-18. Percent Water Loss on SampleDrying – Phase 2 Drilling (Continued)

# 11.5.3.2 Comminution and Subsampling

Table 11-19 and Table 11-20 present the sample comminution QC sample results (grind tests) which show that equipment setup and run times are appropriate for the Jasperoide material and that samples adhere to protocol design.

Batch	Total	Percent material passing 2mm (count of tests)													
Batch	Tests	85	86	87	88	89	90	91	92	93	94	95	96	97	98
JAS_BATCH-015	7			1	1		1	1		2	1				
JAS_BATCH-017	8			1				1	3	2				1	
JAS_BATCH-018	6						2		1	1	1	1			
JAS_BATCH-019	8								1		2	2	3		
JAS_BATCH-020	9		1					1	3	2		1	1		
JAS_BATCH-021	8					1			1	5		1			
JAS_BATCH-022	8					1			1	2	1	3			
JAS_BATCH-024	10		1	1				3	1	3			1		
JAS_BATCH-025	9	1			1		3	1	1	1	1				
JAS_BATCH-026	9	1			2	1	1	2	1	1			1		
JAS_BATCH-027	10	2		2	1		2	1	1				1		
JAS_BATCH-030	8		1				2	1	1		2		1		
JAS_BATCH-032	11		1	1		2	3	2	2						
JAS_BATCH-035	8									1	3	2	1		1
JAS_BATCH-036	9									1	1	3	2	2	
JAS_BATCH-037	10		1				3	1	1	1		1	2	1	
JAS_BATCH-039	12					2	1		1	2	2	1	1	2	
JAS_BATCH-041	12						1		2	2	3	2	1	1	
JAS_BATCH-042	12						2				3	1	2	2	2
JAS_BATCH-043	13						1	2	4	3	3				
JAS_BATCH-044	11			2			2	3	1		1	1		1	
JAS_BATCH-045	12				1		1	1			2	4	1	1	1
JAS_BATCH-046	10	1				3				2	1	1	2		
JAS_BATCH-047	15				1	1	2		2	1	3	1	1	3	
JAS_BATCH-048	10						1		2	2	2	2	1		
JAS_BATCH-049	8				1	1			2	2	1	1			

Table 11-19. Crushing Comminution QC Analysis



	Total			<u> </u>		mate				*			í		
Batch	Tests	85	<b>86</b>	87	88	89	90	91	92	93	94	95	96	97	98
JAS_BATCH-050	10					2		1		1	3	1	2		
JAS_BATCH-051	7									2	2	3			
JAS_BATCH-052	13	1		2		2	1	1	1	2	1				2
JAS_BATCH-053	13						1	1		1	3	5	1	1	
JAS_BATCH-055	12							2			5		1	1	3
JAS_BATCH-056	15						3	1		3	3	1	3	1	
JAS_BATCH-058	9						2		1	2	2	1	1		
JAS_BATCH-059	9						2			3		3	1		
JAS_BATCH-060	9					1	1	1	4	2					
JAS_BATCH-061	8								1	2	2		1	2	
JAS_BATCH-062	8	1	1	1				1		2	2	1			
JAS_BATCH-063	8			1	1	1				1	3		1		
JAS_BATCH-064	11		1	2	1	2		3			2				
JAS_BATCH-065	9							2	1	2	3		1		1
JAS-BATCH-066	8						1		4		1				
JAS_BATCH-067	8			1	1				2	2	1		1		
JAS_BATCH-068	8					1	2		1	1	1	1	1		
JAS_BATCH-070	8				1			1	1	1			1	3	
JAS_BATCH-072	8							1	1			2	3	1	
JAS_BATCH-073	8					1	1	2	1		1	1	1		
JAS_BATCH-075	8						1	2	1		1	1	1	1	
JAS_BATCH-076	12							1	1	3	2	3	2		
JAS_BATCH-077	9				1	2	2	3	1						
JAS_BATCH-078	8				1	1	2		2	2					
JAS_BATCH-079	9		1			1	2	3	1	1					
JAS_BATCH-080	3							1	1	1					

 Table 11-19. Crushing Comminution QC Analysis (Continued)

Batch	Total	Perc	enti	nate	rial p	assin	g 75u	ım (o	ount	of te	sts)
Batch	Tests	90	91	92	93	94	95	96	97	<mark>98</mark>	99
JAS_BATCH-015	16	9	4	1	2						
JAS_BATCH-017	31			5	3	6	10	4	2		1
JAS_BATCH-018	23	1	3	2	1	1	4	4	5	2	
JAS_BATCH-019	23	9	3	1	5	4	1				
JAS_BATCH-020	23	12	1	2	4	3	1				
JAS_BATCH-021	23	14	2	2		4	1				
JAS_BATCH-022	22	16	2	1	2		1				
JAS_BATCH-024	23	10	3	2	3	5					
JAS_BATCH-025	23	8	7	3	3	1	1				
JAS_BATCH-026	23	11	1		3	8					
JAS_BATCH-027	24	5	4	3	6	2	3		1		
JAS_BATCH-030	23	11	3	2	4	1	1	1			
JAS_BATCH-032	23	5	5	2	5	5	1				
JAS_BATCH-035	23	9	1	3	6	1		1	1	1	
JAS_BATCH-036	23	12	3		7	1					
JAS_BATCH-037	22	5	3		7	3		1	3		
JAS_BATCH-039	23	8			1	3	3	4	3	1	
JAS_BATCH-041	30	11	1	1	5	5	1	3	2		1
JAS_BATCH-042	23	6	5	2	4	1		3	2		
JAS_BATCH-043	24	1	1		2	2	7	8	3		
JAS_BATCH-044	22	3	3	1	5	3	1	3	3		
JAS_BATCH-045	21	3	6	2	5	2	1	2			
JAS_BATCH-046	23	4	3	1	6	3	3	3			
JAS_BATCH-047	20	1	6	1		5	2	4	1		
JAS_BATCH-048	25	5	2	1	3	5	3		4	1	1
JAS_BATCH-049	25	13	1		2	4	1	2	1	1	

Table 11-20. Pulverizing Comminution QC Analysis

Batch	Total			mate			_				sts)
Batch	Tests	90	91	92	93	94	95	96	97	<mark>98</mark>	99
JAS_BATCH-050	24	4	3	2		8	2	1	1	2	1
JAS_BATCH-051	21	5	3		1	5	1	2	1	2	1
JAS_BATCH-052	20	1	6	5			1	1	5		1
JAS_BATCH-053	23	8	4	1		1	2	3	1	2	1
JAS_BATCH-055	24	2	10	3	1		1	4	2	1	
JAS_BATCH-056	26	2	7	6	2	1	1	2	4	1	
JAS_BATCH-058	21	4	8	1	2	2	2	2			
JAS_BATCH-059	22	10	4	1			1	2	2	2	
JAS_BATCH-060	23	8	5		1		1	2	2	4	
JAS_BATCH-061	23	11	3	1			2	1	2	3	
JAS_BATCH-062	23	10	6	3			2	1	1		
JAS_BATCH-063	23	11	4	2			3	2	1		
JAS_BATCH-064	24	8	6	5	1	1		3			
JAS_BATCH-065	23	10	6	2		1		1	1	2	
JAS-BATCH-066	23	16				2	1	1	3		
JAS_BATCH-067	21	13	4			1		2	1		
JAS_BATCH-068	24	1	1	3	2	4	5	3	2		3
JAS_BATCH-070	23	5	6		1	2	1		2	3	3
JAS_BATCH-072	23	13	3	2			1	3	1		
JAS_BATCH-073	23	11	4	3			4		1		
JAS_BATCH-075	23	11	7			1		1	2	1	
JAS_BATCH-076	22	3	5	1	1	1	2	2	5	2	
JAS_BATCH-077	22	7	4	2		2	2	1	3	1	
JAS_BATCH-078	23	5	3	4	2	2	4		1	2	
JAS_BATCH-079	23	7	2	4	2	2	1		2	2	1
JAS_BATCH-080	9	2	5	1				1			

Table 11-20. Pulverizing Comminution QC Analysis (Continued)

Table 11-21 presents the -2mm sample split weights, being the weight of samples delivered to the LM2 mills for pulp preparation. Protocols state that a target sample weight of  $\geq$ 1.5kg is to be presented for pulverizing, which is the case for 97% of samples ( $\geq$ 1.4kg) and that a weight of  $\geq$ 1.0kg is the minimum acceptable sample size (99.6% of samples). Table 11-22 presents the observations made of why the 0.4% of pre-pulverizing samples have not achieved the minimum 1.0kg wt. Small initial sample sizes and significant loss following drying are the two key causes of low-weight -2mm sample material being presented for pulverizing.

	Coarse Crush Split w (kg, count of samples)												
Batch	<0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	1.20	1.30	1.40	1.50	1.60
JAS_BATCH-015	1						1	1		6	86	36	
JAS_BATCH-017								1	1	5	184		
JAS_BATCH-018							1	3	6	2	165		
JAS_BATCH-019									1	15	153	19	
JAS_BATCH-020							1	2	3	23	140	18	
JAS_BATCH-021						1			1	1	97	82	7
JAS_BATCH-022								2	1		93	94	
JAS_BATCH-024						2			4		86	93	4
JAS_BATCH-025						1	1		2	1	118	66	
JAS_BATCH-026							2		1		100	81	5
JAS_BATCH-027							1		7	1	95	77	10
JAS_BATCH-030							1	2	5	6	96	76	5
JAS_BATCH-032						1		1	5	1	87	81	11
JAS_BATCH-035					1			1	4		80	80	25
JAS_BATCH-036						1	1		6	3	75	92	9
JAS_BATCH-037								1	4		76	76	39
JAS_BATCH-039									1		97	99	
JAS_BATCH-041								1			140	111	
JAS_BATCH-042								2	1		88	93	
JAS_BATCH-043								1	1	1	76	100	
JAS_BATCH-044											81	101	2
JAS_BATCH-045									1	1	91	79	
JAS_BATCH-046								1	1		92	91	
JAS_BATCH-047							1		1		80	62	9
JAS_BATCH-048					1			1		2	131	53	
JAS_BATCH-049										2	107	78	

Table 11-21. Post Crushing Split Weight QC Analysis



	Coarse Crush Split wt (kg, count of samples)												
Batch	<0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	1.20	1.30	1.40	1.50	1.60
JAS_BATCH-050										1	115	69	
JAS_BATCH-051							1		1	4	74	67	
JAS_BATCH-052											130	50	
JAS_BATCH-053				1					2	3	124	54	
JAS_BATCH-055	1		1	1	3	2	1	1	3	8	101	64	
JAS_BATCH-056	1				1			1	1	5	122	55	1
JAS_BATCH-058											120	71	
JAS_BATCH-059									2	2	117	68	
JAS_BATCH-060					2	1	1		1	2	122	58	
JAS_BATCH-061									1	2	109	79	
JAS_BATCH-062					1		1		1		129	56	
JAS_BATCH-063									1	2	130	56	
JAS_BATCH-064		1			1					1	118	69	
JAS_BATCH-065					1	3		3	3	4	108	68	
JAS-BATCH-066							1	2			125	62	
JAS_BATCH-067										3	121	64	
JAS_BATCH-068									1	2	124	64	
JAS_BATCH-070							1		5	1	130	52	
JAS_BATCH-072					1	1				1	120	65	
JAS_BATCH-073							1			6	125	58	
JAS_BATCH-075										1	133	54	
JAS_BATCH-076										1	129	60	
JAS_BATCH-077										1	115	74	
JAS_BATCH-078			1	1	1		1		1		119	65	
JAS_BATCH-079					2			1		2	134	52	
JAS_BATCH-080					1					2	46	20	

Table 11-21. Post Crushing Split Weight QC Analysis (Continued)

MINING CONSULTANTS, INC.

Batch	Low Sub-sampling Weight (see Table 11-17)           Rec Wt <> Dispatch Wt (>5% difference)         Coarse Crush Split Wt <1.0kg								
	Site	Sample	Sample	Suspected	Unknown	Low	Significant	Should	
	Туро	mixup or	mixup at	typo at	but no	received	loss on	not have	
		typo at	Site or	LAB	suspected	sample	drying	been	
		site	Lab		mixup	weight		split	
JAS_BATCH-015	1					1			
JAS_BATCH-017	1								
JAS_BATCH-019	2								
JAS_BATCH-021	1					1			
JAS_BATCH-022	2								
JAS_BATCH-024						2			
JAS_BATCH-025	1					1			
JAS_BATCH-026	2								
JAS_BATCH-027	3	2							
JAS_BATCH-030	7								
JAS_BATCH-032	2					1			
JAS_BATCH-035	3					1			
JAS_BATCH-036	2	2				2			
JAS_BATCH-037	2								
JAS_BATCH-039	1		2						
JAS_BATCH-043	1								
JAS_BATCH-044	1								
JAS_BATCH-045	7								
JAS BATCH-047	2					1			
JAS_BATCH-048	1					1			
JAS_BATCH-050	2								
JAS_BATCH-051	3					1			
JAS_BATCH-052	4								
JAS_BATCH-053	1							1	
JAS_BATCH-055							9		
JAS BATCH-056						-	2		
JAS_BATCH-058	1								
JAS_BATCH-059		2							
JAS_BATCH-060	5	4				2		1	
JAS_BATCH-061	3				1	-			
JAS_BATCH-062	2					2			
JAS_BATCH-064	1					2			
JAS_BATCH-065	5					3	1		
JAS_BATCH-067					5				
JAS_BATCH-070	2				-	1			
JAS_BATCH-072	3					_	2		
JAS_BATCH-075				4		1	-		
JAS_BATCH-076		2							
JAS_BATCH-078	2	-				2	2		
JAS_BATCH-079	-				2	-	2		
JAS_BATCH-079	-				2	1	2		
JAS_BAICH-080						1			

Table 11-22. QC Analysis Regarding Suspected Sample Mix-up andLow Sub-sampling Weight (see Table 11-17)



#### 11.5.3.3 Contamination and Carry-over

There are no significant contamination or carry-over issues portrayed in the coarse blank and pulp blank QC data (Figure 11-14 and Figure 11-15). A sporadic correlation between previous sample copper grades and the grade of the coarse blank grades is observed however this in the range of 2 to 3 orders of magnitudes lower than grades of interest (i.e. 0.001%Cu to 0.01% Cu).

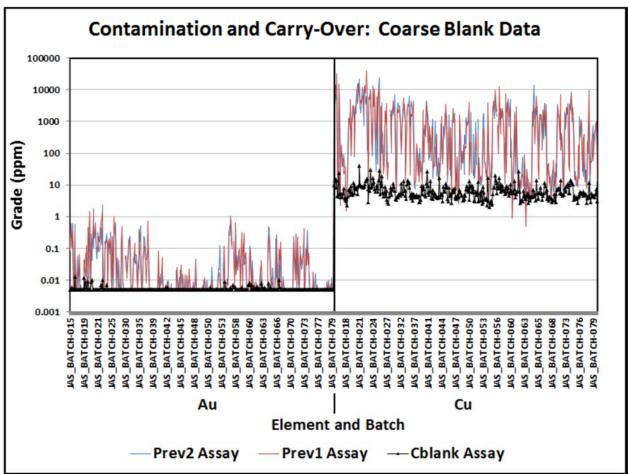


Figure 11-14. Coarse Blank QC Analysis – Phase 2 Drilling (Hackman, 2022)



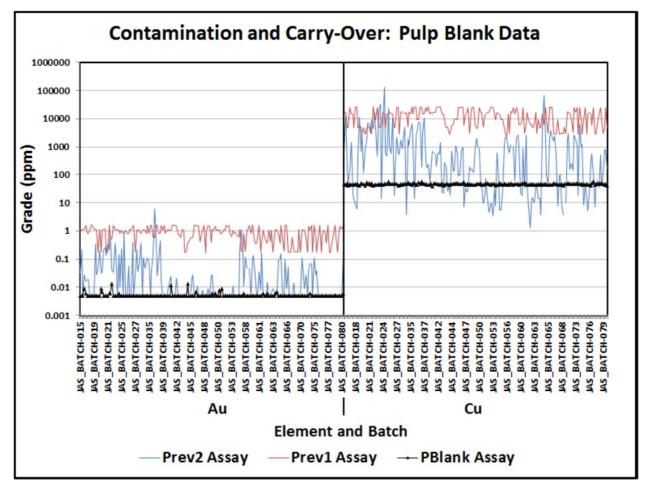


Figure 11-15. Pulp Blank QC Analysis – Phase 2 Drilling (Hackman, 2022)

#### 11.5.3.4 Accuracy and Precision

There are no material issues regarding the reliability of Cu and Au assay values discernible from the C3 Metals and ALS certified reference material standards (Figure 11-16 to Figure 11-24). The 1 standard deviation performance gates of the OREAS standards (utilized by C3M) are tight margins for commercial laboratories to achieve, as shown by the apparent spread of results for Cu in Figure 11-16. The QP for this section has observed that a performance gate of 4% RSD is a more achievable representative of a commercial laboratory's ability (which is in agreement with the precision assessment presented at Figure 11-26 and Figure 11-27). This performance gate would compress the spread of plotted results observed in Figure 11-16 by 25% to 50%, resulting in a graphical presentation more like that presented for the ALS standards at Figure 11-18.



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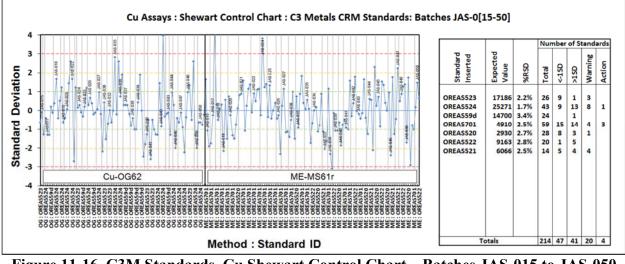


Figure 11-16. C3M Standards. Cu Shewart Control Chart – Batches JAS-015 to JAS-050 (Hackman, 2022)

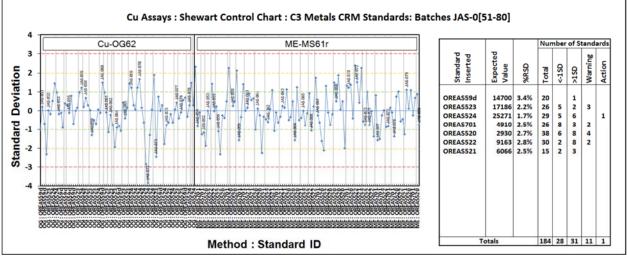


Figure 11-17. C3M Standards. Cu Shewart Control Chart – Batches JAS-051 to JAS-080 (Hackman, 2022)



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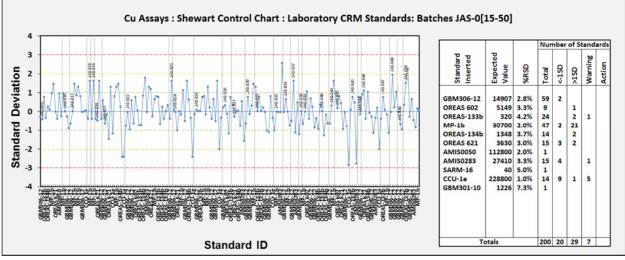


Figure 11-18. ALS Standards. Cu Shewart Control Chart – Batches JAS-015 to JAS-050 (Hackman, 2022)

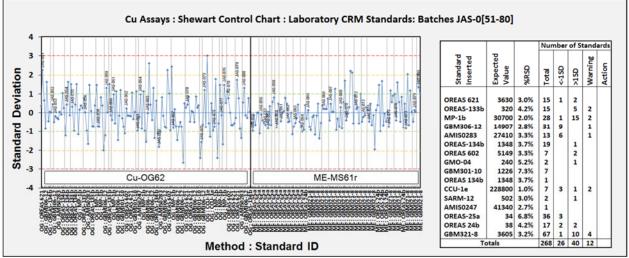


Figure 11-19. ALS Standards. Cu Shewart Control Chart – Batches JAS-051 to JAS-080 (Hackman, 2022)



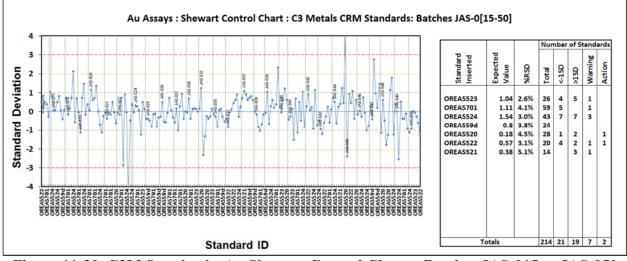


Figure 11-20. C3M Standards. Au Shewart Control Chart – Batches JAS-015 to JAS-050 (Hackman, 2022)

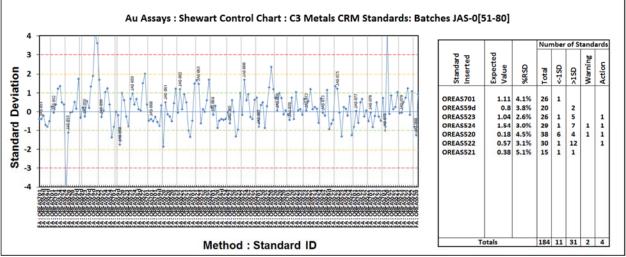


Figure 11-21. C3M Standards. Au Shewart Control Chart – Batches JAS-051 to JAS-080 (Hackman, 2022)



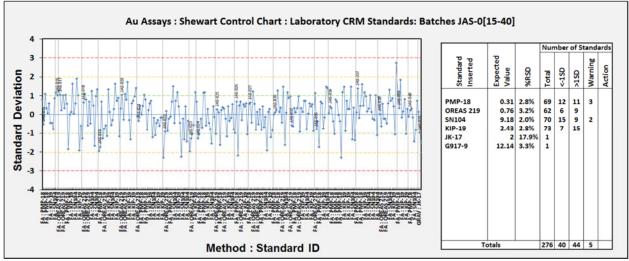


Figure 11-22. ALS Standards. Au Shewart Control Chart – Batches JAS-015 to JAS-040 (Hackman, 2022)

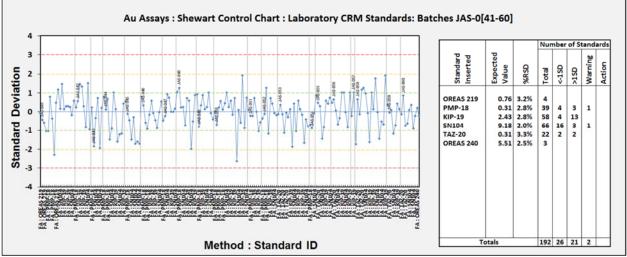


Figure 11-23. ALS Standards. Au Shewart Control Chart – Batches JAS-041 to JAS-060 (Hackman, 2022)



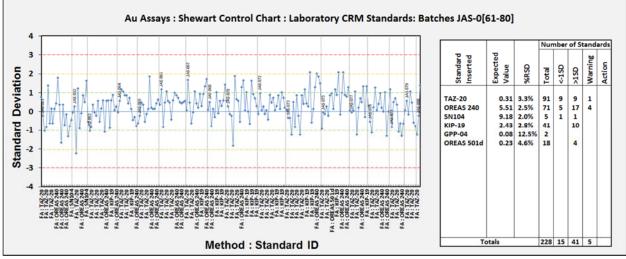


Figure 11-24. ALS Standards. Au Shewart Control Chart – Batches JAS-061 to JAS-080 (Hackman, 2022)

There are no material issues discernible from the Cu and Au coarse crush or pulp duplicate paired sample assays or the laboratory repeat assays (Figure 11-25 to Figure 11-30). Hackman (2022) in evaluating QC results for similar mineralisation styles as Jasperoide, has observed better precision for Cu in coarse crush duplicate samples than reported for Jasperoide (90% of data <5%MPD; whereas JAS data shows 70% of data <5%MPD or 90% of data <8%MPD). This prompted an investigation through ALS into the reliability of the four-acid digest method (reported above) where it was suggested by the limited testwork, that a more reliable digest (and analysis) is achievable through a lithium borate fusion and XRF analysis method. This suggestion is in agreement with proven geochemical understanding; however, given that the observed variance increase in the coarse duplicates dataset (over expected) is not extreme or pervasive, the increase is considered of low risk regarding any observations made from, or use of the ME-Ms61r Cu assay dataset. C3 Metals has opted not to change their primary analytical method from the current ALS ME-MS61r method.



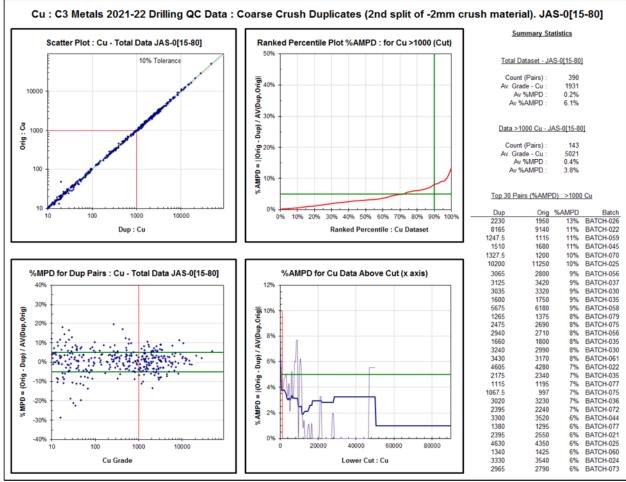


Figure 11-25. Cu Coarse Crush Duplicates (Hackman, 2022)

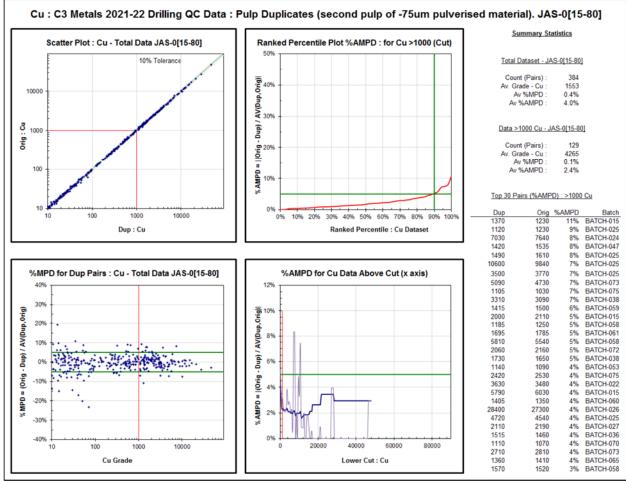


Figure 11-26. Cu Pulp Duplicates (Hackman, 2022)



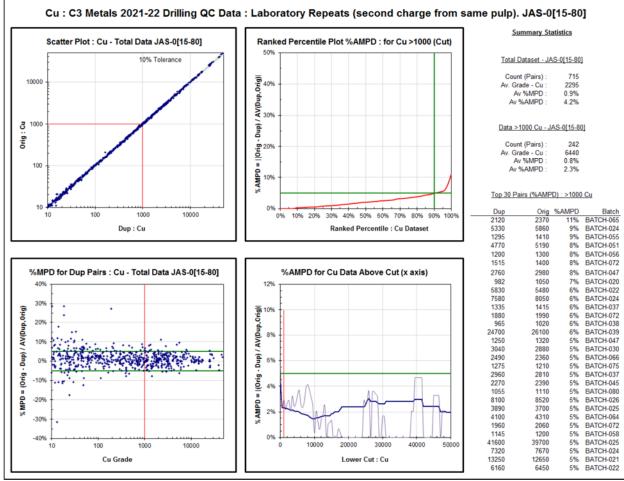


Figure 11-27. Cu Laboratory Repeats (Hackman, 2022)



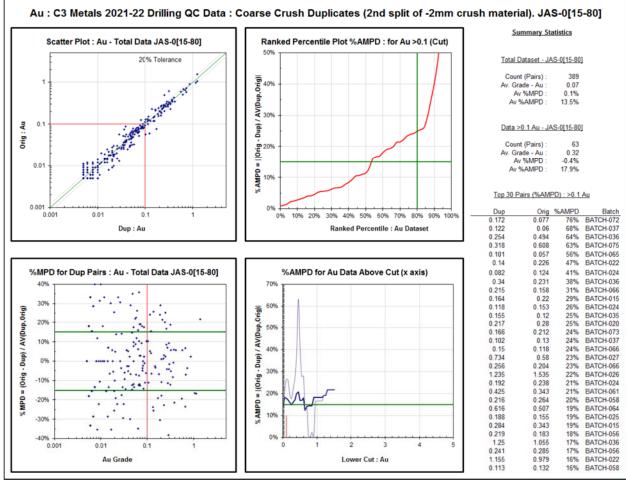


Figure 11-28. Au Coarse Crush Duplicates (Hackman, 2022)



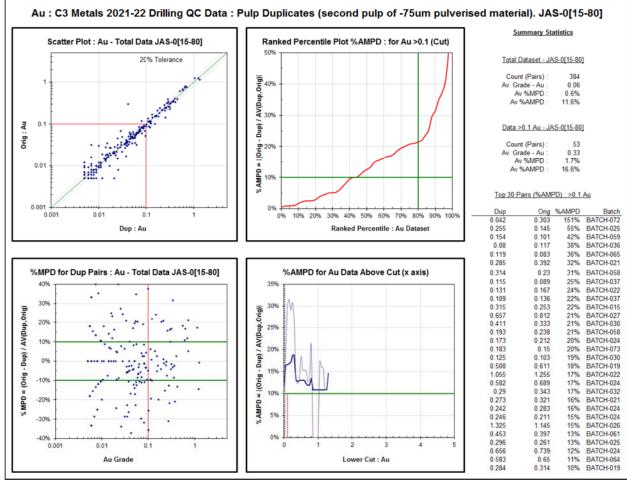


Figure 11-29. Au Pulp Duplicates (Hackman, 2022)



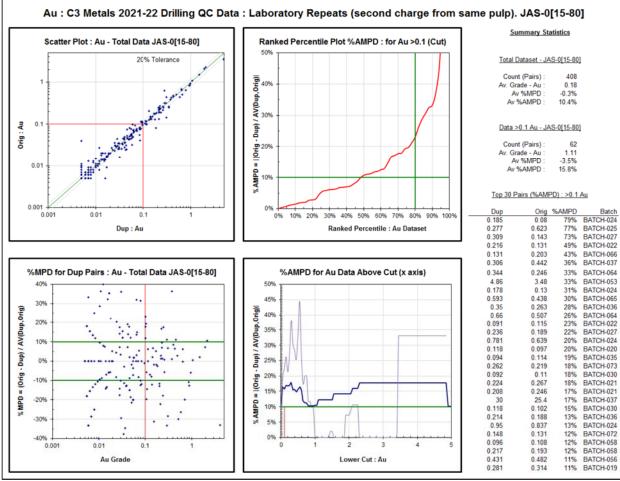


Figure 11-30. Au Laboratory Repeats (Hackman, 2022)

#### 11.5.4 Conclusions – QA/QC Phase 2 Drilling

Assessment of the Quality Assurance (QC) and Quality Control (QC) data for all fifty-three analytical assay batches submitted in the 2021-2022 Phase 2 drilling programme at Jasperoide show that there is no cause for withholding Mineral Resource estimates solely underpinned by assays from these batches. In particular:

- Sample preparation, analysis protocols and QA/QC protocols were selected, reviewed and where necessary were modified (in the case of drying times and comminution testwork) from the ALS standard methods to be best suited for commercial production-rate assaying of Jasperoide style mineralisation.
- There are no material sample mix-ups or assay reporting mix-ups.
- Samples are shown to be thoroughly dried.
- There are no material crush, grind or subsampling issues.
- There are no sample carryover or contamination issues.



- There is acceptable accuracy portrayed for both copper and gold assays.
- There is acceptable precision portrayed for both copper and gold assays.

C3 Metals has not undertaken any umpire laboratory assays at the time of reporting. Hackman (2022) advised that an appropriate number of samples be selected from each of the main mineralisation/gangue material types at Jasperoide to ensure confidence in any check assay evaluation. C3 Metals was also advised to undertake digest/analytical check method analyses in any umpire laboratory assay check programmes.

In the opinion of the QP for this section, sampling methods, preparation and analytical methods for the Phase 2 drilling were adequate and appropriate for the Project. In addition, sample handling and security measures were also appropriate and adequate with a well-established chain of custody from the Project to the laboratory.

11.6 Conclusions on Jasperoide Drilling Database

It is the opinion of the QP for this section the sample preparation, security, and analytical procedures for the Jasperoide drilling database is adequate for the estimation of Mineral Resources for the Project.



# 12.0 Data Verification

#### 12.1 Drillhole Database

#### 12.1.1 Assays

Under the direction of the QP for this section, the following drillholes from C3 Metals' Phase 1 Drilling Program were compared with original assay certificates:

JAS2650-04	JAS2650-05	JAS2650-07	JAS2700-04
JAS2700-05	JAS2700-11	JAS2750-04	JAS2750-05
JAS2750-07	JAS4350-02		

Copper, gold and silver assays were verified, and no errors were found. These 10 drillholes represent more than 25% of the 38 holes drilled.

The following drillholes from C3 Metals' Phase 2 Drilling Program were compared with original assay certificates:

JAS2700-09	JAS2700-10	JAS2800-04	JAS2900-02
JAS2900-04	JAS2900-06		

Copper, gold and silver assays were verified, and no errors were found. These 5 drillholes represent about 15% of the 33 Phase 2 holes drilled.

Under the direction of the QP for this section, the following drillholes from the Minera Ares drilling were compared with original assay certificates:

JADD11-03 JADD11-05 JAD11-10 JADD11-20

Copper and gold assays were verified, and no errors were found. These 4 drillholes represent 16% of the 25 Minera Ares holes drilled.

During 2020, C3 Metals assayed remaining half core from 7 of the Minera Ares drillholes, targeting the same sample intervals as Minera Ares. This resulted in 359 sample intervals reassayed by C3 Metals. Multiple elements were compared including copper and gold. The data sets compared well. The QP for this section reviewed the report from the comparison work and performed independent comparisons. The work provides additional validation of the Minera Ares data. This program is discussed in more detail in Section 9.2.1.

Most of the Cominco drillholes were outside the main resource area or on the periphery of the area and were generally weakly mineralized. These holes are important to define the limits of mineralization and prevent extrapolation of mineralization into non-mineralized areas.



A few of the Southwest Gold drillholes are in the main resource area. They tend to compare well with more recent, nearby, drilling data.

## 12.1.2 Collar Coordinates

The collar elevations for all the drillholes were compared with the detailed topographic data. The largest variances were 1.02 m (topo higher than collar) in hole JAS4350-02 and -1.03 m (collar higher than topo) in hole JAS3750-01. The absolute value of all the remaining variances was less than 1 m. This is good evidence the hole collars are correctly surveyed.

Also, C3 Metals re-surveyed the collar coordinates for the historical holes that could be identified when they acquired the property.

12.1.3 Drillhole Database Conclusion

It is the opinion of the QP for this section that the drillhole database for the Jasperoide Project is adequate for the purposes used in this Technical Report.

## 12.2 Specific Gravity Data

A significant number of specific gravity measurements have been performed by C3 Metals' personnel. These included measurements on the Minera Ares core, as well as C3 Metals' core. The databases for the specific gravity measurements were provided to the QP for this section and the calculations have been verified by the QP.

#### **12.3** Metallurgical Data

The metallurgical data described in Section 13 is historical in nature and has not been relied on for the preparation of this Technical Report.

#### **12.4** Exploration Data

Personal inspections (site visits) to the Project were completed by Mr. Simon Mortimer on 5 and 6 November 2021 and 13 May 2023. During the site visits, Mr. Mortimer confirmed access to the Project, verified the presence of drill hole platforms, and examined drill core.

Also, Mr. Mortimer examined all information and data made available relating to historical and current exploration work within the Project and examined recent diamond drill core, comparing drill core logs and assay results with representative intersections of drill core. Mineralization, alteration, lithology, and structures examined compare well with the drill core logs and assay results for copper and gold.

It is the opinion of the QP for this section that the information and data that has been made available and reviewed is adequate for the purposes of this Technical Report.



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# **13.0** Mineral Processing and Metallurgical Testing

## 13.1 General

The results outlined in this section are historical and should be interpreted with caution. The Qualified Person (QP) for this section cannot verify that the samples were representative of the various types and styles of mineralization present in the entire deposit. Additionally, there is no confirmation regarding the Quality Assurance/Quality Control (QA/QC) protocols implemented during the preparation of the drill core composite samples, the specifics of the laboratory test procedures, or the storage conditions of the drill core to ensure sample integrity. Consequently, the results of these metallurgical studies should be considered preliminary in both design and scope.

Metallurgical test work for the Jasperoide deposit has been conducted on two separate occasions:

- In 2012 by Minera Ares at the SGS Vancouver laboratory.
- In 2017 by LARG at the SGS Lima laboratory.

The primary objectives of both tests were:

- In 2012, the focus was on testing copper-gold froth flotation and copper acid leaching followed by alkaline gold leaching, with a comparison of metal extraction.
- In 2017, following a relogging campaign, several leaching tests were performed.

The results obtained from the 2012 metallurgical testwork using four composites are as follows:

- Leaching was performed using a bottle roll test. Acid leaching achieved a maximum of 51% copper extraction with high acid consumption (112 kg/t), followed by cyanide leaching which achieved relatively high extraction (88-95% Au) and cyanide consumption of 0.81-18.7 kg/t.
- The best results from rougher flotation tests were 14.8% copper and 64.8% gold recoveries, which are low.
- The maximum concentrate grades were 7.5% Cu and 4.3 g/t Au, which are low.

In 2017, the Latin American Resource Group (LARG) selected five drill core composite samples from historical drill core for sighter metallurgical test work. LARG conducted a 72-hour bottle roll leach test using sulphuric acid followed by cyanidation. The composite was considered to be more representative of MCZ's supergene-enrichment mineralization type at Jasperoide. A 72-hour bottle roll leach test was undertaken, using sulphuric acid followed by cyanidation, which yielded the following results:

• Copper extraction by acid leaching showed better performance, averaging 74% copper recovery and gold cyanidation was similar to the previous campaign with 92% Au extraction.

## **13.2** Metallurgical Testwork Program

13.2.1 Minera Ares 2012

In 2012, Compañía Minera Ares (Hochschild Mining PLC) contracted AMEC Peru S.S. to carry out a metallurgical and mineralogical investigation on four composite core samples. The test work was completed by SGS Laboratory in Vancouver, Canada.

## 13.2.1.1 Composite Formation

SGS Vancouver received a total of 51 samples from the Jasperoide Project. The samples were used to prepare four composites for mineralogical and metallurgical tests.

The samples were combined to prepare four composites, based on their sequential copper leach assays.

Table 19-1. Composition of			mposi	105			
Sample ID	Cu, %	Mo, %	Fe, %	As, %	S, %	Au, g/t	Ag, g/t
Low Leach Factor (LLF) composite	0.37	0.001	32.7	0.052	0.08	0.31	2.2
Medium Leach Factor (MLF) Composite	0.85	0.001	36.3	0.005	0.12	0.24	2.2
High Leach Factor (HLF) composite	3.32	< 0.001	21.6	0.041	0.21	0.69	3.2
Low Leach Factor and Gold Moderate Grade(LLF-Gold) composite	0.39	0.001	36.4	0.026	0.09	0.13	2.2

#### Table 13-1. Composition of the 2012 Composites

	Table 15-2. Cu Sequential Assays for the 2012 Composites								
						Estimated C	opper Mineral	Composition, %	
							Secondary	Primary	
Sample ID	Cu % (direct)	Cu % (calc)*	Cu <sub>H2SO4 sol</sub> %	Cu <sub>CN sol</sub> %	Cu <sub>AR sol</sub> %	Oxide	Sulphides	Sulphides	
LLF	0.37	0.37	0.058	0.008	0.30	15.8	2.2	82.0	
MLF	0.85	0.81	0.380	0.017	0.41	47.1	2.1	50.8	
HLF	3.32	3.19	2.500	0.120	0.57	78.4	3.8	17.9	
LLF-Gold	0.39	0.35	0.072	0.009	0.27	20.5	2.6	76.9	

#### Table 13-2. Cu Sequential Assays for the 2012 Composites

\*Calculated Cu is total of Cu H<sub>2</sub>SO<sub>4</sub> sol + Cu <sub>CN sol</sub> + Cu <sub>AR sol</sub>

#### 13.2.1.2 Mineralogical Characterization

Mineralogical analysis revealed complex oxidized minerals with varying amounts of malachite, chrysocolla, Cu-bearing hydrated iron oxides (such as goethite and limonite) as well as Cu-bearing silicates/clays.

- Only minor quantities of chalcopyrite were present and not anticipated to significantly influence Cu behavior.
- Intricate textures of both Cu-rich and Cu-poor phases were observed, particularly fine intergrowths of Cu-goethite/goethite/clays.
- Primary gangue minerals include quartz, feldspars, carbonates, Fe oxides (the portion with low Cu content), and garnets.
- HLF demonstrates a relatively good release of chrysocolla and malachite. Copper clays and Cu-rich Fe oxides exhibit minimal release from Fe oxides, but HFO shows a relatively good release from the rest of the gangue, e.g., quartz, carbonates, feldspars, and andradite are relatively free.



- For MLF, there are low amounts of high Cu phases (Cu>10%), indicating that the significance of chrysocolla and malachite is less than in MLF. It is possible that only trace amounts of CuS are present in the MLF.
- Regarding LLF, only trace amounts of high Cu phases (Cu >10%) are present, suggesting that Fe oxides and Cu-bearing clays are the dominant Cu carriers, with almost no chrysocolla and/or malachite. It is possible that only traces of CuS are present in LLF.
- Based on the QEMSCAN analysis, a relatively poor response could be anticipated due to the refractory behavior of the Fe oxides. Detailed probing and interactive SEM work will be necessary to fully understand the behavior of Cu.

# 13.2.1.3 Results

# Flotation Test

The composites selected for the flotation tests were:

- Low Leach Factor: LLF composite
- High Leach Factor: HLF composite
- Medium Leach Factor: MLF composite
- Low Leach Factor Gold: LLF- Gold composite

Six rougher kinetics tests were carried out with the following reagents:

- Collectors: SIPX y DTP
- Frother: MIBC
- Sulphidization agent: NaHS
- Flotation time: 15 minutes

The test outcomes reveal that the kinetics of copper are notably slow, achieving a peak recovery of 15% after 15 minutes of flotation for the HLF composite. Sodium hydrosulphide was used as a sulphidization agent to facilitate the flotation of oxide minerals, but only works on ionic copper minerals, so it is possible that the copper is in covalent bonded minerals such as iron oxides or silicates.

Contrastingly, the kinetics of gold flotation are faster than those of copper, reaching a maximum recovery of 65% for the LLF composite following 15 minutes of flotation. As indicated in Table 3, this composite comprises 84% sulphide minerals.

Test #	Product	Weight	A	ssays, %,	g/t	% Distribution			
Test#	Product	%	Cu	Au	S	Cu	Au	<b>S</b>	
LLF-F1	Rghr Conc	3.9	0.59	3.21	0.17	6.3	64.8	10.2	
LLF-F5	Rghr Conc	3.8	0.72	1.32	0.66	7.5	39.3	17.8	
MLF-F2	Rghr Conc	4.9	1.28	1.75	1.64	7.7	32.1	73.6	
MLF-F6	Rghr Conc	3.2	2.45	3.05	3.54	9.9	41.7	45.4	
HLF-F3	Rghr Conc	6.5	7.52	4.27	0.88	14.8	40.7	16.4	
LLF-Gold-F4	Rghr Conc	2.8	0.69	4.16	0.52	5.2	46.5	13.1	

 Table 13-3. Flotation Test Results



#### Leaching Tests

The samples were crushed to determine the susceptibility of the mineralization to heap leaching. Samples were pulped to 40% solids using a stirred vessel to measure copper leaching rates with sulphuric acid.

The conditions of the leaching tests are indicated below:

- pH regulation to 1.5 with sulphuric acid.
- Leaching time: 6 hours.
- Intermittent solution samples were taken at 0.5, 1, 2, 3 and 4.5 hours.
- After 6 hours, the samples were filtered, the pregnant leach solution was collected, and the residue was washed several times with pH 1.8 water.
- The test products were subjected to Cu analysis.

Table 13-4 shows the results of the leaching tests.

Table 10 1. Actu Leach Test Results								
Sample ID	Reagent Added	Net Acid Consumption	Extraction/Recovery, %	Residue Grade	Head Grade Calc			
Sample ID	Kg/t of H2SO4	kg/t	Cu	%Cu	Cu total, %			
LLF composite	88	40	19.0	0.35	0.39			
MLF Composite	79	71	35.0	0.54	0.79			
HLF Composite	138	112	51.0	1.71	3.33			
LLFGold Composite	40	29	7	0.36	0.37			

Table 13-4. Acid Leach Test Results

Cyanidation test conditions:

- Solids: 40%
- The pH was adjusted to 10.5–11 by adding hydrated lime.
- Cyanide additions were based on cyanide soluble copper assays.
- For samples containing low cyanide soluble copper, the NaCN level was maintained at 1.5 g/L throughout the test.
- For samples containing a higher amount of cyanide-soluble copper, NaCN was added at 2.5 and 5 g/L to ensure complete dissolution of the gold.
- Cyanidation time: 48 hours
- The samples were filtered, and the residues were washed several times with fresh water.
- The residue and PLS solutions were tested for gold and copper.

Table 13-5 shows the global results of each composite.

Table 15-5. Cyanide Test Results										
Sample ID	Reagent Consumption kg/t of		Extraction/	Extraction/Recovery, %			Head Grade Calc	Head Grade Calc		
Sample ID	NaCN	CaO	Au	Cu	g/t Au	%Cu	Au total, g/t	Cu total, %		
LLF composite	0.81	2.18	87.7	3.2	0.02	0.67	0.16	0.69		
MLF Composite	3.90	1.56	95.9	27.6	0.01	0.34	0.25	0.47		
HLF Composite	18.7	2.68	90.7	20.0	0.06	2.80	0.64	3.50		
LLFGold Composite	0.91	2.25	93.1	6.2	0.02	0.35	0.29	0.37		

Table 13-5. Cyanide Test Results

13.2.2 Latin American Resource Group (LARG) 2017

In 2017, following the re-logging of all available drill core and after reviewing the previous (2012) AMEC Peru S.A. metallurgical and mineralogical study, LARG believed this work was flawed due to poor selection of composite samples which did not accurately reflect the types of mineralization at the Project (Corey, 2019). LARG used five drill core composite samples which they saw as more characteristic of the types of mineralization on the Project.

#### Composite Formation 13.2.2.1

55 individual samples were prepared, then five composites were formed on which the leaching tests were carried out. Table 13-6 presents the information with the coding and weights of the samples received.

Composite	Table 13-6. Composites – Informa Sample ID	Drillhole	Weight, kg
Composite N1	1077 al 1089	H1	14.1
Composite N2	103.50 al 115.30	JA12-03	30.8
Composite N3	20323 al 20333 20335 al 20341 20343	Drill JA11-03	34.9
Composite N4	21441 al 21442 21444 al 21446	JA11-07	28.3
Composite N5	115.30 al 138.00	JA12-03	36.4

Table 12 ( Commentant Jackson J. ADC 2017

#### 13.2.2.2 **Chemical Characterization**

Table 13-7 presents the chemical characterization of each composite.

Table 13-7. Composites – Chemical Characterization

	Table 15-7. Composites – Chemical Characterization								
Composite ID	Au, g/t	Ag, g/t	Cu, %	Fe, %	S total, %	S sulphide, %	*CO3 <sup>2-</sup>	C organic, %	
N1	0.64	4.4	1.4	41.9	0.04	0.02	0.4	0.09	
N2	0.84	6.0	3.2	40.4	0.06	< 0.01	2.3	0.10	
N3	0.73	8.4	2.3	27.0	0.03	< 0.01	2.9	0.05	
N4	0.74	2.9	2.6	36.4	0.03	< 0.01	20.1	0.04	
N5	0.79	5.9	2.1	32.1	0.03	< 0.01	13.3	0.18	
Average	0.75	5.52	2.34	35.55	0.04	< 0.01	7.8	0.09	



- The low sulphide contents indicate that the mineralization will not provide acidity by themselves. The carbonate present in the samples will act as an acid consuming agent.
- Iron values, on average 35.6%, and low sulphur content, indicate the absence of pyrite and the presence of iron in oxide forms. The iron content values are referential since they exceed the upper limits of the method (AAS41B by atomic absorption).

	Table 13-8. Composites – Sequential Cu								
Composite	Cu	CuSS	CuCN	CuRes	SI_CuSS	SI_CuCN	SI_CuR		
ID	%	%	%	%	%	%	%		
N1	1.41	1.04	0.03	0.37	72.4	1.9	25.7		
N2	3.24	2.43	0.05	0.82	73.7	1.4	24.9		
N3	2.34	1.5	0.06	0.74	65.3	2.4	32.3		
N4	2.61	2.02	0.05	0.55	76.9	2.0	21.1		
N5	2.1	1.38	0.04	0.71	64.7	1.9	33.4		

Table 13-8 presents the sequential copper distribution for the five composites.

The chemical analysis data for copper indicates that a significant fraction of copper is acid-soluble (CuSS). The fraction corresponding to CuCN typically can be leached in a bioleach or chloride heap leach, while the remaining fraction, CuR, is not recoverable by conventional leaching methods.

The conclusion drawn is that the samples originate from an oxidized zone, as they contain on average 70% oxidized copper minerals such as chalcanthite, malachite, chrysocolla, atacamite, and azurite. Additionally, the samples comprise of no significant secondary copper minerals, potentially including covellite and chalcocite. The 27.5% of unleachable copper may be due to the presence of Cu-goethites.

#### 13.2.2.3 Mineralogy

Based on the microscopic evaluation, the primary sources of copper are chrysocolla, malachite, and copper oxides. The gangue minerals consist of magnetite, hematite, iron hydroxides, aluminosilicates, carbonates, and quartz.

#### 13.2.2.4 Leaching Test

Bottle leaching tests were performed to evaluate the metallurgical performance of the five composites.

The conditions of the leaching tests are indicated below:

- Mass: 1000 g
- Particle size: P80: 75 µm
- 33% Solids
- 10-100 g/L sulphuric acid
- 72 h



• Ambient temperature

With the residue from the leaching tests with sulphuric acid, leaching tests with NaCN were carried out on each composite, with the aim of evaluating the dissolution of Au, Ag and the consumption of reagents.

The conditions of the leaching tests are indicated below:

- Mass: 1000 g
- Particle size: P80: 75 µm
- 40% Solids
- 1 g/L NaCN
- pH 10-11.8
- Ambient temperature

#### 13.2.2.5 Results

#### Table 13-9. Metallurgical Balance of Leaching with Sulphuric Acid

Composite	Head	assay	Resi	idue	Dissolution %		Reagents Consumption kg/t		**Reagents consumption kg/t	
ID	Cu %	Fe %	Cu %	Fe %	Cu	Fe	$H_2SO_4$	(*) GAC	H <sub>2</sub> SO <sub>4</sub>	(*) GAC
N1	1.4	41.9	0.5	42.1	70.5	1.8	41.4	25.0	32.7	17.1
N2	3.2	40.4	0.9	39.6	75.1	1.5	74.6	32.5	66.9	25.1
N3	2.3	27.0	0.9	24.6	63.9	4.7	92.9	68.0	73.6	49.6
N4	2.6	36.4	0.6	33.4	80.6	7.3	186.3	150.3	177.4	141.7
N5	2.1	32.1	0.6	30.0	74.0	7.3	154.6	128.6	145.6	120.6

\* Consumption of sulphuric acid by gangue,\*\* Sulphuric acid consumption after 24 hours of test.

Composite ID	Не	ad Assa	ıy	Residue			E	Dissolution %			Reagents Consumption kg/t		* Reagents Consumption kg/t	
ID.	Au g/t	Ag g/t	Cu %	Au g/t	Ag g/t	Cu %	Au	Ag	Cu	CaO	NaCN	CaO	NaCN	
N1	0.64	4.4		0.03	4.26	0.44	95.8	13.1	6.1	17.8	1.7	17.8	1.50	
N2	0.84	6		0.07	4.36	0.87	91.7	25.1	7.4	26.3	2.7	26.3	2.37	
N3	0.73	8.4		0.12	6.86	0.76	85.3	14.0	19.2	52.7	5.2	52.7	4.68	
N4	0.74	2.9		0.04	1.9	0.49	93.8	27.2	16.5	64.7	3.0	65.5	2.65	
N5	0.79	5.9		0.04	5.0	0.60	94.4	8.8	1.7	95.1	1.2	95.1	1.07	

 Table 13-10. Metallurgical Balance of Leaching with Sodium Cyanide

\*Reagents consumption after 24 hours of test.



## 13.3 Conclusions

- Metallurgical investigations conducted in 2012 and 2017 indicate that hydrometallurgy yields the best recovery rates for the Jasperoide mineralization, particularly for gold.
- Flotation methods, however, did not result in satisfactory copper recovery, despite their high gold recovery.
- Sequential copper tests and mineralogical analyses performed on the 2017 composites suggest that the Jasperoide deposit area under review is characterized by oxidized copper minerals. This assertion is supported by the low total sulphur assays from the chemical tests of both campaigns.
- Even though the sequential copper tests revealed residual copper contents ranging from 18% to 82% in the 2012 campaign and 21% to 33% in the 2017 campaign, typically indicative of primary copper sulphide (predominantly chalcopyrite), the presence of this mineral is doubtful due to the minimal existence of sulphides, inferred from the presence of sulphur.
- Copper flotation tests from the 2012 campaign imply a high presence of free and fine gold (32% to 65%), or alternatively, gold associated with minimally floatable copper. The poor copper recovery via flotation is likely due to the extent of copper mineralization oxidation.
- The acid reagent consumption in the copper leaching tests was high, ranging from 29 kg/t to 112 kg/t in the 2012 campaign and 25 kg/t to 150 kg/t in the 2017 campaign. Lime consumption was moderate in the 2012 campaign (1.5 to 2.7 kg/t), but significantly higher in the 2018 campaign (17.8 kg/t to 95 kg/t).
- Cyanide consumption in the gold leaching was also high, and ranged from 0.8 kg/t to 18.7 kg/t in the 2012 campaign and 1.16 kg/t to 5.21 kg/t in the 2017 campaign.
- Copper and gold recoveries via the hydrometallurgical process outperform those achieved through flotation concentration, although reagent consumption optimization would be necessary for economic development.
- Suitable hydrometallurgical processes for this type of mineralization would generally include heap leaching, vat leaching, or tank leaching. The latter, despite higher operating costs due to comminution, offers higher and quicker copper and gold recoveries, along with the added benefit of using gravimetry to recover coarse gold that would not be recoverable in a heap leach.

# 13.4 Recommendations

- Future metallurgical testwork should be done on fresh drill core.
- It is advisable to conduct further research into the mineral composition of the residual copper derived from sequential copper tests.
- Implementing gravimetry tests is suggested to gain a deeper understanding of potential gold recovery from such operations.
- It is recommended to perform leaching tests using alternative reagents, such as chloride leach, acid leach, and glycine cyanidation, to compare their kinetics and advantages in reagent consumption throughout the leaching cycle.
- In future metallurgical test campaigns, sampling should be conducted in conjunction with the geological model. This will provide a more accurate determination of the metallurgical behavior of the geological domains and generate valuable information to define the geometallurgical domains, thereby supporting decision-making in the project.



# **14.0 Mineral Resource Estimates**

#### 14.1 Mineral Resource

Table 14-1 shows the Mineral Resource estimate for MCZ of the Jasperoide Project. The Measured and Indicated Mineral Resources amount to 51.9 million tonnes at 0.50% copper and 0.20 g/t gold for 569.1 million pounds of contained copper and 326,800 ounces of contained gold. Inferred Mineral Resource is an additional 4.0 million tonnes at 0.32% copper and 0.11 g/t gold for 28.3 million pounds of contained copper and 14,600 ounces of contained gold. The Mineral Resource estimate is based on a copper price of US\$ 3.75 per pound.

Mineral				Contained	Contained	
Resource	Tonnes	Copper	Gold	Copper	Gold	
Category	(kt)	(%)	(g/t)	(mlbs)	(koz)	
Measured	28,636	0.60	0.24	380.0	218.2	
Indicated	23,304	0.37	0.15	189.1	108.6	
Measured/Indicated	51,940	0.50	0.20	569.1	326.8	
Inferred	4,005	0.32	0.11	28.3	14.6	

Table 14-1. Mineral	<b>Resource Estimate</b>
---------------------	--------------------------

Notes:

1. The Mineral Resource estimate has an effective date of 1 May 2023 and the estimate was prepared using the definitions in CIM Definition Standards (10 May 2014).

2. Mineral Resources are reported based on a conceptual constraining pit shell ("CCPS") to demonstrate reasonable prospects for eventual economic extraction, as required by the definition of Mineral Resource in NI 43-101; mineralization lying outside of the pit shell is excluded from the Mineral Resource.

3. The CCPS used to calculate the Mineral Resource estimate uses a copper price of 3.75/lb, a copper recovery of 75%, and open pit mining unit cost of 2.35/t, processing costs of 4.66/t plus 0.137/lb copper, and G&A unit cost of 1.37/t. Mineral Resources are reported at a cut-off grade of 0.14% copper, breakeven cut-off with these parameters.

4. Potential revenue from gold was not considered for the development of the CCPS; the Mineral Resource estimate is not dependent on recovering gold.

5. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

6. The quantity and grade of reported Inferred Mineral Resources in this estimate are uncertain in nature and there has been insufficient exploration to define these Inferred Mineral Resources as Indicated or Measured Mineral Resources.

7. All figures are rounded to reflect the relative accuracy of the estimate and therefore numbers may not appear to add precisely.

8. The Mineral Resource estimate is prepared by IMC of Tucson, AZ, under the direction of Michael G. Hester, FAusIMM, a Qualified Person.

The Mineral Resource estimate is based on the resource model developed during February and March 2023.

The Measured, Indicated, and Inferred Mineral Resources reported herein are contained within a conceptual constraining pit shell ("CCPS") to demonstrate "reasonable prospects for eventual economic extraction" to meet the definition of Mineral Resources in NI 43-101. Figure 14-1 shows the CCPS that is based on Measured, Indicated, and Inferred Mineral Resource.



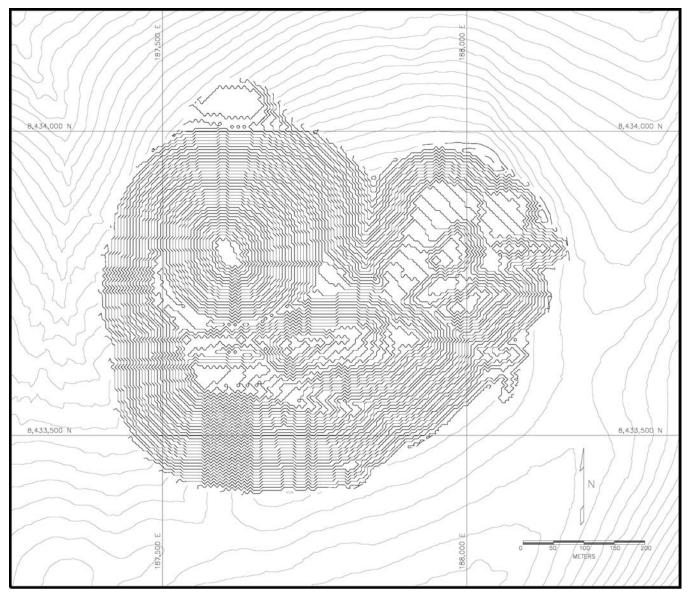


Figure 14-1. Constraining Pit Shell for Mineral Resource Estimate (IMC, 2023)

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#### 14.2 Sensitivity to Cut-off Grade

Table 14-2 shows a sensitivity analysis of the Mineral Resource estimate to various copper prices and copper cut-off grades. The base case Mineral Resource estimate is at a copper price of \$3.75/lb and a breakeven cut-off grade of 0.14% copper. The Mineral Resource estimate is not particularly sensitive to copper price in the ranges of prices shown.

## **14.3 Economic Parameters**

Table 14-3 shows the economic parameters for the Mineral Resource estimate. The estimate is based on a copper price of US\$ 3.75/lb. The QP for this section believes this price to be reasonable based on the following: 1) historical prices, adjusted for inflation, 2) prices used by other companies for comparable projects, and 3) long range consensus price forecasts prepared by various bank economists.

The mining cost is estimated as \$2.35 per total tonne. The likely range is estimated as \$2.25/t to \$2.50/t. For the scale of the project, it is likely that contract mining will be preferred.

The unit process costs are estimated at \$4.66 per tonne processed plus \$0.137/lb recovered copper. Estimated recovery is 75% of total copper. This is a reasonable estimate for acid leaching and solvent extraction/electrowinning (SX/EW) of oxidized copper minerals.

The estimated G&A cost is based on \$10 million/year or \$1.37 per tonne processed.

The bottom of the table shows breakeven and internal total copper cut-off grades of 0.14% total copper and 0.10% total copper respectively. The internal cut-off grade covers process and G&A costs, including SXEW. Internal cut-off applies to blocks that must be removed from the resource shell, so mining is considered a sunk cost.

Cu Price	Cut-off	Resource	Tonnes	Copper	Gold	Copper	Gold	Total
(US\$/lb)	(%Cu)		(kt)	(%)	(g/t)	(mlbs)	(koz)	(kt)
(US\$/ID)	(%CU)	Category Measured	(Kt) 25,383	(%) 0.658	(g/t) 0.251	(mibs) 368.2	(KOZ) 204.8	(KL)
			25,385 17,897					
3.00	0 1 9	Indicated	,	0.420 <b>0.560</b>	0.159	165.7		96,600
3.00	0.18	M+I	43,280		0.213	533.9	296.3	86,600
		Inferred	2,685	0.344	0.110	20.4 374.3	9.5	
		Measured	27,078		0.243		211.6	
2.25	0.10	Indicated	20,306	0.393	0.152	175.9		80.000
3.25	0.16	M+I	47,384	0.527	0.204	550.2	310.8	89,602
		Inferred	3,222	0.328	0.110	23.3	11.4	
		Measured	27,894	0.614	0.240	377.6		
		Indicated	21,923		0.149	183.7		04.075
3.50	0.15	M+I	49,817	0.511	0.200	561.2	320.3	94,875
		Inferred	3,656	0.330	0.113	26.6	13.3	
		Measured	28,636	0.602	0.237	380.0	218.2	
		Indicated	23,304	0.368	0.145	189.1	108.6	
3.75	0.14	M+I	51,940		0.196	569.1	326.8	97,057
		Inferred	4,005	0.321	0.113	28.3	14.6	
		Measured	29,369		0.233	382.0		
		Indicated	24,781	0.355	0.143	193.9		
4.00	0.13	M+I	54,150	0.482	0.192	576.0	333.9	101,346
		Inferred	4,656	0.319	0.117	32.7	17.5	
		Measured	30,170		0.230	384.4	223.1	
		Indicated	26,317	0.343	0.139	199.0		
4.25	0.12	M+I	56,487	0.469	0.188	583.4	340.7	103,539
		Inferred	4,997	0.309	0.115	34.0	18.5	
		Measured	30,212	0.578	0.230	385.0	223.4	
		Indicated	26,455	0.343	0.139	200.0	118.2	
4.50	0.12	M+I	56,667	0.468	0.188	585.0	341.6	104,795
		Inferred	5,113	0.307	0.115	34.6	18.9	
		Measured	30,923	0.567	0.226	386.5	224.7	
		Indicated	27,763	0.332	0.136	203.2	121.4	
4.75	0.11	M+I	58,686	0.456	0.183	589.7	346.1	105,997
		Inferred	5,590	0.294	0.111	36.2	19.9	
		Measured	31,685	0.556	0.223	388.4	227.2	
		Indicated	29,262	0.322	0.134	207.7	126.1	
5.00	0.10	M+I	60,947	0.444	0.180	596.1	353.2	108,672
		Inferred	6,112	0.283	0.109	38.1	21.4	

 Table 14-2. Sensitivity Analysis

 Mineral Resource Cone Shells at Various Copper Prices and Breakeven Cut-off Grades

Parameter	Units	Value
Commodity Prices		
Copper Price Per Pound	(US\$)	3.75
Plant Production Rate	(ktpy)	7,300
Mining Cost Per Total Tonne		
Contract Mining	(US\$)	2.350
Process and G&A Cost Per Ore Tonne		
Processing	(US\$)	4.66
G&A	(US\$)	1.37
Total Process and G&A	(US\$)	6.03
Plant Recovery		
Copper	(%)	75%
Smelting/Refining Payables and Costs		
Copper Refinery Payable	(%)	100.0%
Copper SXEW Per Pound	(US\$)	0.137
Copper Cut-off Grades		
Breakeven Cut-off Grade	(%)	0.14
Internal Cut-off Grade	(%)	0.10

Table 14-3.	Economic	Parameters

### 14.4 Additional Information

The Mineral Resources are classified in accordance with the May 2014 Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") "CIM Definition Standards – For Mineral Resources and Mineral Reserves" adopted by the CIM Council (as amended, the "CIM Definition Standards") in accordance with the requirements of NI 43-101. The Mineral Resource estimate reflects the reasonable expectation that all necessary permits and approvals will be obtained and maintained.

There is no guarantee that any of the Mineral Resources will be converted to Mineral Reserve. There is also no guarantee that any of the Inferred Mineral Resources will be upgraded to Measured or Indicated Mineral Resources or to Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

The Inferred Mineral Resources included in this Technical Report meet the current definition of Inferred Mineral Resources. The quantity and grade of Inferred Mineral Resources are uncertain in nature and there has been insufficient exploration to define these Inferred Mineral Resources as an Indicated Mineral Resource. It is, however, expected that the majority of Inferred Mineral Resource could be upgraded to Indicated Mineral Resource with continued exploration.

The project is subject to the normal risks that mining projects face including changes to metal prices, changes to government regulations, social risks, uncertainty in Mineral Resource and recovery estimates, permitting risks and financing risks. Peru is a significant mining country with established procedures for permitting, legal, title, and taxation issues. Though the project is in a jurisdiction that has historically been friendly to mining, there have been instances where communities have effectively curtailed project development and operation of projects for significant periods of time.

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Metallurgical work on the project is limited to preliminary flotation and leach tests at this time. The main copper minerals identified in the resource area appear to be amenable to dissolution in sulphuric acid and recovery by solvent extraction/electrowinning (SX/EW) methods. C3 Metals has engaged Adam Johnston of Transmin Metallurgical Consultants to evaluate the metallurgical performance of copper mineralization and to develop a flowsheet for its processing for the MCZ (Jasperoide) project.

C3 Metals are undertaking Phase 1 sighter metallurgical testwork in 2023. Ongoing work that will be reported once this work has been completed includes bench-scale testing of samples of the resource to determine its physical and chemical properties, as well as its metallurgical response to various processing techniques. The results of the test work will be used to develop a flowsheet for the processing of the mineralization that will be optimized for its specific properties. The program also includes a series of partial leach extractions that could be used as a geochemistry proxy for copper grade recoverable by heap leaching.

There is a risk that the gold metal reported in the Mineral Resource estimate will not be recovered if the processing method ultimately chosen is conventional heap leaching with sulphuric acid.

# 14.5 Description of the Block Model

# 14.5.1 General

A 3D block model was developed by IMC during February and March 2023. The block model is based on 5 m by 5 m x 5 m high blocks. The current Mineral Resource is estimated only for the Montaña de Cobre Zone as shown on Figure 14-2. This area is bounded by the coordinates 8,432,900N to 8,434,350N and 186,900E to 188,600E.

### 14.5.2 Drilling Data

Section 10 reports that the drilling database consists of 123 holes and 30,198.6 m of drilling. Of this amount, 103 holes and 24,217.9 m of the drilling are at MCZ for which this Mineral Resource estimate is prepared, i.e. bounded by the above coordinates. Table 14-4 shows this drilling by campaign.

Table IT is Summary of Drining Data in Montana de Cobre Zone								
Company	Dates	No. of Holes	Metres					
Southwestern Gold/Cyprus Minerals	1994-1995	14	2,689.2					
Cominco Peru S.R.L.	1995-1996	13	1,854.2					
Compañia Minera Ares S.A.C.	2009-2012	23	5,090.5					
C3 Metals Inc. – Phase 1	2021	33	7,790.3					
C3 Metals Inc. – Phase 2	2021-2022	20	6,793.7					
TOTAL	1994-2022	103	24,217.9					

Figure 14-2 shows the location for these holes and also the location of cross sections referenced in this Technical Report.



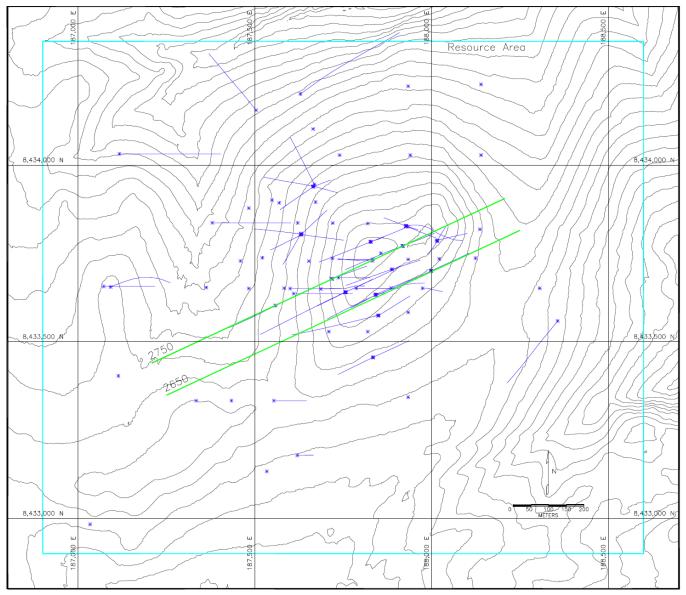


Figure 14-2. Hole Locations and Cross Sections (IMC, 2023)

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### 14.5.3 Geologic Controls

## Rock Types

Table 14-5 shows rock type designations used by C3 Metals' personnel, the rock codes used for modelling, and a description of the rock types. The geology is a sequence of sedimentary and altered sedimentary units, the Ferrobamba and Mara units, that have been intruded on the west side by the tonalite and granodiorite units. The main host for the mineralization is the Ferrobamba Top Limestone (300) where it is in proximity with the tonalite intrusion. The tonalite also hosts significant mineralization. The granodiorite is weakly mineralized. There is very little drilling in the sedimentary units below unit 300.

C3 Metals' personnel provided solids to represent the rock units and model codes for the 5 m model. The solids and model codes were reviewed for accuracy. The solids were also used to back-assign the rock codes to the assay database. The back-assignment provides consistency between the assay intervals and the rock type domains they are located.

TADIE 14-5. WIOUEI NOCK TYPES						
Rock Code		Description				
Tona	70	Tonalite Intrusion				
Gdio	90	Granodiorite Intrusion				
Fer 1st 300		Ferrobamba Top Limestone				
Fer_top_mbllst	310	Ferrobamba Top Marble Limestone				
Fer_top_purlst	320	Ferrobamba Top Pure Limestone				
Fer_bot_mbllst	330	Ferrobamba Bottom Marble Limestone				
Fer_bot_impurlst	340	Ferrobamba Bottom Impure Limestone				
Mar_top_sands	350	Mara Top Sandstone				
qt	604	Quaternary Alluvium				

#### Table 14-5 Model Rock Types

### Alteration

Table 14-6 shows alteration type designations used by C3 Metals' personnel, the alteration codes used for modelling, and a description of the model alteration type. The alteration domains occur in the Ferrobamba Top Limestone (300) and the tonalite (70), with some minor occurrence in the granodiorite. Alteration codes 201 and 205 are the most significant mineralization hosts.

Table 14-6. Model Alteration Types							
Alteration	Code	Description					
Bxgdms	201/209	Mixed Garnet Diopside Magnetite Skarn Breccia					
Bxms	205	Magnetite Skarn Breccia					
Dio_gn	210	Diopside Garnet Skarn					

# Table 14 6 Model Alteration Types

Figure 14-3 is a cross section of the major rock types and alteration types. Rock types not shown on the cross section are deeper than the figure depicts.



C3 Metals' personnel provided solids to represent the alteration types and model codes for the 5 m model. The solids and model codes were reviewed for accuracy. The solids were also used to back-assign the alteration codes to the assay database. The back-assignment provides consistency between the assay intervals and the alteration domains they are located.

# Other Geologic Variables

Other geologic information available in the model includes:

- The regional scale Jasperoide and Hualaycho Thrust Faults.
- Six local faults.
- A fault block domain code to distinguish blocks above and below the Jasperoide Fault.
- A rock competency code to distinguish crushed, broken, and massive zones based on visual inspection of the core.
- Arsenic zones to denote plus 500 ppm, plus 1000 ppm, and plus 2000 ppm arsenic.
- A low calcium vein zone.

Solids for these features were interpreted by C3 Metals' personnel and are assigned to the model.

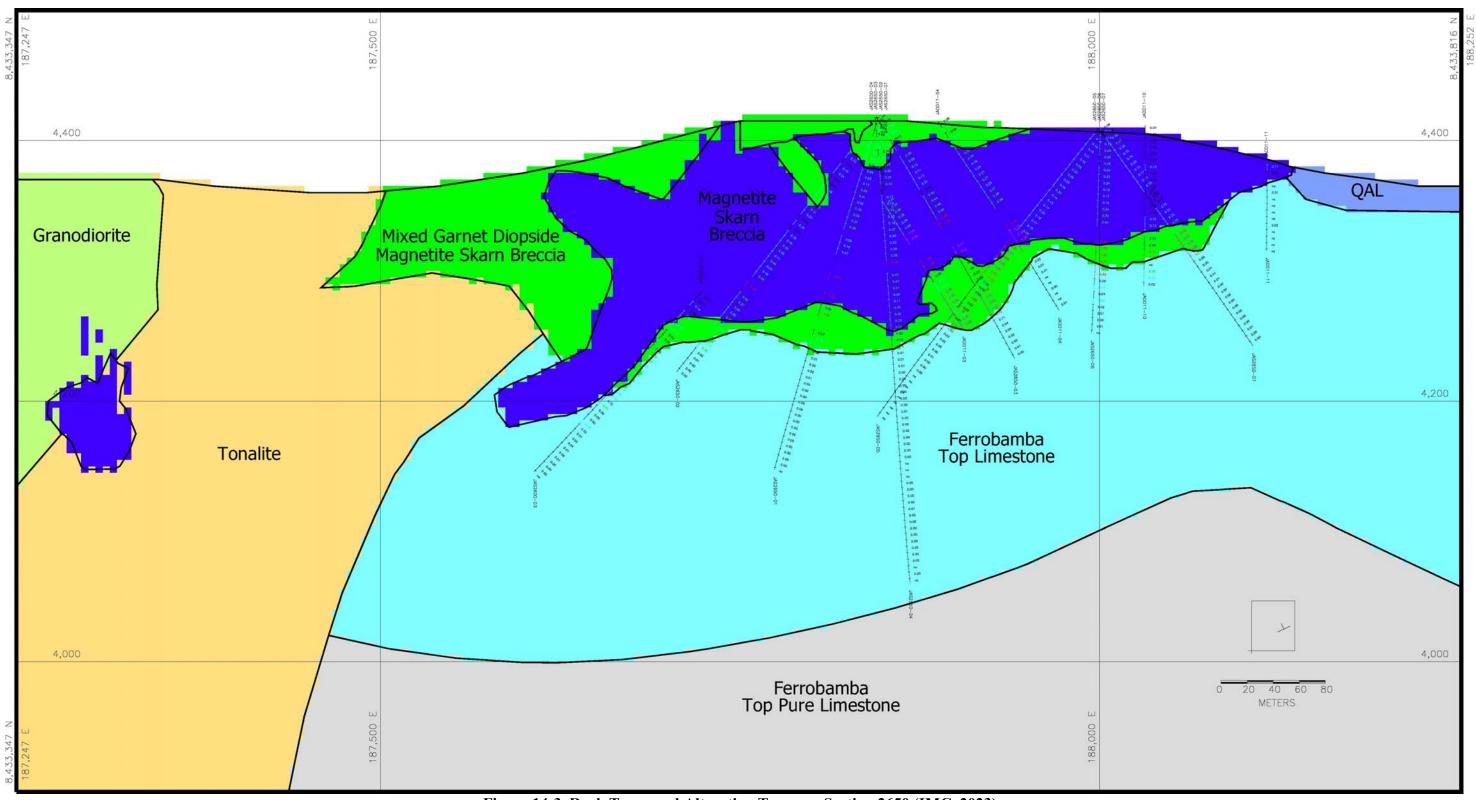


Figure 14-3. Rock Types and Alteration Types on Section 2650 (IMC, 2023)

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### 14.5.4 Cap Grades and Compositing

The database was reviewed to determine cap grades for the various minerals for MCZ. Probability plots and sorted lists of the higher-grade assay intervals for copper, gold, and silver were examined by rock type/alteration zone populations. Table 14-7 shows the cap grades in the upper portion of the table and number of assays capped in the lower portion of the table. A relatively small number of assays were capped for each metal in each population. The cap grades generally correspond to the upper 99.5 percentile of the populations.

The assay database was composited to fix length 5 m downhole composites. Composited values included total copper, gold, and silver. The geologic codes such as rock type, alteration, etc. were also composited. Values were assigned to the composites based on the rock type or alteration code that was the maximum amount in each composite.

	Table 14-7: Cap Grades and Number of Assays Capped								
Rock Co	de	300	300	300	300	70	70	70	
Alteratio	n Code	201	205	209	0	201	205	0	
Cap Gra	des:								
Copper	(%)	14.0	7.0	0.7	5.0	1.5	0.6	none	
Gold	(g/t)	10	10	none	10	none	none	none	
Silver	(g/t)	50	50	none	50	none	none	50	
Number	of Assays	Capped:							
Copper	(none)	11	20	2	14	4	1	0	
Gold	(none)	3	6	0	1	0	0	0	
Silver	(none)	7	4	0	2	0	0	1	

 Table 14-7. Cap Grades and Number of Assays Capped

# 14.5.5 Descriptive Statistics

Table 14-8 shows descriptive statistics for total copper, gold, and silver for the assay intervals. The table shows values by the rock type/alteration zone populations. The left side of the table shows uncapped values and the right side shows capped values. It is evident that the most significant mineral host is the limestone unit (300), particularly in the altered zones. The largest mineralized unit is alteration code 205 in the limestone. For copper and silver the highest average grade material is associated with alteration code 201 in the limestone; for gold the highest average grade is in zone 205 in the limestone. The table includes only non-zero values for each population, though many have placeholders for below detection limit values. The descriptive statistics calculations are limited to the drilling data in the resource area bounded by the coordinates 8,432,900N to 8,434,350N and 186,900E to 188,600E as depicted on Figure 14-2. It is also noted that the silver assays generally had an upper detection limit of 100 ppm.

Table 14-9 shows descriptive statistics for the 5 m composites. The table includes only non-zero values, but zero value assays could be incorporated into the composites.

Figures 14-4 and 14-5 shows probability plots of total copper and gold assays respectively. Figures 14-6 and 14-7 shows probability plots of total copper and gold for 5 m composites respectively.

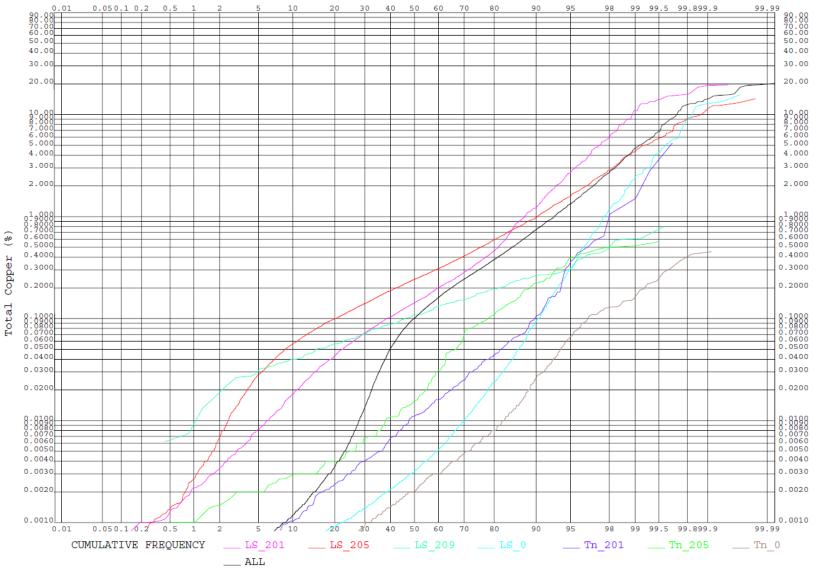


I able 14-8. Summary Statistics of Assays       Metal/Geologic Zone     Not Capped									
Rock	Alt	No. of	Mean	Std Dev	Max	No. of	Mean	Std Dev	Max
Code	Code	Samples	(%)	(%)	(%)	Samples	(%)	(%)	(%)
Copper:	Code	Samples	(70)	(70)	(%)	Samples	(70)	(70)	(70)
All	All	13,434	0.353	1.047	20.30	13,434	0.339	0.909	14.00
300	201	2,121	0.555	1.047	20.30	-	0.539		14.00
300	201	,	0.628	0.824	20.20 15.50	2,121		1.698	7.00
	205	6,127				6,127	0.468	0.771	0.70
300		233	0.143	0.155	1.82	233	0.138	0.113	
300	0	3,308	0.113	0.776	20.30	3,308	0.091	0.455	5.00
70	201	304	0.122	0.803	12.45	304	0.070	0.220	1.50
70	205	195	0.079	0.162	1.65	195	0.074	0.122	0.60
70	0	1,146	0.013	0.041	0.66	1,146	0.013	0.041	0.66
Metal/Geologi			Not Ca	••			Сар		
Rock	Alt	No. of	Mean	Std Dev	Max	No. of	Mean	Std Dev	Max
Code	Code	Samples	(g/t)	(g/t)	(g/t)	Samples	(g/t)	(g/t)	(g/t)
Gold:					- 4 - 0 - 0				
All	All	13,434	0.154	0.964	51.80	13,434	0.139	0.435	10.00
300	201	2,121	0.186	0.928	34.10	2,121	0.170	0.520	10.00
300	205	6,127	0.247	1.254	51.80	6,127	0.222	0.514	10.00
300	209	233	0.065	0.128	1.00	233	0.065	0.128	1.00
300	0	3,308	0.029	0.492	27.20	3,308	0.024	0.221	10.00
70	201	304	0.056	0.267	4.18	304	0.056	0.267	4.18
70	205	195	0.052	0.176	2.28	195	0.052	0.176	2.28
70	0	1,146	0.022	0.205	5.74	1,146	0.022	0.205	5.74
Metal/Geologi			Not Ca	••			Сар		
Rock	Alt	No. of	Mean	Std Dev	Max	No. of	Mean	Std Dev	Max
Code	Code	Samples	(g/t)	(g/t)	(g/t)	Samples	(g/t)	(g/t)	(g/t)
Silver:									
All	All	11,880	1.27	3.82	100.0	11,880	1.23	3.05	50.0
300	201	1,852	1.87	5.57	100.0	1,852	1.79	4.52	50.0
300	205	5,764	1.67	3.56	100.0	5,764	1.64	2.98	50.0
300	209	233	1.12	1.59	13.5	233	1.12	1.59	13.5
300	0	2,769	0.47	3.09	96.8	2,769	0.44	2.15	50.0
70	201	259	0.19	0.56	6.3	259	0.19	0.56	6.3
70	205	147	0.39	0.53	3.5	147	0.39	0.53	3.5
70	0	856	0.37	3.64	100.0	856	0.31	2.13	50.0

Table 14-8. Summary Statistics of Assays

Metal/Geologi	c Zone		Not Ca	U U		in Comp	Сар	bed	
Rock	Alt	No. of	Mean	Std Dev	Max	No. of	Mean	Std Dev	Max
Code	Code	Samples	(%)	(%)	(%)	Samples	(%)	(%)	(%)
Copper:									
All	All	3,395	0.316	0.846	15.69	3,395	0.305	0.751	11.96
300	201	550	0.644	1.604	15.69	550	0.611	1.415	11.96
300	205	1,360	0.477	0.747	11.65	1,360	0.464	0.652	6.92
300	209	43	0.149	0.105	0.59	43	0.144	0.086	0.39
300	0	909	0.052	0.232	3.83	909	0.052	0.225	3.71
70	201	67	0.096	0.305	2.00	67	0.068	0.155	0.91
70	205	62	0.069	0.139	0.86	62	0.062	0.105	0.45
70	0	404	0.012	0.028	0.23	404	0.012	0.028	0.23
Metal/Geologi	c Zone		Not Ca	pped			Сарј	bed	
Rock	Alt	No. of	Mean	Std Dev	Max	No. of	Mean	Std Dev	Max
Code	Code	Samples	(g/t)	(g/t)	(g/t)	Samples	(g/t)	(g/t)	(g/t)
Gold:									
All	All	3,395	0.131	0.413	11.66	3,395	0.121	0.251	3.70
300	201	550	0.160	0.388	6.99	550	0.151	0.267	2.17
300	205	1,360	0.232	0.540	11.66	1,360	0.215	0.304	3.70
300	209	43	0.065	0.064	0.32	43	0.065	0.064	0.32
300	0	909	0.026	0.270	7.55	909	0.021	0.139	2.83
70	201	67	0.044	0.099	0.64	67	0.044	0.099	0.64
70	205	62	0.042	0.072	0.49	62	0.042	0.072	0.49
70	0	404	0.020	0.086	1.51	404	0.020	0.086	1.51
Metal/Geologi	c Zone		Not Ca	pped			Сар	bed	
Rock	Alt	No. of	Mean	Std Dev	Max	No. of	Mean	Std Dev	Max
Code	Code	Samples	(g/t)	(g/t)	(g/t)	Samples	(g/t)	(g/t)	(g/t)
Silver:									
All	All	2,673	1.21	2.63	65.3	2,673	1.18	2.25	44.4
300	201	431	1.74	4.53	65.3	431	1.66	3.61	44.4
300	205	1,201	1.68	2.19	28.1	1,201	1.67	2.09	21.1
300	209	43	1.09	0.93	4.9	43	1.09	0.93	4.9
300	0	641	0.46	1.74	25.2	641	0.42	1.37	14.5
70	201	50	0.19	0.31	2.0	50	0.19	0.31	2.0
70	205	40	0.38	0.41	1.7	40	0.38	0.41	1.7
70	0	267	0.38	1.82	26.1	267	0.33	1.20	13.1

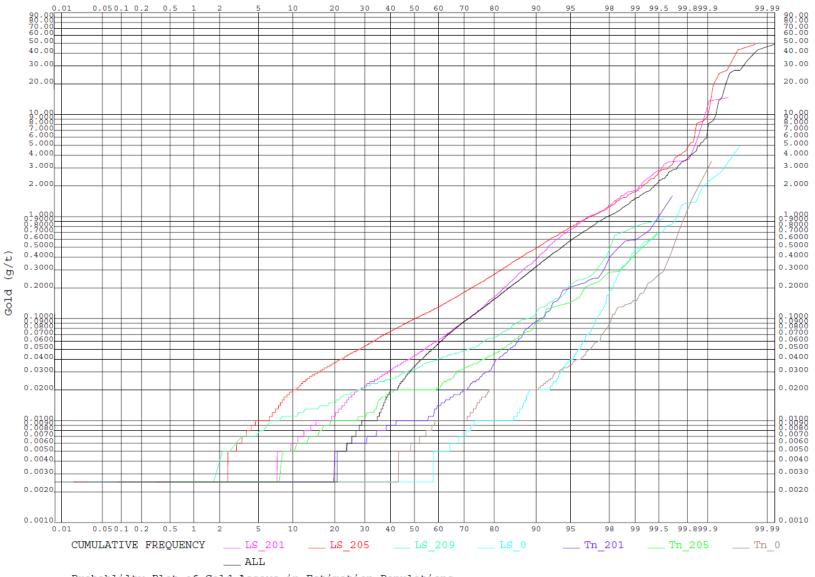
Table 14-9. Summary Statistics of 5 m Composites



Probablilty Plot of Total Copper Assays in Estimation Populations Figure 14-4. Probability Plot of Copper Assays by Estimation Population (IMC, 2023)

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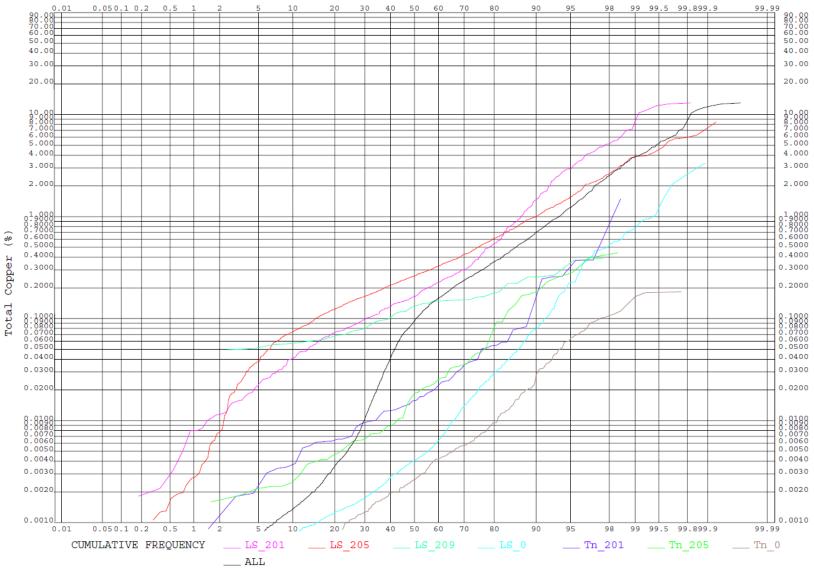




Probablilty Plot of Gold Assays in Estimation Populations Figure 14-5. Probability Plot of Gold Assays by Estimation Population (IMC, 2023)

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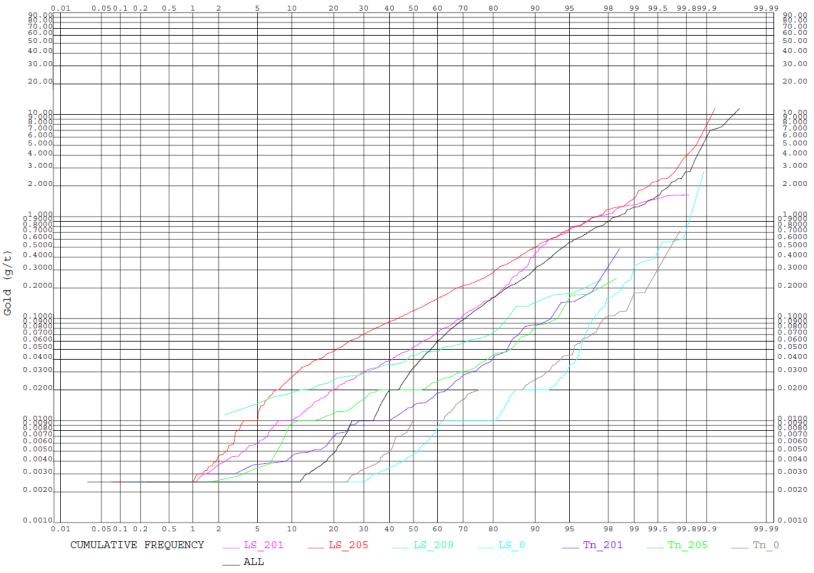
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Probablilty Plot of Total Copper Composites (5m) in Estimation Populations Figure 14-6. Probability Plot of Copper Composites (5 m) by Estimation Population (IMC, 2023)

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Probability Plot of Gold Composites (5m) in Estimation Populations Figure 14-7. Probability Plot of Gold Composites (5 m) by Estimation Population (IMC, 2023)

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### 14.5.6 Variogram Analysis

IMC conducted variogram analyses of total copper. The analysis was done for alteration type 205 in the limestone since that is an important domain, has the most data, and is somewhat regularly shaped. The distribution of material in alteration zone 201 is quite irregular. The analysis was based on the 5 m composites. Visually, the copper mineralization appears to be somewhat flat lying with a slight dip to the southwest. Directional variograms were run in 15° azimuth increments with plunges of  $0^{\circ}$ ,  $\pm 10^{\circ}$ ,  $\pm 15^{\circ}$ , and  $\pm 20^{\circ}$  to investigate preferred orientations of mineralization. From this data, IMC interpreted a major axis direction with azimuth 45° and an upward plunge of 15°, or alternatively, an azimuth of 225° with a 15° downward plunge. This is shown as Figure 14-8 and the variogram range is about 270 m. The minor axis direction is interpreted perpendicular to this with an azimuth of 315° and no plunge (flat). This is shown in Figure 14-9 and the range is about 210 m. The variograms are of good clarity. The variogram calculations were done using a modified covariance method (Srivastava, 1987).



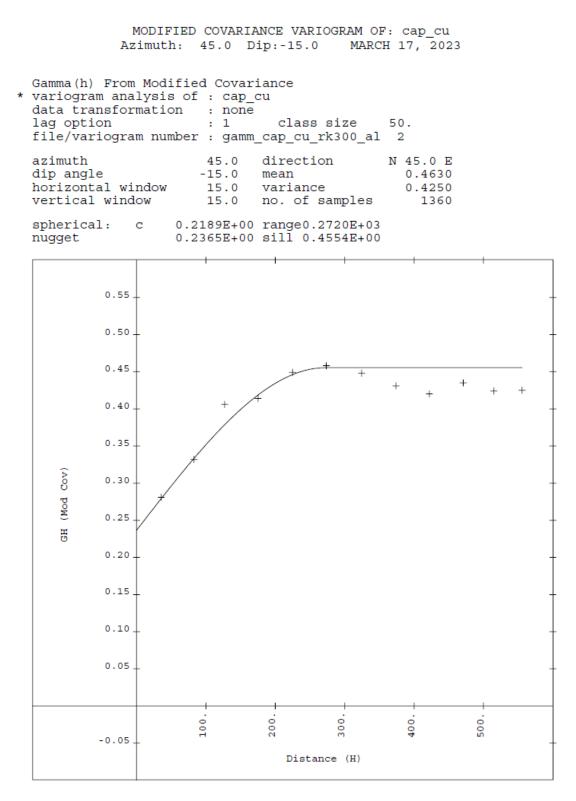


Figure 14-8. Copper Variogram Along Major Axis (IMC, 2023)



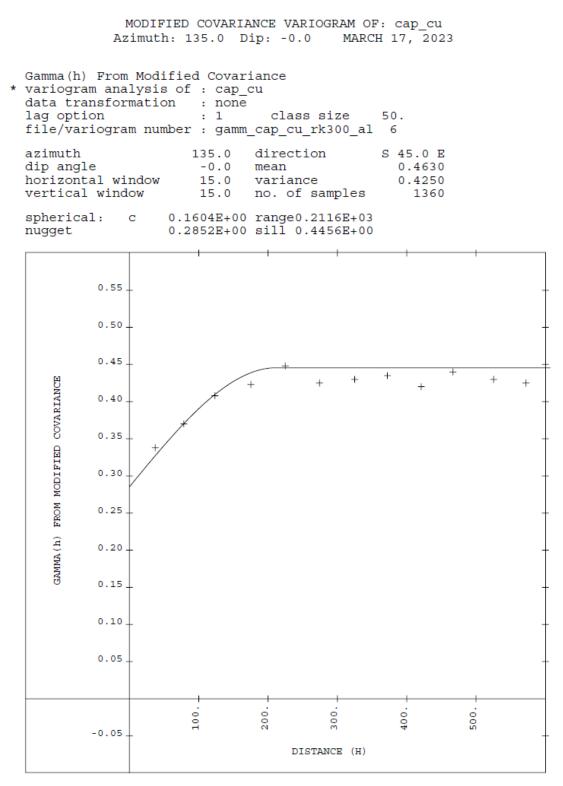


Figure 14-9. Copper Variogram Along Minor Axis (IMC, 2023)



14.5.7 Block Grade Estimation

Block grades for total copper, gold, and silver were estimated with inverse distance with a power weight of 3 (ID3). The ID3 method was chosen because it generally results in less grade smoothing (smearing) than ordinary kriging (OK).

The search orientation was elliptical with the major axis at an azimuth of 225° with a downward dip of 15°. The minor axis was at an azimuth of 315° with no dip. The tertiary axis was perpendicular to these with an azimuth of 225° and an upward angle of 75°. These orientations were interpreted from the variogram analysis.

The limestone/tonalite rock type contact was considered a hard boundary for the estimations. Within the limestone the alteration types 201, 205, 209, and 0 (unaltered) were all treated as separate populations so blocks coded as alteration type 205 only used composites with alteration type 205, etc. For tonalite, alteration types 201 and 205 were lumped into a single population, and the unaltered tonalite was a separate population.

For altered rock populations in the limestone and tonalite the search radii were 150 m in the major axis direction, 120 m in the minor axis direction and 30 m in the tertiary (near vertical) direction. These distances are less than the ranges of the variograms, but are adequate to fill in the blocks. For unaltered rock populations in the limestone and tonalite the search radii were reduced to 100 m in the major axis direction, 80 m in the minor axis direction, and 30 m in the tertiary direction. This was due to the spottier nature of the mineralization in these populations.

A maximum of 10 composites, a minimum of 1 composite and a maximum of 3 composites per hole were used for the estimations. The relatively small number of composites was also to reduce grade smoothing for the estimations.

Figures 14-10 and 14-11 show the copper estimates on cross sections. Figures 14-12 and 14-13 show cross sections of the gold estimates.

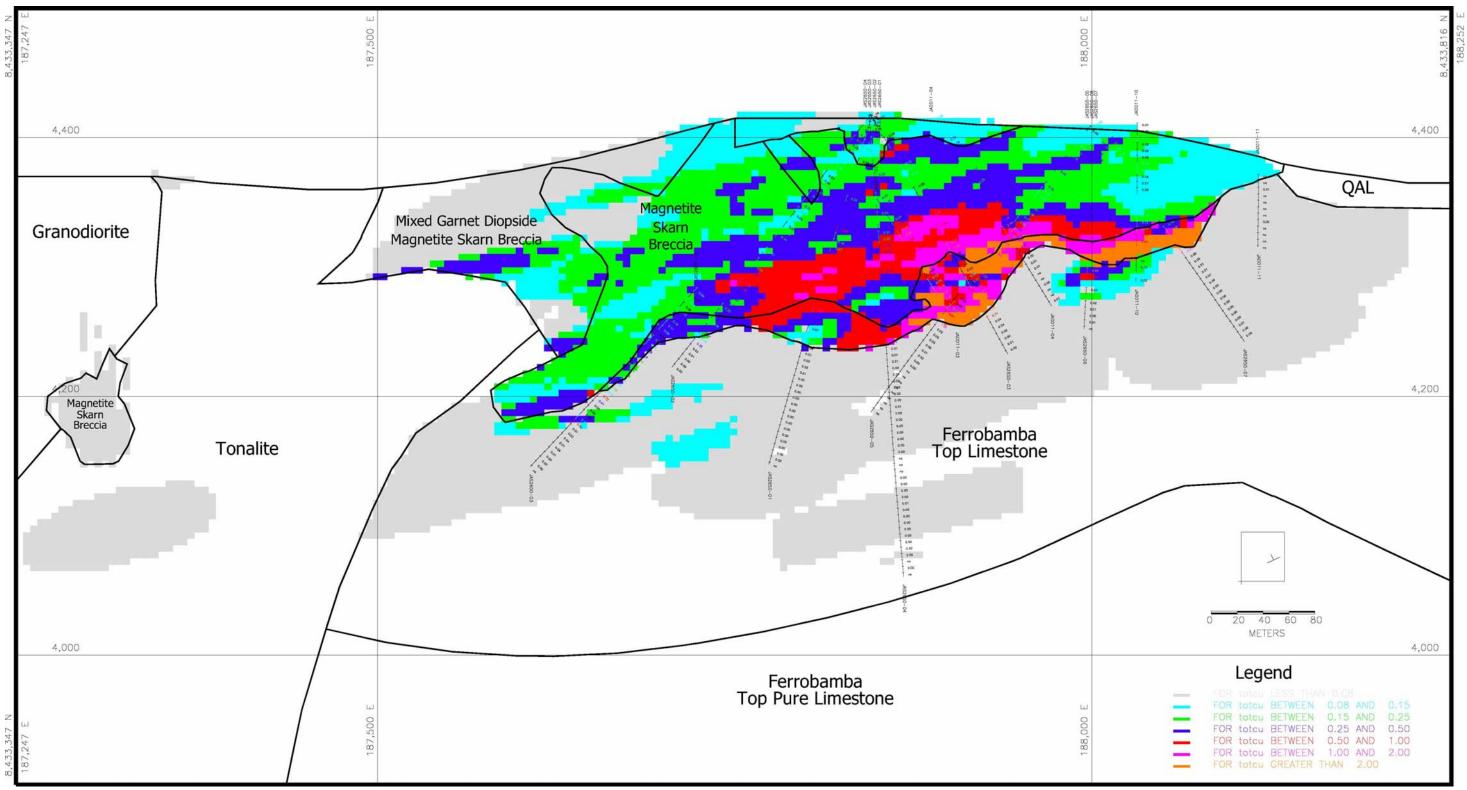


Figure 14-10. Copper Grades on Cross Section 2650 (IMC, 2023)

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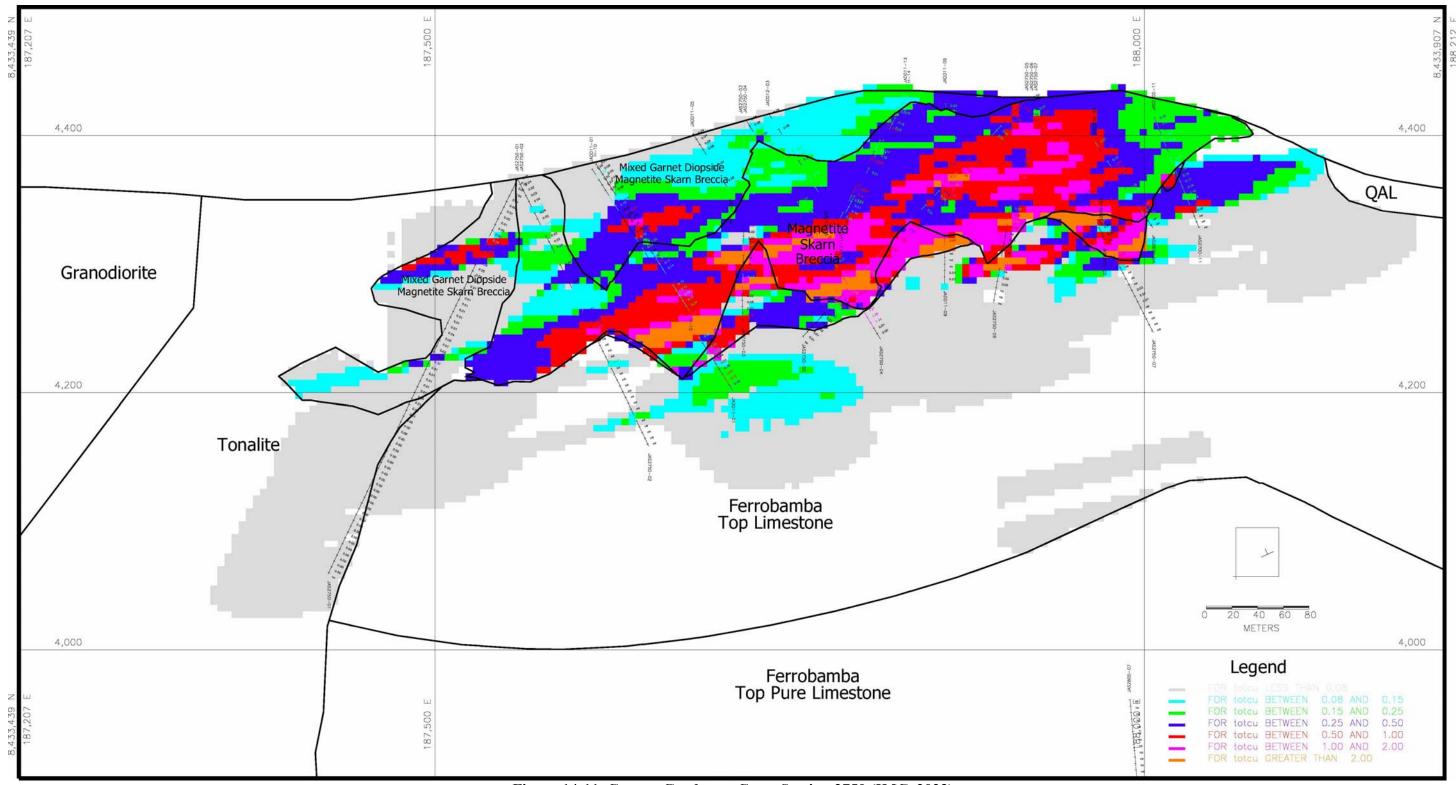


Figure 14-11. Copper Grades on Cross Section 2750 (IMC, 2023)

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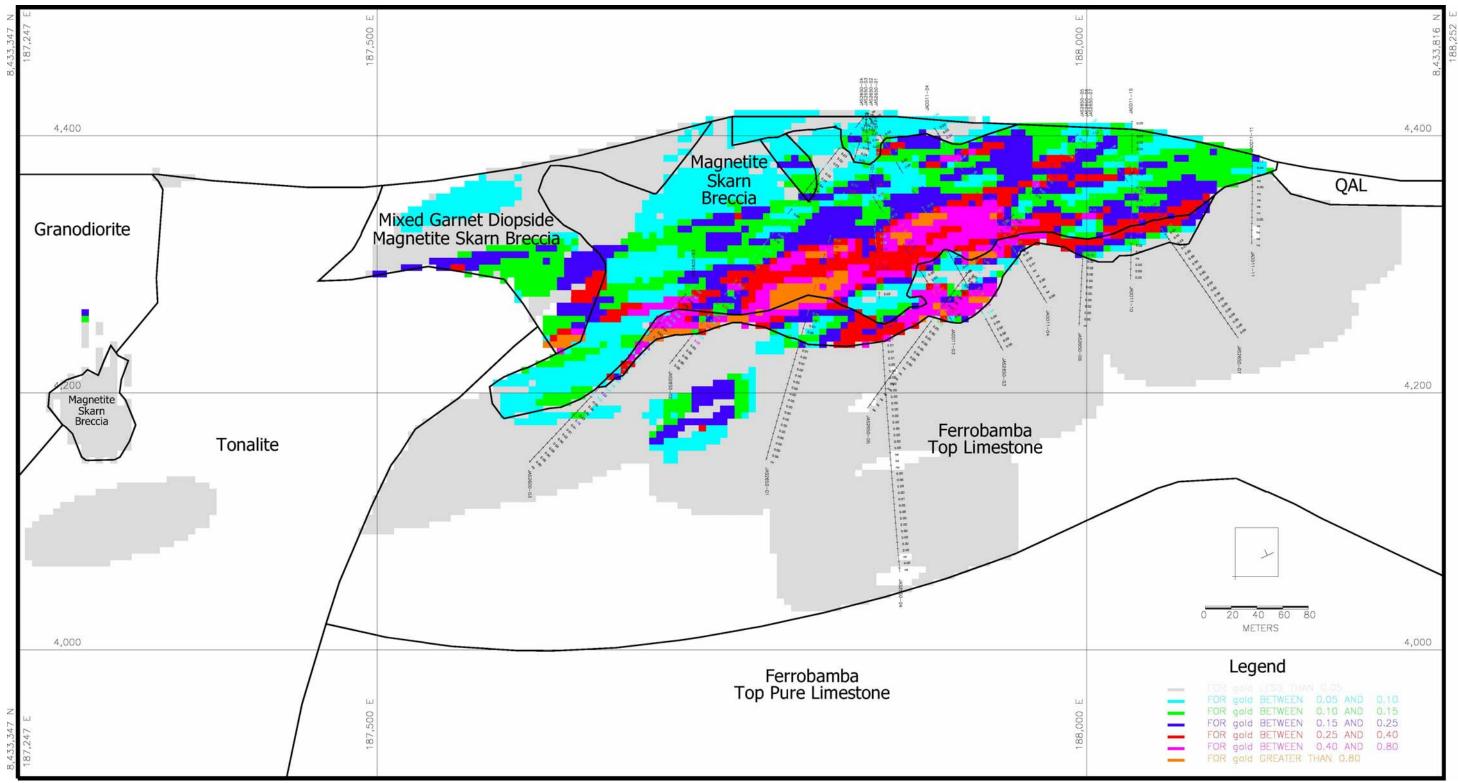


Figure 14-12. Gold Grades on Cross Section 2650 (IMC, 2023)

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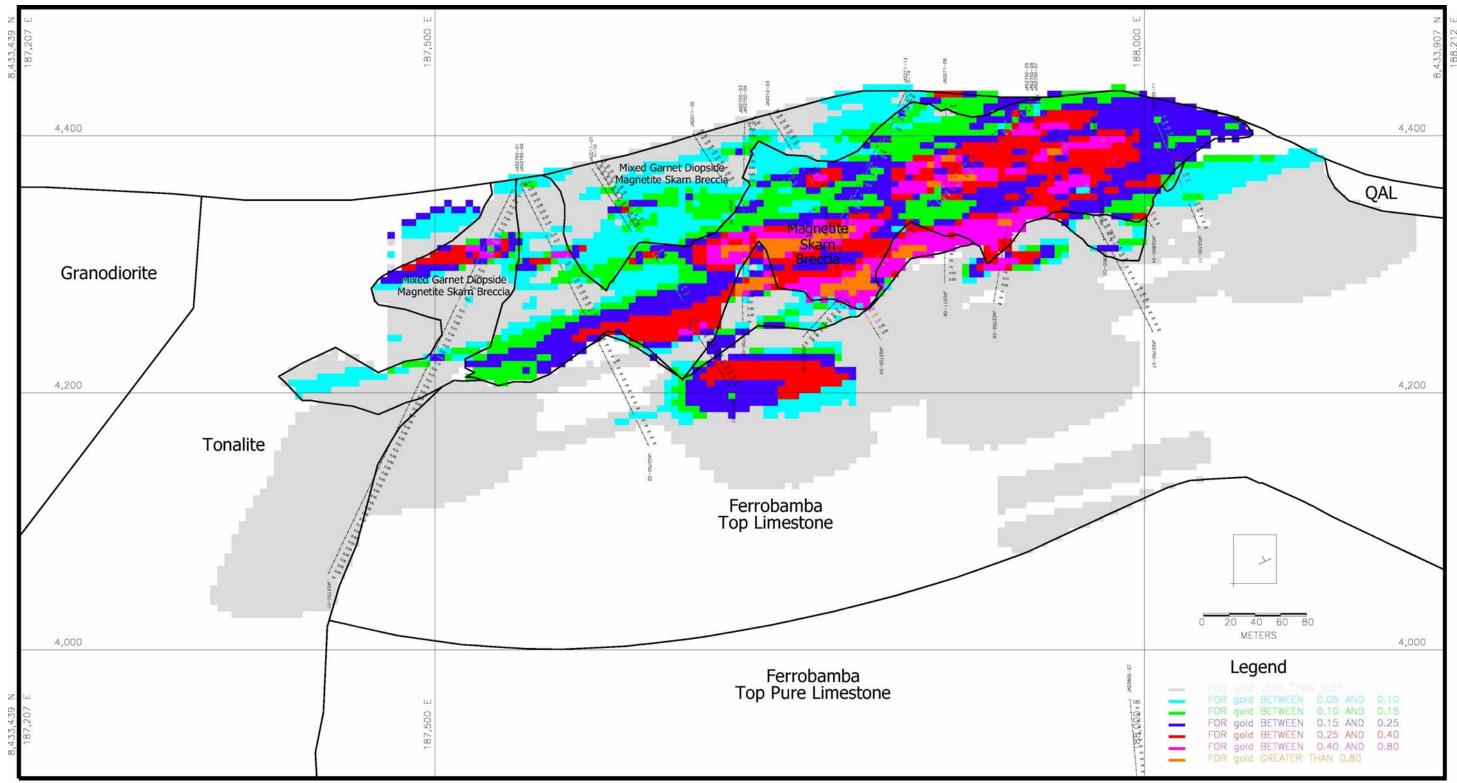


Figure 14-13. Gold Grades on Section 2750 (IMC, 2023)

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### 14.5.8 Bulk Density

About 2927 specific gravity measurements on core samples were included with the Jasperoide database. The measurements were done by C3 Metals' personnel and were by the water immersion method, without coating the samples with wax. The database included the dry and submerged sample weights which were reviewed and checked by the QP for this section. The samples were incorporated into the assay database and analyzed by rock type, alteration, and rock competency populations. The competency code was based on categorizing drill core as crushed, broken, or massive based on visual inspection of the core. Geologic solids were developed for the rock competency data and incorporated into the model. Table 14-10 shows the average values for each of the populations that were incorporated into the model.

Rock	Rock			Comp	Comp	Density
Code	Туре	Alt Code	Alt Type	Code	Туре	(t/m <sup>3</sup> )
300	LS	201	bxgdms	900	Crushed	2.694
300	LS	201	bxgdms	901	Broken	2.698
300	LS	201	bxgdms	902	Massive	2.763
300	LS	201	bxgdms	0	N.A.	2.615
300	LS	205	bxms	900	Crushed	2.856
300	LS	205	bxms	901	Broken	3.223
300	LS	205	bxms	902	Massive	3.378
300	LS	205	bxms	0	N.A.	2.791
300	LS	209	bxmcz	ALL	ALL	3.072
300	LS	0	N.A.	900	Crushed	2.573
300	LS	0	N.A.	901	Broken	2.623
300	LS	0	N.A.	902	Massive	2.578
300	LS	0	N.A.	0	N.A.	2.509
310-350	Other LS	0	N.A.	0	N.A.	2.847
Rock	Rock			Comp	Comp	Density
Code	Туре	Alt Code	Alt Type	Code	Туре	(t/m <sup>3</sup> )
70	Tonalite	201	bxgdms	900	Crushed	2.616
70	Tonalite	201	bxgdms	901	Broken	2.801
70	Tonalite	201	bxgdms	ALL	ALL	2.688
70	Tonalite	205	bxms	900	Crushed	2.677
70	Tonalite	205	bxms	901	Broken	3.071
70	Tonalite	205	bxms	0	N.A.	3.560
70	Tonalite	209	bxmcz	0	N.A.	2.918
70	Tonalite	0	N.A.	900	Crushed	2.567
70	Tonalite	0	N.A.	901	Broken	2.768
70	Tonalite	0	N.A.	0	N.A.	2.814
90	Gran	205	bxms	0	N.A.	4.188
90	Gran	0	N.A.	0	N.A.	3.012

Table 14-10. Bulk Density



The average specific gravity values on the table were also assumed to represent bulk density measurements in tonnes per cubic meter, without any adjustments.

### 14.5.9 Resource Classification

For the purpose of classifying Measured and Indicated versus Inferred Mineral Resources, two additional block estimates were done. These were based on the same search orientations and search radii as the grade estimates. The first estimate was based on a maximum of three composites, a minimum of three, and a maximum of one composite per hole, and the second estimate was based on a maximum of four composites, a minimum of four, and a maximum of one composite per hole. These estimates provide the average distance to the nearest three and four holes to each block and were put into the block model. Note the grades from these estimates were not used. The populations for the estimates were the same as the grade estimates with one exception; the 201/205 alteration boundary in the limestone was not a hard boundary as it was for the grade estimates.

Figure 14-14 shows the probability plots of the average distances to the nearest three and four holes for the 201/205 alteration material in the limestone.

Blocks with an average distance to the nearest four holes less than 45 m were assigned as Measured Mineral Resource. Blocks with an average distance to the nearest three holes less than 75 m were assigned as Indicated Mineral Resource. Blocks with an average distance to three holes greater than 75 m were assigned to Inferred Mineral Resource. Generally (not specific to Jasperoide) an average distance to the nearest four holes of 45 m corresponds to an average drill spacing of about 55 m and an average distance to the nearest three holes of 75 m corresponds to an average drill spacing of about 100 m. These estimates are approximate.

There are no Measured Mineral Resources in the tonalite rock type. Measured blocks defined in the tonalite based on the classification procedure were irregularly distributed and were re-defined as Indicated Mineral Resources.

Figures 14-15 and 14-16 show cross sections of the resource classification.



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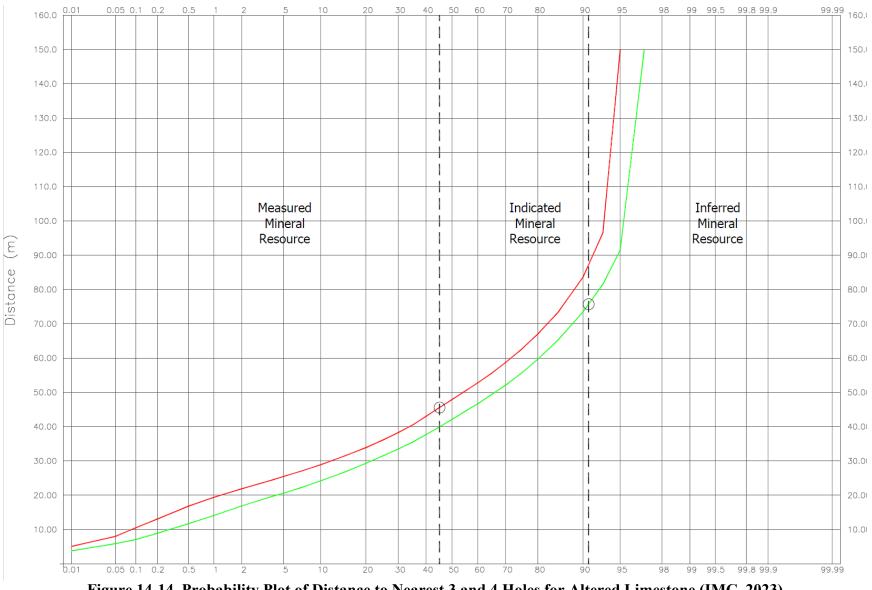


Figure 14-14. Probability Plot of Distance to Nearest 3 and 4 Holes for Altered Limestone (IMC, 2023)

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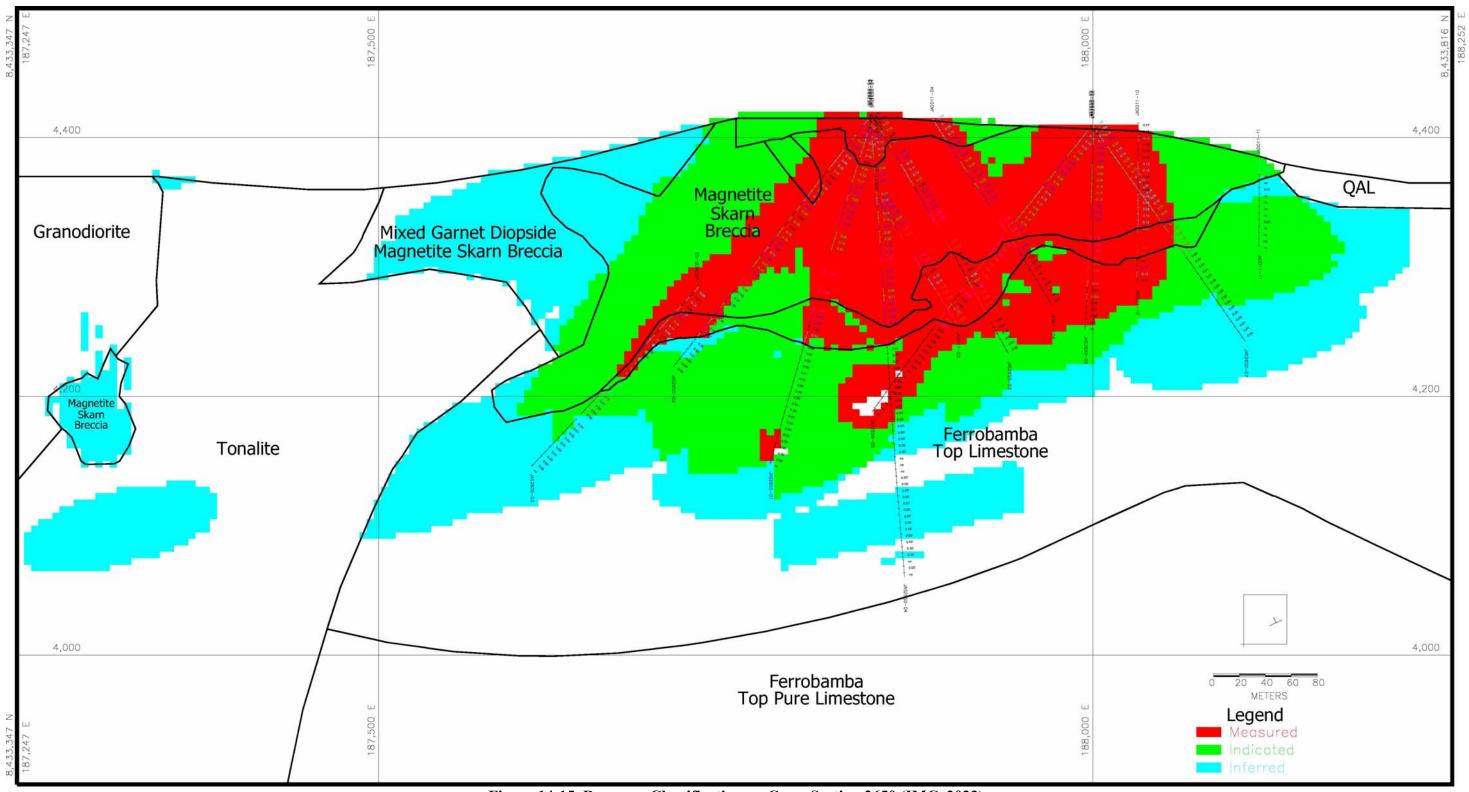


Figure 14-15. Resource Classification on Cross Section 2650 (IMC, 2023)

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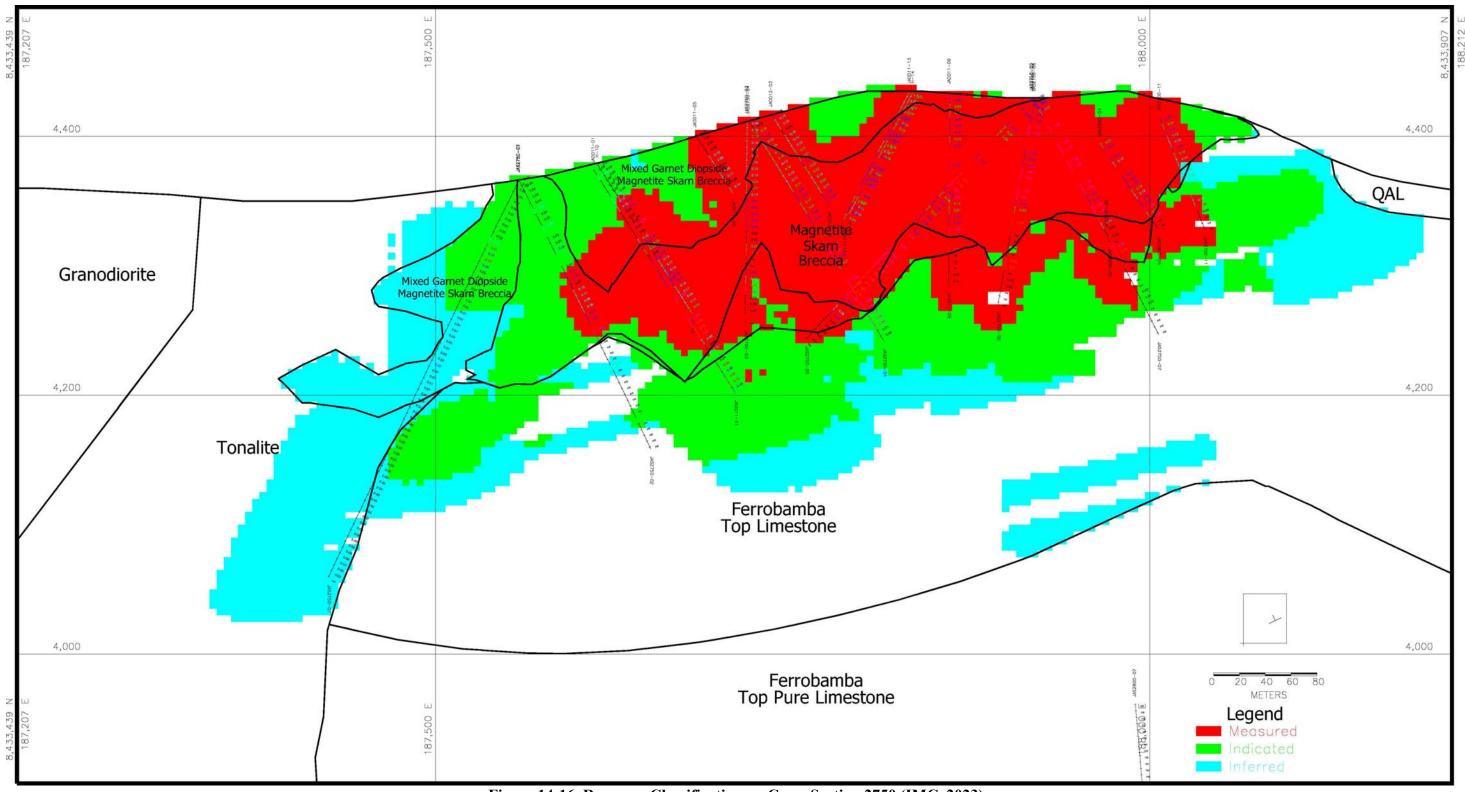


Figure 14-16. Resource Classification on Cross Section 2750 (IMC, 2023)

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# **15.0 Mineral Reserves Estimates**

This section is not applicable to the Project at its current stage.

# 16.0 Mining Methods

This section is not applicable to the Project at its current stage.

# **17.0 Recovery Methods**

This section is not applicable to the Project at its current stage.

# **18.0 Project Infrastructure**

This section is not applicable to the Project at its current stage.

# **19.0 Market Studies and Contracts**

This section is not applicable to the Project at its current stage.

# 20.0 Environmental Studies, Permitting and Social or Community Impact

This section is not applicable to the Project at its current stage.

# 21.0 Capital and Operating Costs

This section is not applicable to the Project at its current stage.

# 22.0 Economic Analysis

This section is not applicable to the Project at its current stage.



# 23.0 Adjacent Properties

The Andahuaylas-Yauri Belt in which the Project is located, is host to several prominent copper projects, deposits and mines that include porphyries with associated skarn mineralization, related to the Andahuaylas-Yauri Batholith (Jasper et al., 2021). While there are no advanced exploration properties, deposits or mines immediately adjacent to the Jasperoide Cu-Au Project, it is relevant to describe several known and well documented deposits and mines located within about 100 km of the Project which have a similar geological setting, geology, and style of mineralization (Figure 23-1 and Figure 23-2).

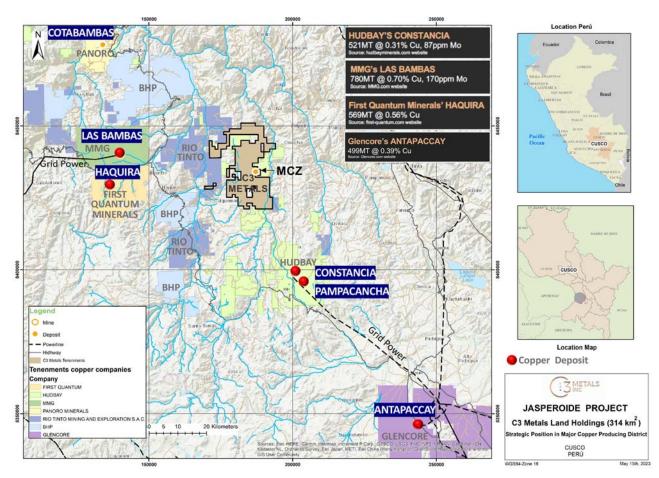


Figure 23-1. Location of the Jasperoide Project Relative to Some of the Major Projects and Producers in the Region (C3 Metals, 2023)

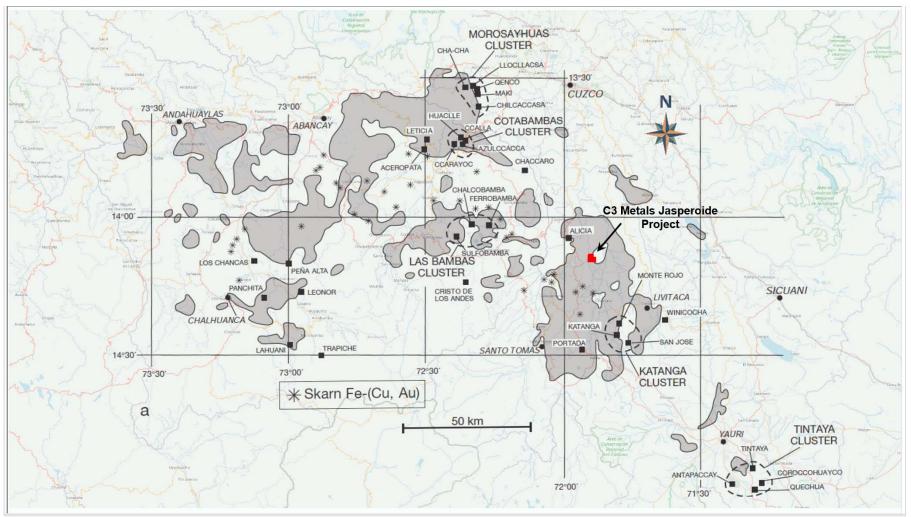


Figure 23-2. Mineral Deposits of the Andahuaylas -Yauri Belt, Peru and Location of the Jasperoide Cu-Au Project (C3 Metals, 2023 – from Perello et al., 2003)

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MMG Limited's Las Bambas mine is located about 40 km west of Jasperoide. Table 23-1 summarizes the Mineral Resources and Mineral Reserves for the property as of the end of June 2022 and is from a public report prepared by MMG. Measured and Indicated Mineral Resources amount to 1.14 billion tonnes at 0.61% copper, 0.04 g/t gold, 2.67 g/t silver and 176 ppm moly. Inferred Mineral Resource is an additional 237 million tonnes at 0.70% copper, 0.05 g/t gold, 4.93 g/t silver and 144 ppm moly. The Proven and Probable Mineral Reserve amounts to 754 million tonnes at 0.72% copper, 0.05 g/t gold, 3.27 g/t silver, and 169 ppm moly. The Mineral Resource is inclusive of the Mineral Reserve.

Hudbay Minerals' Constancia mine is located about 35 km south-southeast of Jasperoide. Table 23-2 summarizes the Mineral Resources and Mineral Reserves for the property as of January 1, 2023 and is from the Annual Information Form filed by Hudbay Minerals on Sedar. Measured and Indicated Mineral Resources amount to 259.1 million tonnes at 0.22% copper, 0.038 g/t gold, 2.04 g/t silver and 68 ppm moly. Inferred Mineral Resource is an additional 63.2 million tonnes at 0.37% copper, 0.054 g/t gold, 2.56 g/t silver and 81 ppm moly. The Proven and Probable Mineral Reserve amounts to 457.7 million tonnes at 0.28% copper, 0.040 g/t gold, 2.85 g/t silver, and 79 ppm moly. The Mineral Resource is exclusive of the Mineral Reserve.

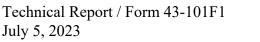
Hudbay Minerals' Papacancha mine is also located about 30 km south of Jasperoide. Table 23-3 summarizes the Mineral Resources and Mineral Reserves for the property as of January 1, 2023 (from the Annual Information Form). Measured and Indicated Mineral Resources amount to 9.4 million tonnes at 0.34% copper, 0.228 g/t gold, 5.90 g/t silver and 105 ppm moly. Inferred Mineral Resource is an additional 900,000 tonnes at 0.15% copper, 0.103 g/t gold, 2.86 g/t silver and 118 ppm moly. The Proven and Probable Mineral Reserve amounts to 34.4 million tonnes at 0.59% copper, 0.319 g/t gold, 4.96 g/t silver, and 155 ppm moly. The Mineral Resource is exclusive of the Mineral Reserve.

Glencore's Antapaccay mine is located about 100 km southeast of Jasperoide. Table 23-4 summarizes the Mineral Resources and Mineral Reserves for the property as of January 1, 2023 and is from information published on Glencorp's web site. Measured and Indicated Mineral Resources amount to 600 million tonnes at 0.38% copper, 0.07 g/t gold and 1.14 g/t silver. Inferred Mineral Resource is an additional 60 million tonnes at 0.25% copper, 0.05 g/t gold, 0.54 g/t silver. The Proven and Probable Mineral Reserve amounts to 500 million tonnes at 0.40% copper, 0.07 g/t gold and 1.20 g/t silver. The Mineral Resource is inclusive of the Mineral Reserve.

First Quantum Minerals' Haquira deposit is located about 45 km west of Jasperoide. Table 23-5 summarizes the Mineral Resources for the property as of January 1, 2023 and is from First Quantum Minerals' Annual Information Form filed on Sedar. Measured and Indicated Mineral Resources amount to 703.7 million tonnes at 0.51% copper and 0.028 g/t gold. Inferred Mineral Resource is an additional 683.9 million tonnes at 0.40% copper and 0.020 g/t gold.

All the above deposits are located along the western flank of the Eastern Cordillera of southern Peru (Jasper et al., 2021).

The QP for this section has been unable to verify the information on the deposits described above and the mineralization, data and information presented is not necessarily indicative of the mineralization on the Property that is the subject of this Technical Report.





Las Bambas Mineral Resources - Primary Only - June 30, 2022								
Resource	Tonnes	Copper	Gold	Silver	Moly			
Category	(Mt)	(%)	(g/t)	(g/t)	(ppm)			
Measured	610	0.56	0.04	2.16	194			
Indicated	534	0.68	0.04	3.25	155			
M+I	1144	0.61	0.04	2.67	176			
Inferred	237	0.70	0.05	4.93	144			
Las Bambas Mi	neral Reserve	- June 30, 20	22					
Reserve	Tonnes	Copper	Gold	Silver	Moly			
Category	(Mt)	(%)	(g/t)	(g/t)	(ppm)			
Proven	440	0.65	0.05	2.72	184			
Probable	314	0.81	0.05	4.04	148			
Prov/Prob	754	0.72	0.05	3.27	169			

### Table 23-1. Las Bambas Mineral Resources and Mineral Reserves

Note: Mineral Resources are inclusive of Mineral Reserves

Mineral Resources exclude oxide copper material

Mineral Reserves exclude stockpiles

### Table 23-2. Constancia Mineral Resources and Mineral Reserves

Constancia Mineral Resources - January 1, 2023					
Resource	Tonnes	Copper	Gold	Silver	Moly
Category	(Mt)	(%)	(g/t)	(g/t)	(ppm)
Measured	118.4	0.20	0.036	1.86	62
Indicated	140.7	0.23	0.040	2.20	73
M+I	259.1	0.22	0.038	2.04	68
Inferred	63.2	0.37	0.054	2.56	81
Constancia Min	eral Reserve - January 1, 2023				
Reserve	Tonnes	Copper	Gold	Silver	Moly
Category	(Mt)	(%)	(g/t)	(g/t)	(ppm)
Proven	411.2	0.28	0.041	2.85	79
Probable	46.5	0.23	0.038	2.84	79
Prov/Prob	457.7	0.28	0.040	2.85	79

Note: Mineral Resources are exclusive of Mineral Reserves

Papacancha Mineral Resources - January 1, 2023					
Resource	Tonnes	Copper	Gold	Silver	Moly
Category	(Mt)	(%)	(g/t)	(g/t)	(ppm)
Measured	9.1	0.35	0.230	6.01	103
Indicated	0.3	0.16	0.173	2.62	173
M+I	9.4	0.34	0.228	5.90	105
Inferred	0.9	0.15	0.103	2.86	118
Papacancha Mineral Reserve - January 1, 2023					
Reserve	Tonnes	Copper	Gold	Silver	Moly
Category	(Mt)	(%)	(g/t)	(g/t)	(ppm)
Proven	34.1	0.59	0.320	4.98	153.2
Probable	0.3	0.17	0.119	2.29	306
Prov/Prob	34.4	0.59	0.319	4.96	155

# Table 23-3. Papacancha Mineral Resources and Mineral Reserves

Note: Mineral Resources are exclusive of Mineral Reserves

Table 23-4. Antapaccay Mineral Resources and Mineral Reserves
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Antapaccay Mineral Resources - January 1, 2023					
Resource	Tonnes	Copper	Gold	Silver	
Category	(Mt)	(%)	(g/t)	(g/t)	
Measured	234	0.42	0.08	1.20	
Indicated	366	0.35	0.07	1.10	
M+I	600	0.38	0.07	1.14	
Inferred	60	0.25	0.05	0.54	
Antapaccay Mineral Reserve - January 1, 2023					
Reserve	Tonnes	Copper	Gold	Silver	
Category	(Mt)	(%)	(g/t)	(g/t)	
Proven	225	0.43	0.08	1.20	
Probable	275	0.37	0.07	1.20	
Prov/Prob	500	0.40	0.07	1.20	

Note: Mineral Resources are inclusive of Mineral Reserves

### **Table 23-5. Haquira Mineral Resources**

Haquira Mineral Resources - January 1, 2023					
Resource	Tonnes	Copper	Gold		
Category	(Mt)	(%)	(g/t)		
Measured	132.6	0.53	0.020		
Indicated	571.1	0.50	0.030		
M+I	703.7	0.51	0.028		
Inferred	683.9	0.40	0.020		

Note: Mineral Resources are at 0.2% Cu cut-off grade.



Other mineral occurrences within about 20 km of the Jasperoide Project include the Accha and Yanque zinc-lead deposits which are both porphyry related supergene Carbonate Replacement Deposits, the Alicia project, a Cu-Au-Mo porphyry and associated skarn complex about 15 km west-northwest of the Project (McCrea, 2014), the Cuervo Resources iron-skarn project (Cerro Ccopane – Orcopura Iron Project Cusco, Peru) about 2.7 km north of the Project, and the Millohuaco project about 13.5 km northeast of the Project (Jasper et al., 2021; Figure 23-3).

Northeast of the Project is the former Cerro Ccopane – Orcopura Iron Project (Cuervo Resources) where a Technical Report (McKay, 2013) reports Indicated Mineral Resources of 55.6 million tonnes at 46.8% iron and Inferred Mineral Resources of 576.4 million tonnes at 43.4% iron. The mineral resource is located at the contact between Middle Cretaceous-age limestones of the Arcurquina Formation and intrusive rocks of the Andahuaylas-Yauri batholith and is classified as a calcic-iron skarn which developed at the intersection of several regional fault systems located proximal to intrusive rock contacts. It is also reported that a portion of the iron skarn deposit is located on claims held by C3 Metals. The QP for this section has examined the Technical Report and finds that it is preliminary in nature and the reported Mineral Resources should not be relied on. Nevertheless, it is also the opinion of the QP that the work done is sufficient to form the basis of an Exploration Target of 500 to 750 million tonnes at 35% to 45% iron. The potential tonnages and grades are conceptual in nature and are based on previous drill results that defined the approximate length, thickness, depth and grade of a portion of the historical resource estimate. There has been insufficient exploration to define a current Mineral Resource and C3 Metals cautions that there is risk further exploration will not result in the delineation of a current Mineral Resource.

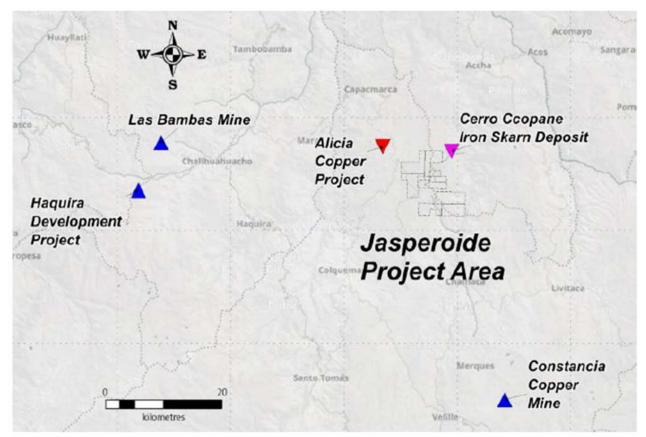


Figure 23-3. Regional Map Showing Location of Significant Copper Mines (Blue Triangles), Copper Deposits (Red Inverted Triangle), and Copper-Iron Skarn Deposits (Purple Inverted Triangle) in Proximity to the Jasperoide Cu-Au Project Area. (C3 Metals, 2022)



# 24.0 Other Relevant Data and Information

There is no additional relevant data or information.

# 25.0 Interpretation and Conclusions

# 25.1 Initial Mineral Resource Estimate

This study has developed an initial Mineral Resource estimate for MCZ for C3 Metals' 100%owned Jasperoide Project in southern Peru. The Measured and Indicated Mineral Resource amounts to 51.9 million tonnes at 0.50% total copper and 0.20 g/t gold for 569.1 million pounds of contained copper and 326,800 ounces of contained gold. Inferred Mineral Resources is an additional 4.0 million tonnes at 0.32% total copper and 0.11 g/t gold for 28.3 million pounds of contained copper and 14,600 ounces of contained gold.

The MCZ deposit comprises a shallow-dipping copper-gold skarn that is oxidized to greater than 200 m vertical depth and with a 50 m to 250 m true thickness. Copper oxide mineralization at MCZ increases significantly with depth, with multiple drill holes intersecting 30m to 80m thick zones of greater than 2.0% copper oxide mineralization. The MCZ Mineral Resource includes a high-grade core amounting to 15.9 million tonnes of Measured and Indicated Mineral Resource at 1.1% copper and 0.35 g/t gold at a 0.45% copper cut-off grade.

The Mineral Resource is amenable to open pit mining methods with a low to moderate strip ratio.

Metallurgical work on the project is limited to preliminary flotation and leach tests at this time. The main copper minerals identified in the resource area appear to be amenable to leaching with sulphuric acid and recovery by solvent extraction/electrowinning (SX/EW) methods. C3 Metals has engaged Adam Johnston of Transmin Metallurgical Consultants to evaluate the metallurgical performance of copper mineralization and to develop a flowsheet for its processing for the MCZ (Jasperoide) Project.

C3 Metals are undertaking Phase 1 sighter metallurgical testwork in 2023. Ongoing work includes bench-scale testing of samples from the resource to determine its physical and chemical properties, as well as its metallurgical response to various processing techniques. The results of the test work will be used to develop a flowsheet for the processing of the mineralization that will be optimized for its specific properties. The program also includes a series of partial leach extractions that could be used as a geochemistry proxy for copper grade recoverable by heap leaching. Previous testwork demonstrated high acid consumption that should be addressed during the flowsheet development.

There is a risk that the gold metal reported in the Mineral Resource estimate will not be recovered if the processing method ultimately chosen is conventional heap leaching with sulphuric acid.



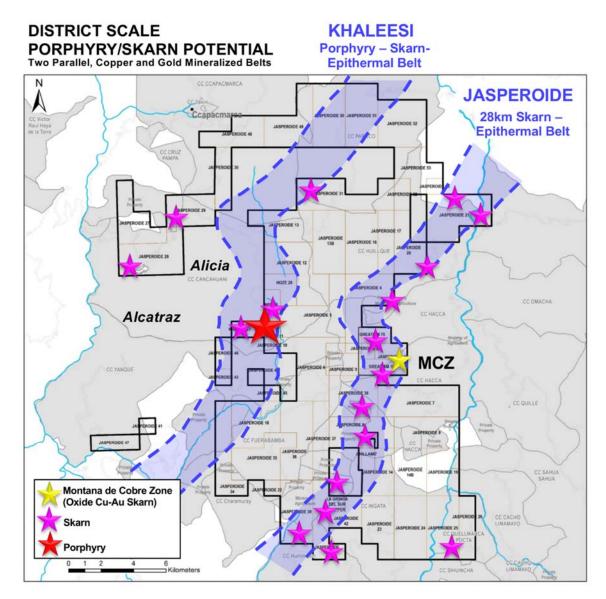
# 25.2 Skarn Belts and Exploration Potential

The current target model for the Jasperoide Belt is stacked prograde and retrograde skarns with well-developed mineralogical zonation from prograde garnet-diopside to retrograde magnetite skarn.

MCZ is the first copper-gold skarn zone that C3 Metals has systematically explored along the 28 km Jasperoide Belt that extends along the eastern side of the Company's 300 sq. km (30,000-hectare) mineral concession and application package (Figure 25-1). Thirteen separate skarn occurrences have been mapped along the Jasperoide Belt to date.

A second, parallel belt of copper-gold mineralization, the "Khaleesi Belt", is located 10 km west of the Jasperoide Belt. The Khaleesi Belt hosts the Company's 100%-owned Khaleesi porphyry, skarn and epithermal copper-gold project. The Company is currently working through the Declaration de Impacto Ambiental (DIA) permitting process to enable exploration drilling at Khaleesi, where community discussions and permitting is expected to continue into 2024.





# Figure 25-1. C3 Metals mineral concession package showing two parallel mineralized copper-gold skarn-porphyry belts and the location of the MCZ deposit and Khaleesi project. (C3 Metals, 2023)

C3 Metals' approximate 300 sq. km mineral concession package is located within the Andahuaylas-Yauri skarn/porphyry belt approximately 45 km east of MMG's Las Bambas mine and First Quantum Minerals' Haquira project, 40 km northwest of Hudbay Minerals' Constancia and Pampacanchca mines and 100 km northwest of Glencore's Antapaccay mine (Figure 25-2).

The proximity of nearby copper mines and development projects provides various development options. These include the potential to develop a standalone SX/EW (solvent extraction and electrowinning) mining operation that exploits higher grade supergene copper mineralization early on, or potential partnerships with nearby mines and development projects.



# Jasperoide Copper-Gold Project Mineral Resource Estimate

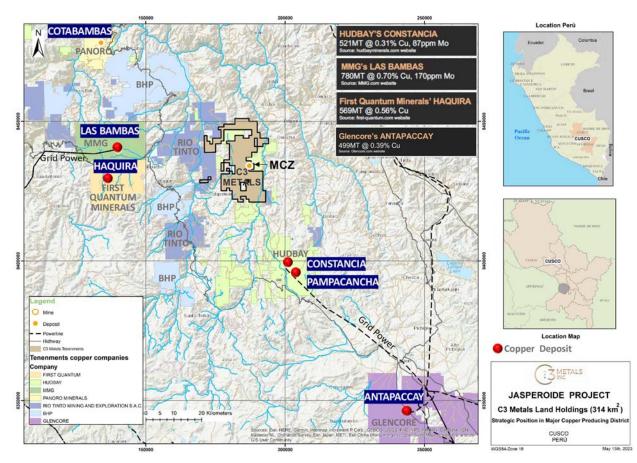


Figure 25-2. Regional map showing C3 Metals' mineral concession package in relation to other large-scale operations, development projects and exploration projects. (C3 Metals, 2023)

The MCZ deposit is strategically located within 60 km of two large scale heap leach copper development projects at Haquira (First Quantum Minerals) and Cotabambas (Panoro Minerals) and two large scale copper flotation mines at Las Bambas (MMG) and Constancia (Hudbay Minerals). Production at Haquira is planned from near-surface secondary copper mineralization that is amenable to heap leaching and from primary copper-gold mineralization amenable to a concentrator flotation circuit. Panoro Minerals is evaluating a heap leaching operation that supports a 17-year mine life (source, panoro.com and first-quantum.con websites).

The Andahuaylas-Yauri Belt is locally covered by talus and debris, and glaciers were effective agents of erosion at Jasperoide with locally thick zones of glacial till left behind by the retreating glaciers. It is interpreted that MCZ and CVZ skarns were once adjoined and that glaciers eroded away the "magnetite skarn bridge" that once linked the two skarn bodies.

A total 13 additional skarn prospects have been identified along the northeast-southwest trending Jasperoide Skarn Belt. Porphyry alteration (phyllic and argillic) has been mapped south of the Jasperoide camp and high sulphidation breccias appear to bisect the skarns. Each of these prospects will be evaluated, ranked and drill tested if warranted.



### Jasperoide Copper-Gold Project Mineral Resource Estimate

On the western side of C3 Metals' mineral concession package is outcropping porphyry, skarn and epithermal style mineralization, referred to as the Khaleesi Belt, and is a parallel copper-gold mineralized corridor located approximately 10 km west of the Jasperoide Belt. The Khaleesi Belt hosts the Alicia Porphyry and Skarn prospect (outside C3 Metals' tenement area), which was drill tested in 2012 by Straits Minerals. South of Alicia is the Alcatraz polymetallic vein system and is located less than 1 km of the mineralized porphyry and skarn mineralization at Khaleesi.

Future targets for drill testing include:

# Jasperoide Belt

- The Jasperoide Belt comprises copper and gold mineralization that is broadly contemporaneous with magnetite-dominated iron-rich skarns, telescoped epithermal veins and an interpreted porphyry.
- 28 km iron-skarn belt extends 15 km north and 13 km south of MCZ deposit.
- Thirteen copper-gold mineralized skarn prospects have been identified to date.
- Informal miners are actively exploiting a 3 km area of near surface magnetite / garnet skarn with copper oxide and sulphide mineralization (Figure 25-3) in C3 Metals' Jasperoide 39 and 40 tenement areas.

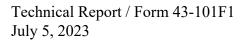




# Figure 25-3. Photo showing informal mine workings over a 3 km strike length, located south of MCZ deposit on C3 Metals Jasperoide 39 and 40 concessions. (C3 Metals, 2023)

# Khaleesi Belt

- Parallel porphyry, skarn and epithermal belt located 10 km west of the MCZ deposit and the Jasperoide Belt.
- Outcropping porphyry, skarn and epithermal copper and gold mineralization has been identified at Khaleesi prospect.
- Khaleesi appears to be spatially and genetically associated with the Alicia porphyry and skarn prospect, 2.5 km to the northwest.





• Discrete zone of porphyry and skarn alteration at Khaleesi measuring 1,000 m by 1,000 m, where surface samples have confirmed high-grade copper-gold mineralization in porphyry, skarn and polymetallic vein style mineralization (Figure 25-4).

KHALEESI PROJECT

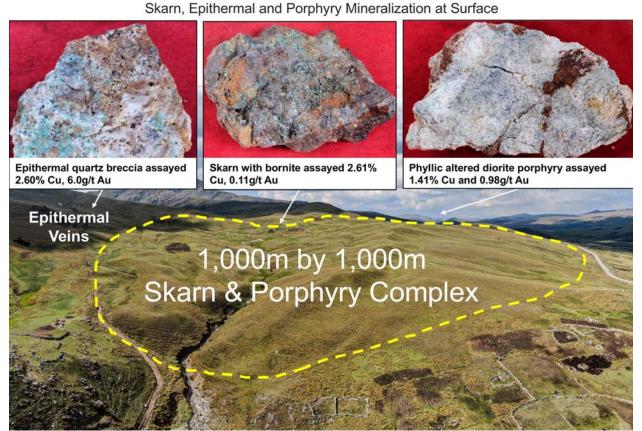


Figure 25-4. Examples of the highest priority exploration targets on the Khaleesi belt within C3 Metals' mineral concession package. (C3 Metals, 2023)

# 25.3 Ongoing Work

MCZ is the first of 13 identified skarn prospects to evaluated for drill testing along the 28 km Jasperoide Belt. Extensive zones of copper and gold mineralization has already been identified on C3 Metals' landholdings, extending northeast and southwest of Jasperoide. The Company believes the MCZ maiden Mineral Resource estimate represents only a small portion of the broader discovery potential on the property.

A modification to the existing Jasperoide drill permit is underway to extend the permitted area and provide additional drill platforms and holes. The Company is also advancing drill permits for its highest priority targets on the Khaleesi Belt.

Metallurgical test work on the MCZ deposit has commenced. Results from initial mineralized materials leach characteristics are expected in the second half of 2023. The Company envisions





the MCZ deposit as being potentially amenable to a low-strip open pit, copper heap leach, tank leach or vat leach operation given the high-grade, near-surface nature of the deposit.

# 26.0 Recommendations

Further mineral exploration and drilling are recommended at Jasperoide within the drill permitted DIA area and focussed on MCZ, CVZ and COZ. MCZ has been "disconnected" from CVZ, due to glacial erosion, and the source of the hydrothermal fluids is interpreted to be west and northwest of MCZ. Some recommendations will require new drill core and would be included in a program designed to increase both the size and confidence of resources at the MCZ and to undertake the additional metallurgical leach tests and responses of the different material types.

Proposed exploration activities at Jasperoide copper-gold belt should be directed at potentially:

- Increasing the volume of copper-gold oxide skarn by additional drilling to evaluate the extension of oxide skarn to the northwest, west and southwest of MCZ.
- Expanding MCZ metallurgical test work to include systematic sequential assays and leach columns. Evaluate process alternatives to increase copper leaching recovery, and reduce acid consumption.
- Scout holes to evaluate the strike potential of the sulphide-rich (pyrrhotite > pyrite > chalcopyrite matrix) brecciated skarn at CVZ; DDH JAS4350-02 intersected 43.5 m at 0.32% Cu.
- Testing for porphyry and stacked skarns of multiple coincident IP-chargeability / HSAMT / Magnetic anomalies that are proximal to and below MCZ.
- Deep hole targeting a coincident IP-chargeability / HSAMT / Magnetic anomaly below CVZ, testing for a blind porphyry and stacked skarn potential.
- Scout holes at COZ testing a large copper-in-soil anomaly proximal to a magnetite skarn.
- Comprehensive mapping and sampling along the 28-km skarn belt, northeast and southwest of MCZ, CVZ and COZ.

Proposed exploration activities at Khaleesi copper-gold belt should be directed at:

• Systematic evaluation of the Khaleesi porphyry, epithermal and skarn belt, with a focus on mapping the Ferrobamba – Intrusive contact and completing grid soils over a 10km strike length.

A total of 4,000 meters of drilling is proposed for the Jasperoide Skarn Belt. Initial drilling (2,000 meters) is recommended to potentially expand copper-gold oxide mineralization at MCZ, upgrade existing Inferred Mineral Resources and undertake the second-round metallurgical test work. A total of 2,000m of drilling is recommended at CVZ and COZ, to test multiple sulphide-rich skarn bodies and two areas displaying significant porphyry alteration.

The total cost of the recommended work program is estimated at CAD\$ 2,500,000 (Table 26-1).



Item	Budget (\$CAD)
General & Administrative	75,000
Staff Salaries	225,000
Community & Government Relations	75,000
Camp Costs (Local Labour, Health & Safety)	145,000
Metallurgy Technical Services	250,000
Drilling (4000m HQ) & Surveys	1,000,000
Mapping and Sampling (5,000 Samples)	375,000
Assays – Drill Core	98,000
Assays – Surface	175,000
Field Support (Software, Vehicles, Misc.)	82,000
Program Total	2,500,000

Table 26-1. C3 Metals Inc. – Estimated Budget for Recommended Work



July 5, 2023

Technical Report / Form 43-101F1

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# **Appendix A. Certificates of Qualified Persons**



# **Certificate of Qualified Person**

I, Michael G. Hester, FAusIMM, do hereby certify that:

- 1. I am currently employed as Vice President and Principal Mining Engineer by Independent Mining Consultants, Inc. ("IMC") of 3560 E. Gas Road, Tucson, Arizona, 84714, USA.
- 2. I graduated with a Bachelor of Science degree in Mining Engineering from the University of Arizona in 1979 and a Master of Science degree in Mining Engineering from the University of Arizona in 1982.
- 3. I am a Fellow of the Australasian Institute of Mining and Metallurgy (FAusIMM #221108), a professional association as defined by National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101").
- 4. I have worked in the minerals industry as an engineer continuously since 1979, a period of 44 years. I am a founding partner, Vice President, and Principal Mining Engineer for IMC, a position I have held since 1983. I have been employed as an Adjunct Lecturer at the University of Arizona (1997-1998) where I taught classes in open pit mine planning and mine economic analysis. I have also been a member of the Resources and Reserves Committee of the Society of Mining, Metallurgy, and Exploration since March 2012. During my career I have had extensive experience in developing databases for mineral resource evaluations, including reviewing/auditing drilling, sampling, assaying, and QA/QC procedures. I also have extensive experience developing mineral resources for many different styles of mineralization, including oxide copper-gold deposits and skarn hosted deposits. I also have extensive experience developing open pit mine plans, estimating equipment requirements for open pit mining operations, developing mine capital and operating cost estimates, performing economic analysis of mining operations and managing various preliminary economic assessments, pre-feasibility, and feasibility studies.
- 5. I have read the definition of "qualified person" set out in NI 43-101 and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- I am responsible for Sections 1.1, 1.2, 1.6, 1.7, 1.8.1, 1.8.3, 1.9, 2, 3, 4, 5, 6, 10, 11, 12.1, 12.2, 12.3, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25.1, 25.3, 26, and 27 of the technical report titled "Jasperoide Copper-Gold Project, Cusco Region, Peru, NI 43-101 Technical Report, Mineral Resource Estimate", (the "Technical Report"), dated effective May 23, 2023 and prepared for C3 Metals, Inc.
- 7. I have no prior involvement with the property that is the subject of the Technical Report. I have not visited the site.
- 8. As of the date of this certificate, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
- 9. I am independent of the issuer and its subsidiaries applying all the tests in Section 1.5 of NI 43-101.
- 10. I have read NI 43-101 and Form 43-101F1. The sections of the Technical Report that I am responsible for have been prepared in compliance with that instrument and form.
- 11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their website accessible by the public, of the Technical Report.

Dated this 5<sup>th</sup> day of July 2023.

<u>"Michael G. Hester"</u> Michael G. Hester, FAusIMM



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## **CERTIFICATE OF QUALIFIED PERSON**

#### Simon James Atticus Mortimer (MSc., FAIG)

I, Simon James Atticus Mortimer, do hereby certify that:

- 1. I am a professional geologist with Atticus Geoscience Consulting S.A.C. with an address at Av. Jose Larco 724, Int 1101, Miraflores, Lima, Peru.
- 2. I graduated from the University of St. Andrews, Scotland, with a B. Sc. in Geoscience in 1995 and from the Camborne School of Mines with a MSc. in Mining Geology in 1998.
- 3. I am a registered Professional Geoscientist, practicing as a member of the Australasian Institute of Mining and Metallurgy (#300947) and the Australian Institute of Geoscientists (FAIG #7795).
- 4. I have worked as a geoscientist in the minerals industry for over 20 years and I have been directly involved in the mining, exploration, and evaluation of mineral properties mainly in Peru, Chile, Argentina, Brazil, and Colombia for precious and base metals.
- 5. I have read the definition of "Qualified Person" set out in National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
- I am a Co-Author and responsible for the sections 1.3,1.4,1.5,1.8.2,7,8,9,12.4, and 25.2 in the technical report titled, "Jasperoide Copper-Gold Project, Cusco Region, Peru. NI43-101 Technical Report. Mineral Resource Estimate" issued on the 5<sup>th</sup> of July 2023 and with an Effective Date of 23<sup>rd</sup> of May 2023.
- 7. I visited the Jasperoide Copper-Gold Project on the 5<sup>th</sup> and 6<sup>th</sup> of November 2021 and for one full day on 13<sup>th</sup> of May 2023.
- 8. I am independent of C3 Metals Inc., applying all the tests in Section 1.5 of NI 43-101 and Companion Policy 43-101CP (June 2011).
- 9. I have co-authored a previous 43-101 technical report on the Project with Caracle Creek, issued of the 15<sup>th</sup> of December 2021.
- 10. I have read NI 43-101 and Form 43-101F1 and confirm the Technical Report has been prepared in compliance with that instrument and form.
- 11. As of the Effective Date of the Technical Report, to the best of my knowledge, information and belief, the Sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Signed at Lima, Peru this 5th day of July 2023.

"s/simon mortimer"

Simon James Atticus Mortimer (MSc. ACSM, MAusIMM, FAIG #7795)





#### CERTIFICATE OF QUALIFIED PERSON

Adam Johnston, FAusIMM, CP (Met)

#### I, Adam Johnston, state that:

- 1. I am a Chief Metallurgist at Transmin Metallurgical Consultants, 10 Cavendish Gardens, Fleet, UK.
- 2. I am a "qualified person" for the purposes of National Instrument 43-101 ("NI 43-101"). My qualifications as a qualified person are as follows. I am a graduate of the Western Australian School of Mines with Bachelor of Minerals Engineering), 1995. I am registered as a Fellow and Chartered Professional with the Australian Institute of Mining and Metallurgy. I have worked as a metallurgist for over 27 years since my graduation. My experience for the purpose of the Technical Report is in the metallurgical testing, plant design, and plant operations of base metal and precious metal ores.
- 3. This certificate applies to the technical report titled "Jasperoide copper-gold project, Cusco Region, Peru. NI43-101 Technical Report. Mineral Resource Estimate" issued 5<sup>th</sup> of July 2023 and with an Effective Date of 23<sup>rd</sup> of May 2023 (the "Technical Report").
- 4. I have not visited the Jasperoide site.
- 5. I am responsible for section 13 of the Technical Report.
- 6. I am independent of the issuer as described in section 1.5 of NI 43-101.
- 7. I have had no prior involvement with the Project that is the subject of the Technical Report.
- 8. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101; and
- 9. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated at Fleet, UK this 5<sup>th</sup> of July, 2023.

"signed"

Adam Johnston, FAusIMM CP (Metallurgy)

