Process Mineralogical Consulting Ltd.

A Mineralogical Description of

MSI Zone CALIDA 18

Prepared for

Calida Gold

AMERICAN CuMo

APR2018-05
July 18, 2018

NOTE:
This report refers to the samples as received.

1.0 SUMMARY

One sample (MSI Zone – Calida 18) was submitted to Process Mineralogical Consulting Ltd for Au/Ag deportment study and Ore Characterization Analysis. The sample was riffled into two 1000g charges which were milled to a P_{80} of ca. 200 µm. One charge was submitted for gold deportment analysis and sized into two fractions (+38 µm and -38 µm). Each fraction was submitted for density separation via heavy liquid separation and Haultain Superpan. The products of each size fraction were then prepared into polished sections (Float, 15 PS; Tail, 3 PS; Midd, 2 PS; Tip, 1 PS) before being submitted for Au-Ag deportment analysis using INCA bright phase recognition software equipped on a Tescan Vega 3 Scanning Electron Microscope. The other charge was submitted for size by size mineral analysis and was wet-sieved into three fractions (+106 µm, + 45 µm, and -45 µm) from which polished sections were prepared (+106 µm, 3 PS; +45 µm, 2 PS; -45 µm, 1 PS). The sections were submitted for Rapid Ore Characterization analysis by Tescan Integrated Mineral Analyzer (TIMA) to obtain mineral abundances, grain and particle sizes, and mineral associations. Portions of each product were riffled off and sent for Au/Ag assay at MS Analytical.

MAJOR FINDINGS

1. Gold mineralization is present as anhedral native gold and electrum (average of 75.4 wt. % Au and ranging from 61 to 93% Au), and rare Cu-Au alloy (tetra-auricupride). The observed mean gold grain size is below 8 µm, and it is important to note that the minus 38 µm gravity tip product contains more gold (24.8% of contained Au by mass balancing) than the +38 µm gravity tip (3.9% of Au).
2. Most of the gold is liberated (73%) or attached to gangue and Cu-sulphides (9%); only tetra-auricupride is locked in quartz (18%).
3. Silver is found in native form as a coating on native copper, and as the sulphosalts argentotennantite and pyrargyrite, which are exposed in rare pyrite and form liberated grains, respectively. The silver phases range in size from 6.5 to 14.6 µm.
4. Both gold and copper minerals show a low degree of liberation at a P_{80} of 200 µm, and the presence of oxide-Cu species suggests a need for selective Cu removal due to difficulties in recovering oxide-Cu species and the potential for CN-consumption by Cu species.
5. 66% of the Cu reports as oxide and/or silicate minerals as well as 3% as Cu-sulphates. 13% of Cu reports as secondary Cu-sulphides chalcocite and covellite, with only 12% reporting as chalcopyrite and minor (1.6% of Cu) as bornite. Secondary Cu species imply a hypogene oxidation replacement and have severe implications for Cyanide consumption and differential Cu-recovery.

July 16, 2018

Thomas Chudy, Ph.D.
Senior Mineralogist
Process Mineralogical Consulting

Geoffrey R. Lane, B.Sc., P.Geo
President
Process Mineralogical Consulting

Lab work carried out by:

Dave Clark, Mineralogical Technologist

2.0 INTRODUCTION

The following report details the results of Process Mineralogical Consulting Ltd.'s mineralogical examination of the sample MSI Zone – Calida 18. The purpose of this report was to identify the overall mineralogy of the samples and characterize the size, distribution and composition of Au- and Ag-bearing minerals within the samples.

3.0 METHODS

TESCAN LIBERATION ANALYSIS

The sample was received as an un-sized product and weighed upon receipt. A riffled 1000g charge of the sample was milled to a P_{80} of ca. 200 µm and wet-sieved into three fractions (+106 µm, + 45 µm, and -45 µm) which were prepared into a polished section for ore characterization and liberation analysis using the Tescan Integrated Mineral Analyser (TIMA) equipped on the Tescan Vega 3 Scanning Electron Microscope enabled with an Energy Dispersive X-ray Spectrometer (SEM-EDX). Sections were scanned to determine modal mineralogy, grain and particle size, and major mineralogical associations. A portion of the unsized sample and the three size fractions was riffled and submitted for AuAg assay and multi-element including S analysis at MS Analytical.

GOLD DEPORTMENT

A second riffled and milled 1 kg charge of the sample was wet-screened at 38 µm and both size fractions were submitted for heavy liquid separation using lithium meta-tungstate (LMT) at a density split point of 2.90 g/cc. From both the >2.90 g/cc (Sink) and the <2.90 g/cc (Float) products a representative split was taken for Au Assay. The Float material was prepared into 15 polished sections (10 PS for +38 µm and 5 PS for -38 µm). The Sink material was further upgraded using the Haultain Superpan to produce 3 products (Tip, Midd, Tail) that were then prepared into an additional 6-polished section (1 PS, 2 PS, and 3 PS respectively), with a portion sent for Au assay.

All polished sections were systematically scanned using bright phase recognition software equipped on a Tescan Vega 3 Scanning Electron Microscope equipped with an Energy Dispersive Spectrometer (SEM-EDS) to determine the elemental composition of the higher atomic weight elements (Au, Ag). The grains were measured based upon the pixel areas and the semi-quantitative composition analyzed. The associations with other minerals were noted and the data assembled to present the grain size distribution, weight distribution, and gold and silver mineral association. Backscatter Electron Images were taken of selected grains to demonstrate mineral texture and associations.

4.0 Major Findings

The ore characterization, liberation analysis and gold-silver deportment studies revealed the following major findings.

Major Findings

1. Sample MSI Zone – Calida 18 is dominantly composed of quartz, carbonates, and Mg silicates including white mica, biotite, chlorite, and amphibole.
2. More than 50% of the Cu-mineralization is hosted by Cu-bearing silicates such as chrysocolla and Cu-bearing carbonates such as malachite.
3. The dominant Cu-sulphide is chalcopyrite (0.5%) followed by chalcocite/covellite (0.25%) and trace amounts of bornite. The Cu-sulphides show replacement structures by Fe-hydroxides (likely goethite) which contain sub-microscopic inclusions of the replaced phase (i.e., chalcopyrite, covellite) and native copper. The latter is also found as liberated grains.
4. Cu-minerals are relatively poorly liberated at a P_{80} of 200 µm.
5. Gold and Silver are relatively sparse and occur as free particles of electrum predominantly in the -38 µm Tip (11 grains) with trace amounts in the -38µm Middlings (5 grains) and one grain in the -38 µm Tail.
6. The composition of the particles straddles the border of electrum with almost half of the total grains having more than 20 wt.% Ag (up to 39 wt.% Ag).
7. Mineralogically detected gold is typically finer than 10 µm in size, consistent with the observation that the -38 µm gravity tip contains more gold (24.8% of contained gold at 361.8 oz/t or 1163.07 g/t) than the +38 µm gravity tip (3.9 % Au at 6.8 g/t). The largest gold grain witnessed in the +38 µm tip measured 100x60 µm in size.

Gold – Silver occurrence

A total of 26 grains were observed in this sample of which there were 12 gold and 10 electrum grains, and 4 Ag-bearing grains. With respect to the composition of the gold grains, the small grains associated with the silicate particle contain between 23 and 30.5 wt.% Cu, which classifies them as tetra-auricupride. The remainder of the gold grains have up to 20 wt.% Ag – grains with greater than 20 wt.% Ag classify as electrum.

Most gold and electrum grains by frequency are less than 8 µm in diameter, but the majority of the detected Au by weight is distributed between 2 grains that are greater than 16 µm (22 – 33 µm). One of these grains is attached to chalcopyrite (Figure 1), whereas the other is free. Most of the gold witnessed is free (61% by mass Au) except for 4 small grains (<3.5 µm) that are locked in a single silicate particle. Electrum is also mostly free except for two grains that are attached to a small carbonate grain and the aforementioned chalcopyrite, respectively.

The Ag-bearing phases include native silver, the sulphosalts argentotennantite [$(Ag,Cu)_{10}(Zn,Fe)_2(As,Sb)_4S_{13}$] and pyrargyrite ($Ag_3SbS_3$). The native silver forms an overgrowth on native copper (Figure 2), argentotennantite is exposed on pyrite, and pyrargyrite is free. The Ag-bearing phases range in size from 7 – 15 µm.

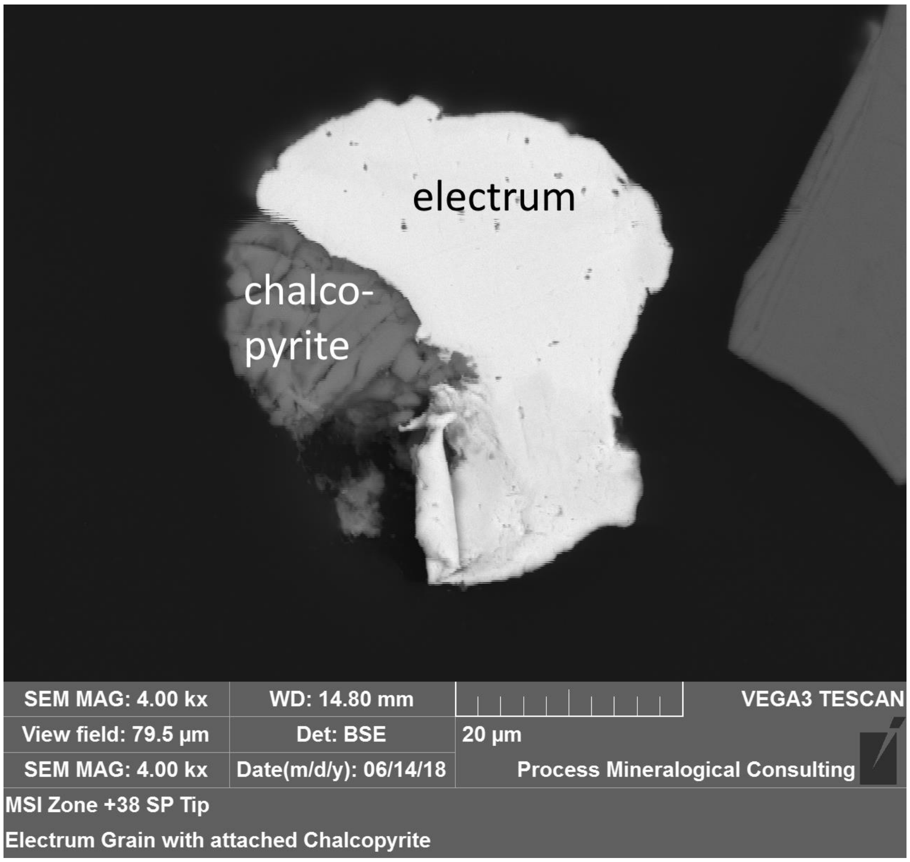

Figure 1: Exposed electrum grain (white) with attached chalcopyrite (dark grey).

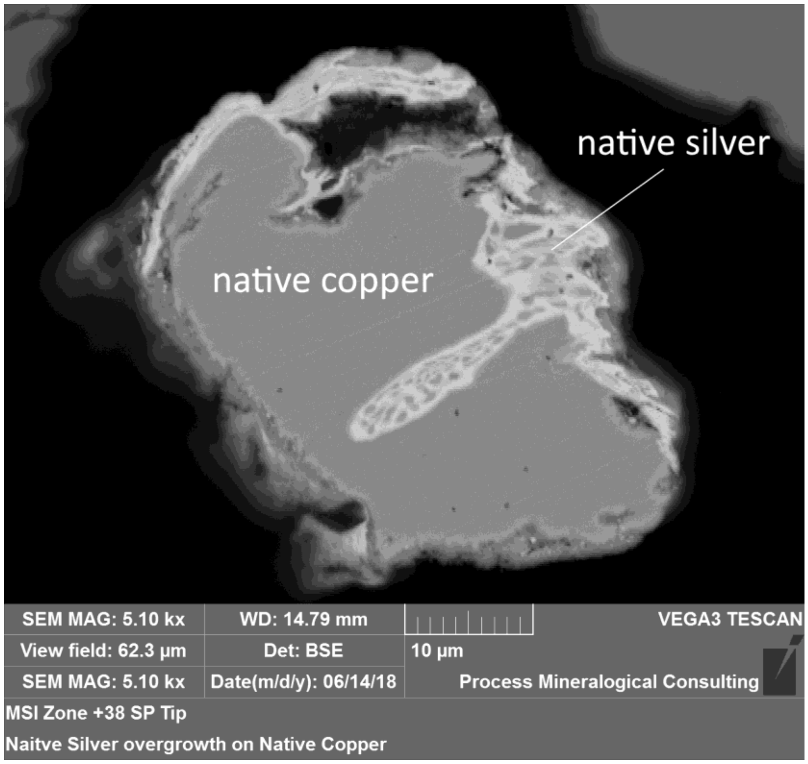

Figure 2: Native silver overgrowth on native copper.

5.0 CONCLUSIONS / RECOMMENDATIONS

The results of the Ore Characterization with Liberation Analysis and Gold Deportment analysis have shown that the sample MSI Zone – Calida 18 has a composition that is typical for hypogene Cu mineralization which is evidenced by native copper and the predominance of chrysocolla (and Fe-bearing Cu-silicates) as the major Cu-minerals. The observed fine-grained gold and silver mineralization as native gold, electrum, native silver and Ag-bearing sulphosalts is in agreement with the bulk mineralogical composition of the sample and low head Au grade (0.06 g/t).

The poor reconciliation of assay results and observed gold mineralization (Appendix B, Figure 10) is related to the overall very low grade of the received sample. The employed methodology for Au/Ag-deportment study is not ideal for low grade material which would have required a significantly larger number of polished sections. This holds in particular for the Tails and Mids of the Haultain Superpan product of the +38 µm fraction, as well as obtaining sufficient sample for a slime and +38 µm float fraction for Au assays. It is clear that the -38 µm SP-Tail fraction contains the highest amount of gold (25.9%), and it is important to establish with what host mineral this gold is associated for understanding improving recovery. Specifically, the number of gold occurrences is too low to categorically infer that the gold in the -38 µm SP-Tail fraction shares locking characteristics with tetra-auricupride in the corresponding float fraction.

Recommendations for the future include:

1. A larger sample size and/or higher grade sample should be submitted for investigation.
2. The gravity procedure should be performed in duplicate for low grade samples and an improved fractional analysis for gold distribution be established.
3. If Cu-minerals are suspected to host any Au, assays for Cu should be added to the mass-balancing procedures

Appendix A

Ore Characterization and Liberation Analysis Results
American CuMo
MSI Zone – Calida 18

Table 1: Mineral Abundances of MSI Zone – Calida 18; Size-by-Size analysis.

Sample	MSI Zone - Calida 18			
Fraction	**+106 µm**	**+45 µm**	**-45 µm**	**Head**
Mass %	52.4	20.0	27.6	100
Pyrite	0.02	0.01	0	0.01
Chalcopyrite	0.62	0.55	0.29	0.51
Chalcocite/Covelite	0.31	0.26	0.16	0.26
Bornite	0.04	0.03	0.04	0.04
Malachite	0.06	0.16	0.10	0.09
Native Copper	0.21	0.03	0.01	0.12
Chrysocolla	0.95	1.06	0.91	0.96
Fe-bearing Cu-silicates	1.53	1.19	2.38	1.70
Copper Sulphate	0.19	0.12	0.08	0.15
Cu-Fe Oxide Blend	1.04	0.66	0.64	0.85
Other Sulphides	0	0.01	0	0.00
Fe&Ti Oxides	2.08	1.74	0.93	1.69
Quartz	70.8	65.1	49.1	63.7
Feldspar	1.04	1.04	4.60	2.02
Phlogopite/Biotite	1.54	1.04	5.47	2.52
Sericite/Muscovite	2.59	1.79	3.15	2.58
Amphibole	0.27	0.31	7.19	2.19
Chlorite	1.42	0.79	2.11	1.48
Carbonates	15.0	23.8	21.7	18.6
Clay Minerals	0.09	0.07	0.51	0.20
Other minerals	0.17	0.18	0.65	0.30
Total	**100**	**100**	**100**	**100**

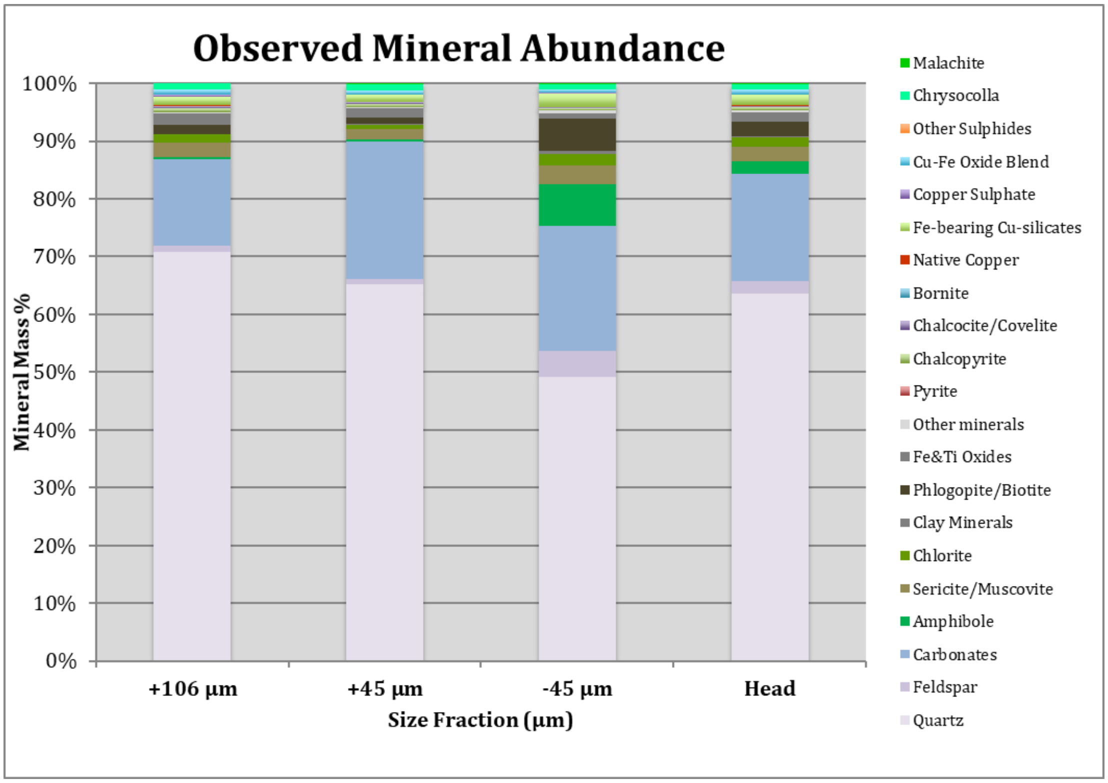

Figure 3: Observed Mineral Abundance in MSI Zone – Calida 18.

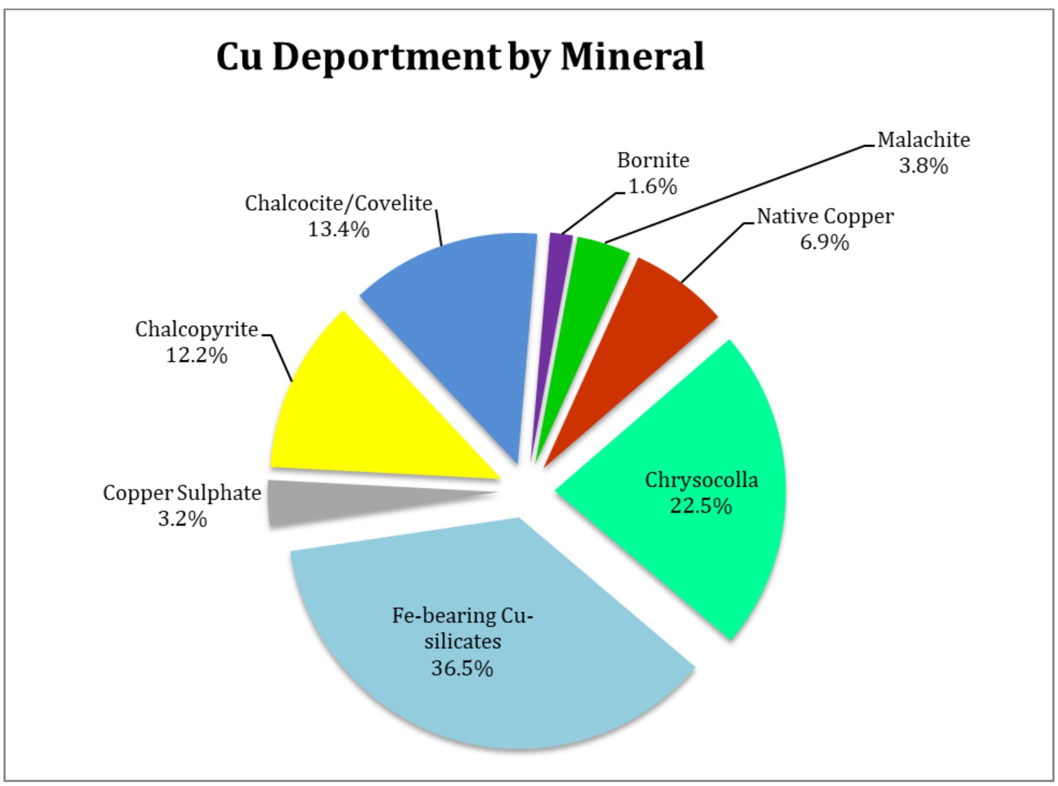

Figure 4: Copper deportment by mineral in MSI Zone – Calida 18.

Table 2: Mineral Association Summary for MSI Zone – Calida 18.

Association Summary		Chalcopyrite	Oher Copper Sulphides	Copper Sulphate	Chrysocolla	Fe-bearing Cu-Silicates	Cu-Fe Oxide Blend	Malachite	Native Copper
Free particles		23.9	11.8	1.51	17.5	10.8	5.86	11.0	0
Binary particles	Chalcopyrite	0	3.96	0.07	0.04	0.02	0.73	0	0
	Oher Copper Sulphides	2.24	0	0.41	0.02	0.21	0.03	0	0
	Copper Sulphate	0.18	0.47	0	0.22	0.09	0.05	0	0
	Chrysocolla	0	0.04	0.41	0	2.86	0.12	3.10	0
	Fe-bearing Cu-Silicates	0.25	0.08	0.69	6.11	0	1.59	0	0
	Cu-Fe Oxide Blend	1.93	2.21	0	0.03	0.86	0	13.6	0
	Malachite	0	0	0	0	0	0.50	0	0
	Native Copper	0	0	0	0	0	0	0	0
	Other Sulphides	0	0	0	0	0	0	0	0
	Fe&Ti Oxides	0	0	0	0.04	0.25	0.47	0.33	0
	Apatite	0	0	0	0	0	0	0	0
	Quartz	3.38	0.31	0	6.77	10.3	2.09	4.09	0
	Feldspar	0.67	1.32	0	1.09	0.26	0	0	0
	Phlogopite/Biotite	0.23	0	0.41	0	0.17	0	0	0
	Sericite/Muscovite	0	0	0	0	0	0	0	0
	Amphibole	0.07	0	0.41	1.81	1.19	0.24	18.4	0
	Chlorite	0.18	0	0	0	0.12	0	0	0
	Carbonates	5.67	0	0.14	0.36	2.01	1.43	3.76	0
	Clay Minerals	0	0	0	0	0	0	0	0
	Other minerals	0	0	0	0	0.22	0	0	0
Ternary particles		9.99	4.58	3.85	18.6	14.6	10.7	11.8	0.24
Complex particles		51.3	75.2	92.1	47.4	56.1	76.2	34.0	99.8
Total		**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Table 3: Liberation of Chalcopyrite in MSI Zone – Calida 18.

Liberation of Chalcopyrite	+106 µm	+45 µm	-45 µm	Head
Liberated	31.0	56.3	42.0	38.1
Middling	27.3	17.6	38.5	27.1
Sub-Middling	21.6	16.9	10.6	18.8
Locked	20.2	9.24	8.92	16.0

Table 4: Liberation of other Copper Sulphides in MSI Zone – Calida 18.

Liberation of Oher Copper Sulphides	+106 µm	+45 µm	-45 µm	Head
Liberated	0.35	14.8	69.3	15.0
Middling	0.90	30.8	9.83	8.44
Sub-Middling	7.22	7.70	20.9	9.66
Locked	91.5	46.7	0	66.9

Table 5: Liberation of Copper Sulphate in MSI Zone – Calida 18.

Liberation of Copper Sulphate	+106 µm	+45 µm	-45 µm	Head
Liberated	0.18	10.1	1.36	1.99
Middling	1.53	15.3	2.73	3.98
Sub-Middling	31.7	37.1	87.7	41.1
Locked	66.6	37.5	8.18	52.9

Table 6: Liberation of Chrysocolla in MSI Zone – Calida 18.

Liberation of Chrysocolla	+106 µm	+45 µm	-45 µm	Head
Liberated	28.4	54.7	56.5	41.5
Middling	32.7	25.9	16.2	26.8
Sub-Middling	17.8	10.6	15.1	15.5
Locked	21.1	8.85	12.2	16.1

Table 7: Liberation of Fe-bearing Cu-silicates in in MSI Zone – Calida 18.

Liberation of Fe-bearing Cu-Silicates	+106 µm	+45 µm	-45 µm	Head
Liberated	17.2	16.9	42.6	27.0
Middling	15.8	36.6	22.8	21.5
Sub-Middling	31.7	20.1	24.1	27.1
Locked	35.3	26.5	10.5	24.4

Table 8: Liberation of Malachite in MSI Zone – Calida 18.

Liberation of Malachite	+106 µm	+45 µm	-45 µm	Head
Liberated	17.4	57.4	82.1	51.1
Middling	27.3	32.6	5.36	22.5
Sub-Middling	26.2	3.28	0	10.2
Locked	29.1	6.80	12.5	16.2

Table 9: Liberation of Cu-Fe oxide blend in MSI Zone – Calida 18.

Liberation of Cu-Fe Oxide Blend	+106 µm	+45 µm	-45 µm	Head
Liberated	0.71	15.4	37.0	10.4
Middling	17.1	29.7	15.8	18.8
Sub-Middling	21.0	15.9	10.4	18.0
Locked	61.2	38.9	36.8	52.8

Table 10: Liberation of all Cu minerals in MSI Zone – Calida 18.

Combined Cu Minerals	+106 µm	+45 µm	-45 µm	Head
Liberated	58.3	68.0	50.0	57.7
Middling	22.7	18.7	33.1	24.8
Sub-Middling	8.52	6.95	11.0	8.92
Locked	10.5	6.38	5.95	8.54

Table 11: Liberation of all Cu sulphides in MSI Zone – Calida 18.

Copper Sulphides	+106 µm	+45 µm	-45 µm	Head
Liberated	27.7	53.3	52.3	37.1
Middling	27.9	22.3	36.0	28.1
Sub-Middling	22.7	12.3	7.18	18.0
Locked	21.7	12.1	4.51	16.8

Table 12: Liberation of all Cu oxides in MSI Zone – Calida 18, including carbonates, sulphates, and silicates.

Copper Oxides	+106 µm	+45 µm	-45 µm	Head
Liberated	44.5	58.3	49.6	48.3
Middling	27.8	23.8	31.5	28.2
Sub-Middling	13.6	9.15	11.5	12.2
Locked	14.1	8.74	7.50	11.2

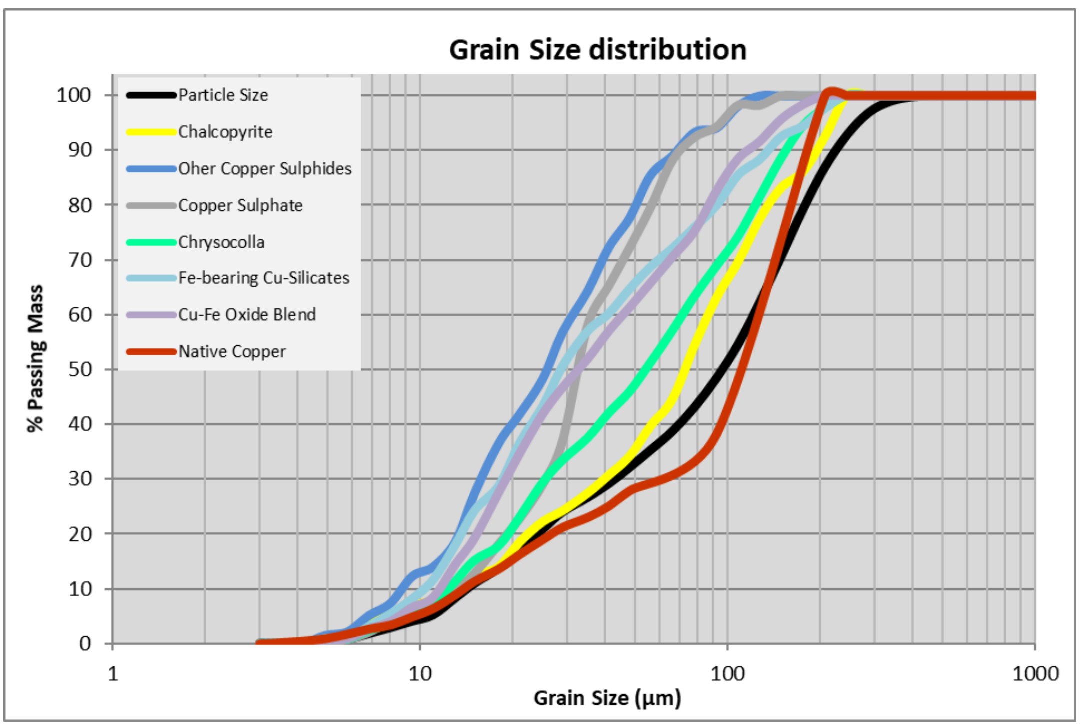

Figure 5: Particle and Cu-bearing minerals Grain Size Distributions for MSI Zone – Calida 18. Other Cu-sulphides likely include grains to small to positively identiy by SEM-EDS.

Appendix B

Gold-Silver Scan
American CuMo
MSI Zone – Calida 18

Table 13: Association Summary for MSI Zone – Calida 18. With low statistics, data should be treated with caution.

Association Summary		Frequency			Based on Assay Au Distribution %		
Type of Association		**Calida 18**	**+38**	**-38**	**% Distribution**	**+38**	**-38**
1	Free Gold	16	0.00	16.00	61.27		65.67
2	Exposed/Attached on NOG	1	0.00	1.00	0.1		0.13
3	Exposed/Attached on Pyrite	0	0.00	0.00	0.0		
4	Exposed/Attached on Copper Sulphides	1	1.00	0.00	6.69	100.00	
5	Binary With Native Copper	0	0.00	0.00	0.00	0.00	0.00
6	Locked in Gangue	4	0.00	4.00	31.91		34.20
7	Locked in Copper Sulphides	0	0.00	0.00	0.0	0.00	
8	Inadequated Statistics	0	0.00	0.00			
9	In Super Pan Slimes/Refractory		0.00	0.00	0.00	0.00	0.00
TOTAL		22	1	21	100	100	100

Table 14: Summary of Au Surface Exposure in MSI Zone – Calida 18.

Surface Exposure of Au	% Au Distribution
Locked	31.9
Fracture Controlled	0.00
Grain Boundary Controlled	0.0
Exposed/Free	68.1

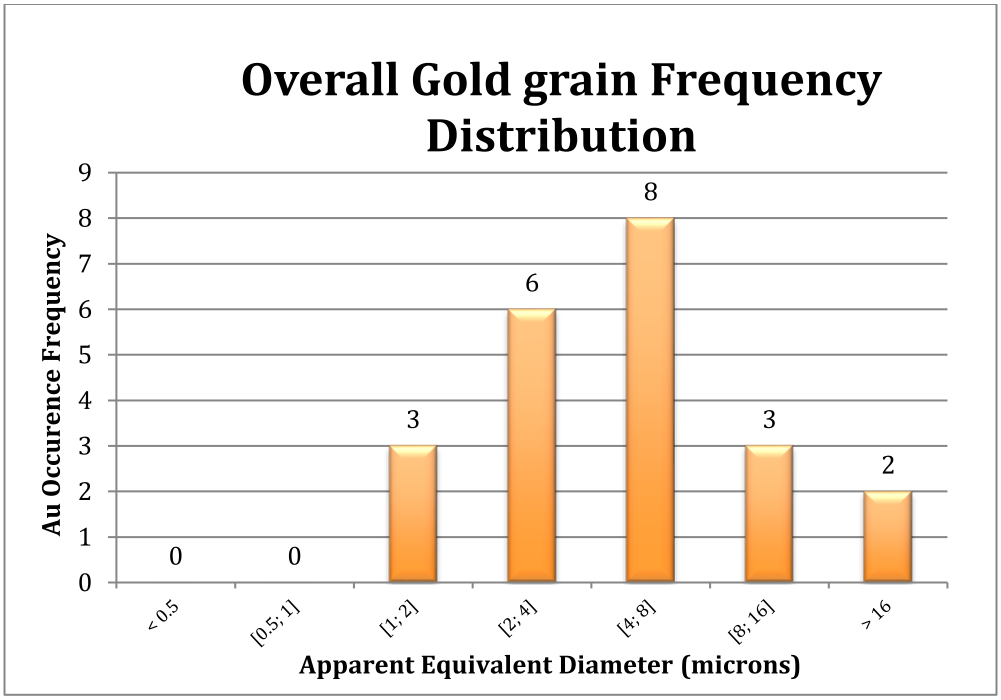

Figure 6: Gold Grain Frequency Distribution in MSI Zone – Calida 18.

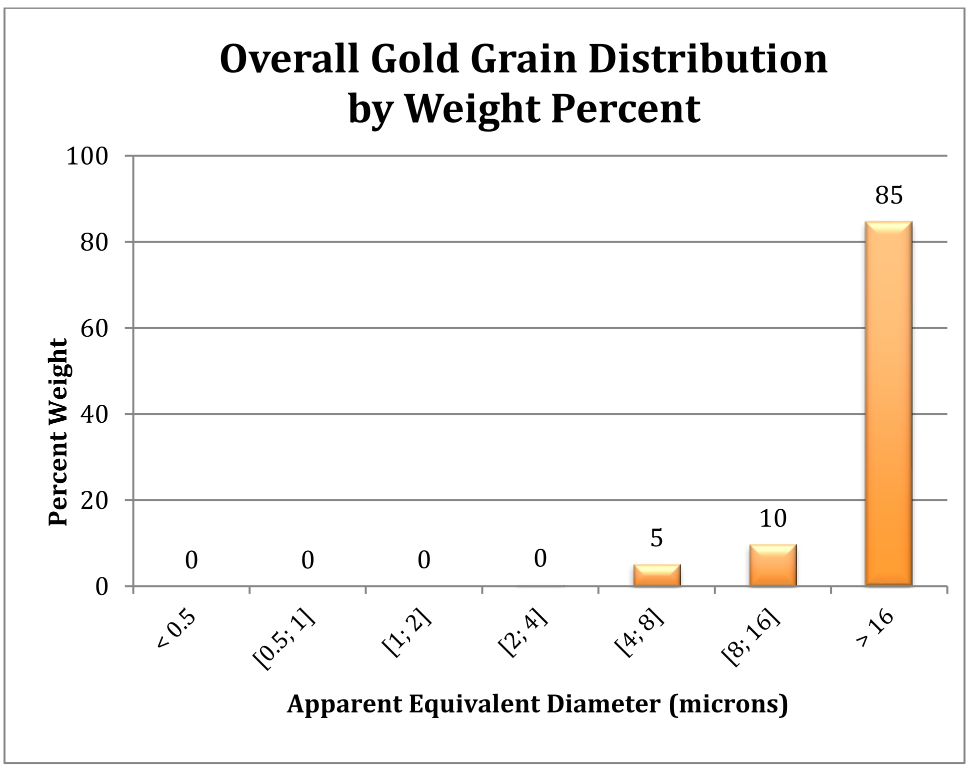

Figure 7: Gold Grain Weight Distribution in observed grain population only; data not weighted by mass balancing per Table 16; sample MSI Zone – Calida 18.

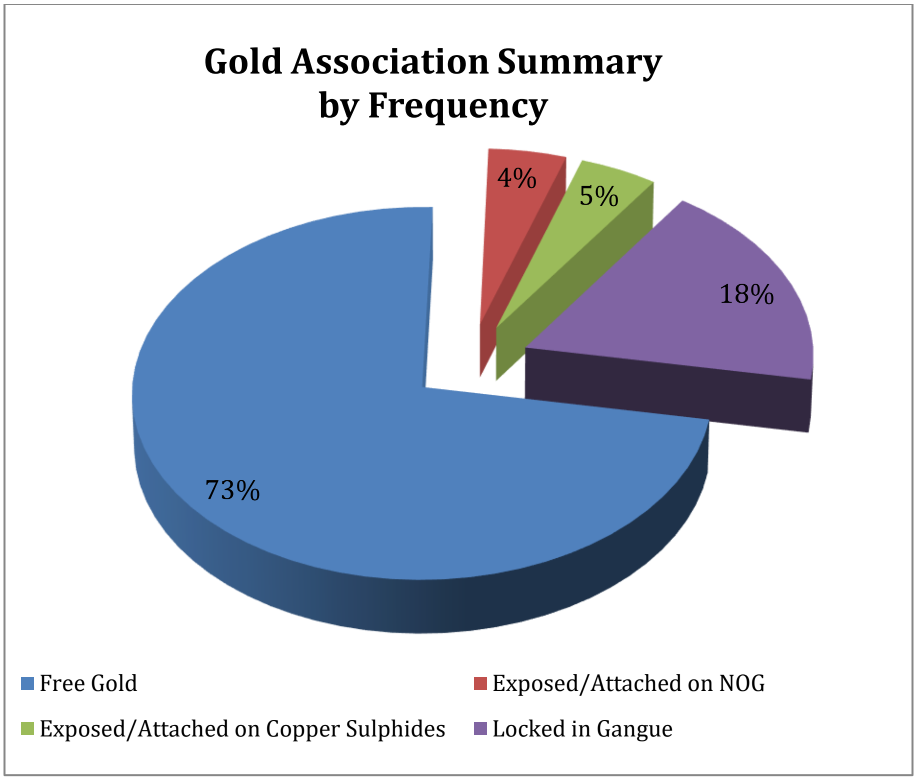

Figure 8: Au Association Summary by Frequency in MSI Zone – Calida 18.

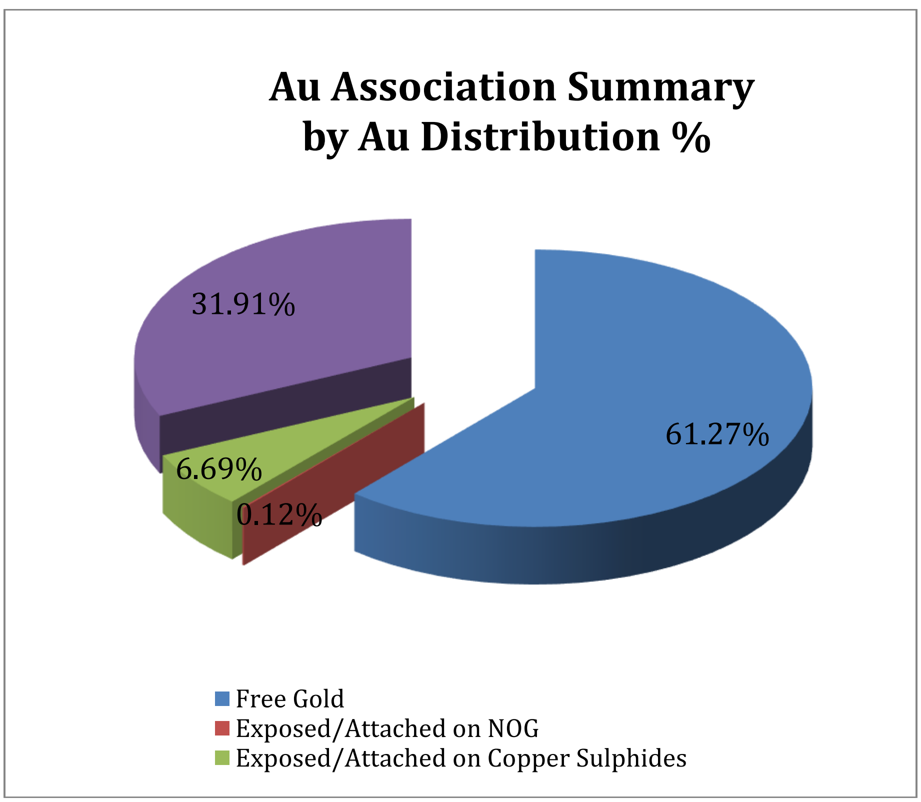

Figure 9: Au Association Summary by Au distribution in MSI Zone – Calida 18.

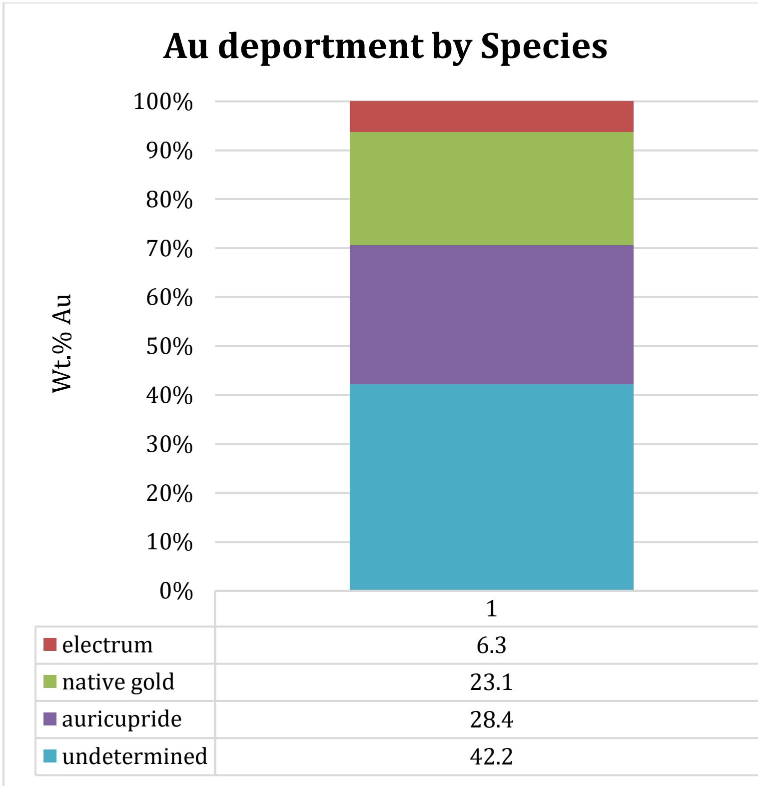

Figure 10: Au Deportment in MSI Zone – Calida 18.

Table 15: Individual Gold- and Silver-bearing grain details for MSI Zone – Calida 18.

Sample	MSI Zone - Caldia 18
Section	All
Total Weight, g	1046.8
Number of Sections	15

Association Type	
1	Free Gold
2	Exposed/Attached on NOG
3	Exposed/Attached on Pyrite
4	Exposed/Attached on Copper Sulphides
5	Binary With Native Copper
6	Locked in Gangue
7	Locked in Copper Sulphides
8	Inadequated Statistics

Au Occurrences

Product	Occurrence	Area* (square microns)	Equivalent Diameter* (microns)	Equ. Spherical Volume* (cubic microns)	Au*V	Ag * V	Cu (Wt., %)	Ag (Wt.,%)	Au (Wt.,%)	Exposure	Mineral	Association Type	Comments
- 38 Tip	65	8.0	3.2	5.4	406.4	135.5		25	75	exposed	Electrum	1	Free
- 38 Tip	551	39.0	7.0	58.3	4548.9	1283.0		22	78	exposed	Electrum	1	Free
- 38 Tip	552	31.0	6.3	41.3	2975.7	1157.2		28	72	exposed	Electrum	1	Free
- 38 Tip	1184	11.0	3.7	8.7	742.5	131.0		15	85	exposed	Native	1	Free
- 38 Tip	1203	79.0	10.0	168.1	15636.4	1176.9		7	93	exposed	Native	1	Free
- 38 Tip	1210	43.0	7.4	67.5	5468.9	1282.8		19	81	exposed	Native	1	Free
- 38 Tip	1211	32.0	6.4	43.3	3467.6	866.9		20	80	exposed	Native	1	Free
- 38 Tip	1305	10.0	3.6	7.6	545.2	212.0		28	72	exposed	Electrum	1	Free
- 38 Tip	1369	44.0	7.5	69.9	5101.7	1886.9		27	73	exposed	Electrum	1	Free
- 38 Tip	1483	63.0	9.0	119.7	9578.9	2394.7		20	80	exposed	Native	1	Free
- 38 Tip	1551	390.0	22.3	1844.2	151225.4	33195.8		18	82	exposed	Native	1	Free
-38 Mid	9	5.4	2.6	9.4	798.3	140.9		15	85	exposed	Native	1	Free
-38 Mid	293	21.7	5.3	76.0	5931.8	1673.1		22	78	exposed	Electrum	2	Attached to Small Carbonate grain
-38 Mid	381	90.8	10.8	650.9	47512.2	17573.0		27	73	exposed	Electrum	1	Free
-38 Mid	456	28.8	6.1	116.4	9077.9	2560.4		22	78	exposed	Electrum	1	Free
-38 Mid	544	2.3	1.7	2.6	155.6	99.5		39	61	exposed	Electrum	1	Free
-38 Tail	6442	21.0	5.2	23.0	1440.2	149.8	31.0	6.5	62.5	exposed	auricupride	1	Free grain with Hi Cu
-38 Float	7797	1.8	1.5	0.6	43.1	0.3	25.0	0.5	74.5	locked	auricupride	6	Native gold in Silicate agglomerate
-38 Float	7797	5.0	2.5	2.7	184.7	1.3	30.5	0.5	69	locked	auricupride	6	Native gold in Silicate agglomerate
-38 Float	7797	8.0	3.2	5.4	360.3	8.1	32.0	1.5	66.5	locked	auricupride	6	Native gold in Silicate agglomerate
-38 Float	7797	0.9	1.1	0.2	15.2	0.5	23.0	2.5	74.5	locked	auricupride	6	Native gold in Silicate agglomerate
+38 Tip	90	890.0	33.7	6357.7	413249.5	222518.9		35	65	exposed	Electrum	4	Electrum Grain with attached Chalcopyrite

Ag Occurrences

Product	Occurrence	Area* (square microns)	Equivalent Diameter* (microns)	Equ. Spherical Volume* (cubic microns)	Au*V	Ag * V	Cu (Wt., %)	Ag (Wt.,%)	Au (Wt.,%)	Exposure	Mineral	Association Type	Comments
- 38 Tip	1474	60.0	8.7	111.3	0.0	6677.2		60	0	exposed	AgSbS	1	Free
-38 Tail	10143	33.0	6.5	45.4	0.0	204.3	26.0	4.5		exposed	Sulphosalt	3	Exposed in Pyrite
+38 Tip	77	168.0	14.6	521.4	0.0	52140.8		100		exposed	Silver	5	Native Silver overgrowth on Native Copper
+38 Tip	77	98.0	11.2	232.3	0.0	23230.2		100		exposed	Silver	5	Native Silver overgrowth on Native Copper

Table 16: Mass Balance for Au/Ag in MSI Zone – Calida 18.

Product	Weight (g)	Weight %	Au Assay (g/t)	Ag Assay (g/t)	% Distribution Au	% Distribution Ag
+38 Float	633.6	66.5	0.00	0.20	0.0	12.0
+38 SP Tail	21.4	2.3	0.70	10.80	25.87	21.92
+38 sp Mid	13.0	1.4	0.73	11.40	16.35	14.02
+38 SP Tip	0.3	0.0	***6.80***	***288.38***	3.87	9.01
-38 Float	237.9	28.1	0.04	0.90	18.4	22.8
-38 SP Tail	12.2	1.4	0.42	7.60	9.92	9.86
-38 sp Mid	0.5	0.1	***0.80***	***14.30***	0.8	0.7
-38 SP Tip	0.011	0.001	***1163.07***	***8264.35***	24.79	9.67
-38 Slime	2.35	0.28	0.00	0.00	0.00	0.00
Head (calc)	**921**	**100**	**0.061**	**1.109**	**100**	**100**
Head (assay)			**0.060**	**1.200**		

Table 17: Mass Balance for Au/Ag in the +38 µm fraction of MSI Zone – Calida 18.

Product	Weight	Weight %	Au Assay (chem)	Ag Assay (chem)	% Distribution Au	% Distribution Ag
+38 Float	633.6	94.8	0.00	0.20	0.00	21.1
+38 SP Tail	21.4	3.21	0.70	10.80	56.1	38.5
+38 sp Mid	13.0	1.94	0.73	11.40	35.5	24.6
+38 SP Tip	0.3	0.05	***6.80***	***288.38***	8.39	15.8
+38 Head (Assay)	**668.36**	**100**	**0.04**	**0.90**	**100**	**100**

Table 18: Mass Balance for Au/Ag in the -38 µm fraction of MSI Zone – Calida 18.

Product	Weight	Weight %	Au Assay (chem)	Ag Assay (chem)	% Distribution	% Distribution
-38 Float	237.9	94.1	0.04	0.90	34.2	52.9
-38 SP Tail	12.2	4.82	0.42	7.60	18.4	22.9
-38 sp Mid	0.49	0.19	***0.80***	***14.30***	1.4	1.7
-38 SP Tip	0.01	0.0	***1163.07***	***8264.35***	46.0	22.5
-38 Slime	2.4	0.9	0.00	0.00	0.0	0.0
-38 Head (Assay)	**252.9**	**100.0**	**0.11**	**1.60**	**100**	**100.0**

Note: Head (assay) is average of Fire Assay result of duplicates (0.04 and 0.08 g/t) on head sample; +38 µm Tip, -38 µm Tip, and -38 µm Mid had insufficient material for assaying; values calculated based on mass distribution.

Appendix C

Photomicrographs
American CuMo
MSI Zone – Calida 18

MSI Zone – Calida 18 Photomicrographs

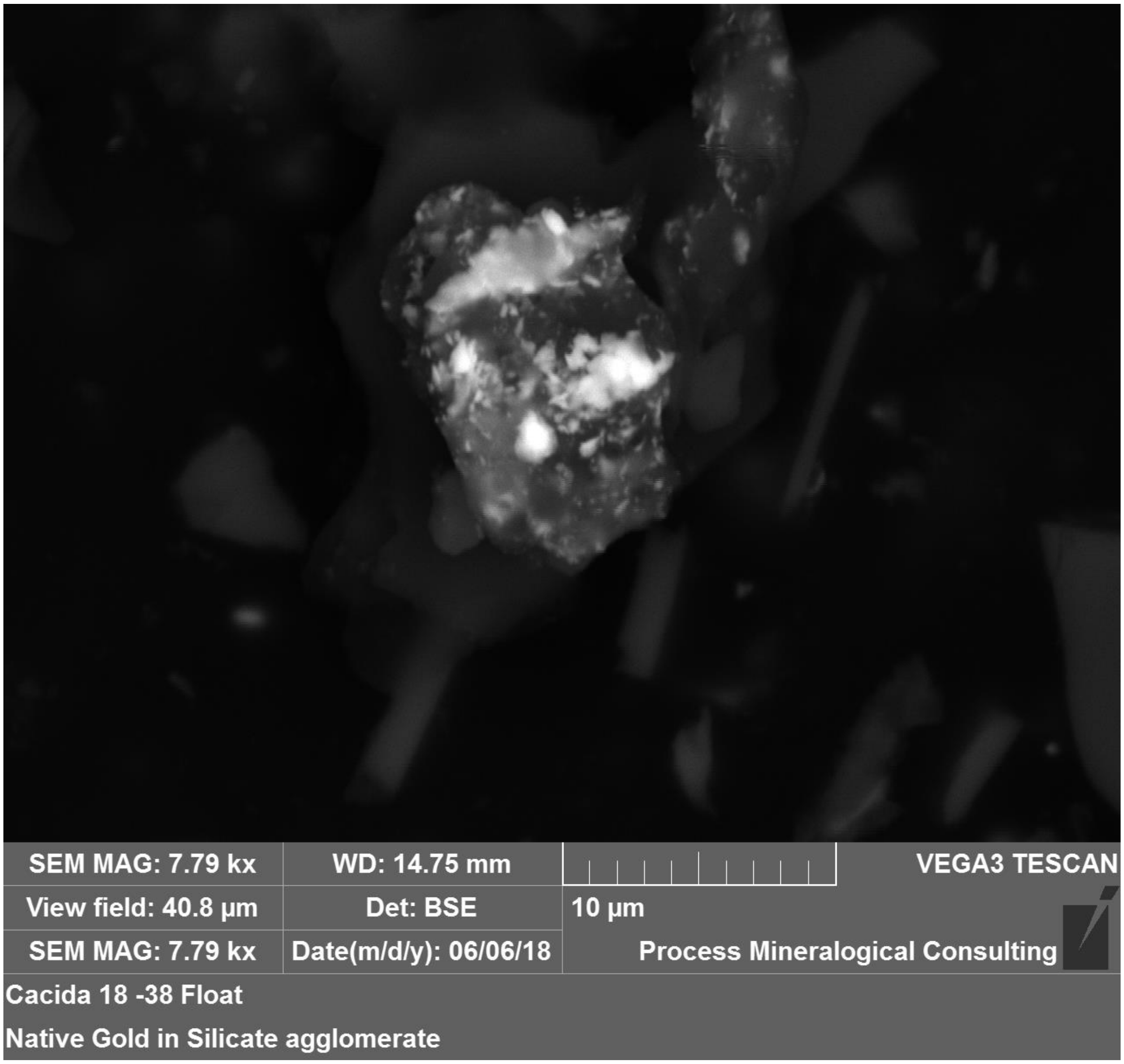

Figure 11: Tetra-auricupride (white) locked in silicate particle (dark grey); sample MSI Zone – Calida 18, -38 µm float product.

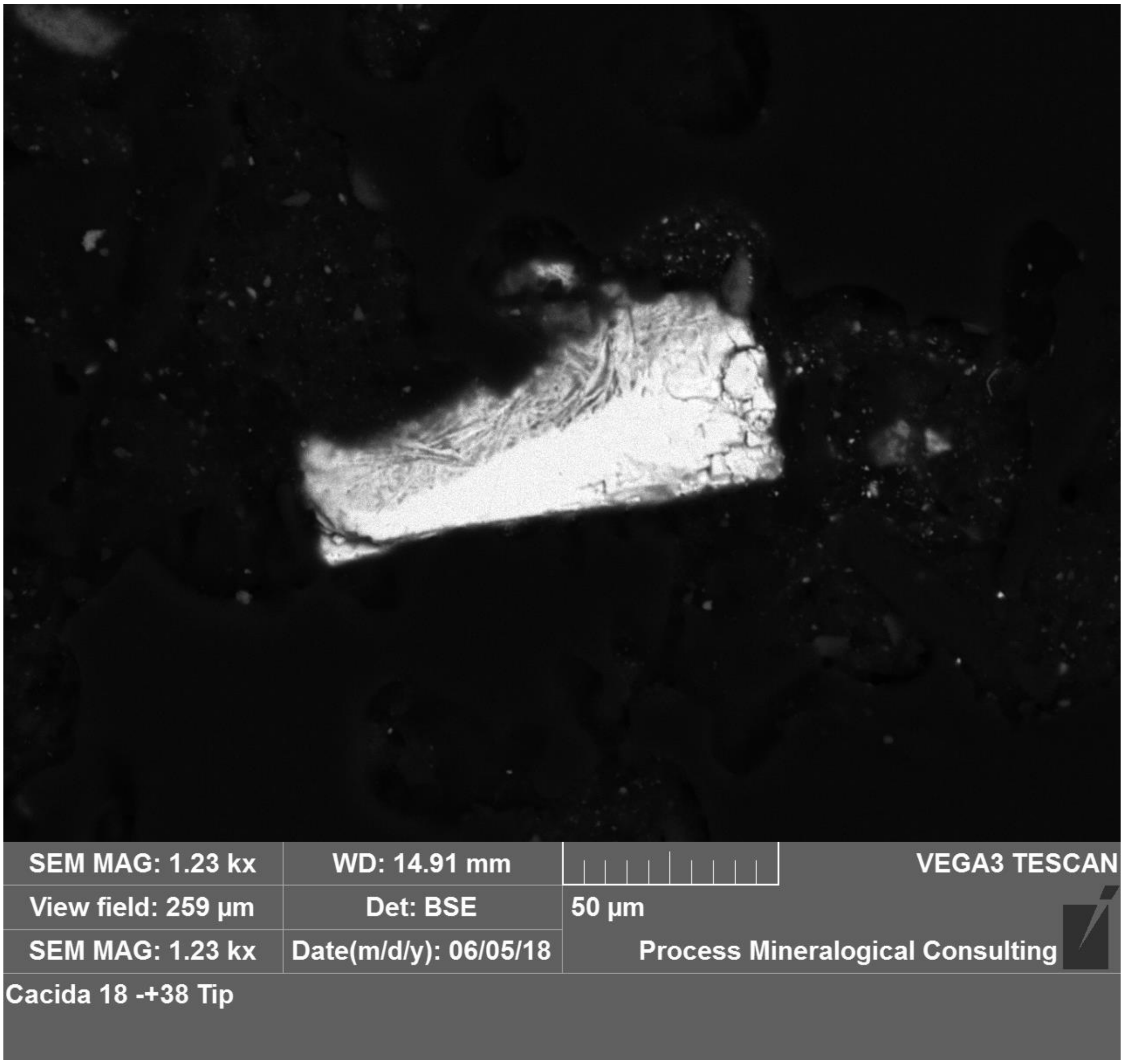

Figure 12: Free electrum nugget; sample MSI Zone – Calida 18, +38 μm gravity product.

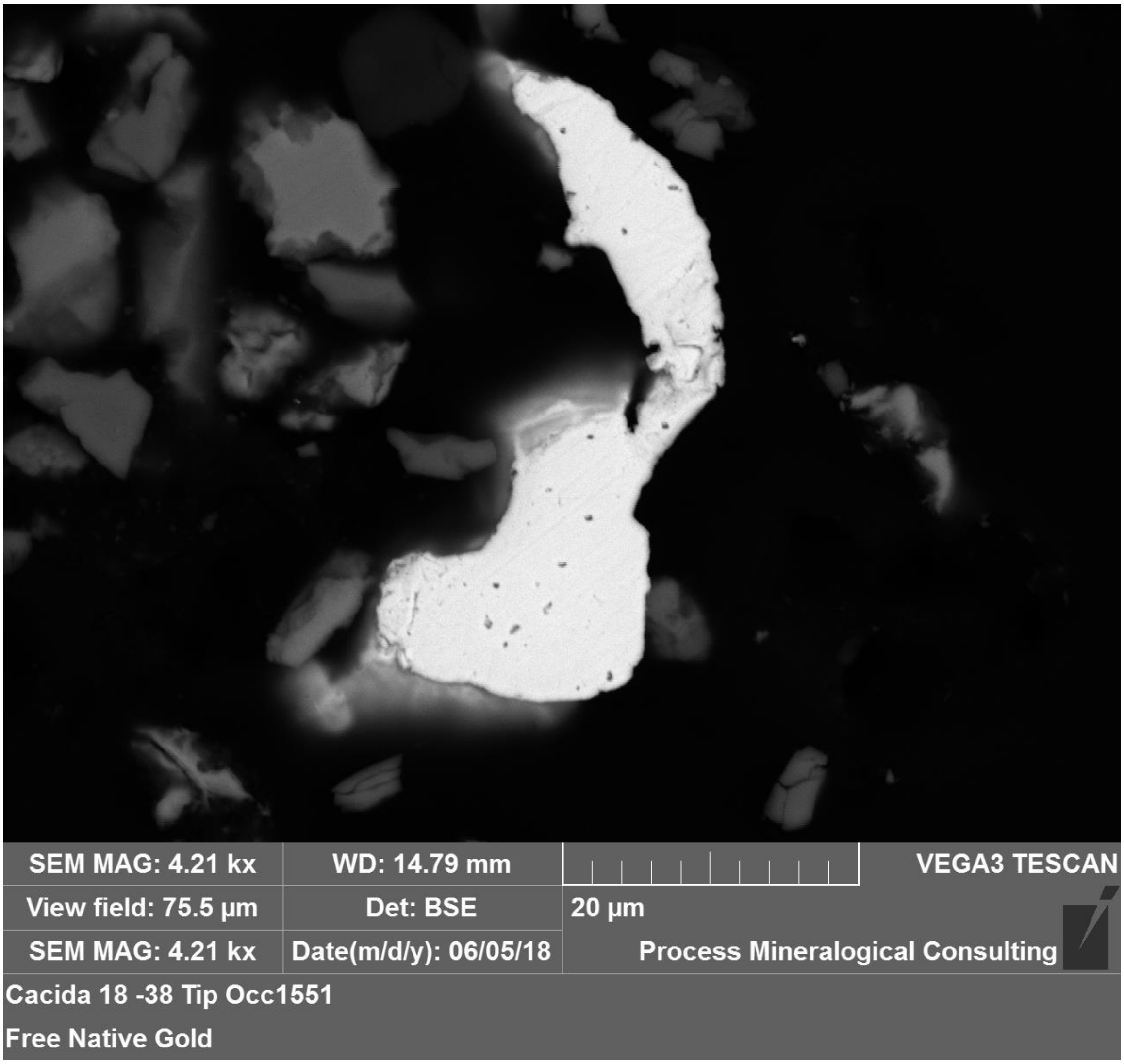

Figure 13: Free anhedral native gold nugget; sample MSI Zone – Calida 18, -38 µm gravity product.

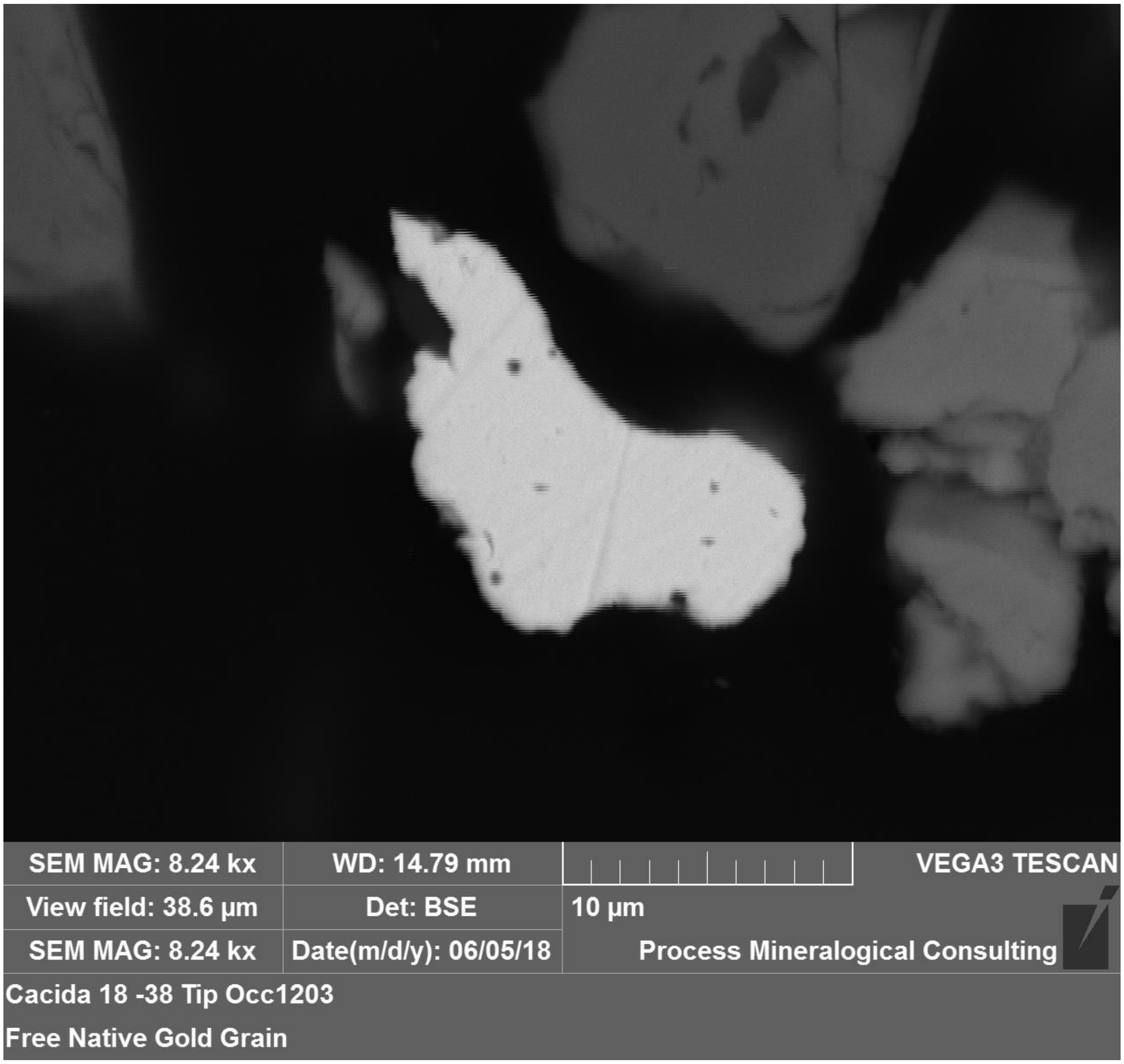

Figure 14: Free anhedral native gold; sample MSI Zone – Calida 18, -38 µm gravity product. The detection of two such comparatively large grains (Figure 13 and 14; of 12 in total) in this product is consistent with the higher proportion of -38 µm gravity gold (24.8%) than the +38 µm gold (Table 16), while only one grain was found in the latter (3.9% of Au).

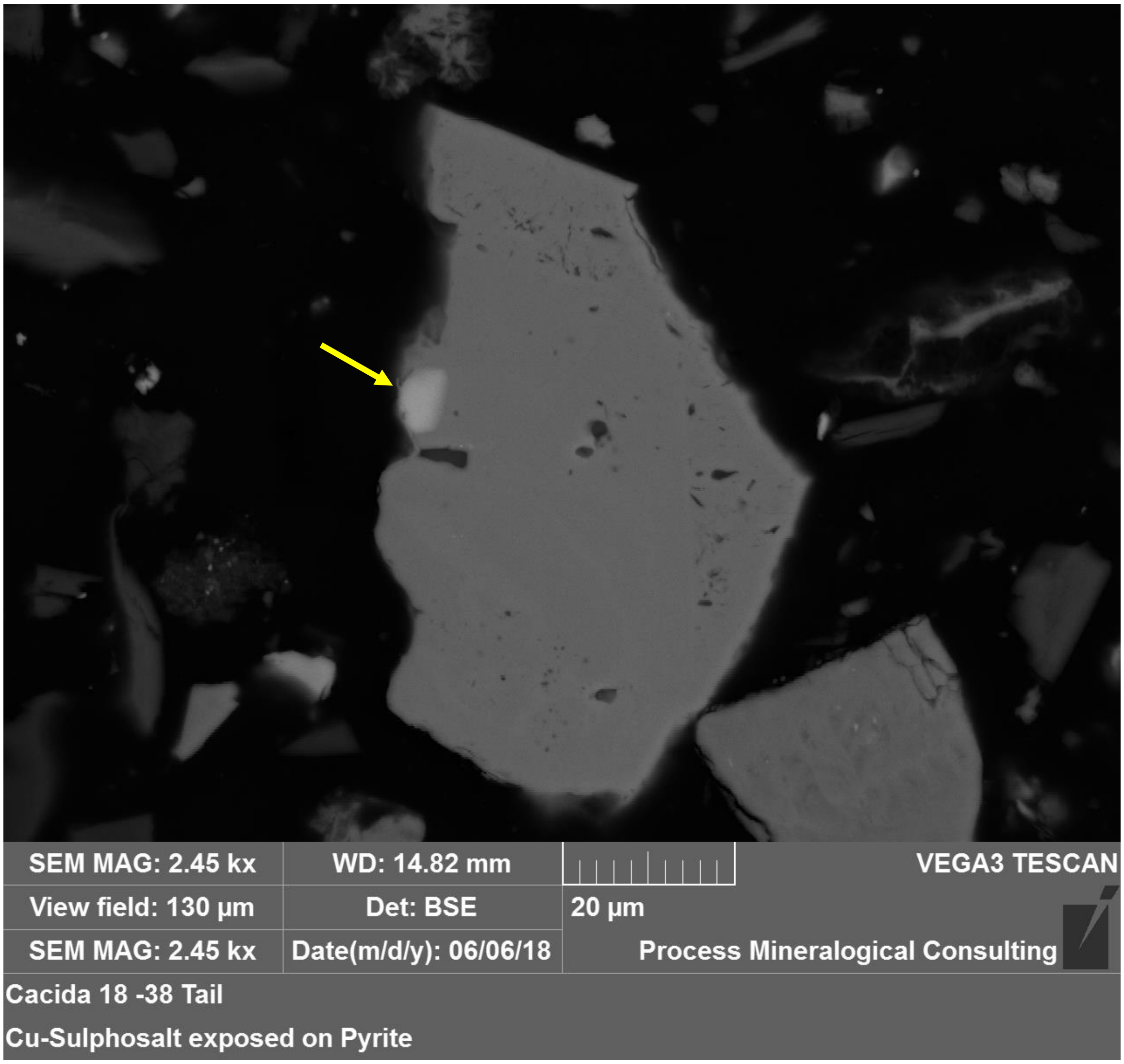

Figure 15: Argentotennantite inclusions (arrowed) exposed in pyrite (dark grey); sample MSI Zone – Calida 18, -38 µm gravity product.