An Investigation by High Definition Mineralogy into

SIX CORE SAMPLES FROM THE MANIITSOQ PROJECT, SOUTHWEST GREENLAND

prepared for

NORTH AMERICAN NICKEL INC.

Project 14021-102 - Final Report
February 25, 2015

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Executive Summary

North American Nickel Inc. submitted six drill core samples from mineralized norite intrusions at regional exploration targets from the Maniitsoq Project, Southwest Greenland for a mineralogical study. The purpose of the mineralogical study was to determine the modal mineralogy, the mineral texture, nickel, cobalt and copper deportment, and the liberation, association and exposure of the nickel, copper and iron sulphides of each sample. Mineralogical analysis was conducted by QEMSCAN (Quantitative Evaluation of Minerals by Scanning Electron Microscopy), X-ray Diffraction (XRD) and Electron Microprobe Analysis (EMPA). Samples were analyzed both as core pieces (for mineral texture) and also crushed to 90% passing 150 µm for process mineralogy characteristics (liberation, association, exposure).

Crushed Samples

<u>Modal Mineralogy</u>

The samples are predominantly comprised of orthopyroxene and pyrrhotite with moderate to minor amphibole, feldspars, pentlandite, clinopyroxene and pyrite (Figure 1). Chalcopyrite occurs in trace amounts (<2%). Talc was identified in sample Box30.MQ-2014-066-133.90-134.00m, which was confirmed by XRD.

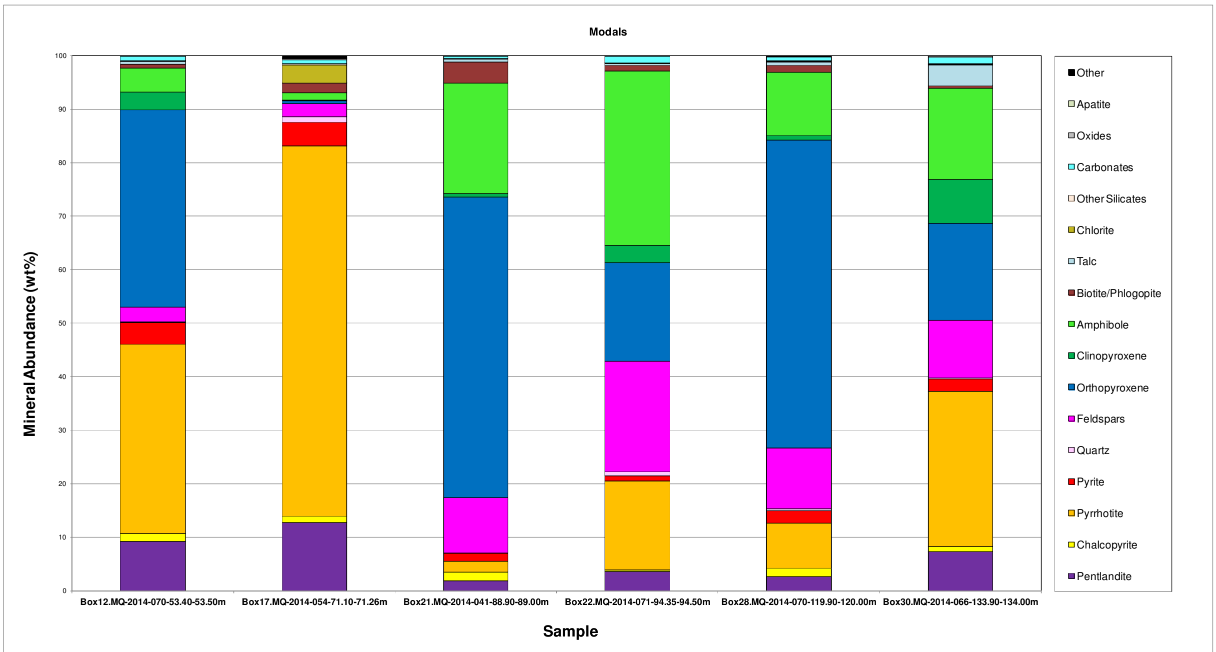

Figure 1: Mineral Abundance of the Crushed Samples

Electron Microprobe Analysis

Electron Microprobe Analysis was carried out on the main sulphides and silicate minerals to determine their chemical compositions and to define the possible carriers of nickel (Table 1 and Table 2). This was carried out on the polished sections from the crushed samples. Values in bold font are above the detection limit for that element. The 0.64% nickel in the pyrrhotite is notable.

Table 1: Summary of EMPA Values for the Sulphide Minerals

Minerals	**Elements (wt%)**						
	As	**Ni**	**S**	**Fe**	**Co**	**Cu**	**Zn**
Pyrrhotite	0.00	**0.64**	**39.42**	**59.80**	0.01	0.00	0.01
Pentlandite	0.00	**36.71**	**33.17**	**29.22**	**0.66**	0.00	0.00
Pyrite	0.00	**0.03**	**53.37**	**45.66**	**0.83**	0.01	0.00
Chalcopyrite	0.00	0.02	**35.03**	**30.37**	0.00	**34.05**	0.03

Table 2: Summary of EMPA Values for the Silicate Minerals

Minerals	**Elements (wt%)**										
	Na	**Mg**	**Cr**	**Ca**	**Fe**	**Si**	**Al**	**K**	**Mn**	**Ti**	**Ni**
Orthopyroxene	0.00	**15.71**	**0.08**	**0.31**	**13.71**	**25.18**	**0.74**	0.01	**0.34**	0.03	**0.05**
Amphibole	**0.67**	**10.31**	**0.26**	**8.26**	**7.39**	**23.07**	**4.10**	**0.44**	**0.17**	**0.38**	**0.07**
Clinopyroxene	**0.34**	**9.18**	**0.23**	**16.54**	**4.60**	**24.49**	**1.25**	0.01	**0.15**	**0.15**	**0.04**
Biotite	**0.09**	**9.89**	**0.36**	0.00	**10.50**	**17.49**	**9.47**	**7.69**	**0.07**	**0.67**	**0.15**
Chlorite	0.01	**9.30**	**0.33**	**0.11**	**20.57**	**13.91**	**8.86**	0.01	**0.15**	0.02	**0.06**
Talc	**0.04**	**17.46**	**0.06**	0.01	**2.88**	**28.38**	**0.50**	0.02	0.01	0.02	**0.09**

Elemental Deportment

Using the EMPA data and the QEMSCAN data, elemental deportment was calculated; the elemental deportment of nickel (Ni), cobalt (Co) and copper (Cu) is summarized in Table 3.

On average, pentlandite carries 92% of the nickel, pyrrhotite 6% and pyrite very trace amounts (<0.5%). Silicates account for trace to minor amounts of nickel (<0.05% to 3%), accounts for between 2 and 6% in Box 21.MQ-2014-041-88.90-89.00m, Box 22.MQ-2014-071-94.35-94.50m and Box28 MQ-2014-070-119.90-120.00m. On average, pentlandite carries 63% and pyrite 37% of the cobalt. Chalcopyrite carries 100% of the copper.

Table 3: Summary of Nickel, Cobalt and Copper Deportment

Element	Mineral Name	Box12.MQ-2014-070-53.40-53.50m:	Box17.MQ-2014-054-71.10-71.26m:	Box21.MQ-2014-041-88.90-89.00m:	Box22.MQ-2014-071-94.35-94.50m:	Box28.MQ-2014-070-119.90-120.00m:	Box30.MQ-2014-066-133.90-134.00m:
Nickel (Ni)	Pentlandite	93.1	91.2	91.8	90.1	91.1	92.6
	Pyrrhotite	6.25	8.69	1.75	7.43	5.24	6.44
	Pyrite	0.04	0.03	0.07	0.02	0.07	0.03
	Orthopyroxene	0.45	0.01	3.40	0.57	2.48	0.28
	Clinopyroxene	0.04	0.00	0.04	0.09	0.03	0.11
	Amphibole	0.09	0.02	2.06	1.67	0.84	0.44
	Biotite/Phlogopite	0.03	0.05	0.83	0.12	0.19	0.02
	Talc	0.01	0.00	0.06	0.02	0.06	0.13
	Chlorite	0.00	0.04	0.00	0.00	0.00	0.00
Cobalt (Co)	Pentlandite	64.5	69.6	48.7	74.6	46.7	71.7
	Pyrite	35.5	30.4	51.3	25.4	53.3	28.3
Copper (Cu)	Chalcopyrite	100.0	100.0	100.0	100.0	100.0	100.0

Liberation, Association and Exposure

The liberation, association and exposure characteristics of the pentlandite, chalcopyrite, pyrite and pyrrhotite were examined and are summarized in Table 4 and in Table 5, respectively. The following data are based on the samples being stage pulverized to 90% passing 150 µm. The complete liberation, association and exposure data are presented in Appendix E.

Liberation of pentlandite is good and range from 73 to 88% in all samples. The remaining pentlandite occurs mainly in associations with pyrrhotite, pyrite, and hard silicates, also as ternary particles with chalcopyrite and iron sulphides and in complex associations.

Chalcopyrite liberation ranges from 63 to 88% in all samples. The remaining chalcopyrite mainly occurs in associations with pyrrhotite, pyrite, and hard silicates, as ternary particles with iron sulphides and pentlandite, and in complex associations.

The liberation of pyrite ranges from 65 to 87% in all samples. The remaining pyrite mainly occurs in associations with other minerals including ternary particles with chalcopyrite and pentlandite, hard silicates and in complex associations.

Pyrrhotite is well liberated ranging from 83 to 96% in all samples. The remaining pyrrhotite mainly occurs in associations with other minerals including as ternary particles with chalcopyrite and pentlandite, hard silicates and in complex associations.

Exposure of minerals can be used to look at the floatability of the particles with minerals having a surface exposure of approximately >20%, which is considered adequate for flotation concentration. Pyrrhotite and pyrite have been grouped as iron sulphides for the exposure calculations.

Pentlandite displays good exposure with an average of 97% of the particles >20% exposed, while the remaining particles are poorly exposed or locked. Chalcopyrite and iron sulphides also show good exposure with an average of 91% and 99% >20% exposure, respectively.

Table 4: Summary of Mineral Liberation and Association

Mineral	Liberation/Associaton	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Pentlandite	**Liberated**	**88.2**	**86.7**	**73.5**	**78.4**	**86.9**	**84.1**
	Pyrrhotite	6.25	9.31	8.37	16.2	5.20	8.30
	Pyrite	0.10	0.11	4.93	0.05	0.07	0.20
	Chalcopyrite	0.46	0.34	0.20	0.15	0.30	0.23
	Chalcopyrite:Fe Sulphides	2.37	0.99	7.11	0.56	2.11	1.33
	Hard Silicates	0.99	0.18	2.38	1.97	3.02	2.41
	Soft Silicates	0.06	0.50	0.17	0.07	0.07	0.07
	Carbonates	0.07	0.02	0.02	0.32	0.07	0.03
	Oxides	0.00	0.01	0.00	0.00	0.00	0.01
	Complex	1.46	1.84	3.34	2.23	2.31	3.35
Chalcopyrite	**Liberated**	**62.9**	**83.2**	**87.9**	**71.4**	**83.7**	**75.5**
	Pyrrhotite	10.7	8.02	0.84	10.0	5.42	4.50
	Pyrite	2.19	0.36	1.78	0.38	2.01	2.65
	Pentlandite	3.41	2.36	0.28	1.18	0.48	1.17
	Fe Sulphides:Pentlandite	10.4	2.92	4.16	2.72	2.22	3.50
	Hard Silicates	4.20	0.14	3.02	8.97	2.80	5.35
	Soft Silicates	0.09	0.65	0.20	0.00	0.02	0.13
	Carbonates	0.13	0.02	0.03	0.00	0.12	0.10
	Oxides	0.00	0.06	0.00	0.00	0.00	0.03
	Complex	6.02	2.28	1.83	5.33	3.19	7.06
Pyrite	**Liberated**	**77.9**	**65.6**	**77.4**	**68.3**	**87.1**	**65.1**
	Pentlandite	0.19	0.41	3.45	0.28	0.39	0.86
	Chalcopyrite	0.83	0.13	1.23	0.13	0.85	2.14
	Chalcopyrite:Pentlandite	4.83	0.01	2.10	0.18	2.44	1.44
	Hard Silicates	0.45	0.31	0.46	1.54	0.62	0.93
	Soft Silicates	0.07	0.23	0.04	0.07	0.03	0.18
	Carbonates	0.01	0.11	0.00	0.18	0.00	0.11
	Oxides	0.00	0.00	0.00	0.00	0.00	0.00
	Complex	15.7	33.2	15.4	29.4	8.54	29.2
Pyrrhotite	**Liberated**	**95.6**	**96.2**	**82.9**	**92.2**	**91.9**	**92.8**
	Pentlandite	1.39	1.43	10.2	3.61	1.28	2.64
	Chalcopyrite	0.46	0.13	0.45	0.15	1.56	0.12
	Chalcopyrite:Pentlandite	0.14	0.05	0.11	0.10	0.24	0.04
	Hard Silicates	1.17	0.11	3.43	2.16	2.29	2.13
	Soft Silicates	0.05	0.30	0.07	0.05	0.12	0.08
	Carbonates	0.06	0.06	0.04	0.10	0.04	0.03
	Oxides	0.00	0.00	0.01	0.01	0.02	0.01
	Complex	1.13	1.67	2.75	1.61	2.54	2.18

Table 5: Summary of Mineral Exposure

Mineral	Exposure	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Pentlandite	**Exposed**	**83.8**	**81.9**	**66.5**	**72.9**	**82.3**	**77.8**
	20-80% Exposed	13.5	14.3	30.4	23.6	14.5	18.2
	<20% Exposed	2.67	3.80	2.97	3.16	3.05	3.70
	Locked	0.08	0.07	0.19	0.38	0.16	0.22
Chalcopyrite	**Exposed**	**59.4**	**78.0**	**86.9**	**54.1**	**83.9**	**71.2**
	20-80% Exposed	26.0	15.9	8.32	31.3	12.2	19.1
	<20% Exposed	14.3	5.86	4.47	12.4	3.85	8.96
	Locked	0.31	0.24	0.30	2.25	0.11	0.72
Fe Sulphides	**Exposed**	**92.8**	**94.8**	**75.6**	**88.9**	**90.0**	**90.4**
	20-80% Exposed	6.59	5.02	21.8	10.2	8.77	8.68
	<20% Exposed	0.57	0.20	2.40	0.86	1.17	0.87
	Locked	0.02	0.00	0.16	0.03	0.04	0.04

Potential Recovery

The potential recovery for pentlandite and chalcopyrite is summarized in Table 6. The following data are based on current grinding at 90% passing 150 µm. Potential recovery can be defined as the percent of a mineral that can potentially be recovered through flotation. It is calculated using the liberation, association and exposure of the grains and is used as a prediction of recovery based on these characteristics.

On average, 97% of pentlandite is potentially recoverable through floatation to a rougher concentrate whereas 3% is non-recoverable due to poor exposure or is locked.

On average, 91% chalcopyrite is potentially recoverable, whereas 9% is non-recoverable due to poor exposure or is locked.

Table 6: Summary of Potential Recovery

Mineral	Potential Recovery	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Pentlandite	Potentially Recoverable	97.2	96.1	96.8	96.5	96.8	96.1
	Non Recoverable	2.76	3.87	3.15	3.54	3.21	3.92
Chalcopyrite	Potentially Recoverable	85.4	93.9	95.2	85.4	96.0	90.3
	Non Recoverable	14.6	6.10	4.77	14.6	3.97	9.68

Introduction

This report describes a mineralogical test program using High Definition Mineralogy, including QEMSCAN technology (Quantitative Evaluation of Materials by Scanning Electron Microscopy), X-ray Diffraction (XRD), Electron Microprobe Analysis (EMPA) and chemical analysis on six drill core samples. The samples were submitted by North American Nickel Inc. and are from mineralized norite intrusions at regional exploration targets from the Maniitsoq Project, Southwest Greenland. The purpose of this test program was to determine the overall mineral assemblage, the nickel, cobalt and copper deportment and the liberation, association and exposure of the nickel, copper and iron bearing sulphide minerals.

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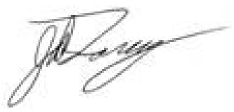

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Testwork Summary

1. Sample Receipt and Preparation

Six core samples were submitted to the Advanced Mineralogy Facility at SGS Canada Inc., Burnaby site by North American Nickel Inc. The project number CAVM-14021-102 was assigned to the testwork.

The 6 drill core samples were inventoried (Table 7), weighed, and a designated area of each core was cut and one polished epoxy rock mount was prepared from each sample. They were submitted for QEMSCAN analysis by Field Scan mode of operation.

Table 7: Sample Inventory

No.	Sample Name
1	Box12.MQ-2014-070-53.40-53.50m
2	Box17.MQ-2014-054-71.10-71.26m
3	Box21.MQ-2014-041-88.90-89.00m
4	Box22.MQ-2014-071-94.35-94.50m
5	Box28.MQ-2014-070-119.90-120.00m
6	Box30.MQ-2014-066-133.90-134.00m

Between 50-100g of the off cuts from each sample were stage pulverized to a P_{90} of 150 µm and the reject was stored. Approximately 20 g was riffled from each sample and submitted for chemical analysis including sulphur by Leco, copper, nickel, cobalt and whole rock analysis by X-ray fluorescence (XRF). Approximately 10 g was riffled and pulverized from three of the samples (Box21.MQ-2014-041-88.90-89.00m, Box22.MQ-2014-071-94.35-94.50m Box30.MQ-2014-066-133.90-134.00m) and submitted for qualitative X-Ray Diffraction (XRD). The remainder from each sample was further reduced by micro-riffler to produce approximately 1 g sub-samples for polished section preparation. A total of twelve graphite impregnated polished epoxy grain mounts were prepared; two polished sections for each sample. These sections were submitted for QEMSCAN using the Particle Mineral Analysis mode of operation.

The polished sections were carbon coated and submitted for QEMSCAN analysis. The polished sections were submitted for EMPA following QEMSCAN analysis.

The certificates of chemical analysis are presented in Appendix A, the XRD report is presented in Appendix B, EMPA data is presented in Appendix C, the Field Scan images are presented in Appendix D, and additional QEMSCAN data is presented in Appendix E. Note that additional density and grain size data from the core samples (Field Scan data) can also be found in Appendix E.

2. Operational Modes and Quality Control

2.1. Operational Modes

Two modes of QEMSCAN analysis were used for this project: Field Scan (FS) and Particle Mineral Analysis (PMA).

The FS mode of measurement maps a core sample that has been mounted in the polished section. It collects a chemical spectrum at a set interval within the field of view. Each field of view is then processed offline and a pseudo image of the core sample is produced.

The PMA is a two-dimensional mapping analysis aimed at resolving liberation and locking characteristics of a generic set of particles. The PMA mode scans the polished section and provides a statistically robust population of mineral identifications based on the X-ray chemistry of minerals. A pre-defined number of particles are mapped at a point spacing selected to spatially resolve and describe mineral textures and associations. This mode is often selected to characterize concentrate products, as both gangue and value minerals report in statistically abundant quantities to be resolved.

It should be noted that the energy dispersive X-ray characteristics for magnetite and hematite are nearly identical and that these two minerals cannot reliably be distinguished by QEMSCAN. Light elements such as Li, B, C, Be, O and H also cannot be discriminated by the QEMSCAN analysis.

2.2. X-Ray Diffraction Analysis

Qualitative XRD was performed for QEMSCAN set up and quality control purposes. The XRD results are summarized in Table 8 and the complete XRD report with the patterns are presented in Appendix B. In general, the XRD results are consistent with the QEMSCAN analysis.

Box21.MQ-2014-041-88.90-89.00m consists of major amounts pyroxene, moderate amphibole, minor plagioclase and mica.

Box22.MQ-2014-071-94.35-94.50m consists of major amounts of amphibole, moderate pyrrhotite, pyroxene and plagioclase, and of minor pentlandite and dolomite.

Box30.MQ-2014-066-133.90-134.00m consists of major amounts of pyrrhotite, moderate pyroxene and amphibole, and minor pentlandite, talc and plagioclase.

Table 8: Summary of XRD Analysis

Crystalline Mineral Assemblage (relative proportions based on peak height)

Sample ID	Major	Moderate	Minor	Trace
Box21.MQ-2014-041-88.90-89.00m	pyroxene	amphibole	plagioclase, mica	*quartz, *pyrite, *pyrrhotite,*magnetite, *chalcopyrite, *pentlandite
Box22.MQ-2014-071-94.35-94.50m	amphibole	pyrrhotite, pyroxene, plagioclase	pentlandite, dolomite	*quartz, *pyrite, *mica, *chalcopyrite, *calcite
Box30.MQ-2014-066-133.90-134.00m	pyrrhotite	pyroxene, amphibole,	pentlandite talc, plagioclase	*quartz, *pyrite, *chalcopyrite, *calcite,

** tentative identification due to low concentrations, diffraction line overlap or poor crystallinity*

2.3. QEMSCAN Assay Reconciliation

Each polished section (from the crushed samples) was submitted for mineralogical analysis using the QEMSCAN PMA method. All data was processed with the iExplorer software version 5.2. The QEMSCAN mineralogical assays were regressed with the chemical assays (Table 9 and Figure 2). Refer to Appendix A for the certificates of chemical analysis.

The QEMSCAN calculated assays show good correlation with the chemical assays with the overall correlation as measured by the R-squared criteria of 0.99 and a slope (m) of 1.00.

Table 9: QEMSCAN and Direct Assay Reconciliation

Sample	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Element	**P90@150um**	**P90@150um**	**P90@150um**	**P90@150um**	**P90@150um**	**P90@150um**
Al (QEMSCAN)	0.92	0.81	3.01	4.61	2.68	2.52
Al (Chemical)	1.02	0.93	3.62	5.04	2.97	2.64
Ca (QEMSCAN)	1.51	0.52	3.26	5.58	2.65	4.19
Ca (Chemical)	1.34	0.58	3.05	5.58	2.34	4.42
Co (QEMSCAN)	0.10	0.13	0.02	0.03	0.04	0.07
Co (Chemical)	0.11	0.15	0.02	0.04	0.04	0.08
Cu (QEMSCAN)	0.51	0.40	0.55	0.11	0.53	0.35
Cu (Chemical)	0.52	0.40	0.43	0.11	0.47	0.31
Fe (QEMSCAN)	31.5	48.4	11.5	16.3	15.6	25.0
Fe (Chemical)	31.8	48.5	12.7	15.7	15.7	24.6
K (QEMSCAN)	0.08	0.23	0.39	0.19	0.14	0.08
K (Chemical)	0.09	0.23	0.50	0.19	0.18	0.07
Mg (QEMSCAN)	5.64	0.94	10.0	5.84	8.82	5.43
Mg (Chemical)	6.88	0.66	10.8	6.09	10.5	5.78
Mn (QEMSCAN)	0.02	0.00	0.03	0.05	0.02	0.03
Mn (Chemical)	0.15	0.02	0.17	0.14	0.17	0.09
Na (QEMSCAN)	0.13	0.09	0.47	0.90	0.46	0.49
Na (Chemical)	0.34	0.27	0.89	1.31	0.85	0.68
Ni (QEMSCAN)	3.40	4.74	0.70	1.34	0.98	2.70
Ni (Chemical)	3.69	5.60	0.74	1.35	1.05	2.71
P (QEMSCAN)	0.00	0.00	0.01	0.01	0.03	0.03
P (Chemical)	0.01	0.00	0.01	0.02	0.03	0.03
S (QEMSCAN)	19.7	34.4	2.79	8.36	6.01	15.4
S (Chemical)	19.6	34.7	2.48	7.78	5.50	15.4
Si (QEMSCAN)	12.2	2.54	22.7	18.8	20.9	14.5
Si (Chemical)	12.4	3.08	22.5	19.5	21.4	15.1
Ti (QEMSCAN)	0.06	0.06	0.20	0.15	0.11	0.13
Ti (Chemical)	0.05	0.02	0.12	0.13	0.19	0.13

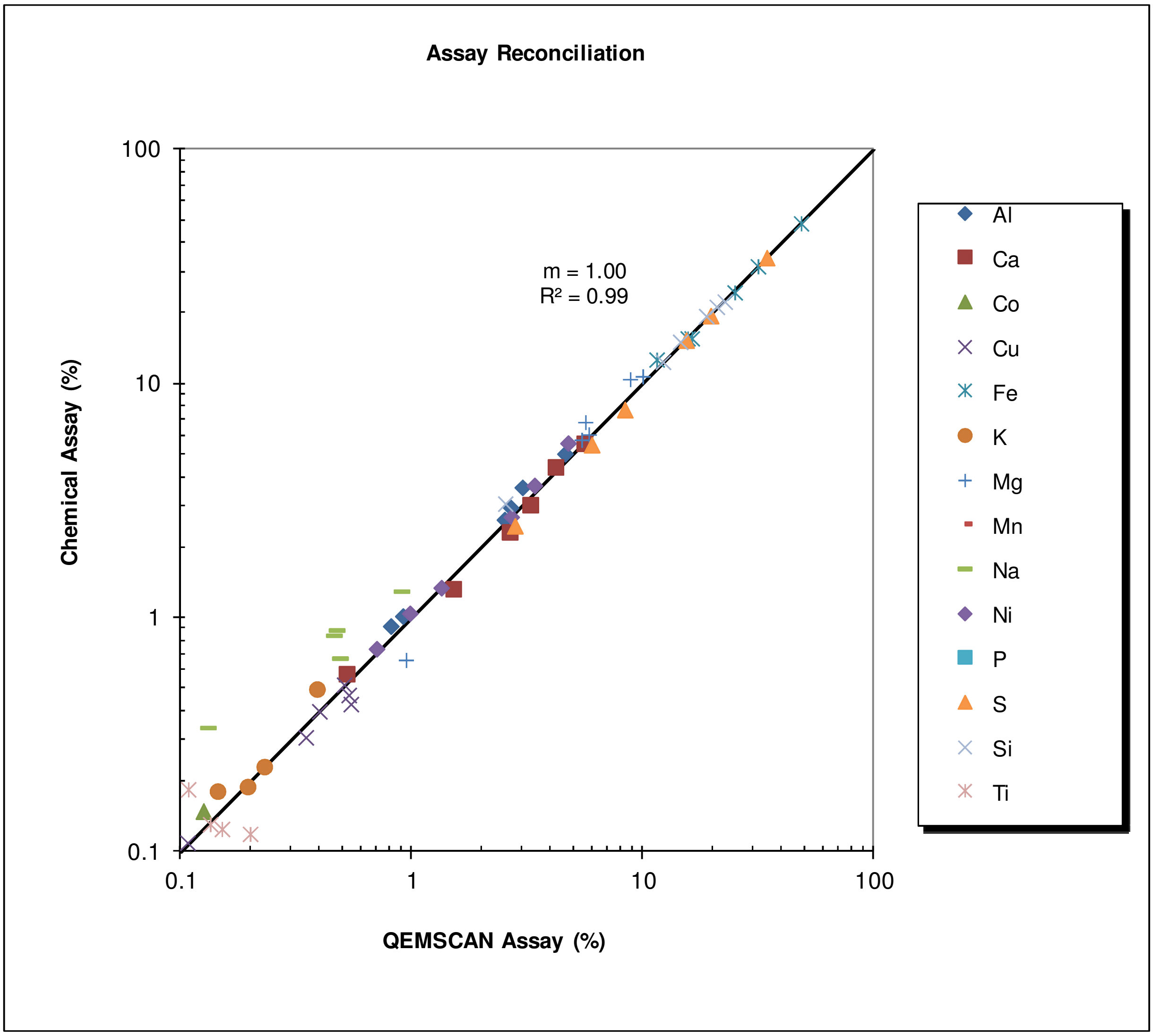


Figure 2: QEMSCAN and Direct Assay Reconciliation

3. Modal Mineralogy and Grain Size

3.1. Modal Mineralogy

3.1.1. Intact Drill Core Samples

The modal abundance of minerals in the core samples is presented in Table 10 and graphically in Figure 3. The modal mineralogy data are given in weight percent.

The Box12.MQ-2014-070-53.40-53.50m sample is predominantly comprised of orthopyroxene (46.7%) and pyrrhotite (23.8%), with minor (1-10%) pentlandite, clinopyroxene, amphibole, pyrite, feldspars and chalcopyrite. Trace amounts (<1%) of biotite/phlogopite, carbonates, quartz, talc, other silicates, oxides, chlorite, apatite, and other minerals are also present.

The Box17.MQ-2014-054-71.10-71.26m sample is predominantly comprised of pyrrhotite (59.2%) and pentlandite (16.8%), with minor (1-10%) feldspars, amphibole, pyrite, chlorite, chalcopyrite and biotite/phlogopite. Trace amounts (<1%) of quartz, orthopyroxene, other silicates, carbonates, oxides, clinopyroxene, talc, apatite, and other minerals are also present.

The Box21.MQ-2014-041-88.90-89.00m sample is predominantly comprised of orthopyroxene (51.5%), amphibole (21.6%) and feldspars (11.1%), with minor (1-10%) pentlandite, biotite/phlogopite, pyrrhotite, pyrite and chalcopyrite. Trace amounts (<1%) of clinopyroxene, carbonates, talc, quartz, apatite, other silicates, oxides, chlorite, and other minerals are also present.

The Box22.MQ-2014-071-94.35-94.50m sample is predominantly comprised of pyrrhotite (31.0%), amphibole (28.5%), feldspars (15.2%) and orthopyroxene (12.6%), with minor (1-10%) pentlandite, clinopyroxene and pyrite. Chalcopyrite occurs in trace amounts (0.2%), along with trace amounts (<1%) of biotite/phlogopite, quartz, carbonates, apatite, talc, other silicates, oxides, chlorite, and other minerals.

The Box28.MQ-2014-070-119.90-120.00m sample is predominantly comprised of orthopyroxene (61.3%) and amphibole (12.6%), with minor (1-10%) pyrrhotite, feldspars, pentlandite, and pyrite. Chalcopyrite occurs in trace amounts (0.9%), along with trace amounts (<1%) of clinopyroxene, biotite/phlogopite, apatite, quartz, carbonates, talc, other silicates, oxides, chlorite, and other minerals.

The Box30.MQ-2014-066-133.90-134.00m sample is predominantly comprised of pyrrhotite (37.4%), amphibole (14.3%), pentlandite (12.8%) and pyrite (10.4%), and with minor (1-10%) orthopyroxene, clinopyroxene, talc, feldspars, and chalcopyrite. Trace amounts (<1%) of carbonates, quartz, other silicates, biotite/phlogopite, oxides, chlorite, other minerals, and apatite are also present. Note the presence of talc was confirmed by the XRD analysis.

Table 10: Modal Abundance of the Core Samples

Survey		CAVM-14021-102 / MI7006-NOV14					
Project		North American Nickel					
Sample		Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Fraction		As Rec'd	As Rec'd	As Rec'd	As Rec'd	As Rec'd	As Rec'd
Mass Size Distribution (%)		100.0	100.0	100.0	100.0	100.0	100.0
		Sample	Sample	Sample	Sample	Sample	Sample
Mineral Mass (%)	Pentlandite	9.23	16.8	4.31	5.83	2.74	12.8
	Chalcopyrite	1.70	1.82	1.00	0.22	0.89	1.25
	Pyrrhotite	23.8	59.2	3.61	31.0	9.28	37.4
	Pyrite	2.71	4.84	1.81	1.27	1.39	10.4
	Quartz	0.15	0.86	0.13	0.63	0.30	0.10
	Feldspars	2.61	6.57	11.1	15.2	9.05	3.01
	Orthopyroxene	46.7	0.75	51.5	12.6	61.3	7.80
	Clinopyroxene	6.50	0.08	0.48	3.24	0.82	7.41
	Amphibole	5.16	5.21	21.6	28.5	12.6	14.3
	Biotite/Phlogopite	0.80	1.08	3.83	0.84	0.70	0.04
	Talc	0.10	0.05	0.19	0.10	0.10	4.80
	Chlorite	0.02	2.28	0.02	0.01	0.01	0.01
	Other Silicates	0.06	0.16	0.06	0.01	0.08	0.05
	Carbonates	0.42	0.12	0.25	0.47	0.30	0.54
	Oxides	0.04	0.09	0.02	0.01	0.02	0.01
	Apatite	0.01	0.02	0.09	0.13	0.40	0.00
	Other	0.00	0.01	0.00	0.00	0.00	0.01
	Total	100.0	100.0	100.0	100.0	100.0	100.0

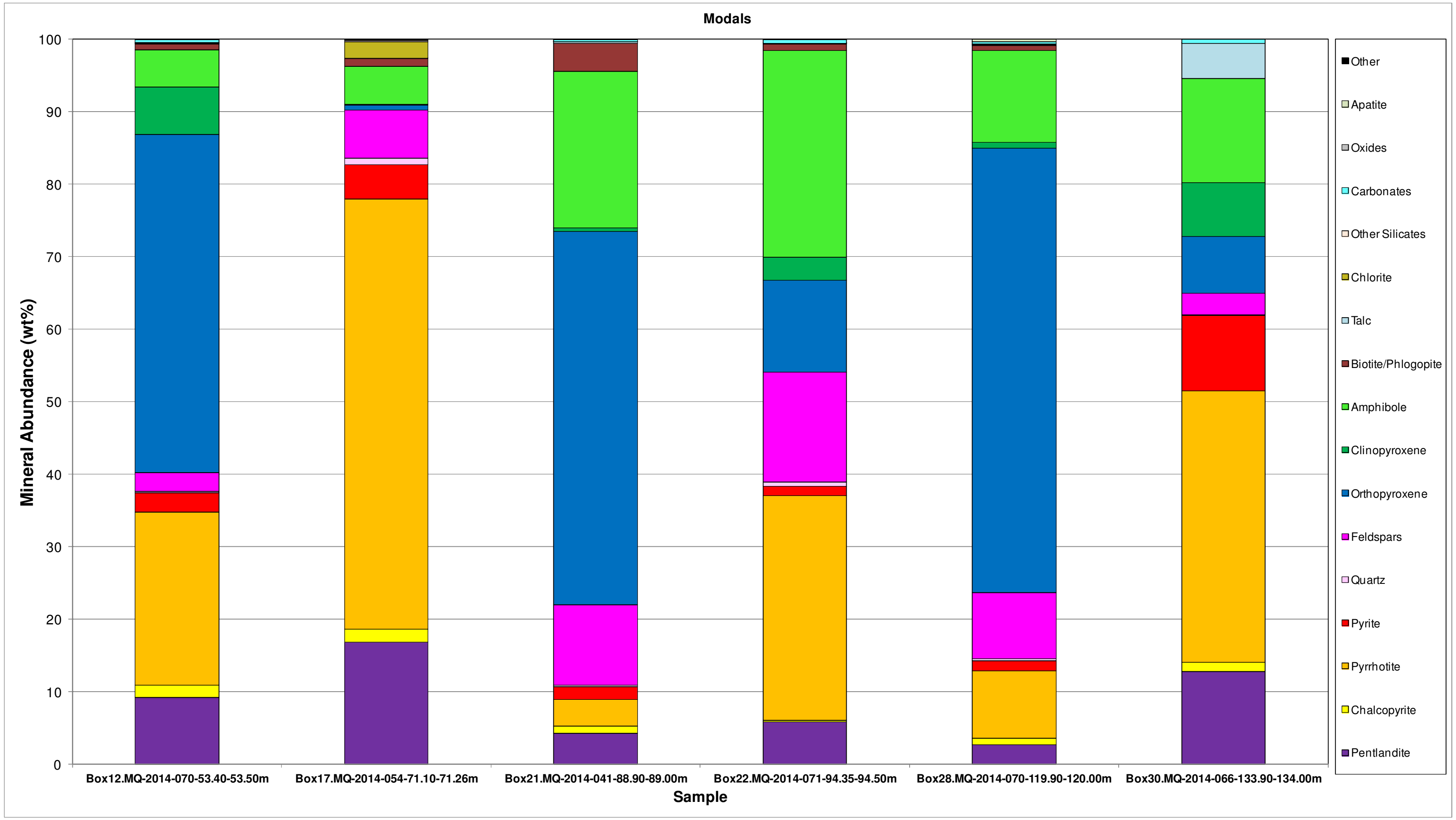


Figure 3: Mineral Abundance of the Core Samples

3.1.2. Crushed Samples

The modal abundance of minerals in the composite sample is presented in Table 11 and graphically in Figure 4. The modal mineralogy data are given in weight percent.

The Box12.MQ-2014-070-53.40-53.50m sample is predominantly comprised of orthopyroxene (36.8%) and pyrrhotite (35.4%), with minor (1-10%) pentlandite, amphibole, pyrite, clinopyroxene, feldspars, and chalcopyrite. Trace amounts (<1%) of carbonates, biotite/phlogopite, talc, quartz, oxides, other silicates, chlorite, apatite, and other minerals are also present.

The Box17.MQ-2014-054-71.10-71.26m sample is predominantly comprised of pyrrhotite (69.2%) and pentlandite (12.7%), with minor (1-10%) pyrite, chlorite, feldspars, biotite/phlogopite, amphibole, chalcopyrite, and quartz. Trace amounts (<1%) of carbonates, orthopyroxene, other minerals, other silicates, oxides, talc, apatite, and clinopyroxene are also present.

The Box21.MQ-2014-041-88.90-89.00m sample is predominantly comprised of orthopyroxene (56.1%), amphibole (20.7%) and feldspars (10.3%), with minor (1-10%) biotite/phlogopite, pyrrhotite, pentlandite, chalcopyrite, and pyrite. Trace amounts (<1%) of clinopyroxene, talc, carbonates, quartz, oxides, other silicates, apatite, chlorite, and other minerals are also present.

The Box22.MQ-2014-071-94.35-94.50m sample is predominantly comprised of amphibole (32.6%), feldspars (20.7%), orthopyroxene (18.4%) and pyrrhotite (16.7%), with minor (1-10%) pentlandite, clinopyroxene, carbonates, biotite/phlogopite, and pyrite. Chalcopyrite occurs in trace amounts (0.3%), along with trace amounts (<1%) of quartz, talc, chlorite, oxides, apatite, other silicates, and other minerals.

The Box28.MQ-2014-070-119.90-120.00m sample is predominantly comprised of orthopyroxene (57.5%), amphibole (11.9%) and feldspars (11.4%), with minor (1-10%) pyrrhotite, pentlandite, pyrite, chalcopyrite, and biotite/phlogopite. Trace amounts (<1%) of clinopyroxene, carbonates, talc, quartz, apatite, other silicates, oxides, chlorite, and other minerals are also present.

The Box30.MQ-2014-066-133.90-134.00m sample is predominantly comprised of pyrrhotite (29.0%), orthopyroxene (18.2%), amphibole (17.1%) and feldspars (10.7%), with minor (1-10%) clinopyroxene, pentlandite, talc, pyrite, carbonates, and chalcopyrite. Trace amounts (<1%) of biotite/phlogopite, oxides, quartz, apatite, other silicates, chlorite, and other minerals are also present. Note the presence of talc was confirmed by the XRD analysis.

Note that some of the samples, by definition are not a typical norite by definition, due to their higher amphibole content.

Table 11: Modal Abundance of the Crushed Samples

Survey		**CAVM-14021-102 / MI7006-NOV14**					
Project		**North American Nickel**					
Sample		**Box12.MQ-2014-070-53.40-53.50m**	**Box17.MQ-2014-054-71.10-71.26m**	**Box21.MQ-2014-041-88.90-89.00m**	**Box22.MQ-2014-071-94.35-94.50m**	**Box28.MQ-2014-070-119.90-120.00m**	**Box30.MQ-2014-066-133.90-134.00m**
Fraction		**P90@150um**	**P90@150um**	**P90@150um**	**P90@150um**	**P90@150um**	**P90@150um**
Mass Size Distribution (%)		100.0	100.0	100.0	100.0	100.0	100.0
Calculated ESD Particle Size		31	25	33	30	31	27
		Sample	**Sample**	**Sample**	**Sample**	**Sample**	**Sample**
Mineral Mass (%)	Pentlandite	9.21	12.7	1.85	3.53	2.59	7.28
	Chalcopyrite	1.50	1.17	1.60	0.32	1.57	1.02
	Pyrrhotite	35.4	69.2	2.02	16.7	8.52	29.0
	Pyrite	4.02	4.40	1.55	0.95	2.34	2.27
	Quartz	0.14	1.08	0.09	0.79	0.29	0.24
	Feldspars	2.79	2.44	10.3	20.7	11.4	10.7
	Orthopyroxene	36.8	0.57	56.1	18.4	57.5	18.2
	Clinopyroxene	3.32	0.02	0.67	3.21	0.76	8.15
	Amphibole	4.52	1.43	20.7	32.6	11.9	17.1
	Biotite/Phlogopite	0.78	1.78	4.01	1.13	1.32	0.33
	Talc	0.51	0.03	0.46	0.27	0.65	4.02
	Chlorite	0.05	3.45	0.04	0.08	0.03	0.05
	Other Silicates	0.07	0.22	0.08	0.04	0.10	0.12
	Carbonates	0.82	0.72	0.41	1.30	0.76	1.14
	Oxides	0.09	0.16	0.09	0.06	0.08	0.24
	Apatite	0.02	0.02	0.06	0.04	0.16	0.14
	Other	0.00	0.56	0.01	0.01	0.01	0.01
	Total	100.0	100.0	100.0	100.0	100.0	100.0

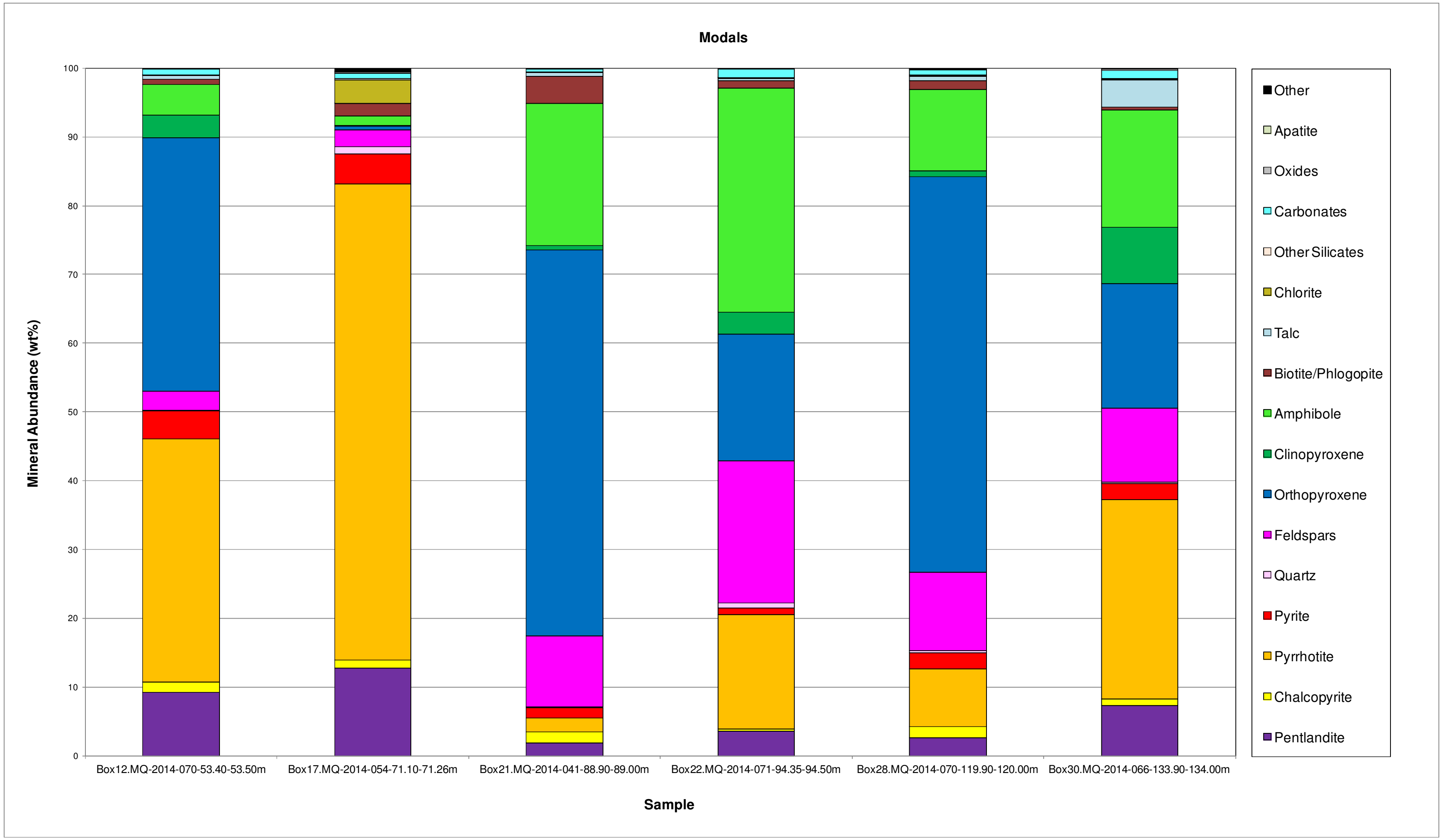


Figure 4: Mineral Abundance of the Crushed Samples

3.2. Grain Size – Crushed Samples

The D_{50} (µm) or 50% passing value from the cumulative grain size distribution of pentlandite, chalcopyrite, Fe-sulphides, hard silicates, soft silicates, carbonates, oxides, and the overall particle size distribution for the samples are presented in Table 12. The D_{50} is the medium grain size of the particles within the sample, which 50% of the particles being coarser and 50% of the particles being finer than the size stated. In relative terms, the iron sulphides are coarser (39 µm to 50 µm) than the pentlandite which is coarser (33 µm to 43 µm) than the chalcopyrite in most cases (22 µm to 40 µm). The overall particle size shows a D_{50} from 39 µm to 59 µm.

The cumulative grain size distribution graphs are presented in Appendix E.

Table 12: D_{50} Cumulative Grain Size Distribution

D50 (µm)	Sample ID					
	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Pentlandite	40	35	35	43	33	35
Chalcopyrite	22	24	40	23	31	24
Fe-Sulphides	47	40	48	50	48	39
Hard Silicates	64	37	60	49	58	45
Soft Silicates	16	25	34	19	20	26
Carbonates	20	22	18	16	22	15
Oxides	14	15	15	13	14	30
Particle	55	39	59	50	56	44

4. Electron Microprobe Analysis

Electron Microprobe Analysis (EMPA) was conducted on pyrrhotite, pentlandite, pyrite, chalcopyrite, orthopyroxene, amphibole, clinopyroxene, biotite, chlorite, and talc to identify the chemical compositions of these minerals. This was carried out on the polished sections from the crushed samples.

The average elemental compositions (in weight percent) of pyrrhotite, pentlandite, pyrite and chalcopyrite are summarized in Table 13 to Table 16, and of orthopyroxene, amphibole, clinopyroxene, biotite, chlorite, and talc in Table 17 to Table 22. The complete EMPA report is presented in Appendix C.

The average nickel (Ni) content is 36.71% in pentlandite. Pyrrhotite carries an average of 0.64% Ni, which is high for pentlandite. Pyrite hosts 0.03% Ni. Nickel is near the detection limit of the instrument for chalcopyrite. In the non-sulphide minerals, trace nickel is carried in orthopyroxene 0.05%, amphibole 0.07%, clinopyroxene 0.04%, biotite 0.15%, chlorite 0.06%, and talc 0.09%. Cobalt (Co) is being carried in trace amounts within the pyrite (with an average of 0.83%) and pentlandite (with an average of 0.66%).

Table 13: Average Elemental Composition of Pyrrhotite (wt%)

Detection Limit	*0.06*	*0.03*	*0.01*	*0.02*	*0.02*	*0.03*	*0.03*	**No. of Analyses**
Minerals	**As**	**Ni**	**S**	**Fe**	**Co**	**Cu**	**Zn**	
Pyrrhotite	0.00	0.64	39.42	59.80	0.01	0.00	0.01	18

Table 14: Average Elemental Composition of Pentlandite (wt%)

Detection Limit	*0.06*	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.03*	**No. of Analyses**
Minerals	**As**	**Ni**	**S**	**Fe**	**Co**	**Cu**	**Zn**	
Pentlandite	0.00	36.71	33.17	29.22	0.66	0.00	0.00	16

Table 15: Average Elemental Composition of Pyrite (wt%)

Detection Limit	*0.06*	*0.02*	*0.01*	*0.02*	*0.02*	*0.02*	*0.03*	**No. of Analyses**
Minerals	**As**	**Ni**	**S**	**Fe**	**Co**	**Cu**	**Zn**	
Pyrite	0.00	0.03	53.37	45.66	0.83	0.01	0.00	14

Table 16: Average Elemental Composition of Chalcopyrite (wt%)

Detection Limit	*0.06*	*0.02*	*0.02*	*0.02*	*0.02*	*0.03*	*0.03*	**No. of Analyses**
Minerals	**As**	**Ni**	**S**	**Fe**	**Co**	**Cu**	**Zn**	
Chalcopyrite	0.00	0.02	35.03	30.37	0.00	34.05	0.03	15

Table 17: Average Elemental Composition of Orthopyroxene (wt%)

Detection Limit	*0.02*	*0.02*	*0.03*	*0.02*	*0.02*	*0.03*	*0.02*	*0.02*	*0.02*	*0.03*	*0.02*	**No. of Analyses**
Minerals	**Na**	**Mg**	**Cr**	**Ca**	**Fe**	**Si**	**Al**	**K**	**Mn**	**Ti**	**Ni**	
Orthopyroxene	0.00	15.71	0.08	0.31	13.71	25.18	0.74	0.01	0.34	0.03	0.05	16

Table 18: Average Elemental Composition of Amphibole (wt%)

Detection Limit	*0.02*	*0.02*	*0.03*	*0.02*	*0.02*	*0.03*	*0.02*	*0.02*	*0.02*	*0.03*	*0.02*	**No. of Analyses**
Minerals	**Na**	**Mg**	**Cr**	**Ca**	**Fe**	**Si**	**Al**	**K**	**Mn**	**Ti**	**Ni**	
Amphibole	0.67	10.31	0.26	8.26	7.39	23.07	4.10	0.44	0.17	0.38	0.07	33

Table 19: Average Elemental Composition of Clinopyroxene (wt%)

Detection Limit	*0.02*	*0.02*	*0.03*	*0.02*	*0.02*	*0.03*	*0.02*	*0.02*	*0.02*	*0.03*	*0.02*	**No. of Analyses**
Minerals	**Na**	**Mg**	**Cr**	**Ca**	**Fe**	**Si**	**Al**	**K**	**Mn**	**Ti**	**Ni**	
Clinopyroxene	0.34	9.18	0.23	16.54	4.60	24.49	1.25	0.01	0.15	0.15	0.04	10

Table 20: Average Elemental Composition of Biotite (wt%)

Detection Limit	*0.02*	*0.02*	*0.03*	*0.02*	*0.02*	*0.03*	*0.02*	*0.02*	*0.02*	*0.03*	*0.02*	**No. of Analyses**
Minerals	**Na**	**Mg**	**Cr**	**Ca**	**Fe**	**Si**	**Al**	**K**	**Mn**	**Ti**	**Ni**	
Biotite	0.09	9.89	0.36	0.00	10.50	17.49	9.47	7.69	0.07	0.67	0.15	12

Table 21: Average Elemental Composition of Chlorite (wt%)

Detection Limit	*0.02*	*0.02*	*0.03*	*0.02*	*0.02*	*0.03*	*0.02*	*0.02*	*0.02*	*0.03*	*0.02*	**No. of Analyses**
Minerals	**Na**	**Mg**	**Cr**	**Ca**	**Fe**	**Si**	**Al**	**K**	**Mn**	**Ti**	**Ni**	
Chlorite	0.01	9.30	0.33	0.11	20.57	13.91	8.86	0.01	0.15	0.02	0.06	7

Table 22: Average Elemental Composition of Talc (wt%)

Detection Limit	*0.02*	*0.02*	*0.03*	*0.02*	*0.02*	*0.03*	*0.02*	*0.02*	*0.02*	*0.03*	*0.02*	**No. of Analyses**
Minerals	**Na**	**Mg**	**Cr**	**Ca**	**Fe**	**Si**	**Al**	**K**	**Mn**	**Ti**	**Ni**	
Talc	0.04	17.46	0.06	0.01	2.88	28.38	0.50	0.02	0.01	0.02	0.09	4

5. Nickel Deportment

The elemental distribution of nickel in the composite sample is presented below (Figure 5). The elemental distribution data are given in weight percent. Nickel deportment calculations are based on the EMPA. The absolute data are presented in Appendix E.

In the Box12.MQ-2014-070-53.40-53.50m sample, nickel is predominantly carried in the pentlandite (93.1%) and pyrrhotite (6.3%), with trace amounts (<1%) present in orthopyroxene, amphibole, clinopyroxene, pyrite, biotite/phlogopite, talc, and chlorite.

In the Box17.MQ-2014-054-71.10-71.26m sample, nickel is predominantly carried in the pentlandite (91.2%) and pyrrhotite (8.7%), with trace amounts (<1%) present in biotite/phlogopite, chlorite, pyrite, amphibole, orthopyroxene, talc, and clinopyroxene.

In the Box21.MQ-2014-041-88.90-89.00m sample, nickel is predominantly carried in the pentlandite (91.8%), orthopyroxene (3.4%), amphibole (2.1%) and pyrrhotite (1.8%), with trace amounts (<1%) present in biotite/phlogopite, pyrite, talc, clinopyroxene, and chlorite.

In the Box22.MQ-2014-071-94.35-94.50m sample, nickel is predominantly carried in the pentlandite (90.1%), pyrrhotite (7.4%) and amphibole (1.7%), with trace amounts (<1%) present in orthopyroxene, biotite/phlogopite, clinopyroxene, pyrite, talc, and chlorite.

In the Box28.MQ-2014-070-119.90-120.00m sample, nickel is predominantly carried in the pentlandite (91.1%), pyrrhotite (5.2%) and orthopyroxene (2.5%), with trace amounts (<1%) present in amphibole, biotite/phlogopite, pyrite, talc, clinopyroxene, and chlorite.

In the Box30.MQ-2014-066-133.90-134.00m sample, nickel is predominantly carried in the pentlandite (92.6%) and pyrrhotite (6.4%), with trace amounts (<1%) present in amphibole, orthopyroxene, talc, clinopyroxene, pyrite, biotite/phlogopite, and chlorite.

	Box12.MQ-2014-070-53.40-53.50m:	Box17.MQ-2014-054-71.10-71.26m:	Box21.MQ-2014-041-88.90-89.00m:	Box22.MQ-2014-071-94.35-94.50m:	Box28.MQ-2014-070-119.90-120.00m:	Box30.MQ-2014-066-133.90-134.00m:
Chlorite	0.00	0.04	0.00	0.00	0.00	0.00
Talc	0.01	0.00	0.06	0.02	0.06	0.13
Biotite/Phlogopite	0.03	0.05	0.83	0.12	0.19	0.02
Amphibole	0.09	0.02	2.06	1.67	0.84	0.44
Clinopyroxene	0.04	0.00	0.04	0.09	0.03	0.11
Orthopyroxene	0.45	0.01	3.40	0.57	2.48	0.28
Pyrite	0.04	0.03	0.07	0.02	0.07	0.03
Pyrrhotite	6.25	8.69	1.75	7.43	5.24	6.44
Pentlandite	93.1	91.2	91.8	90.1	91.1	92.6

Figure 5: Nickel Deportment (Normalized)

6. Cobalt Deportment

The elemental distribution of cobalt in the composite samples is presented below (Figure 6). The elemental distribution data are given in weight percent. Cobalt deportment calculations are based on the EMPA data. The absolute data is presented in Appendix E.

In the Box12.MQ-2014-070-53.40-53.50m sample, cobalt is predominantly carried in the pentlandite (64.5%) with the remainder in the pyrite (35.5%).

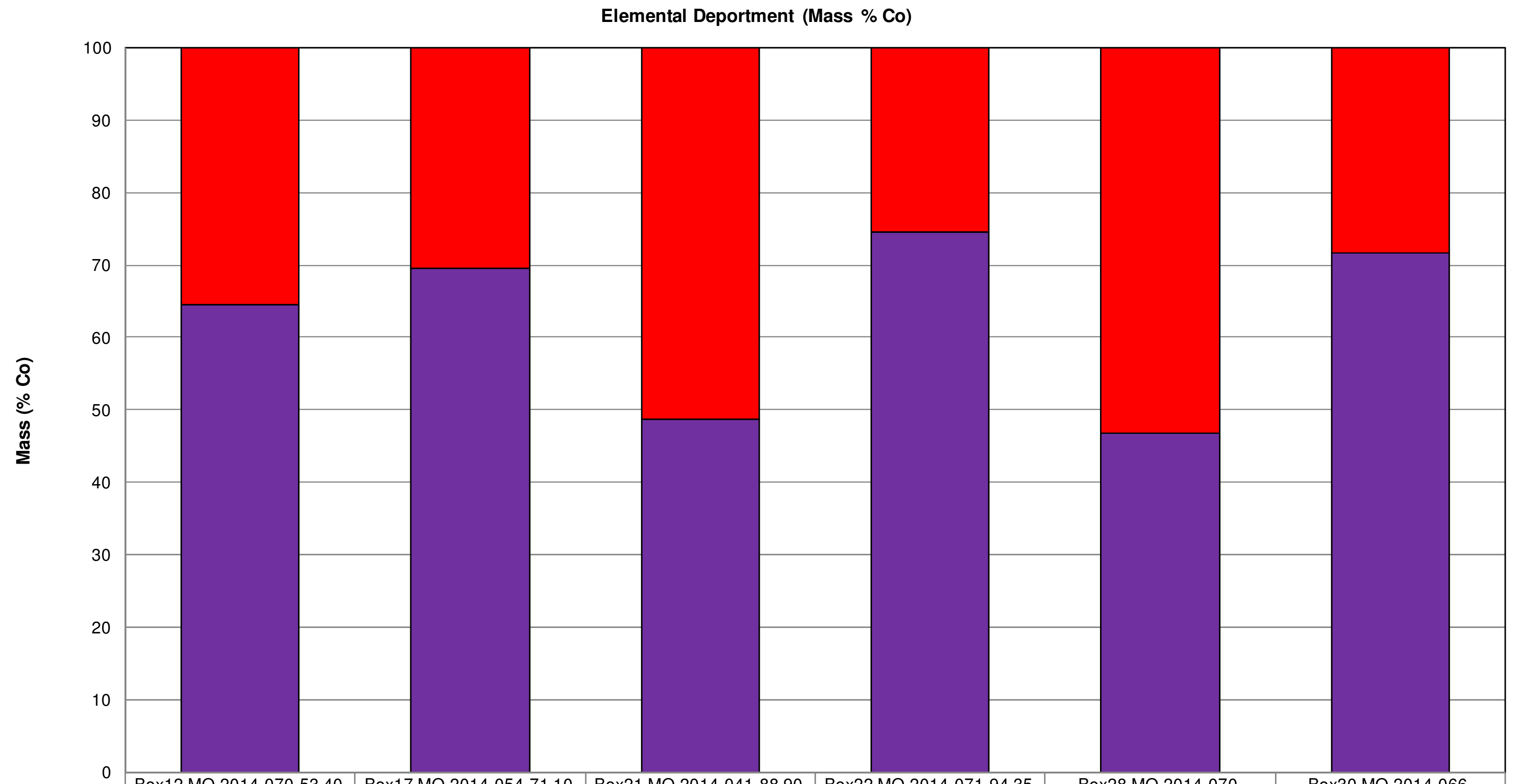
In the Box17.MQ-2014-054-71.10-71.26m sample, cobalt is predominantly carried in the pentlandite (69.6%) with the remainder in the pyrite (30.4%).

In the Box21.MQ-2014-041-88.90-89.00m sample, cobalt is carried in both the pyrite and the pentlandite with 48.7% and 51.3%, respectively.

In the Box22.MQ-2014-071-94.35-94.50m sample, cobalt is predominantly carried in the pentlandite (74.6%) with the remainder in the pyrite (25.4%).

In the Box28.MQ-2014-070-119.90-120.00m sample, cobalt is carried in both the pyrite and the pentlandite with 46.7% and 53.3%, respectively.

In the Box30.MQ-2014-066-133.90-134.00m sample, cobalt is predominantly carried in the pentlandite (71.7%) with the remainder in the pyrite (28.3%).



	Box12.MQ-2014-070-53.40-53.50m:	Box17.MQ-2014-054-71.10-71.26m:	Box21.MQ-2014-041-88.90-89.00m:	Box22.MQ-2014-071-94.35-94.50m:	Box28.MQ-2014-070-119.90-120.00m:	Box30.MQ-2014-066-133.90-134.00m:
Pyrite	35.5	30.4	51.3	25.4	53.3	28.3
Pentlandite	64.5	69.6	48.7	74.6	46.7	71.7

Figure 6: Cobalt Deportment (Normalized)

7. Copper Deportment

All of the copper in the composite samples is carried by chalcopyrite.

8. Potential Recovery

The potential recovery characteristics of the pentlandite and chalcopyrite are presented below. All data are in weight percent and are based on the samples being stage pulverized to 90% passing 150 µm.

Potential recovery is the percent of the mineral that can potentially be recovered through flotation. It is calculated using the liberation, association and exposure of the grains (on a two dimensional surface area) and is used as a predictive tool based on these characteristics. This data should only be used as a guide to benchmark sample to sample from a rougher recovery perspective. It is important to note that these results are based on the mineralogical analysis and do not reflect any other recovery factors that could occur in the actual metallurgical processes.

Potential Recovery Classification Terminology

<u>Grouped under Recoverable Particles</u>

- Pure → 100% of the particle is the mineral of interest
- Free → >= 95% of the particle is of the mineral of interest
- Liberated → >=80% of the particle is of the mineral of interest
- Mineral of Interest: Fe Sulphide >20% Exposed → Mineral plus pyrite are >95% of the particle with the mineral of interest having >=20% exposure
- Mineral of Interest: Hard Silicates → Mineral of Interest plus Hard Silicates are >=95% of the particle area with the mineral of interest having >=50% exposure
- Recoverable – Complex Grains → Mineral of interest plus two or more other mineral groups with the mineral of interest having >=20% exposure

<u>Grouped under Non Recoverable Particles</u>

- Mineral of Interest: Fe Sulphide <20% Exposed/locked → Mineral plus pyrite are >95% of the particle with the mineral of interest having <20% exposure
- Non Recoverable – Exposed → Mineral of interest having <20% exposure

- Non Recoverable – Locked → Mineral of interest being totally locked

It is important to note that when minerals are present in trace amounts (about <0.5 wt.%), statistical data may not be adequate to calculate the liberation, association and exposure and must be taken with caution.

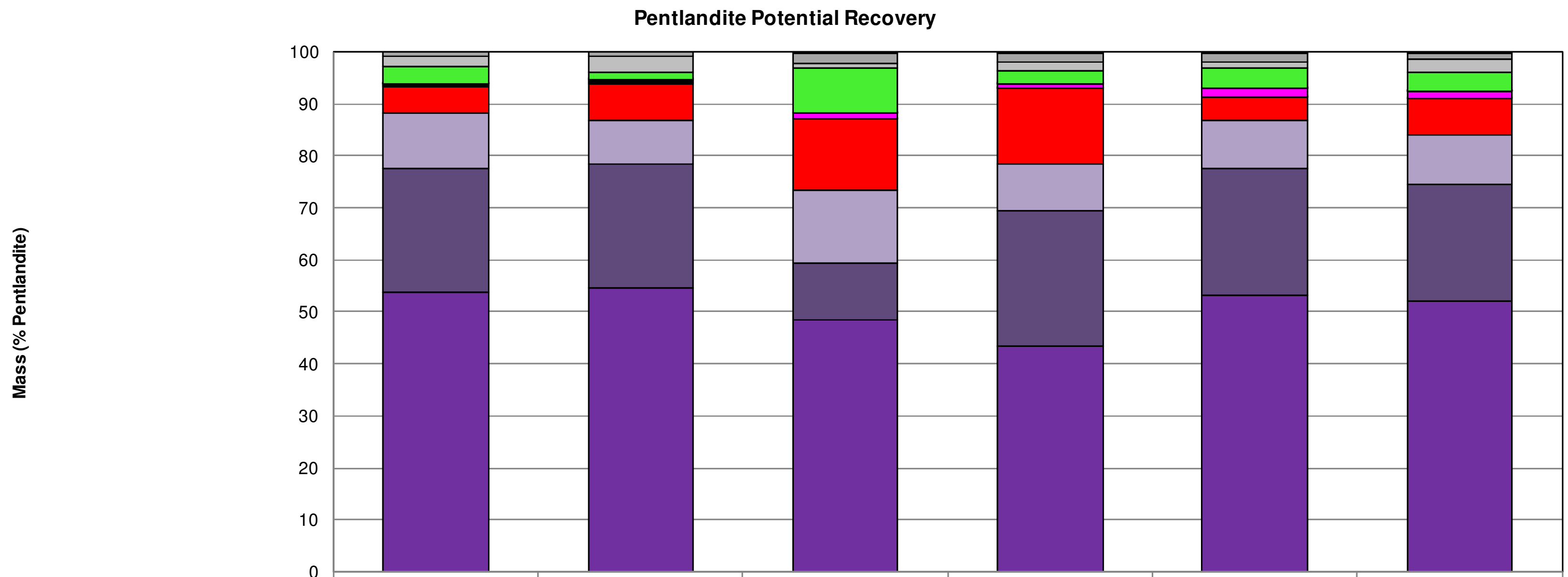
8.1. Pentlandite

The potential recovery of the pentlandite in the samples is summarized in Table 23 and Figure 7. Pentlandite potential recovery image grids and particle maps are presented in Figure 8 and Figure 9, respectively. The absolute data is presented in Appendix E.

At this grind size, between 96-97% of the pentlandite will be recovered to a rougher concentrate across all samples. Most of the remaining non-recoverable pentlandite is associated with the iron sulphides (0.9-2.9%) or is poorly exposed (0.9-2%) with <0.5% locked.

Table 23: Pentlandite Overall Potential Recovery

Mineral	Potential Recovery	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Pentlandite	Potentially Recoverable	97.2	96.1	96.8	96.5	96.8	96.1
	Fe Sul <20% Exp/Lkd (Non Rec)	1.81	2.90	0.88	1.50	1.12	2.39
	Non Recoverable - Exposed	0.86	0.90	2.09	1.66	1.93	1.31
	Non Recoverable - Locked	0.08	0.07	0.19	0.38	0.16	0.22



	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Non Recoverable - Locked	0.08	0.07	0.19	0.38	0.16	0.22
Non Recoverable - Exposed	0.86	0.90	2.09	1.66	1.93	1.31
Pent:Fe Sul <20% Exp/Lkd (Non Rec)	1.81	2.90	0.88	1.50	1.12	2.39
Recoverable - Complex Grains	3.38	1.56	8.60	2.66	3.69	3.60
Pent:Oxides (Rec)	0.00	0.00	0.00	0.00	0.00	0.01
Pent:Carbonates (Rec)	0.06	0.01	0.02	0.02	0.07	0.02
Pent:Soft Silicates (Rec)	0.04	0.28	0.04	0.07	0.05	0.03
Pent:Hard Silicates (Rec)	0.30	0.07	0.95	0.61	1.53	1.33
Pentlandite:Chalcopyrite (Rec)	0.31	0.26	0.12	0.07	0.22	0.18
Pent:Fe Sul >20% Exp (Rec)	4.92	7.24	13.6	14.6	4.37	6.84
Lib Pentlandite	10.7	8.32	14.3	9.14	9.32	9.68
Free Pentlandite	23.7	23.9	10.8	26.0	24.3	22.3
Pure Pentlandite	53.8	54.5	48.5	43.3	53.3	52.1

Figure 7: Potential Recovery of Pentlandite (Normalized)

Figure 8: Image Grid of Pentlandite Potential Recovery

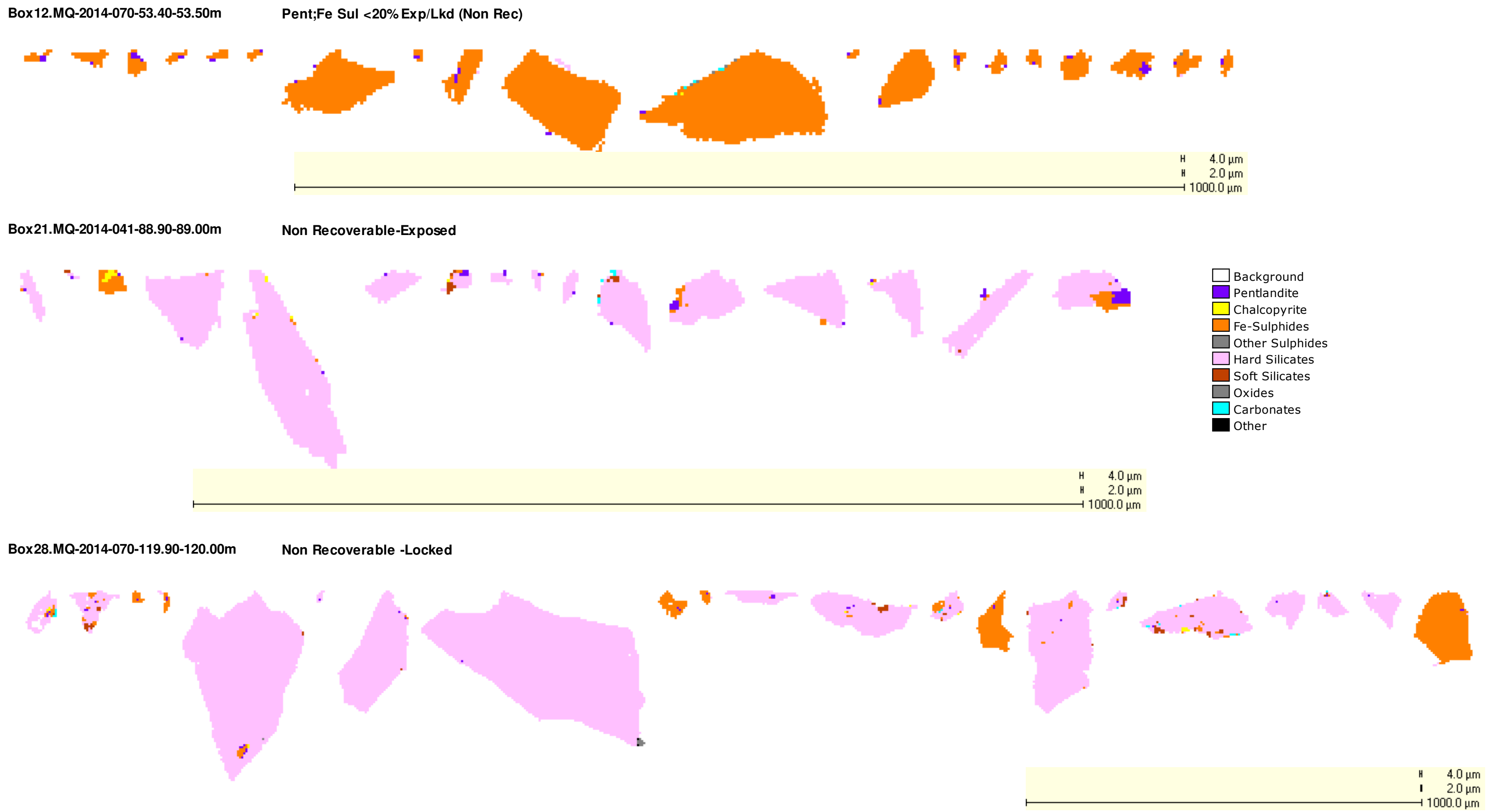


Figure 9: Particle Maps of Pentlandite Potential Recovery

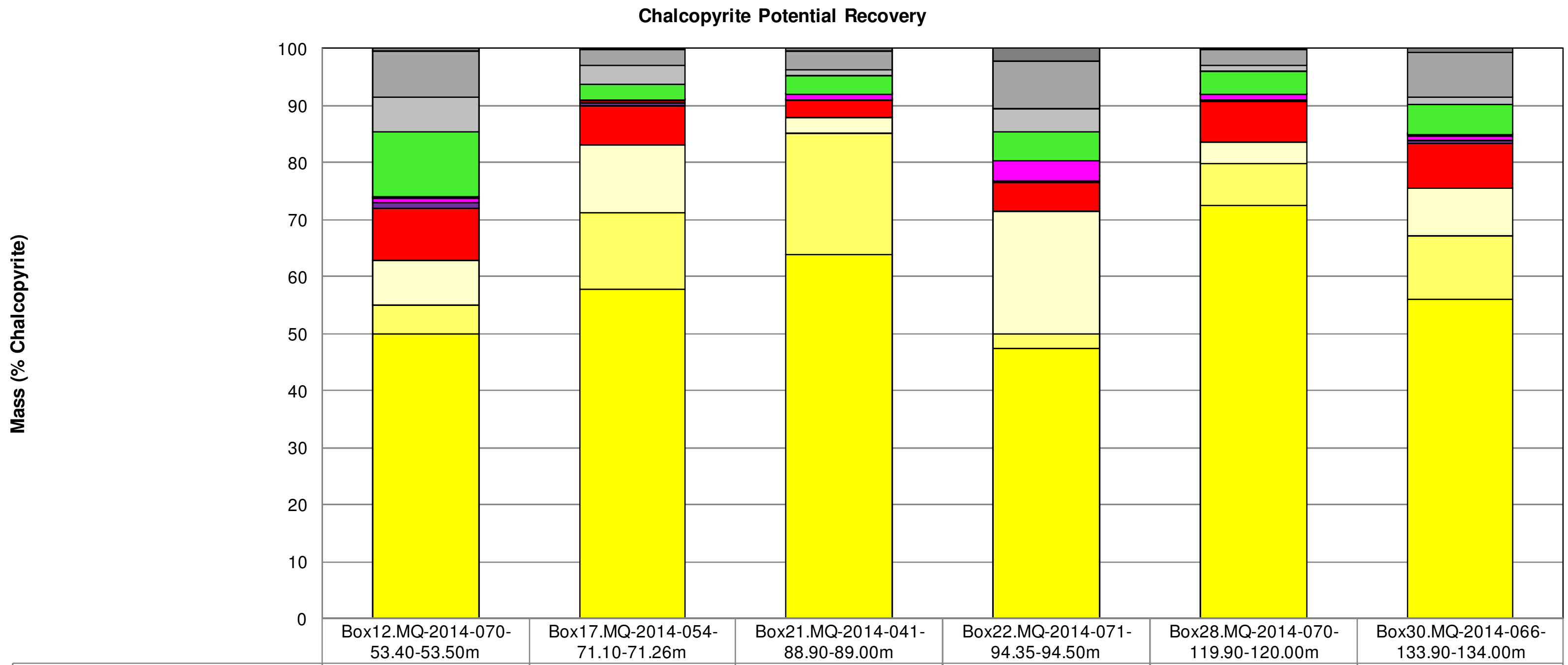
8.2. Chalcopyrite

The potential recovery of the chalcopyrite in the samples is summarized in Table 24 and Figure 10. Chalcopyrite potential recovery image grids and particle maps are presented in Figure 11 and Figure 12, respectively. The absolute data is presented in Appendix E.

At this grind size, between 85-96% of the chalcopyrite will be recovered to a rougher concentrate across all samples. Most of the remaining non-recoverable chalcopyrite is associated with the iron sulphides (1-6%) or is poorly exposed (2.8-8.3%) with 0.11 to 2.5% locked.

Table 24: Chalcopyrite Overall Potential Recovery

Mineral	Potential Recovery	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Chalcopyrite	Potentially Recoverable	85.4	93.9	95.2	85.4	96.0	90.3
	Fe Sul <20% Exp/Lkd (Non Rec)	5.98	3.06	1.06	4.17	1.04	1.21
	Non Recoverable - Exposed	8.29	2.80	3.41	8.20	2.81	7.74
	Non Recoverable - Locked	0.31	0.24	0.30	2.25	0.11	0.72



	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Non Recoverable - Locked	0.31	0.24	0.30	2.25	0.11	0.72
Non Recoverable - Exposed	8.29	2.80	3.41	8.20	2.81	7.74
Cpy:Fe Sul <20% Exp/Lkd (Non Rec)	5.98	3.06	1.06	4.17	1.04	1.21
Recoverable - Complex Grains	11.5	2.83	3.20	4.92	3.95	5.42
Cpy:Oxides (Rec)	0.00	0.04	0.00	0.00	0.00	0.03
Cpy:Carbonates (Rec)	0.07	0.00	0.00	0.00	0.06	0.06
Cpy:Soft Silicates (Rec)	0.04	0.52	0.14	0.00	0.01	0.04
Cpy:Hard Silicates (Rec)	0.78	0.00	0.78	3.63	0.97	0.98
Cpy:Pent (Rec)	1.12	0.59	0.22	0.13	0.21	0.29
Cpy:Fe Sul >20% Exp (Rec)	9.03	6.73	3.03	5.27	7.10	8.01
Lib Cpy	7.72	11.8	2.81	21.5	3.95	8.38
Free Cpy	5.05	13.5	21.1	2.39	7.17	11.1
Pure Cpy	50.1	57.9	64.0	47.5	72.6	56.0

Figure 10: Potential Recovery of Chalcopyrite (Normalized)

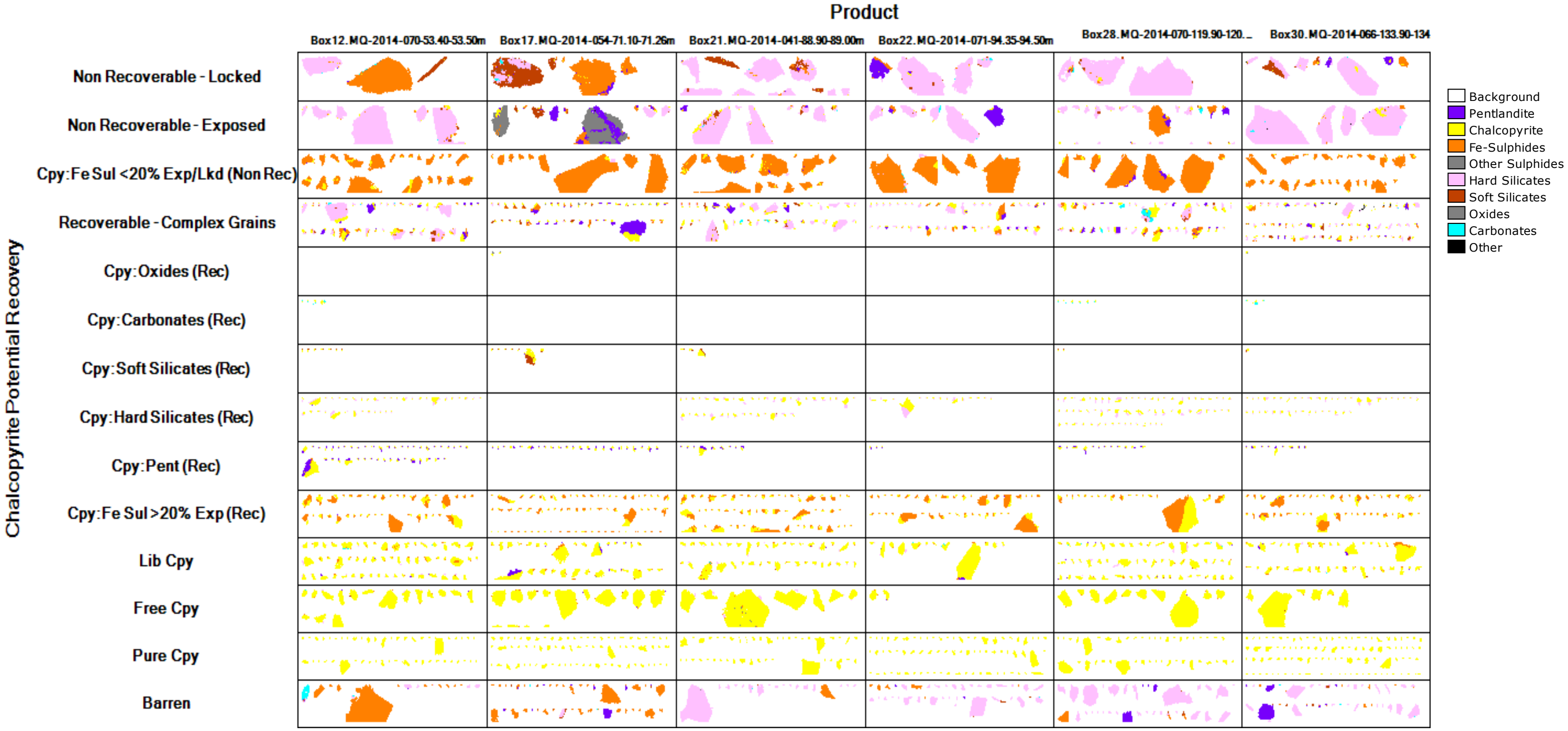


Figure 11: Image Grid of Chalcopyrite Potential Recovery

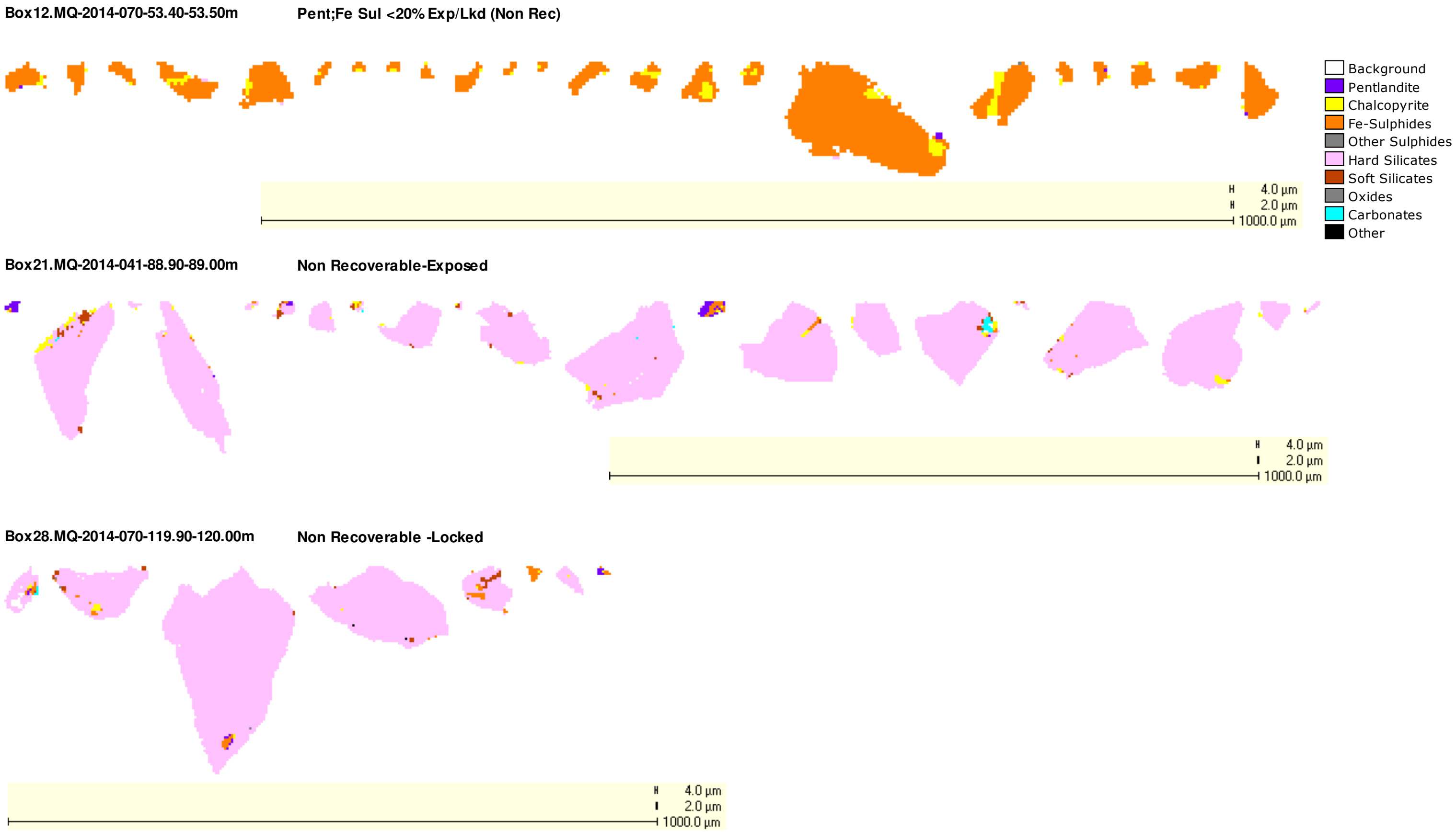


Figure 12: Particle Maps of Chalcopyrite Potential Recovery

9. Metallurgical Commentary

Mineral Effect

Recovery of sulphide copper and nickel is performed by flotation. By reviewing baseline mineralogical data, theoretical process models are established and potential complications identified. The modal abundances help identify complexities within the mineral matrix (Table 25).

Host minerals containing payable metals that are targeted for recovery include pentlandite and chalcopyrite.

Table 25: Modal Commentary

Composite Head Modal Mineral Mass (%)						
Modal	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Pentlandite	9.21	12.7	1.85	3.53	2.59	7.28
Chalcopyrite	1.50	1.17	1.60	0.32	1.57	1.02
Pyrrhotite	35.4	69.2	2.02	16.7	8.52	29.0
Pyrite	4.02	4.40	1.55	0.95	2.34	2.27
Talc	0.51	0.03	0.46	0.27	0.65	4.02
Quartz	0.14	1.08	0.09	0.79	0.29	0.24
Feldspars	2.79	2.44	10.3	20.7	11.4	10.7
Orthopyroxene	36.8	0.57	56.1	18.4	57.5	18.2
Clinopyroxene	3.32	0.02	0.67	3.21	0.76	8.15
Amphibole	4.52	1.43	20.7	32.6	11.9	17.1
Biotite/Phlogopite	0.78	1.78	4.01	1.13	1.32	0.33
Chlorite	0.05	3.45	0.04	0.08	0.03	0.05
Other Silicates	0.07	0.22	0.08	0.04	0.10	0.12
Carbonates	0.82	0.72	0.41	1.30	0.76	1.14
Oxides	0.09	0.16	0.09	0.06	0.08	0.24
Apatite	0.02	0.02	0.06	0.04	0.16	0.14
Other	0.00	0.56	0.01	0.01	0.01	0.01
Total	100	100	100	100	100	100

Upon review of the samples included within the study, there is no apparent non-sulphide mineral species that could impact mineral process performance in terms of reactive minerals that exhibit natural hydrophobic properties or alter pulp rheology with the exception of talc in sample Box30.MQ-2014-066-133.90-134.00m. The presence of sulphide gangue is massive in nature with high levels of pyrrhotite and pyrite both of which will need to be managed as they will be readily collected by reagents used to recover both pentlandite and chalcopyrite.

From a mineral processing perspective there are two main flowsheet options for recovery of Cu/Ni:

a) Full sequential Cu followed by Ni
b) Bulk Cu/Ni followed by separation

Other specialty flowsheets which could be considered would include a hybrid of the above. Specific discussion follows in context of mineral texture.

Rougher Performance Expectations

To successfully produce selective copper and nickel concentrates understanding the degree of liberation and association of the non liberated particles of interest must be understood; this is a factor that is dependent on grind size distribution typically improving from coarse to fine sizes. The current mineralogy study was completed at a particle size of 90% passing 150 µm translating to approximately 135-145 µm on a k_{80} basis with association of copper and nickel minerals provided by Table 26 and Table 27 respectively.

Table 26: Copper Association

Mineral Name	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Pure Cpy	50.1	57.9	64.0	47.5	72.6	56.0
Free Cpy	5.05	13.5	21.1	2.39	7.17	11.1
Lib Cpy	7.72	11.8	2.81	21.5	3.95	8.38
Cpy:Fe Sul	15.1	9.95	4.09	11.1	8.15	9.27
Cpy:Pent	3.41	2.36	0.28	1.18	0.48	1.17
Cpy:Fe Sul:Pent	8.17	1.34	2.70	2.05	1.50	1.39
Cpy:Hard Silicates	4.20	0.14	3.02	8.97	2.80	5.35
Cpy:Soft Silicates	0.09	0.65	0.20	0.00	0.02	0.13
Cpy:Carb	0.13	0.02	0.03	0.00	0.12	0.10
Cpy:Oxides	0.00	0.06	0.00	0.00	0.00	0.03
Complex	6.02	2.28	1.83	5.33	3.19	7.06
Total	100	100	100	100	100	100
Liberated	**62.9**	**83.2**	**87.9**	**71.4**	**83.7**	**75.5**
Expected Cu Recovery	**89.6**	**96.9**	**94.9**	**85.7**	**93.9**	**87.3**

Table 27: Nickel Association

Mineral Name	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Pure Pent	53.8	54.5	48.5	43.3	53.3	52.1
Free Pent	23.7	23.9	10.8	26.0	24.3	22.3
Lib Pent	10.7	8.32	14.3	9.14	9.32	9.68
Pent:Fe Sul	6.80	10.2	14.5	16.4	5.53	9.37
Pent:Cpy	0.46	0.34	0.20	0.15	0.30	0.23
Pent:Cpy:Fe Sul	1.92	0.20	5.87	0.36	1.85	0.46
Pent:Hard Silicates	0.99	0.18	2.38	1.97	3.02	2.41
Pent:Soft Silicates	0.06	0.50	0.17	0.07	0.07	0.07
Pent:Carb	0.07	0.02	0.02	0.32	0.07	0.03
Pent:Oxides	0.00	0.01	0.00	0.00	0.00	0.01
Complex	1.46	1.84	3.34	2.23	2.31	3.35
Total	100	100	100	100	100	100
Liberated	**88.2**	**86.7**	**73.5**	**78.5**	**86.9**	**84.1**
Expected Ni Misplacement	**2.38**	**0.54**	**6.07**	**0.51**	**2.15**	**0.69**

Opportunity to float a sequential copper followed by nickel depends on the degree of nickel associated copper as outlined by Table 27 and highlighted under the 'Expected Ni Misplacement' line; suggesting theoretical misplacement as low as 0.54% for sample from Box17.MQ-2014-054-71.10-71.26m and as high as 6.1% with Box21.MQ-2014-041-88.90-89.00m material. This is relatively promising but in reality misplacement will generally be higher; however this is suitable in suggesting an independent copper concentrate can be produced.

Considering rougher performance, it should be expected to see rougher recoveries nearing 90% for both copper and nickel (recovery of nickel sulphides, see deportment of nickel outlined by Figure 5) if selecting a primary grind around 140 microns or finer which is comparable to similar projects of this mineralogical type.

Cleaner Circuit Considerations

Metallurgical factors that can be controlled in contributing an achievable saleable final concentrate specification in terms of copper or nickel levels are driven by:

- Regrinding of rougher concentrates to a required size that liberates both Ni and Cu sulphides
- Controlling free floating gangue; both iron sulphides and non-sulphide

By considering mineral grain sizes for both chalcopyrite and pentlandite, regrind targets for either a bulk or sequential flowsheet can be recommended. Data highlighted in Table 28 suggest regrinding to ~25 microns is suitable for pentlandite but a finer regrind of between 15-20 microns is required for chalcopyrite.

Table 28: Regrind Targets

	Composite Head Modal Mineral Mass (%)					
Modal	**Box12.MQ-2014-070-53.40-53.50m**	**Box17.MQ-2014-054-71.10-71.26m**	**Box21.MQ-2014-041-88.90-89.00m**	**Box22.MQ-2014-071-94.35-94.50m**	**Box28.MQ-2014-070-119.90-120.00m**	**Box30.MQ-2014-066-133.90-134.00m**
Pentlandite	23.1	20.3	20.6	24.1	20.8	20.5
Chalcopyrite	14.9	16.0	23.3	15.8	19.0	15.8
Pyrrhotite	26.5	24.4	18.8	27.7	22.7	22.4
Pyrite	22.6	17.2	30.9	20.3	30.9	17.4
Quartz	21.6	26.7	11.8	19.6	24.2	18.3
Feldspars	31.2	25.3	33.5	31.9	32.1	31.4
Orthopyroxene	31.7	8.37	32.4	16.9	31.2	15.5
Clinopyroxene	32.1	10.4	14.6	20.6	15.3	27.6
Amphibole	23.4	18.8	26.5	25.3	24.3	22.3
Biotite/Phlogopite	16.9	19.1	23.1	16.0	19.5	12.3
Talc	9.78	7.26	10.1	9.47	9.44	18.9
Chlorite	8.23	14.9	6.37	8.02	6.37	7.69
Other Silicates	6.55	7.35	6.58	6.20	6.60	6.89
Carbonates	13.4	15.3	11.8	11.4	14.0	10.6
Oxides	8.88	9.56	10.5	9.32	9.03	16.9
Apatite	20.4	20.4	27.7	17.3	29.7	22.8
Other	7.18	17.2	8.87	7.34	9.38	8.36

Final Considerations

The level of iron sulphides for all samples will need to be carefully monitored and steps must be taken to control mass recovery. Pyrrhotite content is high for all samples and carries the ability to intrinsically oxidize nickel sulphides diminishing recovery.

Controlling mass recovery:

- Iron sulphides: pH control with lime or soda ash
- Talc rejection: CMC type depressants, most effectively added within the cleaner circuits

Pyrrhotite interference:

- Pulp galvanic properties during grinding can negatively impact flotation both from an oxygen depletion and demand perspective and the oxidation of sulphides.

- Grinding with stainless steel media and mild steel shells have shown to improve bench scale performance.

Conclusions

- Sulphides identified in the samples include pyrrhotite (2-69%), pentlandite (2-13%), pyrite (1-4%), and chalcopyrite (0.3-2%).

- Orthopyroxene, amphibole and feldspar are the major silicates, with minor clinopyroxene, mica, and chlorite, and trace other minerals. Talc was noted as a minor mineral in sample Box30.MQ-2014-066-133.90-134.00m, this was confirmed by XRD analysis.

- The identification of talc within sample Box30.MQ-2014-066-133.90-134.00m could have a potential impact on the recovery of the pentlandite through flotation because it will be recovered along with the sulphides due to its hydrophobic characteristics, unless it is managed. Trace to very trace amounts were found in the other samples, which could also have a potential impact, but note that this is a tentative identification; as it can be an alteration product of the pyroxenes and has similar chemistry. Optical microscopy using polished thin sections as confirmation would be recommended which is outside the scope of this work.

- For the crushed samples, the medium grain size (D_{50}) for pentlandite ranges from 33 µm to 43 µm, for chalcopyrite its 22 µm to 40 µm and Fe sulphides (pyrite and pyrrhotite) its 39 µm to 50 µm. For the overall particle size its 39 µm to 56 µm.

- EMPA was used to determine the elemental composition of the pyrrhotite, pentlandite, pyrite, chalcopyrite, orthopyroxene, amphibole, clinopyroxene, biotite, chlorite and talc, in order to define the deportment of nickel and cobalt.

- Using the QEMSCAN and EMPA data to evaluate nickel and cobalt deportment, pentlandite was found to carry over 90% of nickel and on average 63% of the cobalt in the samples. Pyrrhotite also carries significant amounts of nickel with an average of 6% and an average of 37% of the cobalt. Chalcopyrite carries 100% of the copper in the samples.

- Nickel is also found in the silicates across the samples with amphibole averaging 0.64%, biotite averaging 0.2% and orthopyroxene averaging 1.2% with Box21.QQ-2014-041-88.89.00m accounting for the majority at 3.4%.

- At 90% passing 150 µm, the majority of pentlandite (averaging 97%) is potentially recoverable to the rougher concentrate, with approximately 3% non-recoverable (lost to the rougher tails), composed of 2.5% poorly exposed and <0.5% locked in the samples.

- Chalcopyrite also shows a high recovery to the rougher concentrate at an average of 91%, with approximately 9% of non-recoverable (lost to the rougher tails), composed of 6.5% poorly exposed and <2.5% locked in the samples.

Notes:

It must be noted, that due to the difference in grain size, all size fractions contain particles that are close to the measurement area (~3 µm) and the spacing of the measurement points and therefore can encounter less precision in the measurements. In addition, the X-ray beam can scatter at the edges of particles and can lead to inaccurate analytical results. As the particles become smaller, the edges constitute a larger percentage of the total particle mass. Therefore, some bias might be introduced, especially in the fine fraction, and caution is advised in interpreting the results in this particular fraction.

Appendix A – Certificate of Analysis

Certificate of Analysis

Work Order : VC143714

[Report File No.: 0000009666]

To: Morgan Gibson-Wright
F400101 SGS CANADA INC
3260 PRODUCTION WAY
BURNABY BC V5A 4W4

Date: Dec 02, 2014

P.O. No.	:	AMF/MI7006-NOV14
Project No.	:	CAVM-14021-102
No. Of Samples	:	6
Date Submitted	:	Nov 26, 2014
Report Comprises	:	Pages 1 to 4 (Inclusive of Cover Sheet)

Distribution of unused material:
Active files:

Certified By : ______________________

Cam Chiang
Assistant Operations Manager

SGS Minerals Services Geochemistry Vancouver conforms to the requirements of ISO/IEC 17025 for specific tests as listed on their scope of accreditation which can be found at http://www.scc.ca/en/search/palcan/sgs

Report Footer:

L.N.R.	= Listed not received	I.S.	= Insufficient Sample
n.a.	= Not applicable	--	= No result

*INF = Composition of this sample makes detection impossible by this method

M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion

Methods marked with an asterisk (e.g. *NAA08V) were subcontracted
Elements marked with the **@** symbol (e.g. @Cu) denote assays performed using accredited test methods

Final : VC143714 Order: AMF/MI7006-NOV14

Report File No.: 0000009666

Element	S	Co	Cu	Ni	LOI	SiO2	Al2O3	Fe2O3
Method	GC_CSA06V	GO_XRF77B	GO_XRF77B	GO_XRF77B	GO_XRF76V	GO_XRF76V	GO_XRF76V	GO_XRF76V
Det.Lim.	0.005	0.01	0.01	0.01	-10.000	0.01	0.01	0.01
Units	%	%	%	%	%	%	%	%
Box12.MQ-2014-070-53.40-53.50m	19.6	0.11	0.52	3.69	7.84	26.6	1.93	45.5
Box17.MQ-2014-054-71.10-71.26m	34.7	0.15	0.40	5.60	13.7	6.60	1.75	69.4
Box21.MQ-2014-041-88.90-89.00m	2.48	0.02	0.43	0.74	0.902	48.1	6.84	18.2
Box22.MQ-2014-071-94.35-94.50m	7.78	0.04	0.11	1.35	3.61	41.7	9.52	22.4
Box28.MQ-2014-070-119.90-120.00m	5.50	0.04	0.47	1.05	2.10	45.7	5.61	22.4
Box30.MQ-2014-066-133.90-134.00m	15.4	0.08	0.31	2.71	6.75	32.4	4.98	35.2

Element	MgO	CaO	K2O	Na2O	TiO2	MnO	P2O5	Cr2O3
Method	GO_XRF76V	GO_XRF76V	GO_XRF76V	GO_XRF76V	GO_XRF76V	GO_XRF76V	GO_XRF76V	GO_XRF76V
Det.Lim.	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Units	%	%	%	%	%	%	%	%
Box12.MQ-2014-070-53.40-53.50m	11.4	1.87	0.11	0.46	0.08	0.20	0.02	0.12
Box17.MQ-2014-054-71.10-71.26m	1.10	0.81	0.28	0.37	0.03	0.03	0.01	0.04
Box21.MQ-2014-041-88.90-89.00m	17.9	4.27	0.60	1.20	0.20	0.22	0.03	0.26
Box22.MQ-2014-071-94.35-94.50m	10.1	7.81	0.23	1.76	0.21	0.18	0.05	0.12
Box28.MQ-2014-070-119.90-120.00m	17.4	3.27	0.22	1.14	0.31	0.22	0.08	0.24
Box30.MQ-2014-066-133.90-134.00m	9.58	6.19	0.09	0.91	0.22	0.12	0.07	0.11

SGS

Final : VC143714 Order: AMF/MI7006-NOV14

Report File No.: 0000009666

Element	V2O5	Sum
Method	GO_XRF76V	GO_XRF76V
Det.Lim.	0.01	0
Units	%	%
Box12.MQ-2014-070-53.40-53.50m	<0.01	96.1
Box17.MQ-2014-054-71.10-71.26m	0.01	94.2
Box21.MQ-2014-041-88.90-89.00m	0.02	98.6
Box22.MQ-2014-071-94.35-94.50m	0.02	97.8
Box28.MQ-2014-070-119.90-120.00m	0.02	98.7
Box30.MQ-2014-066-133.90-134.00m	0.02	96.6

Appendix B – XRD Analysis

SGS

Qualitative X-Ray Diffraction

Report Prepared for:	*North American Nickel*
Project Number/ LIMS No.	*14021-102/MI4525-JAN15*
Sample Receipt:	*January 30, 2015*
Sample Analysis:	*February 3,2015*
Reporting Date:	*February 9, 2015*

Instrument:	BRUKER AXS D8 Advance Diffractometer
Test Conditions:	Co radiation, 40 kV, 35 mA Regular Scanning: Step: 0.02°, Step time:0.2s, 2θ range: 3-70°
Interpretations :	PDF2/PDF4 powder diffraction databases issued by the International Center for Diffraction Data (ICDD). DiffracPlus Eva software.
Detection Limit :	0.5-2%. Strongly dependent on crystallinity.

Contents:

1) Method Summary
2) Summary of Mineral Asemblages
3) XRD Pattern(s)

Sarah Prout, Ph.D.
Senior Mineralogist

Huyun Zhou, Ph.D., P.Geo.
Senior Mineralogist

ACCREDITATION: SGS Minerals Services Lakefield is accredited to the requirements of ISO/IEC 17025 for specific tests as listed on our scope of accreditation, including geochemical, mineralogical and trade mineral tests. To view a list of the accredited methods, please visit the following website and search SGS Canada - Minerals Services - Lakefield: http://palcan.scc.ca/SpecsSearch/GLSearchForm.do.

Method Summary

The Qualitative Mineral Identification By XRD (ME-LR-MIN-MET-MN-D01) method used by SGS Minerals Services is accredited to the requirements of ISO/IEC 17025.

Mineral Identification and Interpretation:

Mineral identification and interpretation involve matching the diffraction pattern of an unknown test sample to patterns of single-phase reference materials. The reference patterns are compiled by the Joint Committee on Powder Diffraction Standards - International Center for Diffraction Data (JCPDS-ICDD) and released on software as a database of Powder Diffraction Files (PDF).

Interpretations do not reflect the presence of non-crystalline and/or amorphous compounds. Mineral proportions are based on relative peak heights and may be strongly influenced by crystallinity, structural group or preferred orientations. Interpretations and relative proportions should be accompanied by supporting petrographic and geochemical data (Whole Rock Analysis, Inductively Coupled Plasma - Optical Emission Spectroscopy, etc.).

SGS Minerals
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Member of the SGS Group (SGS SA)

Summary of Qualitative X-ray Diffraction Results

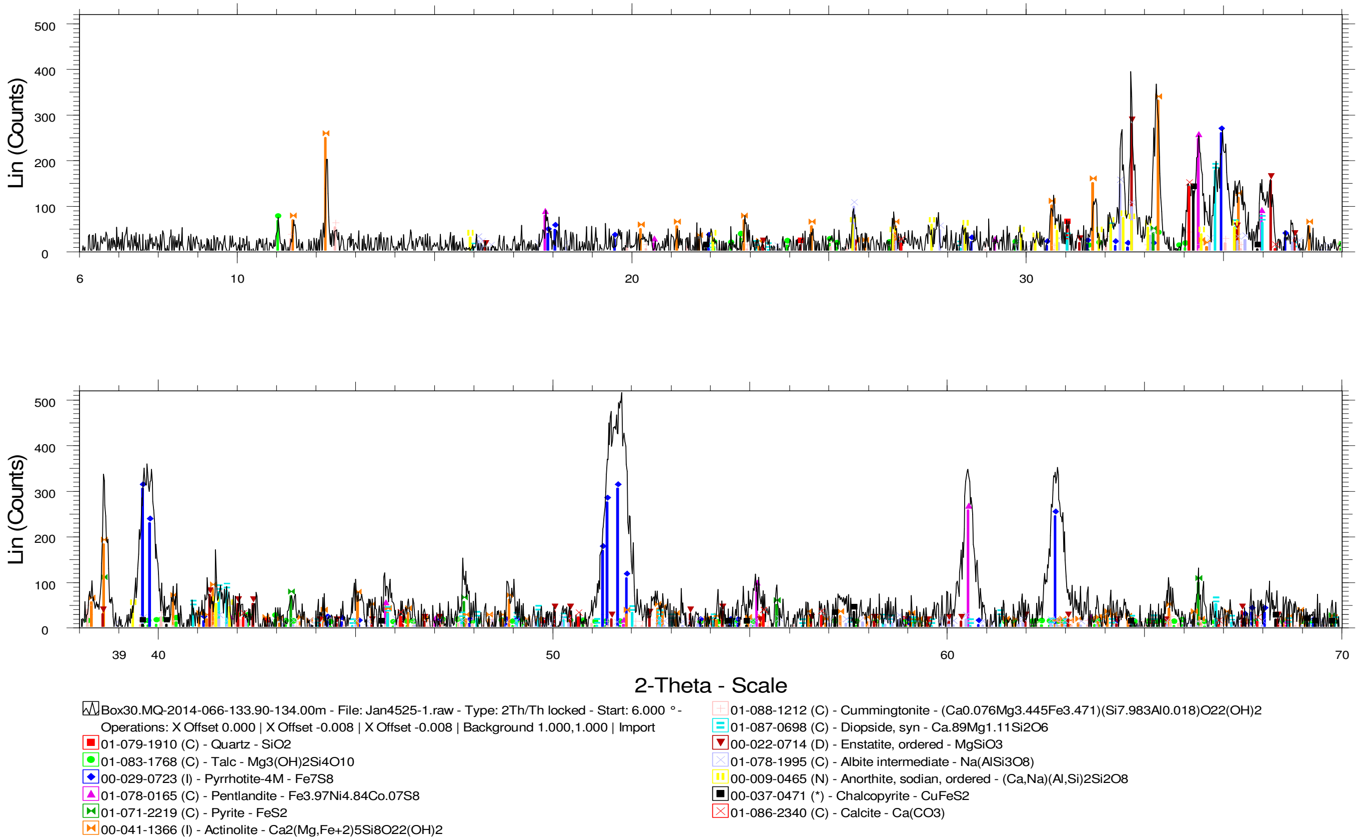
Crystalline Mineral Assemblage (relative proportions based on peak height)

Sample ID	Major	Moderate	Minor	Trace
Box30.MQ-2014-066-133.90-134.00m	pyrrhotite	pyroxene, amphibole,	pentlandite talc, plagioclase	*quartz, *pyrite, *chalcopyrite, *calcite,

** tentative identification due to low concentrations, diffraction line overlap or poor crystallinity*

Mineral	Composition
Amphibole	$(Na,K)Ca_2(Fe,Mg)_5(Al,Si)_8O_{22}(OH)_2$
Calcite	$CaCO_3$
Chalcopyrite	$CuFeS_2$
Pentlandite	$(Fe,Ni)_9S_8$
Plagioclase	$(NaSi,CaAl)AlSi_2O_8$
Pyrite	FeS_2
Pyroxene	$(Ca,Na)(Mg,Fe,Al,Ti)(Si,Al)_2O_6$
Pyrrhotite	$Fe_{(1-x)}S$
Quartz	SiO_2
Talc	$Mg_3Si_4O_{10}(OH)_2$

Box30.MQ-2014-066-133.90-134.00m



SGS

Qualitative X-Ray Diffraction

Report Prepared for:	*North American Nickel*
Project Number/ LIMS No.	*14021-102/MI4526-NOV14*
Sample Receipt:	*November 28, 2014*
Sample Analysis:	*December 1, 2014*
Reporting Date:	*February 9, 2015*

Instrument:	BRUKER AXS D8 Advance Diffractometer
Test Conditions:	Co radiation, 40 kV, 35 mA Regular Scanning: Step: 0.02°, Step time:0.2s, 2θ range: 3-70°
Interpretations :	PDF2/PDF4 powder diffraction databases issued by the International Center for Diffraction Data (ICDD). DiffracPlus Eva software.
Detection Limit :	0.5-2%. Strongly dependent on crystallinity.

Contents:

1) Method Summary
2) Summary of Mineral Asemblages
3) XRD Pattern(s)

Sarah Prout, Ph.D.
Senior Mineralogist

Huyun Zhou, Ph.D., P.Geo.
Senior Mineralogist

Method Summary

The Qualitative Mineral Identification By XRD (ME-LR-MIN-MET-MN-D01) method used by SGS Minerals Services is accredited to the requirements of ISO/IEC 17025.

Mineral Identification and Interpretation:

Mineral identification and interpretation involve matching the diffraction pattern of an unknown test sample to patterns of single-phase reference materials. The reference patterns are compiled by the Joint Committee on Powder Diffraction Standards - International Center for Diffraction Data (JCPDS-ICDD) and released on software as a database of Powder Diffraction Files (PDF).

Interpretations do not reflect the presence of non-crystalline and/or amorphous compounds. Mineral proportions are based on relative peak heights and may be strongly influenced by crystallinity, structural group or preferred orientations. Interpretations and relative proportions should be accompanied by supporting petrographic and geochemical data (Whole Rock Analysis, Inductively Coupled Plasma - Optical Emission Spectroscopy, etc.).

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Member of the SGS Group (SGS SA)

Summary of Qualitative X-ray Diffraction Results

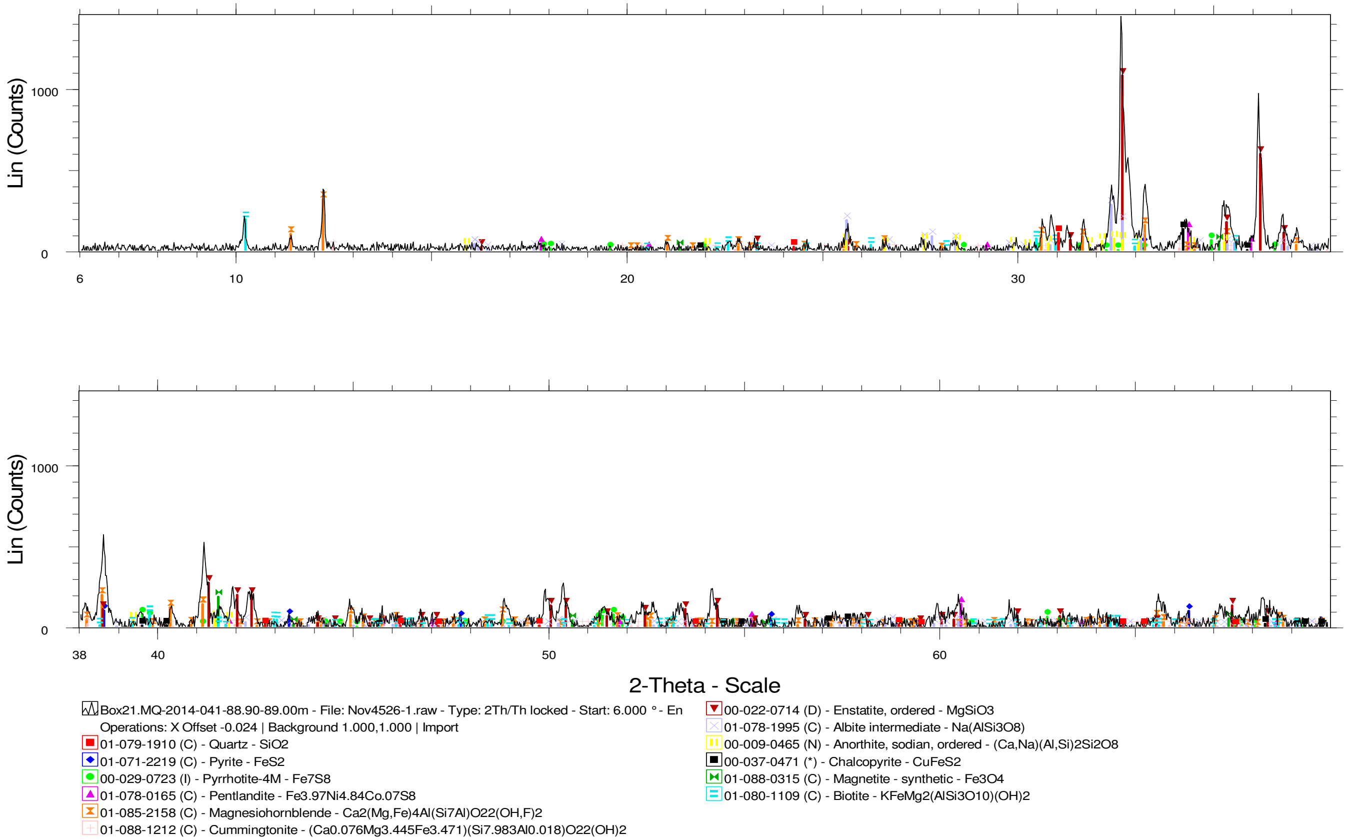
Crystalline Mineral Assemblage (relative proportions based on peak height)

Sample ID	Major	Moderate	Minor	Trace
Box21.MQ-2014-041-88.90-89.00m	pyroxene	amphibole	plagioclase, mica	*quartz, *pyrite, *pyrrhotite,*magnetite, *chalcopyrite, *pentlandite
Box22.MQ-2014-071-94.35-94.50m	amphibole	pyrrhotite, pyroxene, plagioclase	pentlandite, dolomite	*quartz, *pyrite, *mica, *chalcopyrite, *calcite

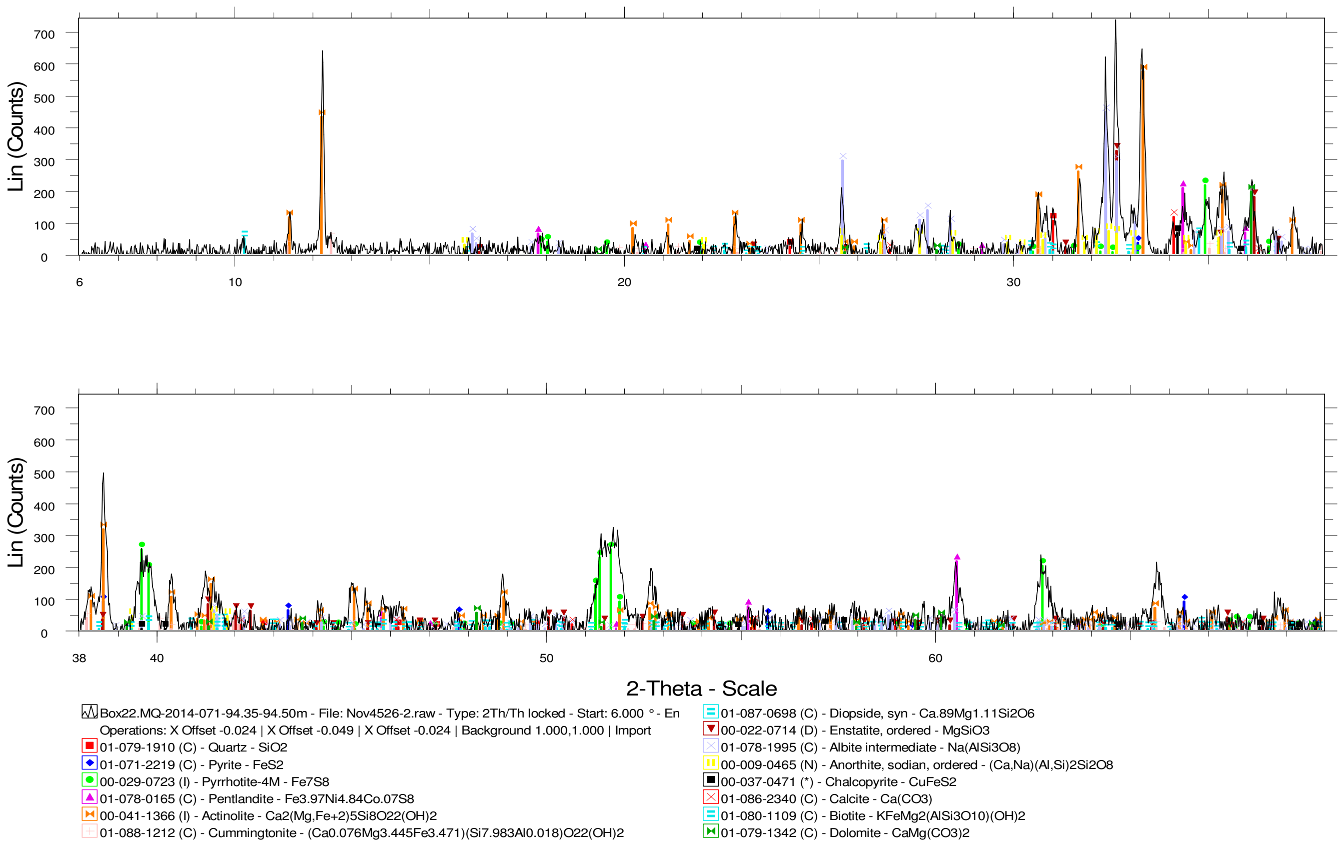
** tentative identification due to low concentrations, diffraction line overlap or poor crystallinity*

Mineral	Composition
Amphibole	$(Na,K)Ca_2(Fe,Mg)_5(Al,Si)_8O_{22}(OH)_2$
Calcite	$CaCO_3$
Chalcopyrite	$CuFeS_2$
Dolomite	$CaMg(CO_3)_2$
Magnetite	Fe_3O_4
Mica	$K(Mg,Fe)Al_2Si_3AlO_{10}(OH)_2$
Pentlandite	$(Fe,Ni)_9S_8$
Plagioclase	$(NaSi,CaAl)AlSi_2O_8$
Pyrite	FeS_2
Pyroxene	$(Ca,Na)(Mg,Fe,Al,Ti)(Si,Al)_2O_6$
Pyrrhotite	$Fe_{(1-x)}S$
Quartz	SiO_2

Box21.MQ-2014-041-88.90-89.00m



Box22.MQ-2014-071-94.35-94.50m



Appendix C – EMPA Data

CAVM-14021-102
North American Nickel
MI7006-NOV14
EMPA Data- Sulfides

EMPA: Pyrrhotite (wt%)	As	Ni	S	Fe	Co	Cu	Zn	Total
Detection Limit	***0.06***	***0.03***	***0.01***	***0.02***	***0.02***	***0.03***	***0.03***	
Box12.MQ-2014-070-Pyrrhotite	0.00	0.48	39.46	59.89	0.01	0.00	0.01	99.85
	0.00	0.42	39.46	59.86	0.00	0.00	0.00	99.74
	0.00	0.60	39.49	59.71	0.00	0.00	0.00	99.80
	0.03	0.67	39.55	59.81	0.02	0.01	0.00	100.09
	0.00	0.59	39.56	59.67	0.01	0.00	0.00	99.83
Box17.MQ-2014-054-Pyrrhotite	0.01	1.06	39.44	59.19	0.01	0.00	0.01	99.72
	0.00	1.04	39.43	59.19	0.02	0.00	0.01	99.69
	0.00	1.11	39.54	59.06	0.01	0.00	0.01	99.73
	0.00	1.00	39.60	59.38	0.01	0.00	0.01	100.00
Box30.MQ-2014-066-Pyrrhotite	0.00	0.57	39.52	59.83	0.02	0.00	0.01	99.94
	0.00	0.37	39.50	60.02	0.01	0.00	0.00	99.90
	0.00	0.45	39.66	60.08	0.01	0.00	0.01	100.21
	0.00	0.46	39.52	60.08	0.02	0.00	0.00	100.08
Box21.MQ-2014-041-Pyrrhotite	0.00	0.45	39.61	59.95	0.01	0.00	0.02	100.04
	0.00	0.55	39.48	59.78	0.02	0.00	0.00	99.82
	0.00	0.60	38.85	60.29	0.00	0.00	0.00	99.74
	0.00	0.55	38.86	60.37	0.00	0.00	0.02	99.80
	0.00	0.61	38.94	60.27	0.01	0.00	0.00	99.82
Max	***0.03***	***1.11***	***39.66***	***60.37***	***0.02***	***0.01***	***0.02***	***100.21***
Min	***0.00***	***0.37***	***38.85***	***59.06***	***0.00***	***0.00***	***0.00***	***99.69***
Std Dev	***0.01***	***0.24***	***0.25***	***0.39***	***0.01***	***0.00***	***0.01***	***0.15***
Average	***0.00***	***0.64***	***39.42***	***59.80***	***0.01***	***0.00***	***0.01***	***99.88***

CAVM-14021-102
North American Nickel
MI7006-NOV14
EMPA Data- Sulfides

EMPA: Pentlandite (wt%)	As	Ni	S	Fe	Co	Cu	Zn	Total
Detection Limit	***0.06***	***0.02***	***0.02***	***0.02***	***0.02***	***0.02***	***0.03***	
Box12.MQ-2014-070-Pentlandite	0.00	36.20	33.28	29.72	0.76	0.01	0.00	99.97
	0.00	36.31	33.33	29.65	0.73	0.00	0.00	100.02
	0.00	36.26	33.18	29.63	0.76	0.00	0.00	99.83
	0.00	36.18	33.22	29.65	0.70	0.00	0.00	99.75
Box17.MQ-2014-054-Pentlandite	0.01	37.20	33.03	28.29	0.97	0.00	0.00	99.50
	0.02	37.32	32.80	28.24	0.90	0.00	0.01	99.28
	0.00	37.45	33.26	28.31	0.92	0.00	0.00	99.94
	0.00	37.14	33.05	28.43	0.91	0.00	0.01	99.54
Box30.MQ-2014-066-Pentlandite	0.00	36.37	33.27	29.56	0.73	0.00	0.00	99.93
	0.00	36.47	33.14	29.49	0.66	0.01	0.00	99.77
	0.00	36.34	33.23	29.62	0.75	0.00	0.00	99.94
	0.00	36.24	33.28	29.30	0.72	0.00	0.00	99.54
Box21.MQ-2014-041-Pentlandite	0.00	36.88	33.06	29.32	0.26	0.00	0.00	99.52
	0.00	36.83	33.11	29.47	0.22	0.00	0.00	99.63
	0.00	37.12	33.14	29.30	0.24	0.00	0.00	99.80
	0.00	37.06	33.33	29.59	0.27	0.00	0.00	100.25
Max	***0.02***	***37.45***	***33.33***	***29.72***	***0.97***	***0.01***	***0.01***	***100.25***
Min	***0.00***	***36.18***	***32.80***	***28.24***	***0.22***	***0.00***	***0.00***	***99.28***
Std Dev	***0.00***	***0.46***	***0.14***	***0.56***	***0.26***	***0.00***	***0.00***	***0.25***
Average	***0.00***	***36.71***	***33.17***	***29.22***	***0.66***	***0.00***	***0.00***	***99.76***

CAVM-14021-102
North American Nickel
MI7006-NOV14
EMPA Data- Sulfides

EMPA: Pyrite (wt%)	As	Ni	S	Fe	Co	Cu	Zn	Total
Detection Limit	***0.06***	***0.02***	***0.01***	***0.02***	***0.02***	***0.02***	***0.03***	
Box12.MQ-2014-070-Pyrite	0.00	0.00	53.47	45.74	0.75	0.07	0.00	100.03
	0.00	0.06	53.42	45.64	0.51	0.00	0.00	99.63
	0.00	0.04	53.42	46.18	0.37	0.00	0.00	100.01
	0.00	0.06	53.13	45.92	0.41	0.00	0.01	99.52
Box17.MQ-2014-054-Pyrite	0.01	0.00	53.36	45.76	0.79	0.00	0.00	99.92
	0.00	0.01	53.32	46.01	0.73	0.01	0.01	100.09
	0.00	0.00	53.54	45.42	1.10	0.00	0.00	100.06
	0.00	0.01	53.50	46.00	0.59	0.00	0.00	100.09
Box30.MQ-2014-066-Pyrite	0.00	0.03	53.45	45.86	0.48	0.00	0.00	99.82
	0.00	0.00	53.25	43.93	2.62	0.00	0.00	99.80
	0.01	0.00	53.41	46.18	0.47	0.00	0.01	100.08
	0.00	0.04	53.24	44.58	1.80	0.00	0.00	99.66
Box21.MQ-2014-041-Pyrite	0.00	0.03	53.40	45.94	0.56	0.00	0.02	99.95
	0.00	0.17	53.25	46.07	0.38	0.00	0.02	99.89
Max	***0.01***	***0.17***	***53.54***	***46.18***	***2.62***	***0.07***	***0.02***	***100.09***
Min	***0.00***	***0.00***	***53.13***	***43.93***	***0.37***	***0.00***	***0.00***	***99.52***
Std Dev	***0.00***	***0.05***	***0.12***	***0.64***	***0.64***	***0.02***	***0.01***	***0.19***
Average	***0.00***	***0.03***	***53.37***	***45.66***	***0.83***	***0.01***	***0.00***	***99.90***

CAVM-14021-102
North American Nickel
MI7006-NOV14
EMPA Data- Sulfides

EMPA: Chalcopyrite (wt%)	**As**	**Ni**	**S**	**Fe**	**Co**	**Cu**	**Zn**	**Total**
Detection Limit	***0.06***	***0.02***	***0.02***	***0.02***	***0.02***	***0.03***	***0.03***	
Box12.MQ-2014-070-Chalcopyrite	0.00	0.00	34.86	30.68	0.00	33.99	0.00	99.53
	0.00	0.01	34.97	30.17	0.00	34.10	0.00	99.25
	0.00	0.02	34.77	31.55	0.01	33.04	0.00	99.39
	0.00	0.01	34.99	30.22	0.00	33.95	0.13	99.30
Box17.MQ-2014-054-Chalcopyrite	0.00	0.01	34.95	30.21	0.01	34.09	0.01	99.28
	0.00	0.02	34.92	30.31	0.00	34.16	0.01	99.41
	0.00	0.10	35.02	30.31	0.01	33.94	0.01	99.39
	0.02	0.06	35.23	30.42	0.01	34.24	0.10	100.07
Box30.MQ-2014-066-Chalcopyrite	0.00	0.03	34.87	30.27	0.01	34.07	0.02	99.27
	0.00	0.01	35.39	30.06	0.00	34.07	0.02	99.55
	0.00	0.01	35.64	30.04	0.00	34.25	0.00	99.94
Box21.MQ-2014-041-Chalcopyrite	0.00	0.00	35.24	30.41	0.00	34.35	0.01	100.01
	0.00	0.00	34.92	30.18	0.00	34.13	0.08	99.31
	0.00	0.00	34.92	30.21	0.00	34.11	0.00	99.24
	0.00	0.00	34.74	30.50	0.00	34.33	0.02	99.60
Max	***0.02***	***0.10***	***35.64***	***31.55***	***0.01***	***34.35***	***0.13***	***100.07***
Min	***0.00***	***0.00***	***34.74***	***30.04***	***0.00***	***33.04***	***0.00***	***99.24***
Std Dev	***0.00***	***0.03***	***0.24***	***0.37***	***0.00***	***0.31***	***0.04***	***0.28***
Average	***0.00***	***0.02***	***35.03***	***30.37***	***0.00***	***34.05***	***0.03***	***99.50***

CAVM-14021-102
North American Nickel
MI7006-NOV14
EMPA Data-Silicates (Oxide wt%)

EMPA: OPX (wt%)	Na2O	MgO	Cr2O3	CaO	FeO	SiO2	Al2O3	K2O	MnO	TiO2	NiO	Total
Detection Limit	***0.02***	***0.02***	***0.03***	***0.02***	***0.02***	***0.03***	***0.02***	***0.02***	***0.02***	***0.03***	***0.02***	
Box12.MQ-2014-070 - OPX	0.00	26.21	0.14	0.49	16.77	53.77	1.46	0.00	0.45	0.05	0.06	99.40
	0.00	26.62	0.14	0.31	16.80	53.93	1.30	0.00	0.49	0.04	0.04	99.67
	0.00	26.64	0.11	0.39	16.85	53.92	1.33	0.00	0.52	0.08	0.03	99.88
	0.00	26.68	0.14	0.45	16.75	53.93	1.37	0.01	0.48	0.07	0.04	99.93
	0.00	26.30	0.15	0.48	16.94	53.88	1.44	0.02	0.50	0.06	0.04	99.80
	0.00	26.79	0.11	0.42	16.60	54.00	1.27	0.01	0.52	0.05	0.06	99.83
Box30.MQ-2014-066-OPX	0.00	25.85	0.12	0.57	17.70	53.83	1.11	0.01	0.45	0.06	0.04	99.73
	0.00	26.03	0.12	0.54	17.58	53.76	1.28	0.01	0.46	0.11	0.04	99.92
	0.01	25.19	0.13	0.64	18.48	53.37	1.25	0.01	0.39	0.09	0.06	99.60
	0.00	26.12	0.10	0.41	18.03	54.07	1.14	0.01	0.57	0.08	0.03	100.55
	0.00	25.91	0.12	0.45	17.79	53.76	1.24	0.02	0.42	0.12	0.06	99.88
Box21.MQ-2014-041-OPX	0.00	25.20	0.08	0.34	19.22	53.86	1.08	0.01	0.36	0.00	0.09	100.26
	0.00	25.13	0.07	0.36	19.22	53.72	1.20	0.01	0.39	0.01	0.08	100.19
	0.00	27.71	0.14	0.35	15.74	54.60	1.20	0.01	0.31	0.03	0.10	100.18
	0.00	25.27	0.05	0.35	18.94	53.71	1.19	0.01	0.36	0.01	0.08	99.97
	0.00	25.29	0.08	0.35	18.77	53.86	1.08	0.01	0.36	0.00	0.09	99.89
Max	***0.01***	***27.71***	***0.15***	***0.64***	***19.22***	***54.60***	***1.46***	***0.02***	***0.57***	***0.12***	***0.10***	***100.55***
Min	***0.00***	***25.13***	***0.05***	***0.31***	***15.74***	***53.37***	***1.08***	***0.00***	***0.31***	***0.00***	***0.03***	***99.40***
Std Dev	***0.00***	***0.73***	***0.03***	***0.09***	***1.06***	***0.25***	***0.12***	***0.01***	***0.07***	***0.04***	***0.02***	***0.28***
Average	***0.00***	***26.06***	***0.11***	***0.43***	***17.64***	***53.87***	***1.25***	***0.01***	***0.44***	***0.05***	***0.06***	***99.92***

CAVM-14021-102
North American Nickel
MI7006-NOV14
EMPA Data-Silicates (Oxide wt%)

EMPA: Amph (wt%)	Na2O	MgO	Cr2O3	CaO	FeO	SiO2	Al2O3	K2O	MnO	TiO2	NiO	Total
Detection Limit	***0.02***	***0.02***	***0.03***	***0.02***	***0.02***	***0.03***	***0.02***	***0.02***	***0.02***	***0.03***	***0.02***	
Box12.MQ-2014-070-Amph	1.31	16.11	0.65	12.13	8.50	45.29	10.23	0.97	0.11	1.34	0.08	96.69
	0.64	19.01	0.13	12.13	7.23	51.41	5.85	0.37	0.12	0.09	0.09	97.06
	1.27	16.08	0.67	12.02	8.97	45.80	10.08	0.97	0.11	1.11	0.09	97.17
	1.15	16.27	0.62	12.00	8.13	45.91	10.65	0.86	0.13	1.21	0.06	96.97
	0.46	20.46	0.22	12.25	5.61	53.34	4.50	0.19	0.16	0.24	0.06	97.49
	0.22	20.57	0.29	12.83	6.13	54.77	2.31	0.12	0.13	0.20	0.08	97.64
Box17.MQ-2014-054-71-Amph	0.79	17.85	0.23	11.41	9.48	52.17	4.43	0.14	0.28	0.48	0.08	97.33
	0.34	18.70	0.07	12.24	8.98	54.36	2.27	0.04	0.28	0.07	0.08	97.45
	0.50	18.74	0.26	11.36	8.87	53.68	2.97	0.07	0.34	0.16	0.11	97.05
	0.74	17.31	0.41	9.80	12.10	51.98	4.72	0.16	0.56	0.29	0.08	98.16
	0.08	20.49	0.04	1.09	19.14	54.91	0.59	0.02	1.27	0.04	0.07	97.74
	0.76	17.66	0.19	10.95	10.23	52.00	4.74	0.08	0.35	0.35	0.09	97.41
	0.79	16.91	0.40	11.71	10.23	51.74	4.66	0.13	0.32	0.35	0.18	97.41
	1.36	13.97	0.41	11.21	12.96	47.29	8.33	0.35	0.28	0.82	0.08	97.04
	1.20	15.63	0.40	11.54	10.37	48.65	7.82	0.26	0.26	0.63	0.06	96.81
	1.42	14.67	0.49	11.54	11.45	46.23	9.32	0.62	0.23	1.25	0.09	97.29
	1.01	16.58	0.16	11.98	9.80	49.91	6.73	0.32	0.24	0.60	0.09	97.41
	1.30	14.34	0.22	11.67	11.69	47.16	9.32	0.43	0.28	0.76	0.09	97.26
	1.45	14.73	0.47	11.58	11.49	46.15	9.30	0.64	0.25	1.25	0.10	97.40
Box30.MQ-2014-066-Amph	0.66	18.40	0.40	12.28	7.36	50.28	5.94	0.41	0.11	0.74	0.08	96.64
	1.34	15.07	0.63	12.18	9.61	44.50	10.66	0.98	0.11	1.89	0.07	97.02
	0.37	19.32	0.19	12.60	7.09	53.04	3.76	0.17	0.11	0.37	0.07	97.09
	0.75	17.60	0.39	12.27	7.99	49.19	7.19	0.50	0.11	1.11	0.08	97.19
	0.43	19.95	0.15	12.19	6.46	53.33	4.16	0.18	0.13	0.24	0.09	97.31
	0.28	20.66	0.16	12.22	5.96	54.23	2.79	0.10	0.14	0.22	0.07	96.83
	0.13	20.81	0.09	12.33	5.55	55.50	1.71	0.05	0.14	0.13	0.08	96.50
	1.03	15.32	0.63	12.19	9.06	45.10	10.71	1.03	0.10	1.84	0.11	97.12
Box21.MQ-2014-041-Amph	1.36	15.21	0.77	11.98	10.34	44.73	10.68	1.28	0.08	0.43	0.11	96.96
	1.39	14.67	0.59	11.82	11.03	44.76	10.80	1.27	0.09	0.38	0.14	96.94
	1.24	15.16	0.69	12.01	10.76	45.19	10.26	1.21	0.08	0.41	0.12	97.12
	1.33	15.41	0.46	12.04	10.18	45.47	10.41	1.21	0.08	0.53	0.17	97.29
	1.40	15.17	0.39	11.79	10.78	45.03	10.18	1.24	0.09	0.72	0.16	96.95
	1.27	15.25	0.61	11.90	10.33	45.36	10.28	1.21	0.08	0.48	0.15	96.91
Max	***1.45***	***20.81***	***0.77***	***12.83***	***19.14***	***55.50***	***10.80***	***1.28***	***1.27***	***1.89***	***0.18***	***98.16***
Min	***0.08***	***13.97***	***0.04***	***1.09***	***5.55***	***44.50***	***0.59***	***0.02***	***0.08***	***0.04***	***0.06***	***96.50***
Std Dev	***0.44***	***2.17***	***0.21***	***1.96***	***2.62***	***3.81***	***3.29***	***0.45***	***0.22***	***0.49***	***0.03***	***0.33***
Average	***0.90***	***17.09***	***0.38***	***11.55***	***9.51***	***49.35***	***6.92***	***0.53***	***0.22***	***0.63***	***0.09***	***97.17***

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North American Nickel
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EMPA Data-Silicates (Oxide wt%)

EMPA: CPX (wt%)	Na2O	MgO	Cr2O3	CaO	FeO	SiO2	Al2O3	K2O	MnO	TiO2	NiO	Total
Detection Limit	*0.02*	*0.02*	*0.03*	*0.02*	*0.02*	*0.03*	*0.02*	*0.02*	*0.02*	*0.03*	*0.02*	
Box12.MQ-2014-070-CPX	0.48	15.26	0.44	22.85	5.74	52.42	2.06	0.02	0.20	0.20	0.06	99.74
	0.47	15.29	0.32	22.96	5.91	52.60	2.04	0.01	0.21	0.17	0.05	100.02
	0.46	15.44	0.35	23.39	5.47	52.42	1.95	0.02	0.21	0.18	0.05	99.94
	0.46	15.46	0.49	23.26	5.32	52.56	2.04	0.00	0.21	0.18	0.04	100.02
	0.46	15.39	0.49	23.36	5.59	52.51	1.91	0.01	0.22	0.15	0.05	100.13
Box30.MQ-2014-066-CPX	0.48	15.09	0.27	22.92	6.10	52.10	2.42	0.02	0.18	0.37	0.05	100.00
	0.46	14.86	0.29	23.27	6.42	51.89	2.21	0.01	0.16	0.33	0.06	99.94
	0.48	14.89	0.25	23.05	6.31	52.27	2.05	0.02	0.16	0.30	0.04	99.81
	0.43	15.15	0.26	22.64	6.74	52.18	2.36	0.00	0.17	0.38	0.07	100.40
	0.41	15.34	0.25	23.69	5.63	52.95	1.99	0.01	0.16	0.26	0.05	100.74
Max	***0.48***	***15.46***	***0.49***	***23.69***	***6.74***	***52.95***	***2.42***	***0.02***	***0.22***	***0.38***	***0.07***	***100.74***
Min	***0.41***	***14.86***	***0.25***	***22.64***	***5.32***	***51.89***	***1.91***	***0.00***	***0.16***	***0.15***	***0.04***	***99.74***
Std Dev	***0.02***	***0.21***	***0.10***	***0.31***	***0.46***	***0.30***	***0.17***	***0.01***	***0.02***	***0.09***	***0.01***	***0.29***
Average	***0.46***	***15.22***	***0.34***	***23.14***	***5.92***	***52.39***	***2.10***	***0.01***	***0.19***	***0.25***	***0.05***	***100.07***

EMPA: Biotite (wt%)	Na2O	MgO	Cr2O3	CaO	FeO	SiO2	Al2O3	K2O	MnO	TiO2	NiO	Total
Detection Limit	*0.02*	*0.02*	*0.03*	*0.02*	*0.02*	*0.03*	*0.02*	*0.02*	*0.02*	*0.03*	*0.02*	
Box17.MQ-2014-054-71-Biotite	0.07	13.35	0.66	0.00	16.92	36.84	17.31	9.22	0.14	0.31	0.14	94.96
	0.08	14.08	0.32	0.00	16.84	36.61	17.28	9.13	0.15	0.21	0.14	94.83
	0.10	13.69	0.48	0.01	17.49	36.53	16.92	8.66	0.17	0.40	0.14	94.58
	0.05	14.17	0.77	0.01	18.09	36.28	16.58	8.24	0.16	0.93	0.13	95.41
	0.08	13.22	0.52	0.01	17.05	36.56	16.87	9.06	0.15	1.08	0.13	94.72
	0.17	14.34	0.23	0.01	15.79	37.38	17.20	9.23	0.12	0.71	0.14	95.32
Box21.MQ-2014-041-Biotite	0.17	18.25	0.56	0.00	10.56	37.68	15.02	9.54	0.03	1.41	0.18	93.40
	0.20	19.61	0.56	0.00	9.26	38.32	14.98	9.58	0.02	1.62	0.17	94.30
	0.15	19.30	0.65	0.03	9.82	38.58	14.69	9.52	0.02	1.85	0.32	94.93
	0.10	18.88	0.55	0.01	10.06	37.77	15.04	9.72	0.03	1.49	0.30	93.95
	0.18	19.11	0.51	0.00	10.12	38.54	15.04	9.51	0.02	1.76	0.29	95.08
	0.15	18.79	0.55	0.01	10.13	37.90	14.88	9.69	0.02	1.66	0.25	94.03
Max	***0.20***	***19.61***	***0.77***	***0.03***	***18.09***	***38.58***	***17.31***	***9.72***	***0.17***	***1.85***	***0.32***	***95.41***
Min	***0.05***	***13.22***	***0.23***	***0.00***	***9.26***	***36.28***	***14.69***	***8.24***	***0.02***	***0.21***	***0.13***	***93.40***
Std Dev	***0.05***	***2.74***	***0.14***	***0.01***	***3.72***	***0.83***	***1.11***	***0.44***	***0.07***	***0.60***	***0.07***	***0.60***
Average	***0.12***	***16.40***	***0.53***	***0.01***	***13.51***	***37.41***	***15.98***	***9.26***	***0.09***	***1.12***	***0.19***	***94.63***

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EMPA Data-Silicates (Oxide wt%)

EMPA: Chlorite (wt%)	Na2O	MgO	Cr2O3	CaO	FeO	SiO2	Al2O3	K2O	MnO	TiO2	NiO	Total
Detection Limit	***0.02***	***0.02***	***0.03***	***0.02***	***0.02***	***0.03***	***0.02***	***0.02***	***0.02***	***0.03***	***0.02***	
Box17.MQ-2014-054-71-Chlorite	0.00	15.84	0.16	0.18	26.59	29.98	15.29	0.02	0.13	0.04	0.01	88.23
	0.03	16.34	0.55	0.28	25.27	30.52	14.39	0.02	0.11	0.00	0.04	87.54
	0.04	16.07	0.62	0.14	25.64	29.81	14.87	0.01	0.15	0.05	0.06	87.45
	0.01	15.35	0.54	0.11	26.35	29.73	14.86	0.03	0.12	0.04	0.04	87.17
	0.00	14.44	0.39	0.10	28.06	29.47	14.67	0.02	0.15	0.00	0.26	87.57
	0.04	16.10	0.55	0.21	26.23	30.45	14.42	0.01	0.11	0.03	0.07	88.22
	0.01	13.79	0.55	0.08	27.13	28.28	16.14	0.02	0.61	0.04	0.05	86.69
Max	***0.04***	***16.34***	***0.62***	***0.28***	***28.06***	***30.52***	***16.14***	***0.03***	***0.61***	***0.05***	***0.26***	***88.23***
Min	***0.00***	***13.79***	***0.16***	***0.08***	***25.27***	***28.28***	***14.39***	***0.01***	***0.11***	***0.00***	***0.01***	***86.69***
Std Dev	***0.02***	***0.96***	***0.16***	***0.07***	***0.93***	***0.75***	***0.61***	***0.01***	***0.18***	***0.02***	***0.08***	***0.55***
Average	***0.02***	***15.42***	***0.48***	***0.16***	***26.47***	***29.75***	***14.95***	***0.02***	***0.20***	***0.03***	***0.08***	***87.55***

EMPA: Talc (wt%)	Na2O	MgO	Cr2O3	CaO	FeO	SiO2	Al2O3	K2O	MnO	TiO2	NiO	Total
Detection Limit	***0.02***	***0.02***	***0.03***	***0.02***	***0.02***	***0.03***	***0.02***	***0.02***	***0.02***	***0.03***	***0.02***	
Box30.MQ-2014-066-Talc	0.05	28.76	0.07	0.02	3.55	60.42	0.88	0.03	0.01	0.04	0.15	93.98
	0.06	29.02	0.11	0.02	3.70	60.33	0.99	0.02	0.00	0.06	0.09	94.40
	0.03	28.99	0.07	0.02	3.81	60.89	0.65	0.04	0.01	0.03	0.11	94.64
	0.07	29.03	0.10	0.02	3.77	61.21	0.88	0.02	0.01	0.04	0.11	95.26
Max	***0.07***	***29.03***	***0.11***	***0.02***	***3.81***	***61.21***	***0.99***	***0.04***	***0.01***	***0.06***	***0.15***	***95.26***
Min	***0.03***	***28.76***	***0.07***	***0.02***	***3.55***	***60.33***	***0.65***	***0.02***	***0.00***	***0.03***	***0.09***	***93.98***
Std Dev	***0.02***	***0.13***	***0.02***	***0.00***	***0.12***	***0.41***	***0.14***	***0.01***	***0.01***	***0.01***	***0.02***	***0.54***
Average	***0.05***	***28.95***	***0.08***	***0.02***	***3.71***	***60.71***	***0.85***	***0.03***	***0.01***	***0.04***	***0.12***	***94.57***

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EMPA Data-Silicates (Elemental wt%)

EMPA: OPX (wt%)	Na	Mg	Cr	Ca	Fe	Si	Al	K	Mn	Ti	Ni
Detection Limit	***0.02***	***0.02***	***0.03***	***0.02***	***0.02***	***0.03***	***0.02***	***0.02***	***0.02***	***0.03***	***0.02***
Box12.MQ-2014-070 - OPX	0.00	15.80	0.10	0.35	13.03	25.14	0.87	0.00	0.35	0.03	0.05
	0.00	16.05	0.09	0.22	13.06	25.21	0.77	0.00	0.38	0.03	0.03
	0.00	16.07	0.08	0.28	13.10	25.21	0.79	0.00	0.40	0.05	0.02
	0.00	16.09	0.10	0.32	13.02	25.21	0.81	0.01	0.37	0.04	0.03
	0.00	15.86	0.10	0.34	13.17	25.18	0.85	0.02	0.39	0.04	0.03
	0.00	16.15	0.07	0.30	12.90	25.24	0.75	0.01	0.40	0.03	0.05
Box30.MQ-2014-066-OPX	0.00	15.59	0.08	0.41	13.76	25.16	0.66	0.00	0.35	0.04	0.03
	0.00	15.69	0.08	0.38	13.67	25.13	0.76	0.01	0.36	0.07	0.03
	0.00	15.19	0.09	0.45	14.37	24.95	0.74	0.01	0.30	0.05	0.04
	0.00	15.75	0.07	0.29	14.01	25.27	0.68	0.01	0.44	0.05	0.03
	0.00	15.62	0.08	0.32	13.83	25.13	0.73	0.02	0.33	0.07	0.04
Box21.MQ-2014-041-OPX	0.00	15.20	0.06	0.25	14.94	25.17	0.64	0.01	0.28	0.00	0.07
	0.00	15.16	0.05	0.26	14.94	25.11	0.71	0.01	0.30	0.01	0.06
	0.00	16.71	0.09	0.25	12.24	25.52	0.71	0.01	0.24	0.02	0.08
	0.00	15.24	0.03	0.25	14.72	25.11	0.71	0.01	0.28	0.01	0.06
	0.00	15.25	0.06	0.25	14.59	25.18	0.64	0.01	0.28	0.00	0.07
Max	***0.00***	***16.71***	***0.10***	***0.45***	***14.94***	***25.52***	***0.87***	***0.02***	***0.44***	***0.07***	***0.08***
Min	***0.00***	***15.16***	***0.03***	***0.22***	***12.24***	***24.95***	***0.64***	***0.00***	***0.24***	***0.00***	***0.02***
Std Dev	***0.00***	***0.44***	***0.02***	***0.07***	***0.83***	***0.12***	***0.07***	***0.00***	***0.06***	***0.02***	***0.02***
Average	***0.00***	***15.71***	***0.08***	***0.31***	***13.71***	***25.18***	***0.74***	***0.01***	***0.34***	***0.03***	***0.05***

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EMPA Data-Silicates (Elemental wt%)

EMPA: Amph (wt%)	Na	Mg	Cr	Ca	Fe	Si	Al	K	Mn	Ti	Ni
Detection Limit	***0.02***	***0.02***	***0.03***	***0.02***	***0.02***	***0.03***	***0.02***	***0.02***	***0.02***	***0.03***	***0.02***
Box12.MQ-2014-070-Amph	0.97	9.71	0.44	8.67	6.60	21.17	6.06	0.81	0.08	0.80	0.06
	0.48	11.47	0.09	8.67	5.62	24.03	3.47	0.31	0.09	0.05	0.07
	0.94	9.70	0.46	8.59	6.97	21.41	5.97	0.80	0.09	0.67	0.07
	0.85	9.81	0.42	8.58	6.32	21.46	6.31	0.71	0.10	0.72	0.04
	0.34	12.34	0.15	8.76	4.36	24.93	2.67	0.16	0.12	0.14	0.05
	0.16	12.40	0.20	9.17	4.77	25.60	1.37	0.10	0.10	0.12	0.06
Box17.MQ-2014-054-71-Amph	0.59	10.77	0.16	8.15	7.37	24.39	2.62	0.12	0.21	0.28	0.06
	0.25	11.28	0.05	8.75	6.98	25.41	1.35	0.03	0.22	0.04	0.06
	0.37	11.30	0.18	8.12	6.89	25.09	1.76	0.06	0.26	0.10	0.08
	0.55	10.44	0.28	7.00	9.41	24.30	2.80	0.14	0.43	0.18	0.07
	0.06	12.36	0.03	0.78	14.88	25.67	0.35	0.01	0.98	0.03	0.06
	0.57	10.65	0.13	7.83	7.95	24.31	2.81	0.07	0.27	0.21	0.07
	0.58	10.20	0.28	8.37	7.95	24.18	2.76	0.10	0.25	0.21	0.14
	1.01	8.43	0.28	8.01	10.07	22.11	4.93	0.29	0.22	0.49	0.06
	0.89	9.43	0.27	8.24	8.06	22.74	4.63	0.22	0.20	0.38	0.05
	1.05	8.85	0.34	8.24	8.90	21.61	5.52	0.51	0.18	0.75	0.07
	0.75	10.00	0.11	8.56	7.62	23.33	3.99	0.27	0.19	0.36	0.07
	0.97	8.64	0.15	8.34	9.09	22.05	5.52	0.36	0.21	0.46	0.07
	1.07	8.88	0.32	8.28	8.93	21.57	5.51	0.53	0.20	0.75	0.08
Box30.MQ-2014-066-Amph	0.49	11.09	0.27	8.78	5.72	23.50	3.52	0.34	0.08	0.44	0.06
	0.99	9.09	0.43	8.71	7.47	20.80	6.32	0.81	0.08	1.14	0.05
	0.28	11.65	0.13	9.01	5.51	24.79	2.23	0.14	0.08	0.22	0.06
	0.56	10.61	0.27	8.77	6.21	22.99	4.26	0.41	0.09	0.67	0.06
	0.32	12.03	0.10	8.71	5.02	24.93	2.47	0.15	0.10	0.14	0.07
	0.21	12.46	0.11	8.74	4.63	25.35	1.65	0.08	0.11	0.13	0.05
	0.10	12.55	0.06	8.81	4.31	25.94	1.01	0.04	0.10	0.08	0.06
	0.76	9.24	0.43	8.71	7.05	21.08	6.35	0.85	0.08	1.10	0.08
Box21.MQ-2014-041-Amph	1.01	9.17	0.53	8.56	8.04	20.91	6.33	1.06	0.06	0.26	0.08
	1.03	8.84	0.41	8.45	8.57	20.92	6.40	1.06	0.07	0.23	0.11
	0.92	9.14	0.47	8.58	8.36	21.12	6.08	1.00	0.06	0.25	0.10
	0.99	9.29	0.31	8.61	7.92	21.25	6.17	1.00	0.06	0.32	0.13
	1.04	9.15	0.26	8.43	8.38	21.05	6.03	1.03	0.07	0.43	0.12
	0.94	9.19	0.42	8.50	8.03	21.20	6.09	1.01	0.06	0.29	0.11
Max	***1.07***	***12.55***	***0.53***	***9.17***	***14.88***	***25.94***	***6.40***	***1.06***	***0.98***	***1.14***	***0.14***
Min	***0.06***	***8.43***	***0.03***	***0.78***	***4.31***	***20.80***	***0.35***	***0.01***	***0.06***	***0.03***	***0.04***
Std Dev	***0.33***	***1.31***	***0.14***	***1.40***	***2.04***	***1.78***	***1.95***	***0.37***	***0.17***	***0.30***	***0.02***
Average	***0.67***	***10.31***	***0.26***	***8.26***	***7.39***	***23.07***	***4.10***	***0.44***	***0.17***	***0.38***	***0.07***

CAVM-14021-102
North American Nickel
MI7006-NOV14
EMPA Data-Silicates (Elemental wt%)

EMPA: CPX (wt%)	Na	Mg	Cr	Ca	Fe	Si	Al	K	Mn	Ti	Ni
Detection Limit	***0.02***	***0.02***	***0.03***	***0.02***	***0.02***	***0.03***	***0.02***	***0.02***	***0.02***	***0.03***	***0.02***
Box12.MQ-2014-070-CPX	0.36	9.20	0.30	16.33	4.46	24.50	1.22	0.01	0.16	0.12	0.05
	0.35	9.22	0.22	16.41	4.59	24.59	1.21	0.01	0.16	0.10	0.04
	0.34	9.31	0.24	16.72	4.25	24.50	1.15	0.02	0.16	0.11	0.04
	0.34	9.32	0.34	16.62	4.13	24.57	1.21	0.00	0.16	0.11	0.03
	0.34	9.28	0.33	16.70	4.34	24.54	1.13	0.01	0.17	0.09	0.04
Box30.MQ-2014-066-CPX	0.36	9.10	0.18	16.38	4.74	24.35	1.43	0.01	0.14	0.22	0.04
	0.34	8.96	0.19	16.63	4.99	24.25	1.31	0.00	0.13	0.20	0.04
	0.36	8.98	0.17	16.47	4.91	24.43	1.21	0.01	0.13	0.18	0.03
	0.32	9.14	0.18	16.18	5.24	24.39	1.40	0.00	0.13	0.23	0.05
	0.30	9.25	0.17	16.93	4.37	24.75	1.18	0.01	0.13	0.16	0.04
Max	***0.36***	***9.32***	***0.34***	***16.93***	***5.24***	***24.75***	***1.43***	***0.02***	***0.17***	***0.23***	***0.05***
Min	***0.30***	***8.96***	***0.17***	***16.18***	***4.13***	***24.25***	***1.13***	***0.00***	***0.13***	***0.09***	***0.03***
Std Dev	***0.02***	***0.13***	***0.07***	***0.22***	***0.36***	***0.14***	***0.10***	***0.00***	***0.02***	***0.05***	***0.01***
Average	***0.34***	***9.18***	***0.23***	***16.54***	***4.60***	***24.49***	***1.25***	***0.01***	***0.15***	***0.15***	***0.04***

EMPA: Biotite (wt%)	Na	Mg	Cr	Ca	Fe	Si	Al	K	Mn	Ti	Ni
Detection Limit	***0.02***	***0.02***	***0.03***	***0.02***	***0.02***	***0.03***	***0.02***	***0.02***	***0.02***	***0.03***	***0.02***
Box17.MQ-2014-054-71-Biotite	0.05	8.05	0.45	0.00	13.15	17.22	10.26	7.65	0.11	0.19	0.11
	0.06	8.49	0.22	0.00	13.09	17.11	10.24	7.58	0.11	0.12	0.11
	0.07	8.26	0.33	0.00	13.60	17.07	10.02	7.19	0.13	0.24	0.11
	0.04	8.54	0.53	0.01	14.06	16.96	9.83	6.84	0.13	0.56	0.10
	0.06	7.97	0.35	0.01	13.25	17.09	10.00	7.52	0.11	0.65	0.10
	0.13	8.65	0.16	0.01	12.27	17.47	10.19	7.66	0.10	0.42	0.11
Box21.MQ-2014-041-Biotite	0.13	11.00	0.39	0.00	8.21	17.61	8.90	7.92	0.02	0.84	0.14
	0.14	11.82	0.38	0.00	7.19	17.91	8.88	7.95	0.01	0.97	0.13
	0.11	11.64	0.45	0.02	7.63	18.03	8.70	7.90	0.02	1.11	0.25
	0.07	11.38	0.37	0.01	7.82	17.65	8.91	8.07	0.02	0.90	0.24
	0.13	11.53	0.35	0.00	7.87	18.01	8.91	7.90	0.01	1.05	0.23
	0.11	11.33	0.37	0.01	7.87	17.72	8.82	8.04	0.02	1.00	0.20
Max	***0.14***	***11.82***	***0.53***	***0.02***	***14.06***	***18.03***	***10.26***	***8.07***	***0.13***	***1.11***	***0.25***
Min	***0.04***	***7.97***	***0.16***	***0.00***	***7.19***	***16.96***	***8.70***	***6.84***	***0.01***	***0.12***	***0.10***
Std Dev	***0.04***	***1.65***	***0.10***	***0.01***	***2.89***	***0.39***	***0.66***	***0.37***	***0.05***	***0.36***	***0.06***
Average	***0.09***	***9.89***	***0.36***	***0.00***	***10.50***	***17.49***	***9.47***	***7.69***	***0.07***	***0.67***	***0.15***

CAVM-14021-102
North American Nickel
MI7006-NOV14
EMPA Data-Silicates (Elemental wt%)

EMPA: Chlorite (wt%)	Na	Mg	Cr	Ca	Fe	Si	Al	K	Mn	Ti	Ni
Detection Limit	***0.02***	***0.02***	***0.03***	***0.02***	***0.02***	***0.03***	***0.02***	***0.02***	***0.02***	***0.03***	***0.02***
Box17.MQ-2014-054-71-Chlorite	0.00	9.55	0.11	0.13	20.67	14.01	9.06	0.01	0.10	0.02	0.01
	0.02	9.85	0.37	0.20	19.64	14.27	8.53	0.01	0.08	0.00	0.03
	0.03	9.69	0.43	0.10	19.93	13.94	8.81	0.01	0.11	0.03	0.04
	0.01	9.26	0.37	0.08	20.48	13.90	8.80	0.02	0.09	0.02	0.03
	0.00	8.71	0.26	0.07	21.81	13.78	8.69	0.02	0.12	0.00	0.21
	0.03	9.71	0.37	0.15	20.39	14.23	8.55	0.01	0.09	0.02	0.05
	0.01	8.31	0.37	0.06	21.09	13.22	9.56	0.02	0.47	0.02	0.04
Max	***0.03***	***9.85***	***0.43***	***0.20***	***21.81***	***14.27***	***9.56***	***0.02***	***0.47***	***0.03***	***0.21***
Min	***0.00***	***8.31***	***0.11***	***0.06***	***19.64***	***13.22***	***8.53***	***0.01***	***0.08***	***0.00***	***0.01***
Std Dev	***0.01***	***0.58***	***0.11***	***0.05***	***0.72***	***0.35***	***0.36***	***0.00***	***0.14***	***0.01***	***0.07***
Average	***0.01***	***9.30***	***0.33***	***0.11***	***20.57***	***13.91***	***8.86***	***0.01***	***0.15***	***0.02***	***0.06***

EMPA: Talc (wt%)	Na	Mg	Cr	Ca	Fe	Si	Al	K	Mn	Ti	Ni
Detection Limit	***0.02***	***0.02***	***0.03***	***0.02***	***0.02***	***0.03***	***0.02***	***0.02***	***0.02***	***0.03***	***0.02***
Box30.MQ-2014-066-Talc	0.04	17.34	0.05	0.01	2.76	28.24	0.52	0.02	0.01	0.02	0.12
	0.05	17.50	0.07	0.01	2.88	28.20	0.59	0.02	0.00	0.03	0.07
	0.02	17.48	0.05	0.01	2.96	28.46	0.39	0.03	0.01	0.02	0.09
	0.05	17.51	0.06	0.02	2.93	28.61	0.52	0.02	0.01	0.03	0.08
Max	***0.05***	***17.51***	***0.07***	***0.02***	***2.96***	***28.61***	***0.59***	***0.03***	***0.01***	***0.03***	***0.12***
Min	***0.02***	***17.34***	***0.05***	***0.01***	***2.76***	***28.20***	***0.39***	***0.02***	***0.00***	***0.02***	***0.07***
Std Dev	***0.01***	***0.08***	***0.01***	***0.00***	***0.09***	***0.19***	***0.08***	***0.01***	***0.00***	***0.01***	***0.02***
Average	***0.04***	***17.46***	***0.06***	***0.01***	***2.88***	***28.38***	***0.50***	***0.02***	***0.01***	***0.02***	***0.09***

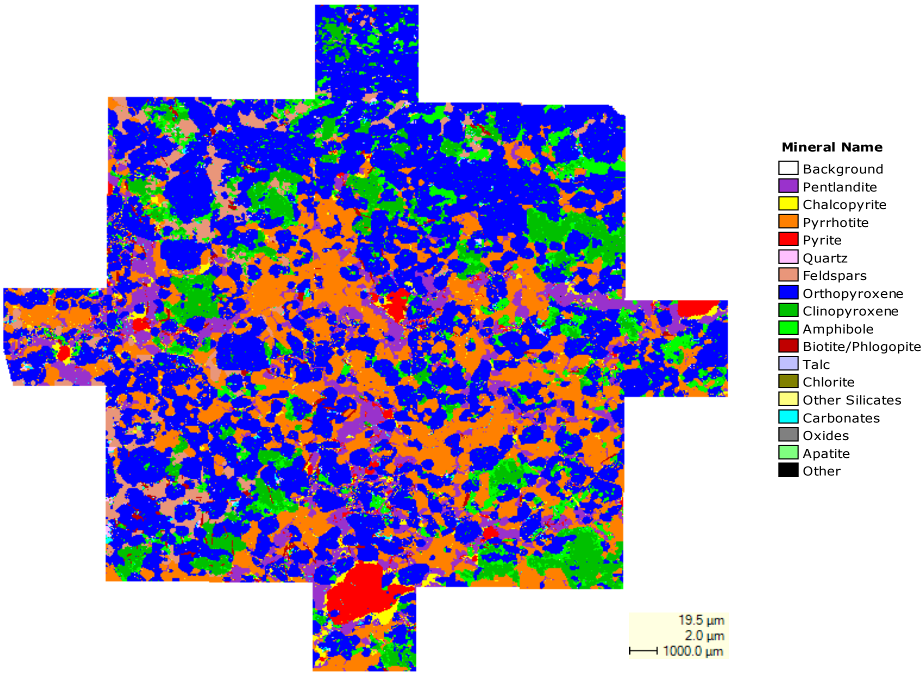
Appendix D – Field Scan Images

North American Nickel
CAVM-14021-102
MI7006-NOV14

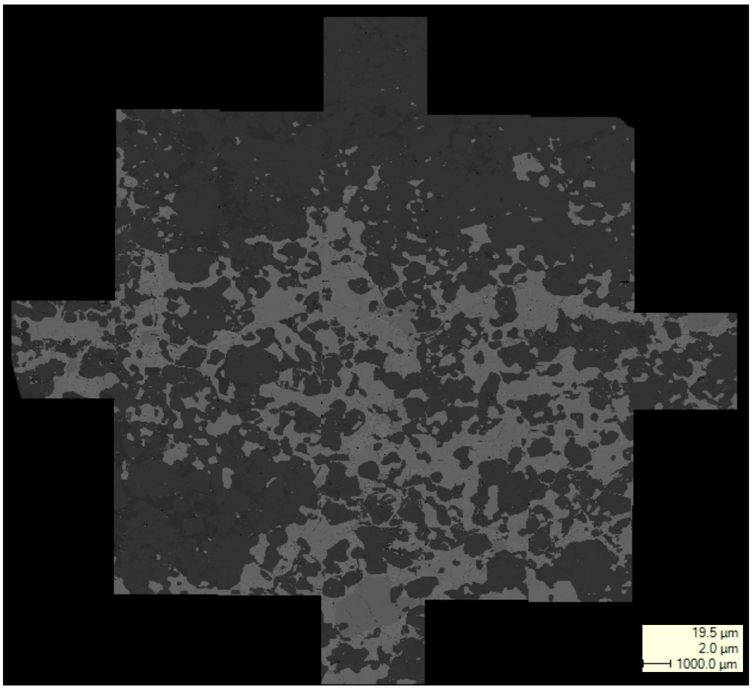
High Definition Mineralogical Analysis using QEMSCAN
(Quantitative Evaluation of Materials by Scanning Electron

Sample: Box12.MQ-2014-070-53.40-53.50m

QEMSCAN Pseudo Colour Image

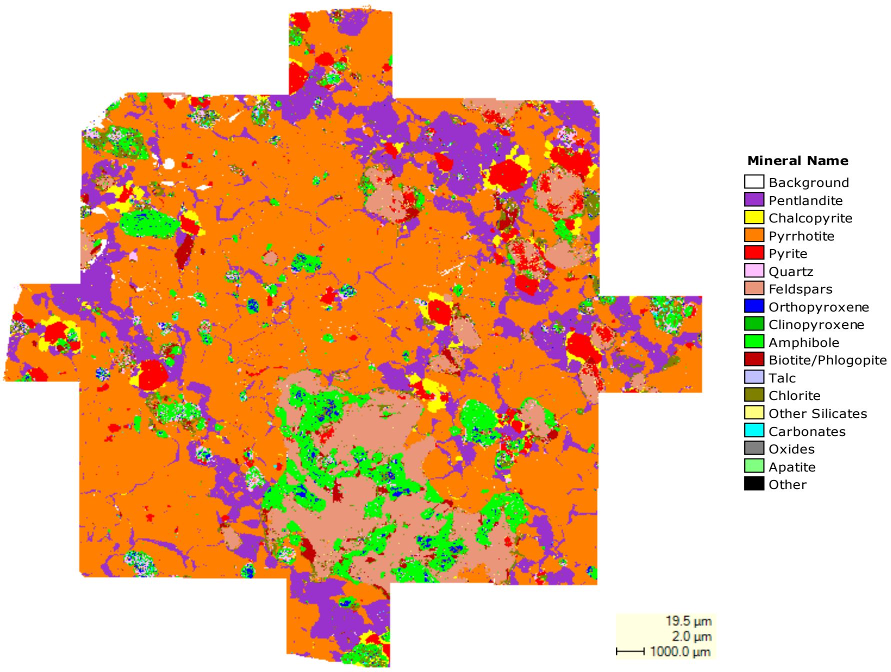


QEMSCAN Backscattered Electron Image

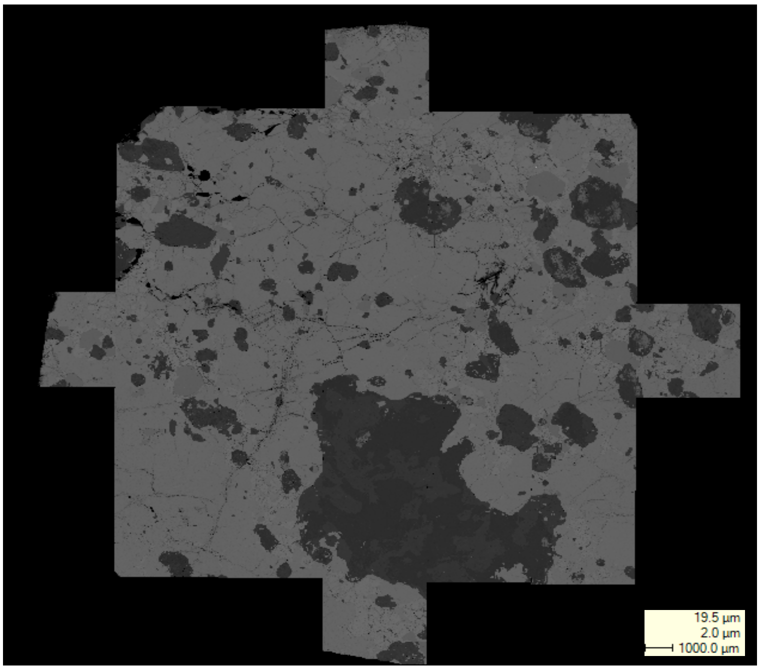


Sample: Box17.MQ-2014-054-71.10-71.26m

QEMSCAN Pseudo Colour Image

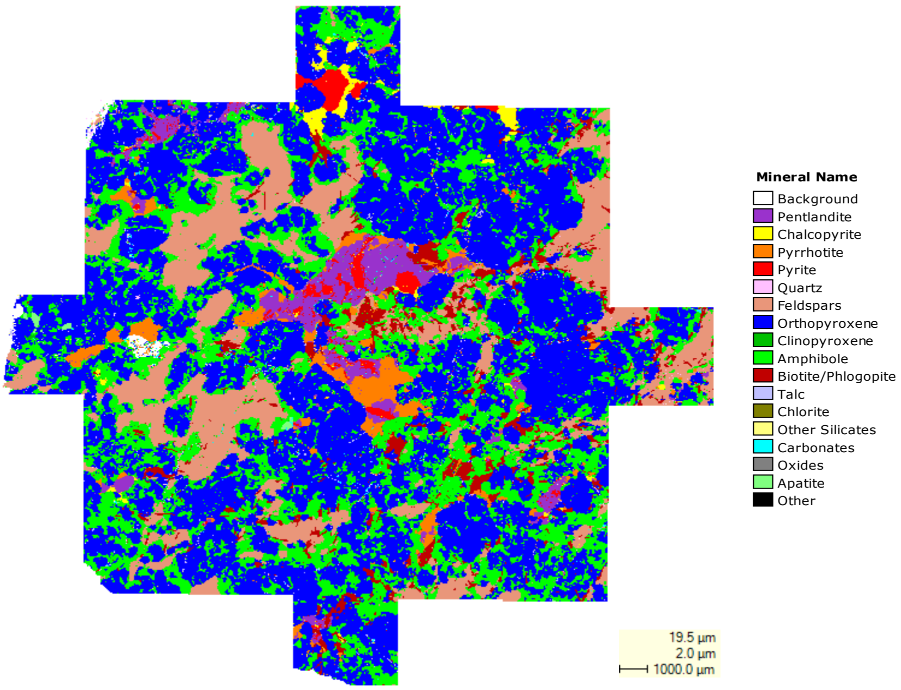


QEMSCAN Backscattered Electron Image

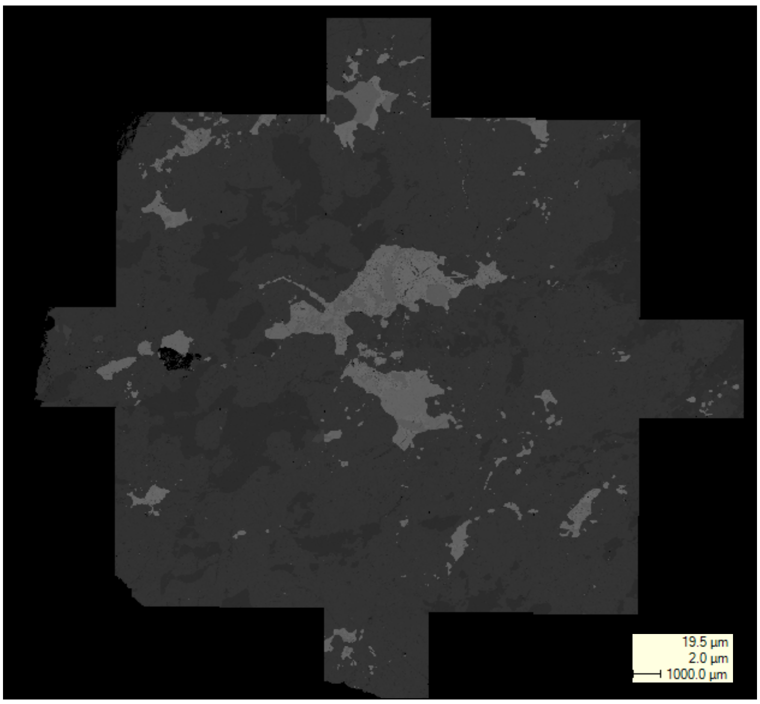


Sample: Box21.MQ-2014-041-88.90-89.00m

QEMSCAN Pseudo Colour Image

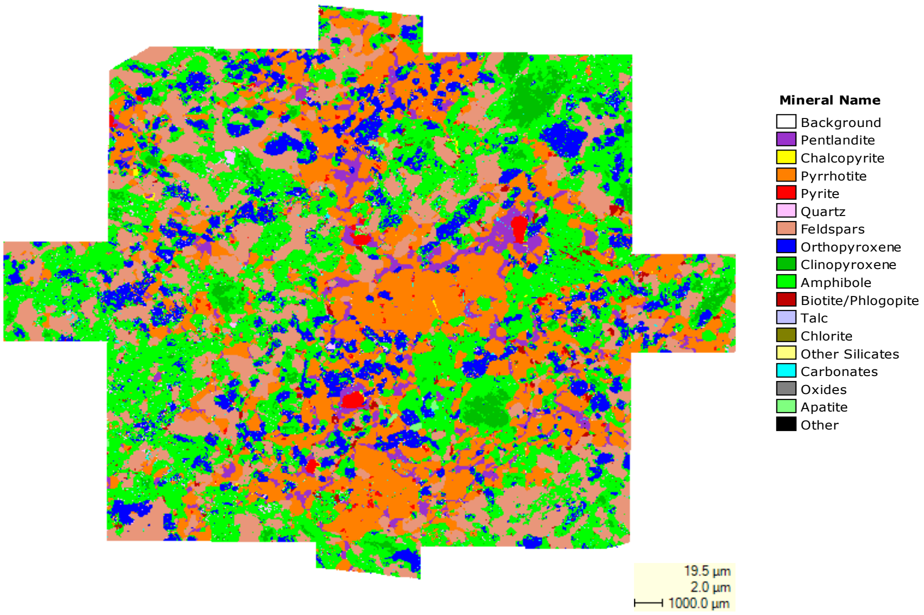


QEMSCAN Backscattered Electron Image

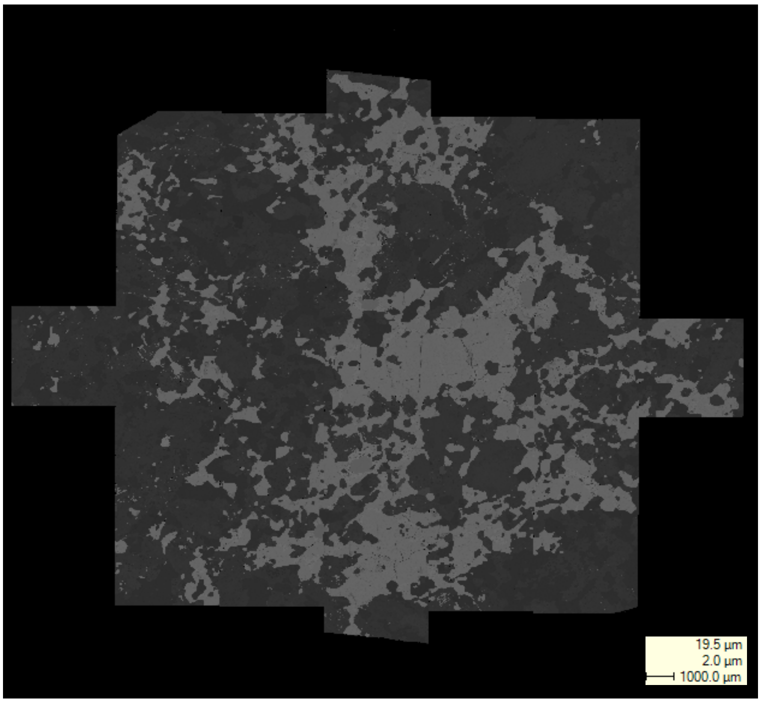


Sample: Box22.MQ-2014-071-94.35-94.50m

QEMSCAN Pseudo Colour Image

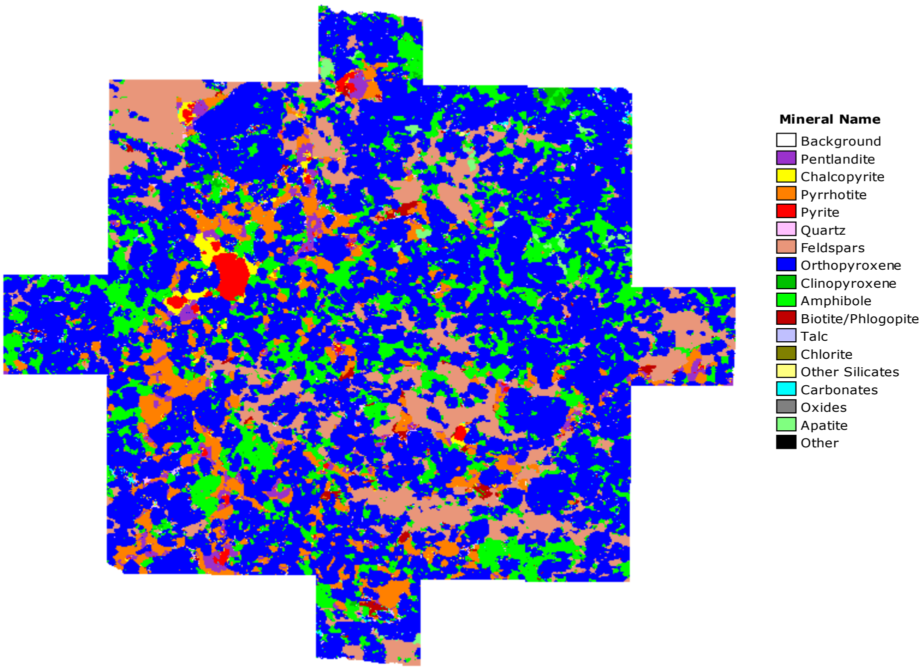


QEMSCAN Backscattered Electron Image

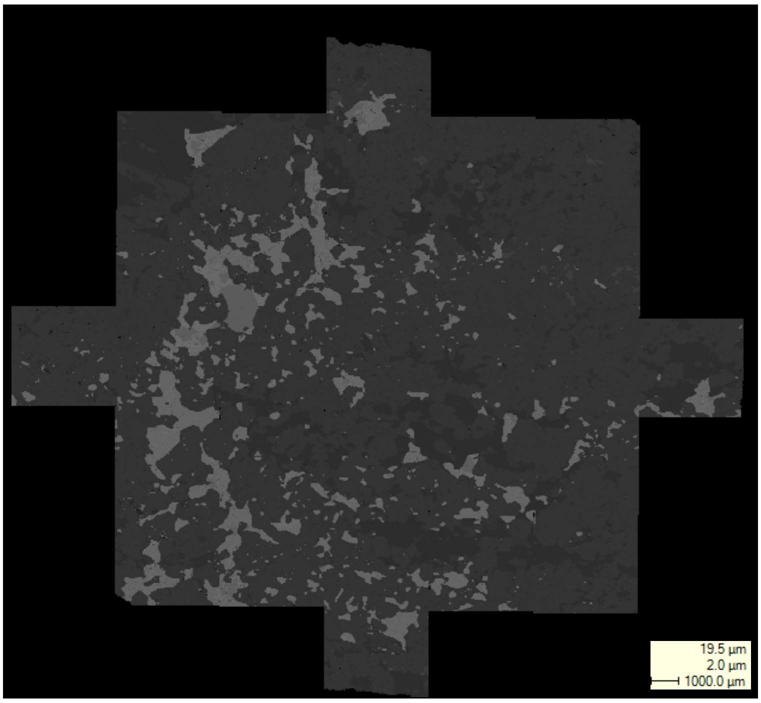


Sample: Box28.MQ-2014-070-119.90-120.00m

QEMSCAN Pseudo Colour Image

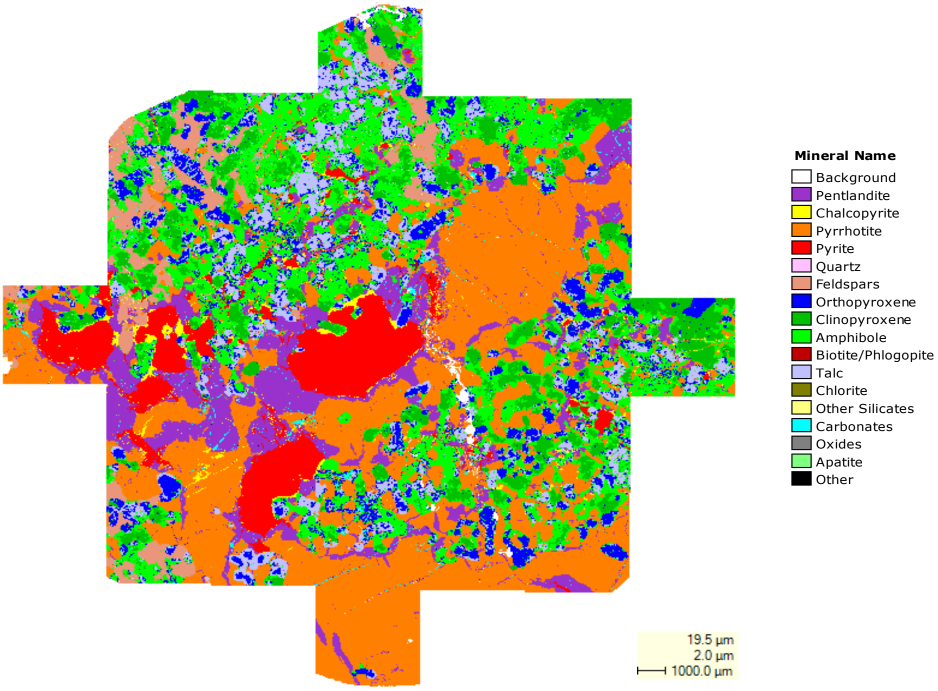


QEMSCAN Backscattered Electron Image

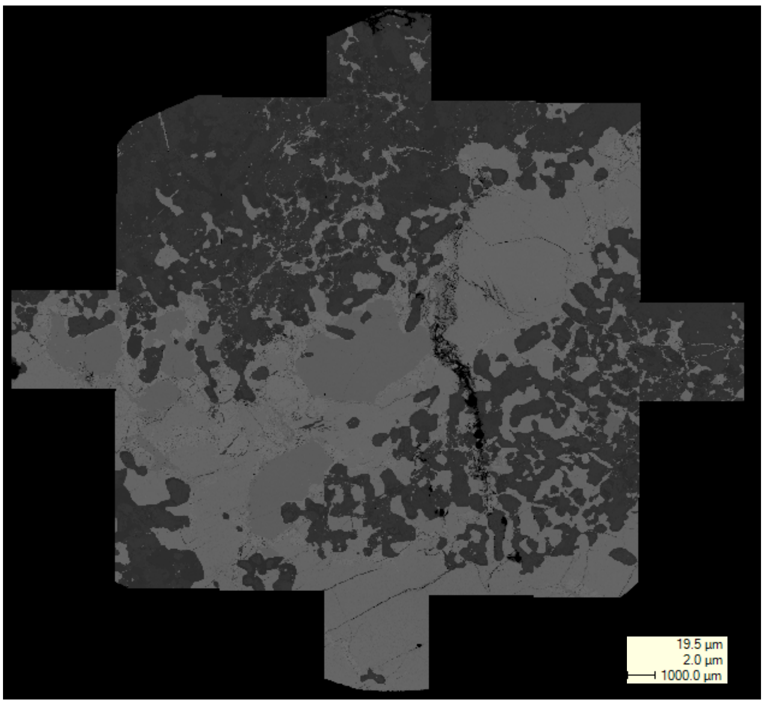


Sample: Box30.MQ-2014-066-133.90-134.00m

QEMSCAN Pseudo Colour Image



QEMSCAN Backscattered Electron Image



Appendix E – Additional QEMSCAN Data

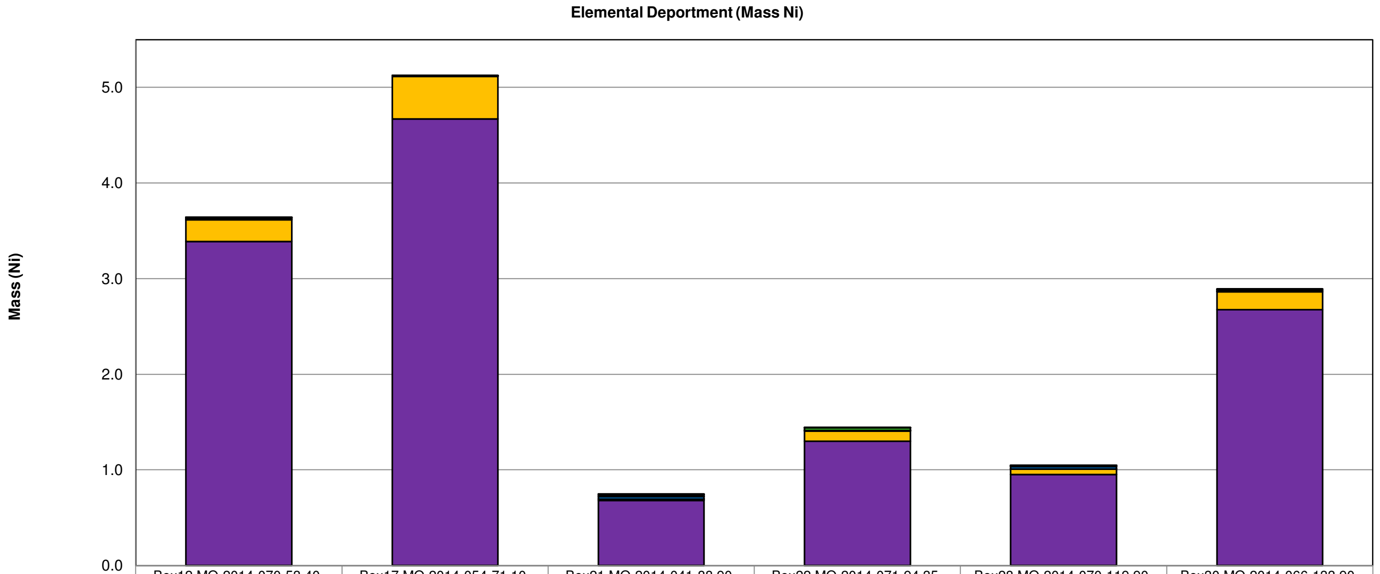
CAVM-14021-102
North American Nickel
MI7006-NOV14
Density and Size Data

Mineral	Box12.MQ-2014-070-53.40-53.50m		Box17.MQ-2014-054-71.10-71.26m		Box21.MQ-2014-041-88.90-89.00m		Box22.MQ-2014-071-94.35-94.50m		Box28.MQ-2014-070-119.90-120.00m		Box30.MQ-2014-066-133.90-134.00m	
	Density	Size	Density	Size	Density	Size	Density	Size	Density	Size	Density	Size
All	3.96	N/A	4.13	N/A	3.54	N/A	3.54	N/A	3.69	N/A	3.92	N/A
Pentlandite	4.54	182.28	4.47	288.49	4.42	228.84	4.55	156.43	4.49	141.45	4.56	202.61
Chalcopyrite	4.01	77.21	4.04	135.86	4.06	151.68	3.83	48.40	4.04	106.98	3.91	67.54
Pyrrhotite	4.48	284.23	4.55	750.16	4.37	192.19	4.56	341.44	4.46	227.06	4.50	406.59
Pyrite	5.01	194.62	5.01	257.30	5.01	173.87	5.01	144.65	5.01	197.59	5.01	443.31
Quartz	2.61	56.63	2.58	57.67	2.60	37.15	2.61	41.50	2.61	56.70	2.54	35.11
Feldspars	2.69	256.87	2.68	373.98	2.69	500.65	2.69	407.62	2.69	437.44	2.69	329.14
Orthopyroxene	3.95	448.47	3.95	51.08	3.95	434.57	3.95	161.88	3.95	595.91	3.95	110.09
Clinopyroxene	3.40	223.56	3.40	50.81	3.40	50.70	3.40	126.10	3.40	71.77	3.40	205.54
Amphibole	3.04	136.91	3.04	162.60	3.04	240.15	3.04	246.66	3.04	246.23	3.04	160.97
Biotite/Phlogopite	3.20	90.84	3.20	92.43	3.20	133.36	3.20	71.65	3.20	97.79	3.20	44.32
Talc	2.75	51.46	2.75	35.00	2.75	60.18	2.75	46.59	2.75	52.11	2.75	146.22
Chlorite	2.86	33.98	2.79	67.57	3.03	29.45	2.84	35.97	2.91	30.39	2.75	34.97
Other Silicates	3.09	31.33	2.78	31.98	2.94	32.37	2.89	29.46	3.32	33.02	3.15	33.25
Carbonates	3.09	47.15	2.96	43.08	3.18	41.83	2.95	39.43	3.16	48.67	2.85	43.88
Oxides	4.43	29.44	5.00	31.52	4.81	31.90	4.64	29.65	4.60	33.23	4.83	31.42
Apatite	3.19	89.91	3.19	91.27	3.19	163.62	3.19	179.80	3.19	239.88	3.19	29.31
Other	4.18	29.31	4.37	42.57	5.09	30.77	3.41	31.97	5.11	31.14	3.14	29.69

North American Nickel
CAVM-14021-102
MI7006-NOV14

High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Ni Deportment - Absolute

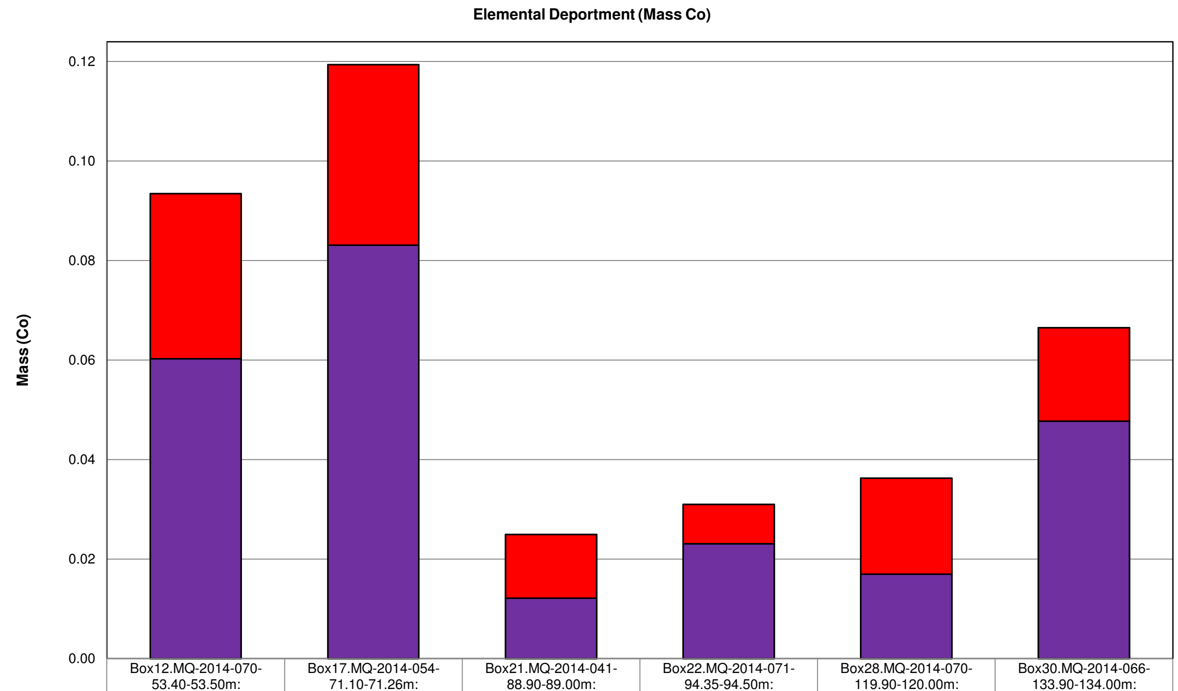


	Box12.MQ-2014-070-53.40-53.50m:	Box17.MQ-2014-054-71.10-71.26m:	Box21.MQ-2014-041-88.90-89.00m:	Box22.MQ-2014-071-94.35-94.50m:	Box28.MQ-2014-070-119.90-120.00m:	Box30.MQ-2014-066-133.90-134.00m:
Chlorite	0.00	0.00	0.00	0.00	0.00	0.00
Talc	0.00	0.00	0.00	0.00	0.00	0.00
Biotite/Phlogopite	0.00	0.00	0.01	0.00	0.00	0.00
Amphibole	0.00	0.00	0.02	0.02	0.01	0.01
Clinopyroxene	0.00	0.00	0.00	0.00	0.00	0.00
Orthopyroxene	0.02	0.00	0.03	0.01	0.03	0.01
Pyrite	0.00	0.00	0.00	0.00	0.00	0.00
Pyrrhotite	0.23	0.45	0.01	0.11	0.05	0.19
Pentlandite	3.39	4.67	0.68	1.30	0.95	2.68

North American Nickel
CAVM-14021-102
MI7006-NOV14

High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Co Deportment - Absolute

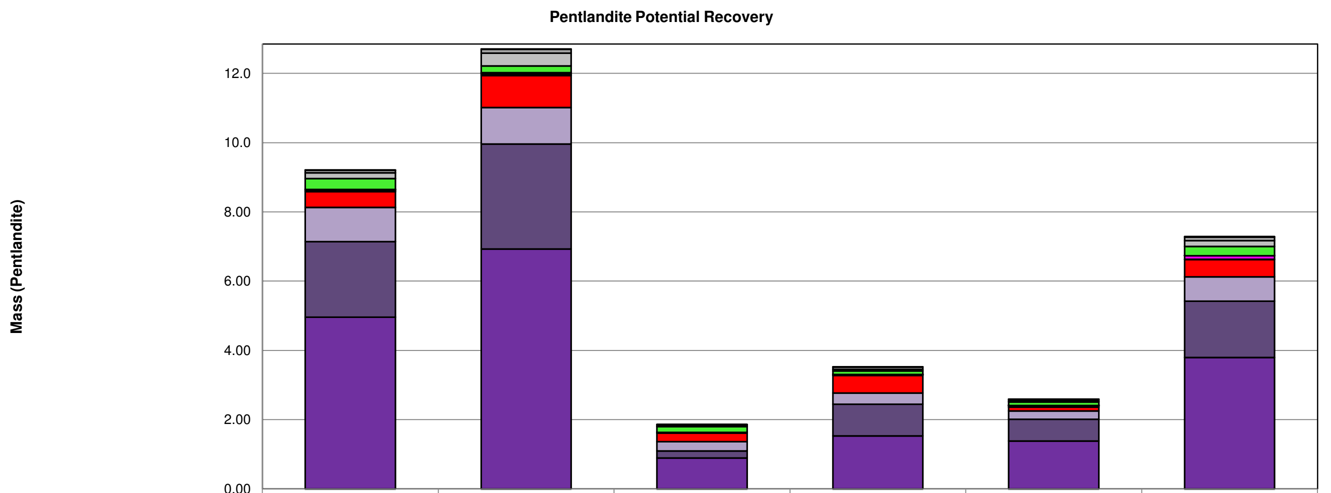


	Box12.MQ-2014-070-53.40-53.50m:	Box17.MQ-2014-054-71.10-71.26m:	Box21.MQ-2014-041-88.90-89.00m:	Box22.MQ-2014-071-94.35-94.50m:	Box28.MQ-2014-070-119.90-120.00m:	Box30.MQ-2014-066-133.90-134.00m:
Pyrite	0.03	0.04	0.01	0.01	0.02	0.02
Pentlandite	0.06	0.08	0.01	0.02	0.02	0.05

North American Nickel
CAVM-14021-102
MI7006-NOV14

High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Pentlandite Potential Recovery-Absolute

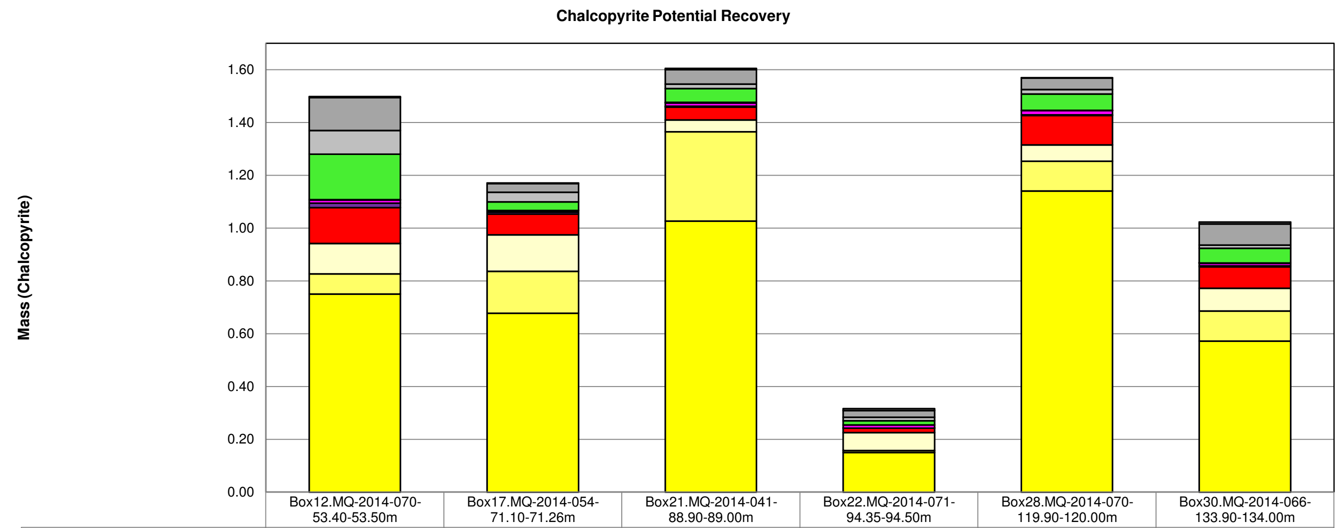


	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Non Recoverable - Locked	0.01	0.01	0.00	0.01	0.00	0.02
Non Recoverable - Exposed	0.08	0.11	0.04	0.06	0.05	0.10
Pent:Fe Sul <20% Exp/Lkd (Non Rec)	0.17	0.37	0.02	0.05	0.03	0.17
Recoverable - Complex Grains	0.31	0.20	0.16	0.09	0.10	0.26
Pent:Oxides (Rec)	0.00	0.00	0.00	0.00	0.00	0.00
Pent:Carbonates (Rec)	0.01	0.00	0.00	0.00	0.00	0.00
Pent:Soft Silicates (Rec)	0.00	0.04	0.00	0.00	0.00	0.00
Pent:Hard Silicates (Rec)	0.03	0.01	0.02	0.02	0.04	0.10
Pentlandite:Chalcopyrite (Rec)	0.03	0.03	0.00	0.00	0.01	0.01
Pent:Fe Sul >20% Exp (Rec)	0.45	0.92	0.25	0.51	0.11	0.50
Lib Pentlandite	0.99	1.06	0.26	0.32	0.24	0.71
Free Pentlandite	2.18	3.03	0.20	0.92	0.63	1.63
Pure Pentlandite	4.96	6.93	0.90	1.53	1.38	3.79

North American Nickel
CAVM-14021-102
MI7006-NOV14

High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Chalcopyrite Potential Recovery-Absolute

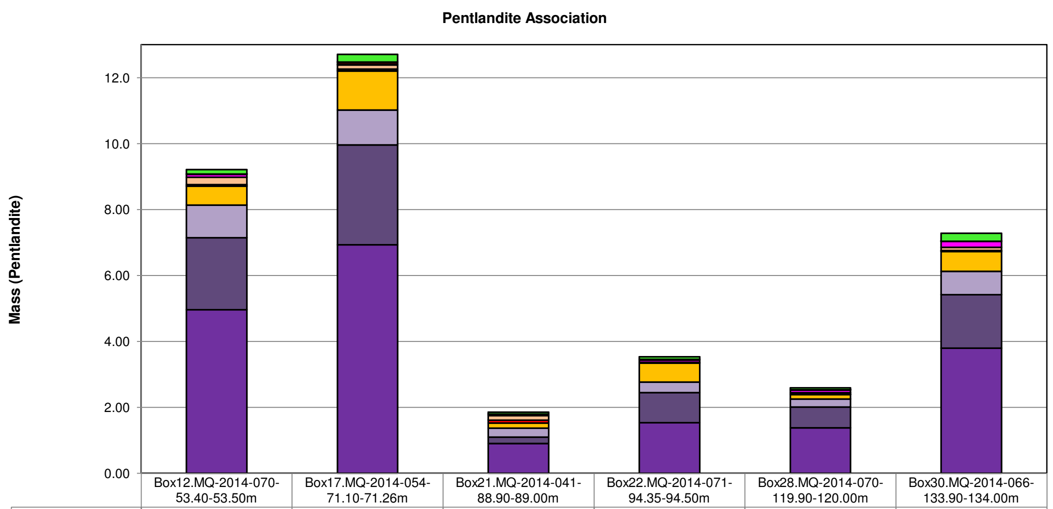


	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Non Recoverable - Locked	0.00	0.00	0.00	0.01	0.00	0.01
Non Recoverable - Exposed	0.12	0.03	0.05	0.03	0.04	0.08
Cpy:Fe Sul <20% Exp/Lkd (Non Rec)	0.09	0.04	0.02	0.01	0.02	0.01
Recoverable - Complex Grains	0.17	0.03	0.05	0.02	0.06	0.06
Cpy:Oxides (Rec)	0.00	0.00	0.00	0.00	0.00	0.00
Cpy:Carbonates (Rec)	0.00	0.00	0.00	0.00	0.00	0.00
Cpy:Soft Silicates (Rec)	0.00	0.01	0.00	0.00	0.00	0.00
Cpy:Hard Silicates (Rec)	0.01	0.00	0.01	0.01	0.02	0.01
Cpy:Pent (Rec)	0.02	0.01	0.00	0.00	0.00	0.00
Cpy:Fe Sul >20% Exp (Rec)	0.14	0.08	0.05	0.02	0.11	0.08
Lib Cpy	0.12	0.14	0.05	0.07	0.06	0.09
Free Cpy	0.08	0.16	0.34	0.01	0.11	0.11
Pure Cpy	0.75	0.68	1.03	0.15	1.14	0.57

North American Nickel
CAVM-14021-102
MI7006-NOV14

High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Pentlandite Association



	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Complex	0.13	0.23	0.06	0.08	0.06	0.24
Pent:Oxides	0.00	0.00	0.00	0.00	0.00	0.00
Pent:Carb	0.01	0.00	0.00	0.01	0.00	0.00
Pent:Soft Silicates	0.01	0.06	0.00	0.00	0.00	0.00
Pent:Hard Silicates	0.09	0.02	0.04	0.07	0.08	0.18
Pent:Cpy:Fe Sul	0.22	0.13	0.13	0.02	0.05	0.10
Pent:Cpy	0.04	0.04	0.00	0.01	0.01	0.02
Pent:Pyrite	0.01	0.01	0.09	0.00	0.00	0.01
Pent:Pyrrhotite	0.58	1.18	0.16	0.57	0.13	0.60
Lib Pent	0.99	1.06	0.26	0.32	0.24	0.71
Free Pent	2.18	3.03	0.20	0.92	0.63	1.63
Pure Pent	4.96	6.93	0.90	1.53	1.38	3.79

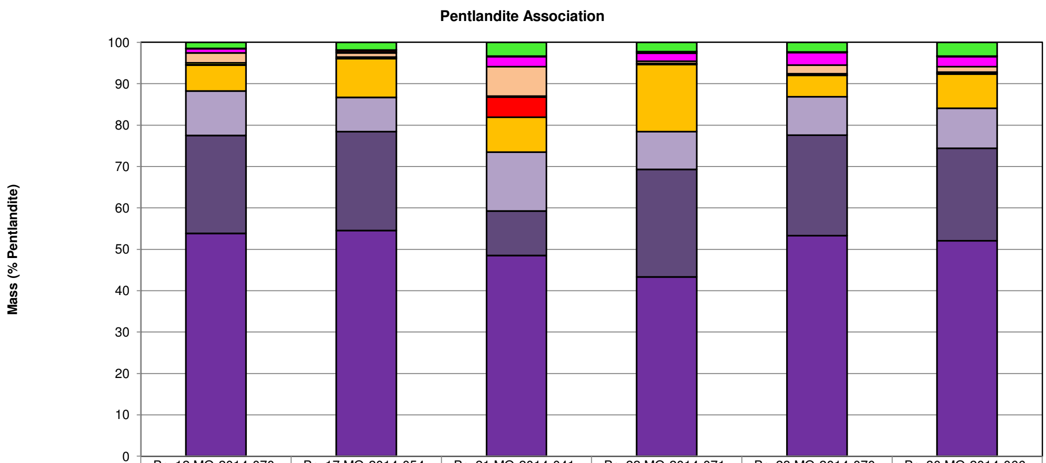
Absolute Mass of Pentlandite Across Samples

Mineral Name	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Pure Pent	4.96	6.93	0.90	1.53	1.38	3.79
Free Pent	2.18	3.03	0.20	0.92	0.63	1.63
Lib Pent	0.99	1.06	0.26	0.32	0.24	0.71
Pent:Pyrrhotite	0.58	1.18	0.16	0.57	0.13	0.60
Pent:Pyrite	0.01	0.01	0.09	0.00	0.00	0.01
Pent:Cpy	0.04	0.04	0.00	0.01	0.01	0.02
Pent:Cpy:Fe Sul	0.22	0.13	0.13	0.02	0.05	0.10
Pent:Hard Silicates	0.09	0.02	0.04	0.07	0.08	0.18
Pent:Soft Silicates	0.01	0.06	0.00	0.00	0.00	0.00
Pent:Carb	0.01	0.00	0.00	0.01	0.00	0.00
Pent:Oxides	0.00	0.00	0.00	0.00	0.00	0.00
Complex	0.13	0.23	0.06	0.08	0.06	0.24
Total	9.21	12.7	1.86	3.53	2.59	7.28

North American Nickel
CAVM-14021-102
MI7006-NOV14

High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Pentlandite Association



	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Complex	1.46	1.84	3.34	2.23	2.31	3.35
Pent:Oxides	0.00	0.01	0.00	0.00	0.00	0.01
Pent:Carb	0.07	0.02	0.02	0.32	0.07	0.03
Pent:Soft Silicates	0.06	0.50	0.17	0.07	0.07	0.07
Pent:Hard Silicates	0.99	0.18	2.38	1.97	3.02	2.41
Pent:Cpy:Fe Sul	2.37	0.99	7.11	0.56	2.11	1.33
Pent:Cpy	0.46	0.34	0.20	0.15	0.30	0.23
Pent:Pyrite	0.10	0.11	4.93	0.05	0.07	0.20
Pent:Pyrrhotite	6.25	9.31	8.37	16.2	5.20	8.30
Lib Pent	10.7	8.32	14.2	9.13	9.32	9.68
Free Pent	23.7	23.9	10.8	26.0	24.3	22.3
Pure Pent	53.8	54.5	48.5	43.3	53.3	52.1

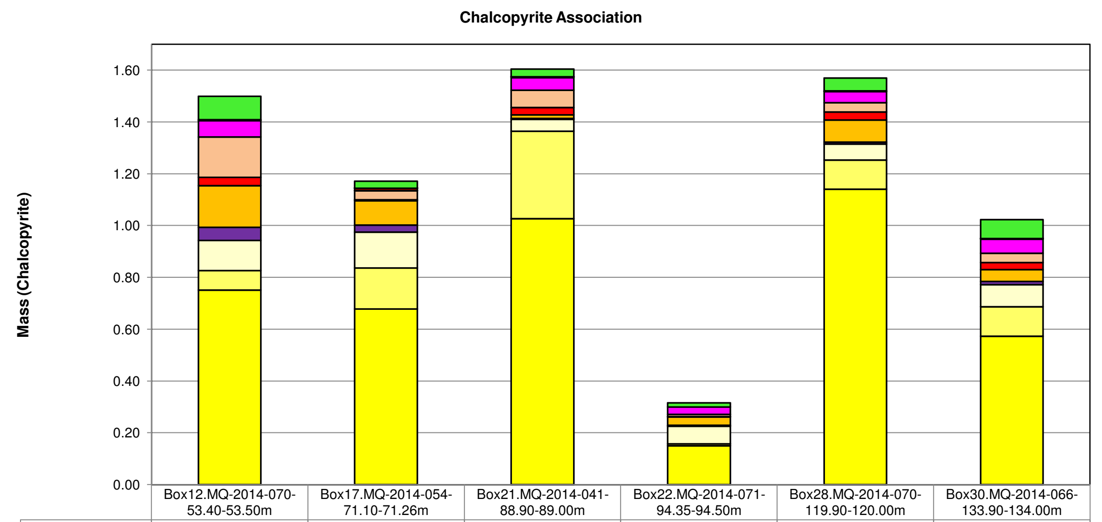
Normalized Mass of Pentlandite Across Samples

Mineral Name	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Pure Pent	53.8	54.5	48.5	43.3	53.3	52.1
Free Pent	23.7	23.9	10.8	26.0	24.3	22.3
Lib Pent	10.7	8.32	14.2	9.13	9.32	9.68
Pent:Pyrrhotite	6.25	9.31	8.37	16.2	5.20	8.30
Pent:Pyrite	0.10	0.11	4.93	0.05	0.07	0.20
Pent:Cpy	0.46	0.34	0.20	0.15	0.30	0.23
Pent:Cpy:Fe Sul	2.37	0.99	7.11	0.56	2.11	1.33
Pent:Hard Silicates	0.99	0.18	2.38	1.97	3.02	2.41
Pent:Soft Silicates	0.06	0.50	0.17	0.07	0.07	0.07
Pent:Carb	0.07	0.02	0.02	0.32	0.07	0.03
Pent:Oxides	0.00	0.01	0.00	0.00	0.00	0.01
Complex	1.46	1.84	3.34	2.23	2.31	3.35
Total	100.0	100.0	100.0	100.0	100.0	100.0
Liberated	**88.2**	**86.7**	**73.5**	**78.4**	**86.9**	**84.1**

North American Nickel
CAVM-14021-102
MI7006-NOV14

High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Chalcopyrite Association



	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Complex	0.09	0.03	0.03	0.02	0.05	0.07
Cpy:Oxides	0.00	0.00	0.00	0.00	0.00	0.00
Cpy:Carb	0.00	0.00	0.00	0.00	0.00	0.00
Cpy:Soft Silicates	0.00	0.01	0.00	0.00	0.00	0.00
Cpy:Hard Silicates	0.06	0.00	0.05	0.03	0.04	0.05
Cpy:FeS:Pent	0.16	0.03	0.07	0.01	0.03	0.04
Cpy:Pyrite	0.03	0.00	0.03	0.00	0.03	0.03
Cpy:Pyrrhotite	0.16	0.09	0.01	0.03	0.09	0.05
Cpy:Pentlandite	0.05	0.03	0.00	0.00	0.01	0.01
Lib Cpy	0.12	0.14	0.05	0.07	0.06	0.09
Free Cpy	0.08	0.16	0.34	0.01	0.11	0.11
Pure Cpy	0.75	0.68	1.03	0.15	1.14	0.57

Absolute Mass of Chalcopyrite Across Samples

Mineral Name	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Pure Cpy	0.75	0.68	1.03	0.15	1.14	0.57
Free Cpy	0.08	0.16	0.34	0.01	0.11	0.11
Lib Cpy	0.12	0.14	0.05	0.07	0.06	0.09
Cpy:Pentlandite	0.05	0.03	0.00	0.00	0.01	0.01
Cpy:Pyrrhotite	0.16	0.09	0.01	0.03	0.09	0.05
Cpy:Pyrite	0.03	0.00	0.03	0.00	0.03	0.03
Cpy:FeS:Pent	0.16	0.03	0.07	0.01	0.03	0.04
Cpy:Hard Silicates	0.06	0.00	0.05	0.03	0.04	0.05
Cpy:Soft Silicates	0.00	0.01	0.00	0.00	0.00	0.00
Cpy:Carb	0.00	0.00	0.00	0.00	0.00	0.00
Cpy:Oxides	0.00	0.00	0.00	0.00	0.00	0.00
Complex	0.09	0.03	0.03	0.02	0.05	0.07
Total	1.50	1.17	1.60	0.32	1.57	1.02

North American Nickel
CAVM-14021-102
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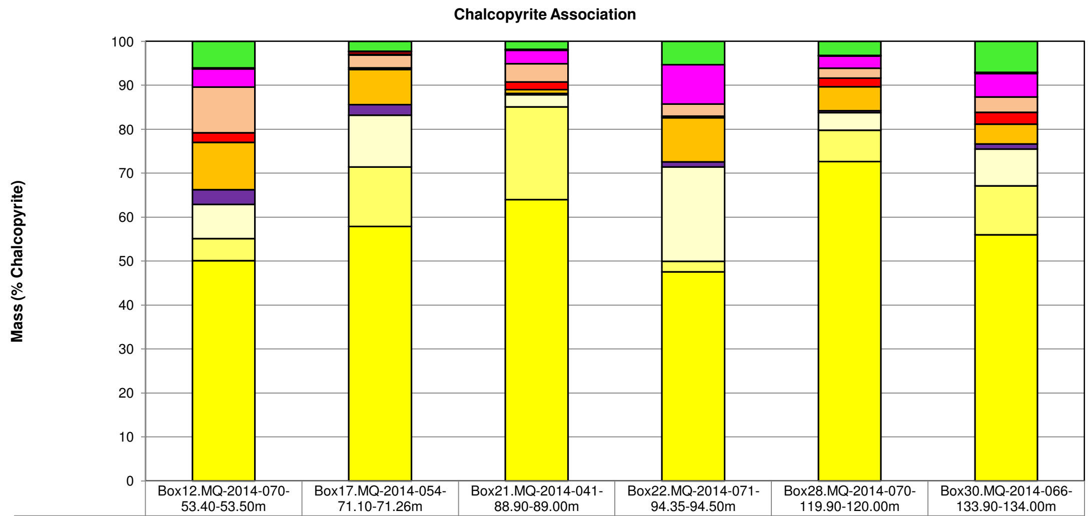
High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Chalcopyrite Association



	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Complex	6.02	2.28	1.83	5.33	3.19	7.06
Cpy:Oxides	0.00	0.06	0.00	0.00	0.00	0.03
Cpy:Carb	0.13	0.02	0.03	0.00	0.12	0.10
Cpy:Soft Silicates	0.09	0.65	0.20	0.00	0.02	0.13
Cpy:Hard Silicates	4.20	0.14	3.02	8.97	2.80	5.35
Cpy:FeS:Pent	10.4	2.92	4.16	2.72	2.22	3.50
Cpy:Pyrite	2.19	0.36	1.78	0.38	2.01	2.65
Cpy:Pyrrhotite	10.7	8.02	0.84	10.0	5.42	4.50
Cpy:Pentlandite	3.41	2.36	0.28	1.18	0.48	1.17
Lib Cpy	7.72	11.8	2.81	21.5	3.95	8.38
Free Cpy	5.05	13.5	21.1	2.39	7.17	11.1
Pure Cpy	50.1	57.9	64.0	47.5	72.6	56.0

Normalized Mass of Chalcopyrite Across Samples

Mineral Name	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Pure Cpy	50.1	57.9	64.0	47.5	72.6	56.0
Free Cpy	5.05	13.5	21.1	2.39	7.17	11.1
Lib Cpy	7.72	11.8	2.81	21.5	3.95	8.38
Cpy:Pentlandite	3.41	2.36	0.28	1.18	0.48	1.17
Cpy:Pyrrhotite	10.7	8.02	0.84	10.0	5.42	4.50
Cpy:Pyrite	2.19	0.36	1.78	0.38	2.01	2.65
Cpy:FeS:Pent	10.4	2.92	4.16	2.72	2.22	3.50
Cpy:Hard Silicates	4.20	0.14	3.02	8.97	2.80	5.35
Cpy:Soft Silicates	0.09	0.65	0.20	0.00	0.02	0.13
Cpy:Carb	0.13	0.02	0.03	0.00	0.12	0.10
Cpy:Oxides	0.00	0.06	0.00	0.00	0.00	0.03
Complex	6.02	2.28	1.83	5.33	3.19	7.06
Total	100.0	100.0	100.0	100.0	100.0	100.0
Liberated	**62.9**	**83.2**	**87.9**	**71.4**	**83.7**	**75.5**

North American Nickel
CAVM-14021-102
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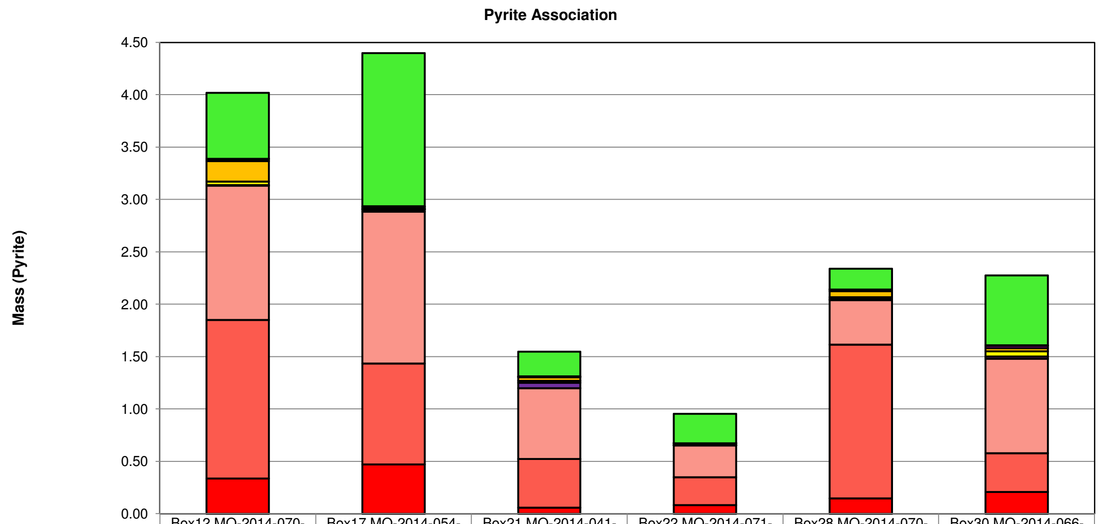
High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Pyrite Association



	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Complex	0.63	1.46	0.24	0.28	0.20	0.66
Pyrite:Oxides	0.00	0.00	0.00	0.00	0.00	0.00
Pyrite:Carb	0.00	0.00	0.00	0.00	0.00	0.00
Pyrite:Soft Silicates	0.00	0.01	0.00	0.00	0.00	0.00
Pyrite:Hard Silicates	0.02	0.01	0.01	0.01	0.01	0.02
Pyrite:Cpy:Pent	0.19	0.00	0.03	0.00	0.06	0.03
Pyrite:Cpy	0.03	0.01	0.02	0.00	0.02	0.05
Pyrite:Pent	0.01	0.02	0.05	0.00	0.01	0.02
Lib Pyrite	1.28	1.45	0.67	0.30	0.42	0.90
Free Pyrite	1.51	0.96	0.46	0.27	1.47	0.37
Pure Pyrite	0.34	0.47	0.06	0.08	0.15	0.21

Absolute Mass of Pyrite Across Samples

Mineral Name	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Pure Pyrite	0.34	0.47	0.06	0.08	0.15	0.21
Free Pyrite	1.51	0.96	0.46	0.27	1.47	0.37
Lib Pyrite	1.28	1.45	0.67	0.30	0.42	0.90
Pyrite:Pent	0.01	0.02	0.05	0.00	0.01	0.02
Pyrite:Cpy	0.03	0.01	0.02	0.00	0.02	0.05
Pyrite:Cpy:Pent	0.19	0.00	0.03	0.00	0.06	0.03
Pyrite:Hard Silicates	0.02	0.01	0.01	0.01	0.01	0.02
Pyrite:Soft Silicates	0.00	0.01	0.00	0.00	0.00	0.00
Pyrite:Carb	0.00	0.00	0.00	0.00	0.00	0.00
Pyrite:Oxides	0.00	0.00	0.00	0.00	0.00	0.00
Complex	0.63	1.46	0.24	0.28	0.20	0.66
Total	4.02	4.40	1.55	0.95	2.34	2.27

North American Nickel
CAVM-14021-102
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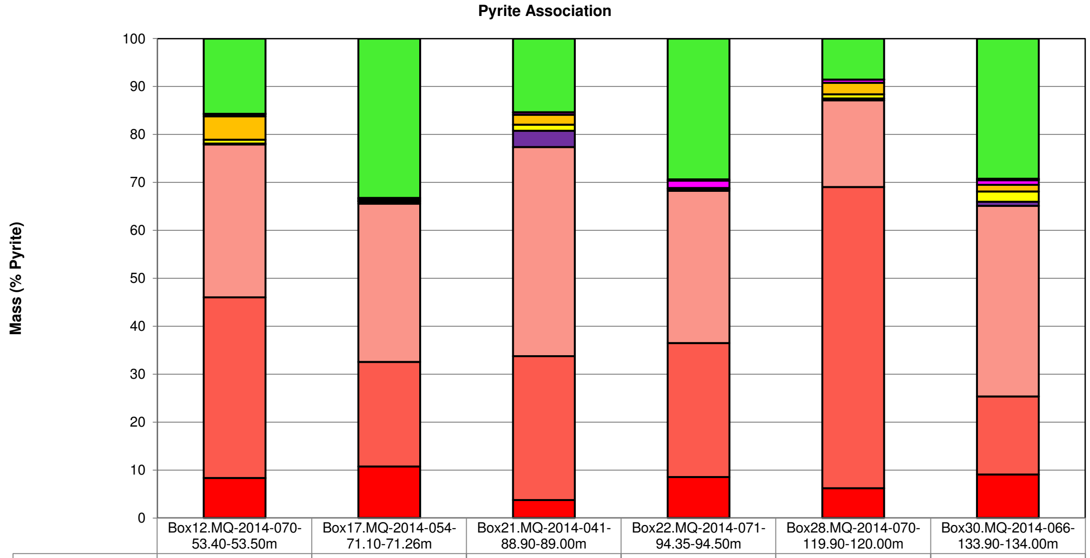
High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Pyrite Association



	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Complex	15.7	33.2	15.4	29.4	8.54	29.2
Pyrite:Oxides	0.00	0.00	0.00	0.00	0.00	0.00
Pyrite:Carb	0.01	0.11	0.00	0.18	0.00	0.11
Pyrite:Soft Silicates	0.07	0.23	0.04	0.07	0.03	0.18
Pyrite:Hard Silicates	0.45	0.31	0.46	1.54	0.62	0.93
Pyrite:Cpy:Pent	4.83	0.01	2.10	0.18	2.44	1.44
Pyrite:Cpy	0.83	0.13	1.23	0.13	0.85	2.14
Pyrite:Pent	0.19	0.41	3.45	0.28	0.39	0.86
Lib Pyrite	31.9	33.0	43.6	31.8	18.1	39.8
Free Pyrite	37.7	21.9	30.0	28.0	62.8	16.3
Pure Pyrite	8.36	10.7	3.76	8.52	6.22	9.07

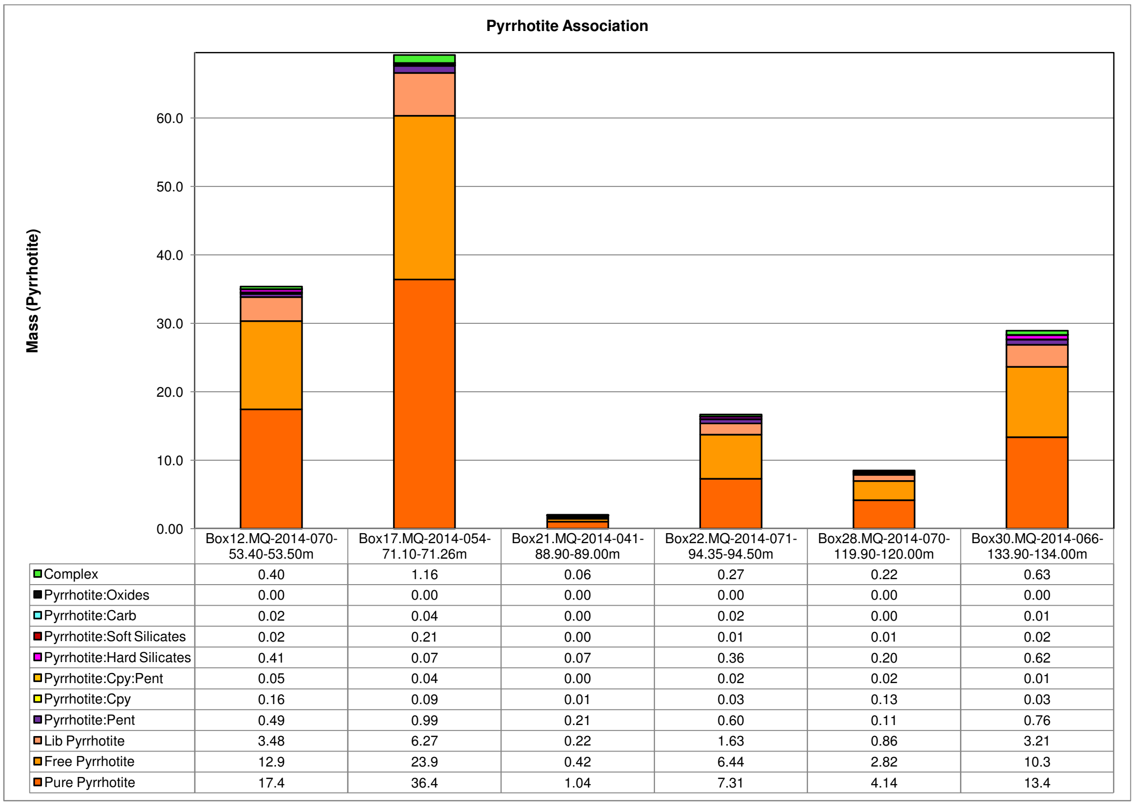
Normalized Mass of Pyrite Across Samples

Mineral Name	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Pure Pyrite	8.36	10.7	3.76	8.52	6.22	9.07
Free Pyrite	37.7	21.9	30.0	28.0	62.8	16.3
Lib Pyrite	31.9	33.0	43.6	31.8	18.1	39.8
Pyrite:Pent	0.19	0.41	3.45	0.28	0.39	0.86
Pyrite:Cpy	0.83	0.13	1.23	0.13	0.85	2.14
Pyrite:Cpy:Pent	4.83	0.01	2.10	0.18	2.44	1.44
Pyrite:Hard Silicates	0.45	0.31	0.46	1.54	0.62	0.93
Pyrite:Soft Silicates	0.07	0.23	0.04	0.07	0.03	0.18
Pyrite:Carb	0.01	0.11	0.00	0.18	0.00	0.11
Pyrite:Oxides	0.00	0.00	0.00	0.00	0.00	0.00
Complex	15.7	33.2	15.4	29.4	8.54	29.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Liberated	**77.9**	**65.6**	**77.4**	**68.3**	**87.1**	**65.1**

North American Nickel
CAVM-14021-102
MI7006-NOV14

High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Pyrrhotite Association



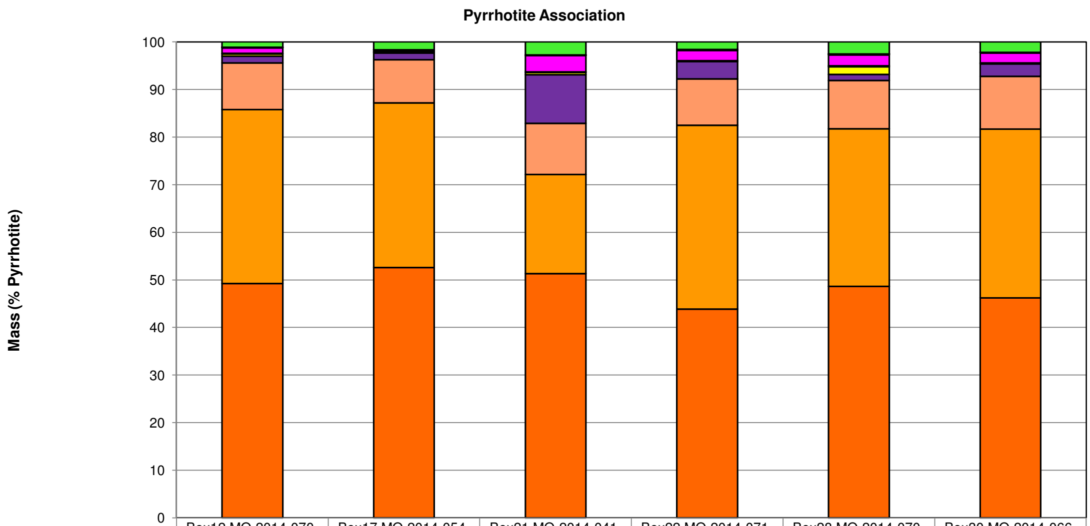
Absolute Mass of Pyrrhotite Across Samples

Mineral Name	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Pure Pyrrhotite	17.4	36.4	1.04	7.31	4.14	13.4
Free Pyrrhotite	12.9	23.9	0.42	6.44	2.82	10.3
Lib Pyrrhotite	3.48	6.27	0.22	1.63	0.86	3.21
Pyrrhotite:Pent	0.49	0.99	0.21	0.60	0.11	0.76
Pyrrhotite:Cpy	0.16	0.09	0.01	0.03	0.13	0.03
Pyrrhotite:Cpy:Pent	0.05	0.04	0.00	0.02	0.02	0.01
Pyrrhotite:Hard Silicates	0.41	0.07	0.07	0.36	0.20	0.62
Pyrrhotite:Soft Silicates	0.02	0.21	0.00	0.01	0.01	0.02
Pyrrhotite:Carb	0.02	0.04	0.00	0.02	0.00	0.01
Pyrrhotite:Oxides	0.00	0.00	0.00	0.00	0.00	0.00
Complex	0.40	1.16	0.06	0.27	0.22	0.63
Total	35.4	69.2	2.02	16.7	8.52	29.0

North American Nickel
CAVM-14021-102
MI7006-NOV14

High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Pyrrhotite Association



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Complex	1.13	1.67	2.75	1.61	2.54	2.18
Pyrrhotite:Oxides	0.00	0.00	0.01	0.01	0.02	0.01
Pyrrhotite:Carb	0.06	0.06	0.04	0.10	0.04	0.03
Pyrrhotite:Soft Silicates	0.05	0.30	0.07	0.05	0.12	0.08
Pyrrhotite:Hard Silicates	1.17	0.11	3.43	2.16	2.29	2.13
Pyrrhotite:Cpy:Pent	0.14	0.05	0.11	0.10	0.24	0.04
Pyrrhotite:Cpy	0.46	0.13	0.45	0.15	1.56	0.12
Pyrrhotite:Pent	1.39	1.43	10.2	3.61	1.28	2.64
Lib Pyrrhotite	9.84	9.05	10.8	9.75	10.1	11.1
Free Pyrrhotite	36.5	34.6	20.8	38.6	33.1	35.4
Pure Pyrrhotite	49.2	52.6	51.3	43.8	48.7	46.2

Normalized Mass of Pyrrhotite Across Samples

Mineral Name	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Pure Pyrrhotite	49.2	52.6	51.3	43.8	48.7	46.2
Free Pyrrhotite	36.5	34.6	20.8	38.6	33.1	35.4
Lib Pyrrhotite	9.84	9.05	10.8	9.75	10.1	11.1
Pyrrhotite:Pent	1.39	1.43	10.2	3.61	1.28	2.64
Pyrrhotite:Cpy	0.46	0.13	0.45	0.15	1.56	0.12
Pyrrhotite:Cpy:Pent	0.14	0.05	0.11	0.10	0.24	0.04
Pyrrhotite:Hard Silicates	1.17	0.11	3.43	2.16	2.29	2.13
Pyrrhotite:Soft Silicates	0.05	0.30	0.07	0.05	0.12	0.08
Pyrrhotite:Carb	0.06	0.06	0.04	0.10	0.04	0.03
Pyrrhotite:Oxides	0.00	0.00	0.01	0.01	0.02	0.01
Complex	1.13	1.67	2.75	1.61	2.54	2.18
Total	100.0	100.0	100.0	100.0	100.0	100.0
Liberated	**95.6**	**96.2**	**82.9**	**92.2**	**91.9**	**92.8**

North American Nickel
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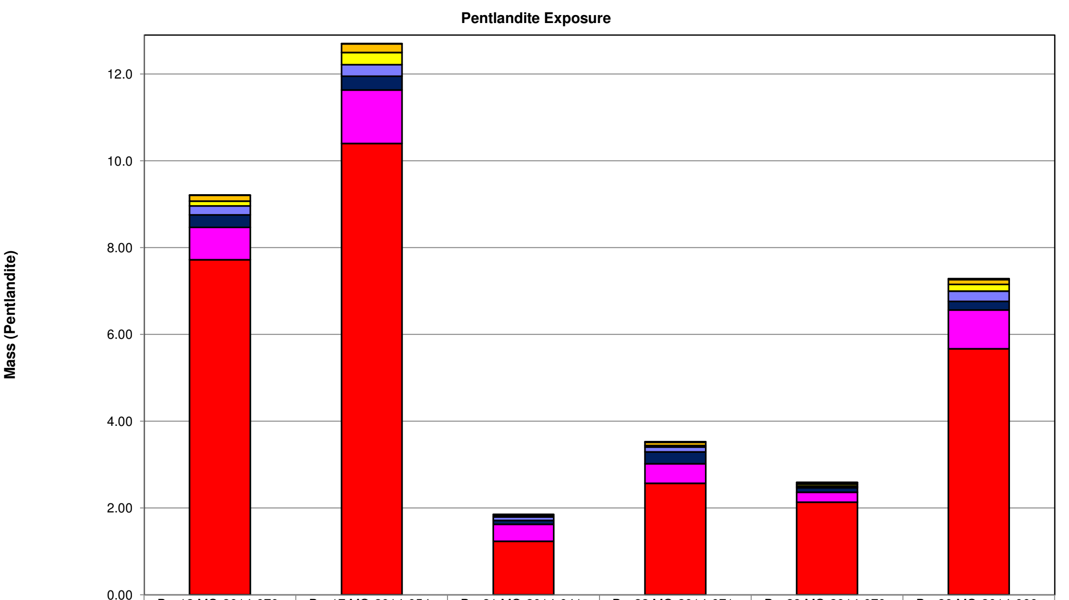
High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Pentlandite Exposure



	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Locked	0.01	0.01	0.00	0.01	0.00	0.02
0-10% Exposed	0.13	0.20	0.03	0.07	0.03	0.11
10-20% Exposed	0.11	0.28	0.03	0.04	0.04	0.16
20-30% Exposed	0.20	0.26	0.08	0.11	0.04	0.24
30-50% Exposed	0.29	0.31	0.09	0.27	0.10	0.20
50-80% Exposed	0.75	1.24	0.39	0.45	0.23	0.89
Exposed	7.72	10.4	1.23	2.57	2.13	5.67

Absolute Mass of Pentlandite Across Samples

Mineral Name	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Exposed	7.72	10.4	1.23	2.57	2.13	5.67
50-80% Exposed	0.75	1.24	0.39	0.45	0.23	0.89
30-50% Exposed	0.29	0.31	0.09	0.27	0.10	0.20
20-30% Exposed	0.20	0.26	0.08	0.11	0.04	0.24
10-20% Exposed	0.11	0.28	0.03	0.04	0.04	0.16
0-10% Exposed	0.13	0.20	0.03	0.07	0.03	0.11
Locked	0.01	0.01	0.00	0.01	0.00	0.02
Total	9.21	12.7	1.85	3.53	2.59	7.28

North American Nickel
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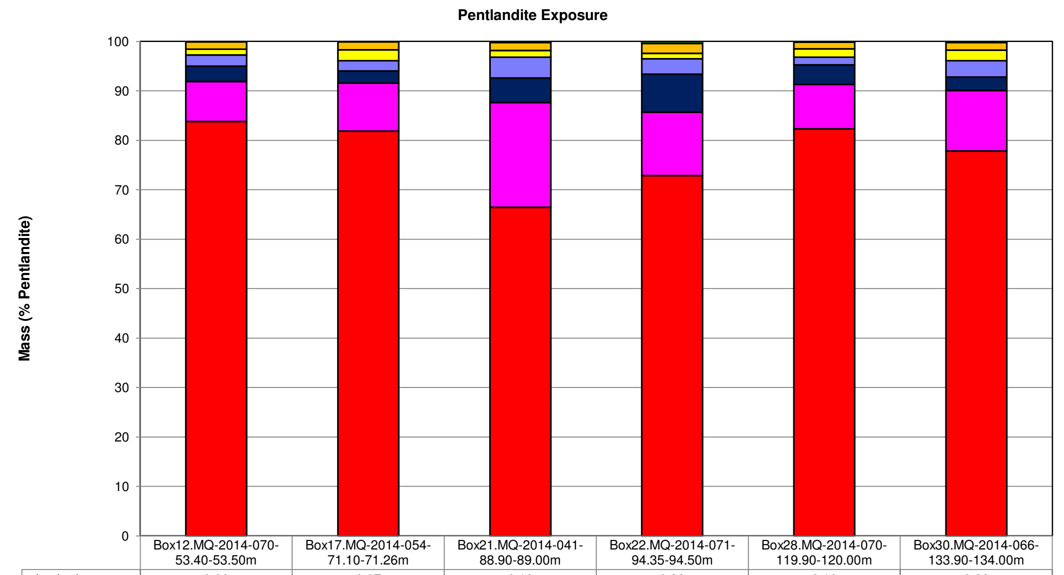
High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Pentlandite Exposure



	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Locked	0.08	0.07	0.19	0.38	0.16	0.22
0-10% Exposed	1.45	1.59	1.61	2.02	1.32	1.53
10-20% Exposed	1.22	2.21	1.35	1.14	1.73	2.17
20-30% Exposed	2.22	2.08	4.21	3.06	1.51	3.25
30-50% Exposed	3.10	2.45	4.98	7.71	3.95	2.75
50-80% Exposed	8.13	9.72	21.2	12.8	9.00	12.2
Exposed	83.8	81.9	66.5	72.9	82.3	77.8

Normalized Mass of Pentlandite Across Samples

Mineral Name	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Exposed	83.8	81.9	66.5	72.9	82.3	77.8
50-80% Exposed	8.13	9.72	21.2	12.8	9.00	12.2
30-50% Exposed	3.10	2.45	4.98	7.71	3.95	2.75
20-30% Exposed	2.22	2.08	4.21	3.06	1.51	3.25
10-20% Exposed	1.22	2.21	1.35	1.14	1.73	2.17
0-10% Exposed	1.45	1.59	1.61	2.02	1.32	1.53
Locked	0.08	0.07	0.19	0.38	0.16	0.22
Total	100.0	100.0	100.0	100.0	100.0	100.0
>20% Exposed	**97.2**	**96.1**	**96.8**	**96.5**	**96.8**	**96.1**

North American Nickel
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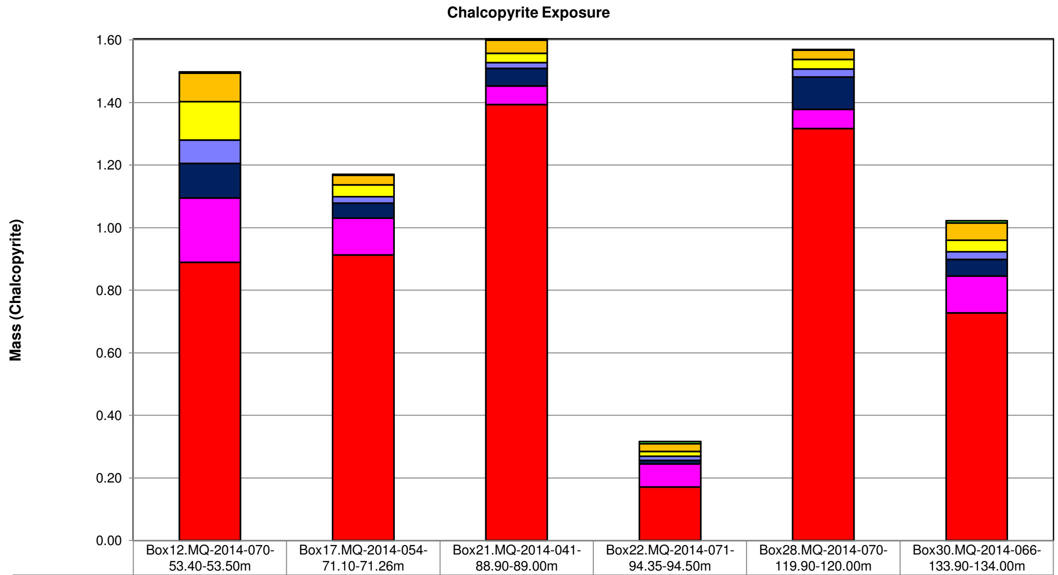
High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Chalcopyrite Exposure



	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Locked	0.00	0.00	0.00	0.01	0.00	0.01
0-10% Exposed	0.09	0.03	0.04	0.02	0.03	0.05
10-20% Exposed	0.12	0.04	0.03	0.01	0.03	0.04
20-30% Exposed	0.07	0.02	0.02	0.01	0.03	0.02
30-50% Exposed	0.11	0.05	0.06	0.01	0.10	0.05
50-80% Exposed	0.21	0.12	0.06	0.07	0.06	0.12
Exposed	0.89	0.91	1.39	0.17	1.32	0.73

Absolute Mass of Chalcopyrite Across Samples

Mineral Name	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Exposed	0.89	0.91	1.39	0.17	1.32	0.73
50-80% Exposed	0.21	0.12	0.06	0.07	0.06	0.12
30-50% Exposed	0.11	0.05	0.06	0.01	0.10	0.05
20-30% Exposed	0.07	0.02	0.02	0.01	0.03	0.02
10-20% Exposed	0.12	0.04	0.03	0.01	0.03	0.04
0-10% Exposed	0.09	0.03	0.04	0.02	0.03	0.05
Locked	0.00	0.00	0.00	0.01	0.00	0.01
Total	1.50	1.17	1.60	0.32	1.57	1.02

North American Nickel
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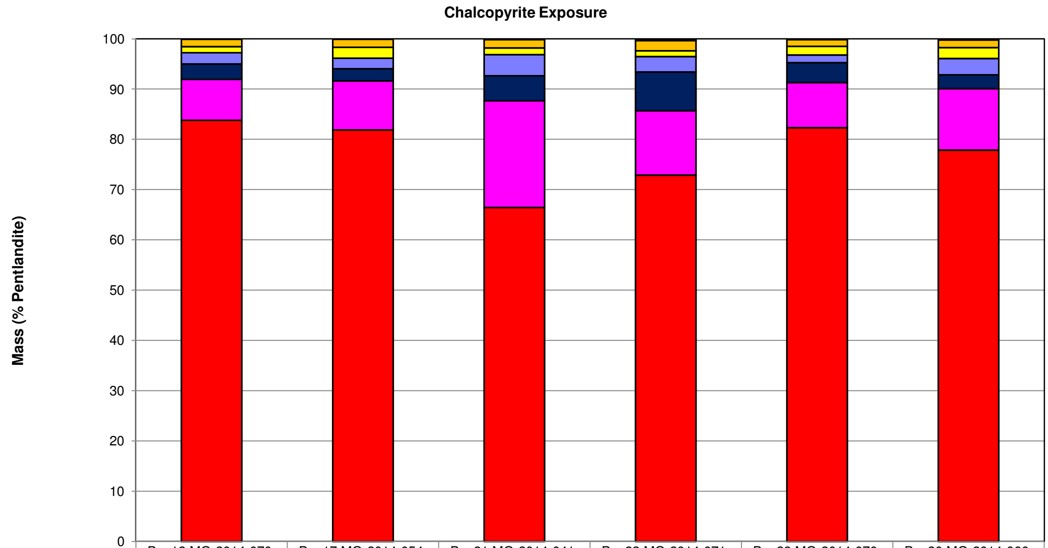
High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Chalcopyrite Exposure



	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Locked	0.08	0.07	0.19	0.38	0.16	0.22
0-10% Exposed	1.45	1.59	1.61	2.02	1.32	1.53
10-20% Exposed	1.22	2.21	1.35	1.14	1.73	2.17
20-30% Exposed	2.22	2.08	4.21	3.06	1.51	3.25
30-50% Exposed	3.10	2.45	4.98	7.71	3.95	2.75
50-80% Exposed	8.13	9.72	21.2	12.8	9.00	12.2
Exposed	83.8	81.9	66.5	72.9	82.3	77.8

Normalized Mass of Chalcopyrite Across Samples

Mineral Name	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Exposed	59.4	78.0	86.9	54.1	83.9	71.2
50-80% Exposed	13.7	9.99	3.69	23.3	3.96	11.4
30-50% Exposed	7.32	4.15	3.53	3.62	6.59	5.26
20-30% Exposed	4.99	1.76	1.10	4.35	1.62	2.42
10-20% Exposed	8.19	3.17	1.90	4.67	1.95	3.61
0-10% Exposed	6.08	2.69	2.57	7.71	1.91	5.35
Locked	0.31	0.24	0.30	2.25	0.11	0.72
Total	100.0	100.0	100.0	100.0	100.0	100.0
>20% Exposed	**85.4**	**93.9**	**95.2**	**85.4**	**96.0**	**90.3**

North American Nickel
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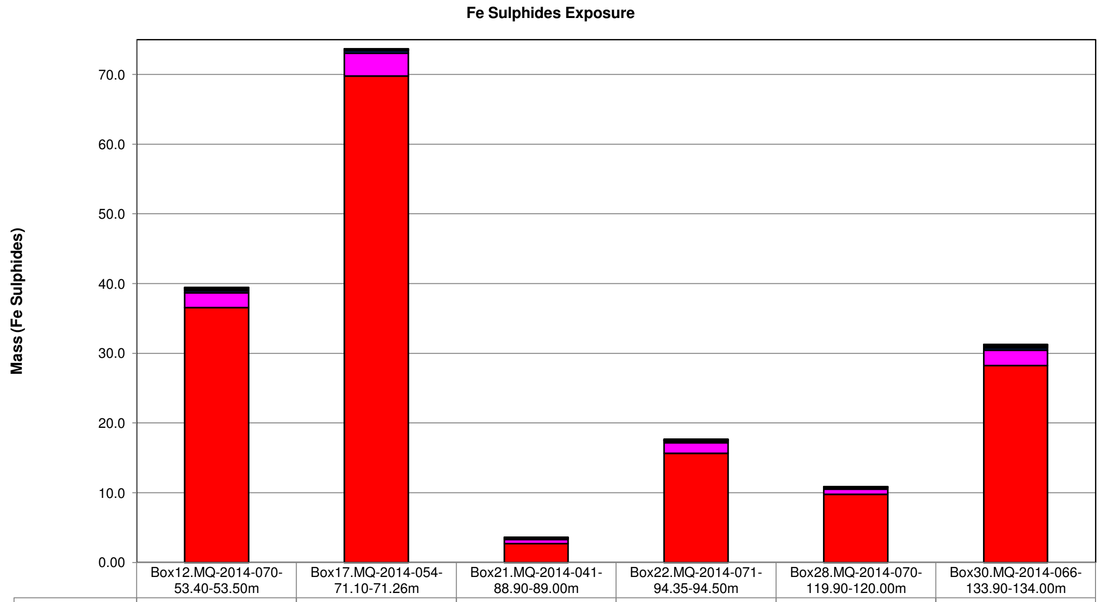
High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Fe Sulphides Exposure



	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Locked	0.01	0.00	0.01	0.01	0.00	0.01
0-10% Exposed	0.09	0.05	0.04	0.08	0.05	0.13
10-20% Exposed	0.13	0.09	0.04	0.07	0.07	0.14
20-30% Exposed	0.21	0.09	0.07	0.06	0.04	0.17
30-50% Exposed	0.32	0.35	0.13	0.22	0.16	0.33
50-80% Exposed	2.07	3.25	0.59	1.52	0.75	2.21
Exposed	36.6	69.8	2.70	15.7	9.77	28.2

Absolute Mass of Fe Sulphides Across Samples

Mineral Name	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Exposed	36.6	69.8	2.70	15.7	9.77	28.2
50-80% Exposed	2.07	3.25	0.59	1.52	0.75	2.21
30-50% Exposed	0.32	0.35	0.13	0.22	0.16	0.33
20-30% Exposed	0.21	0.09	0.07	0.06	0.04	0.17
10-20% Exposed	0.13	0.09	0.04	0.07	0.07	0.14
0-10% Exposed	0.09	0.05	0.04	0.08	0.05	0.13
Locked	0.01	0.00	0.01	0.01	0.00	0.01
Total	39.4	73.6	3.57	17.6	10.9	31.2

North American Nickel
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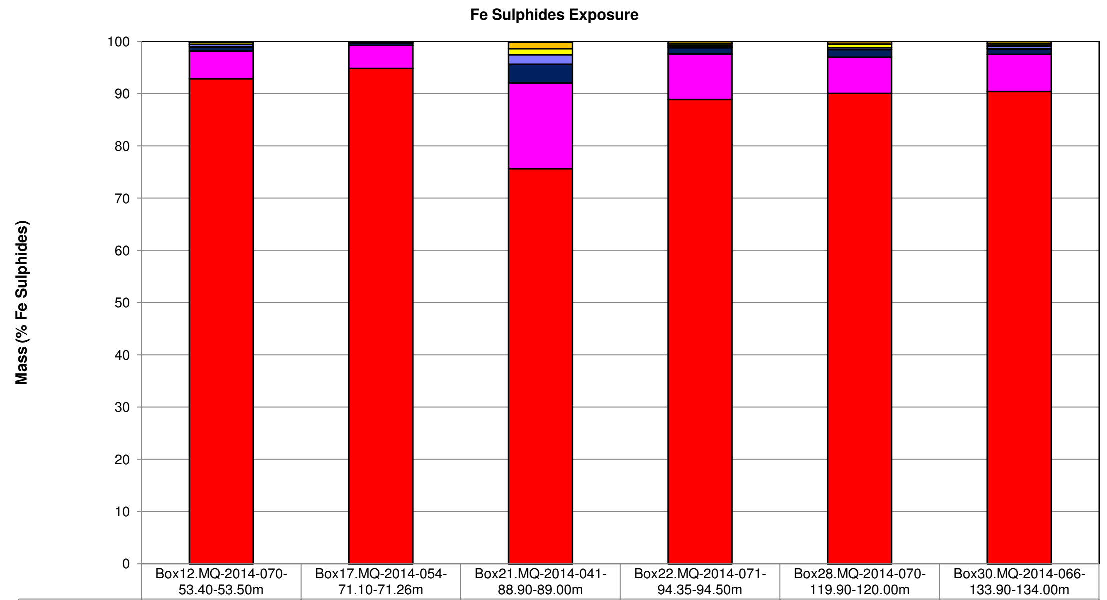
High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Fe Sulphides Exposure



	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Locked	0.02	0.00	0.16	0.03	0.04	0.04
0-10% Exposed	0.23	0.07	1.22	0.46	0.49	0.41
10-20% Exposed	0.34	0.13	1.18	0.39	0.69	0.46
20-30% Exposed	0.52	0.13	1.86	0.32	0.38	0.56
30-50% Exposed	0.81	0.47	3.51	1.26	1.47	1.06
50-80% Exposed	5.26	4.42	16.4	8.65	6.91	7.07
Exposed	92.8	94.8	75.6	88.9	90.0	90.4

Normalized Mass of Fe Sulphides Across Samples

Mineral Name	Box12.MQ-2014-070-53.40-53.50m	Box17.MQ-2014-054-71.10-71.26m	Box21.MQ-2014-041-88.90-89.00m	Box22.MQ-2014-071-94.35-94.50m	Box28.MQ-2014-070-119.90-120.00m	Box30.MQ-2014-066-133.90-134.00m
Exposed	92.8	94.8	75.6	88.9	90.0	90.4
50-80% Exposed	5.26	4.42	16.4	8.65	6.91	7.07
30-50% Exposed	0.81	0.47	3.51	1.26	1.47	1.06
20-30% Exposed	0.52	0.13	1.86	0.32	0.38	0.56
10-20% Exposed	0.34	0.13	1.18	0.39	0.69	0.46
0-10% Exposed	0.23	0.07	1.22	0.46	0.49	0.41
Locked	0.02	0.00	0.16	0.03	0.04	0.04
Total	100.0	100.0	100.0	100.0	100.0	100.0
>20% Exposed	**99.4**	**99.8**	**97.4**	**99.1**	**98.8**	**99.1**

North American Nickel
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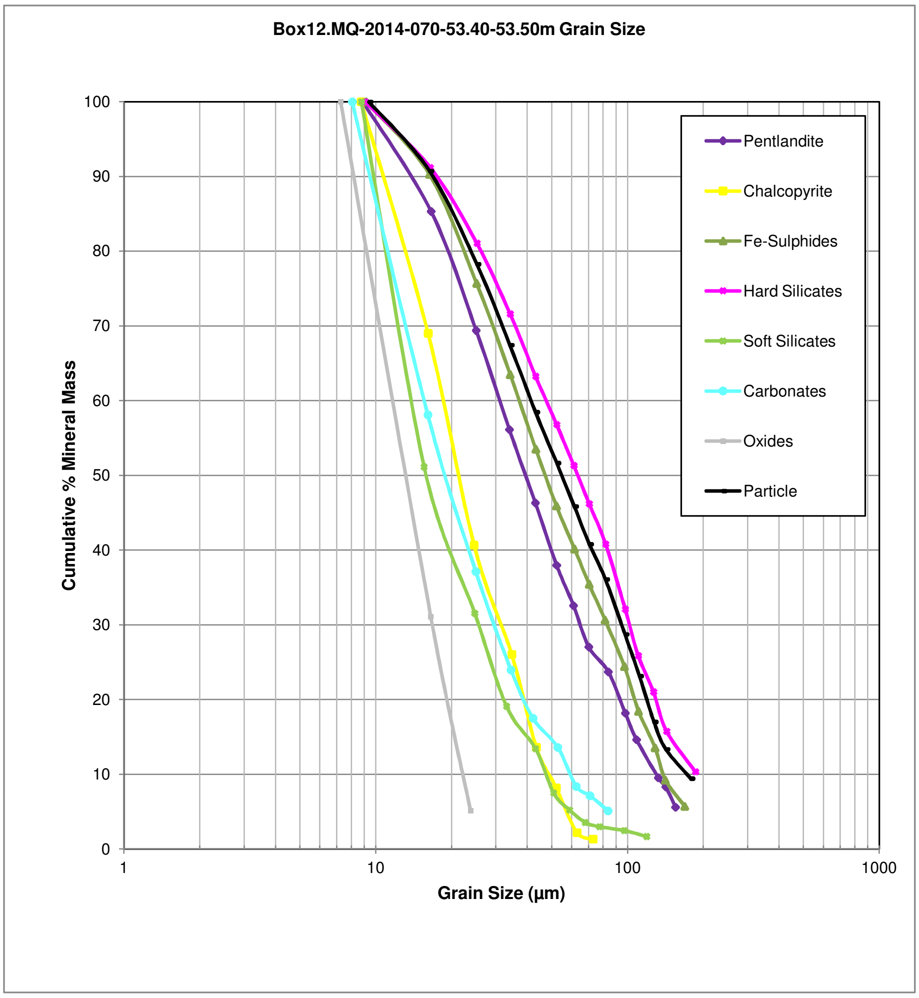
High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Cumulative Grain Size Distribution



North American Nickel
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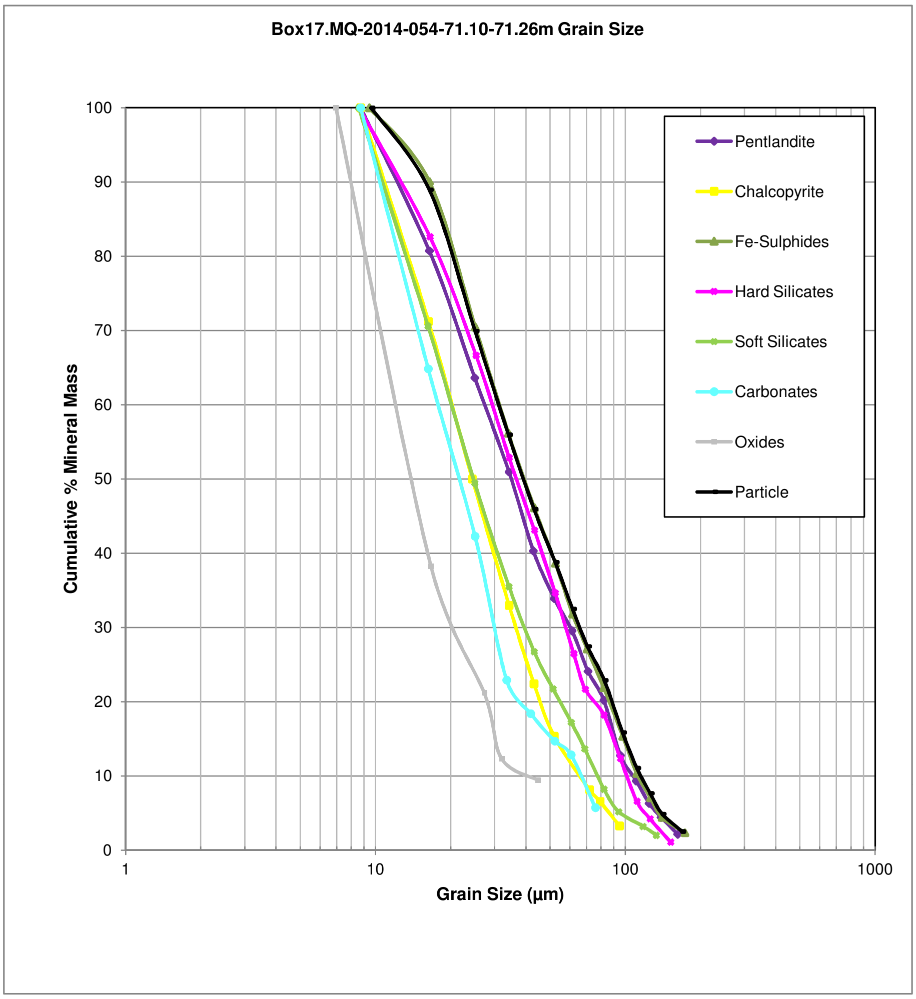
High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Cumulative Grain Size Distribution



North American Nickel
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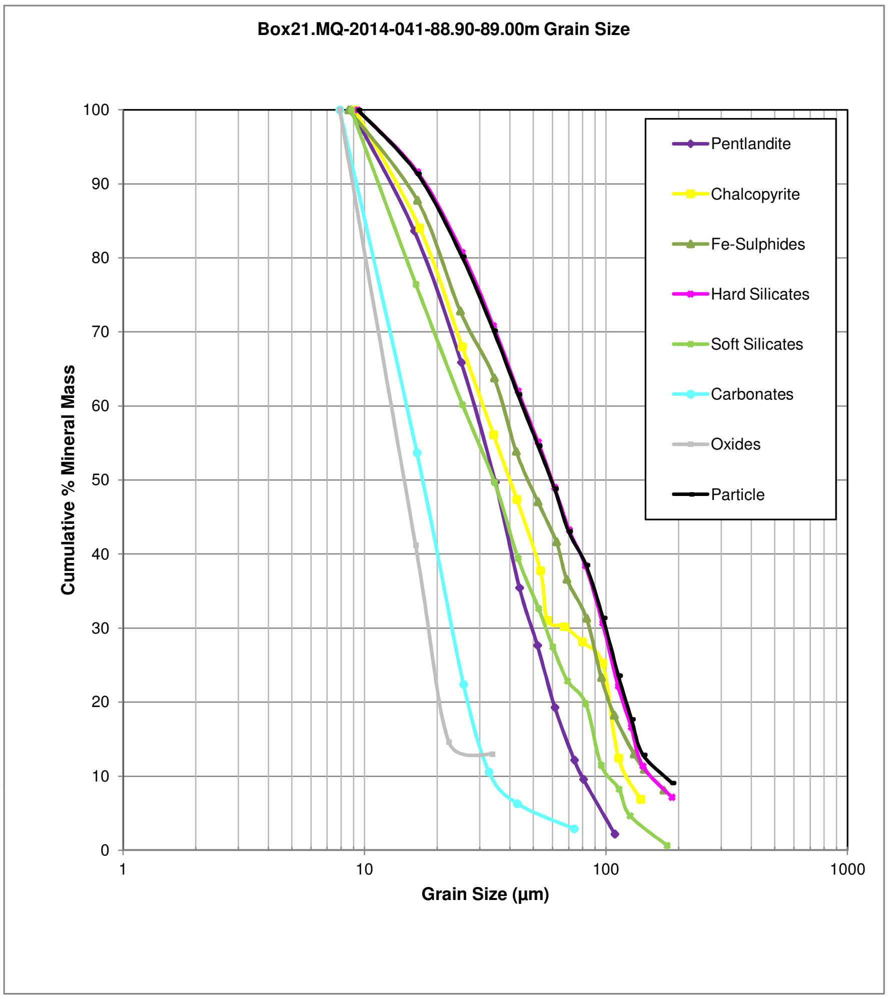
High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Cumulative Grain Size Distribution



North American Nickel
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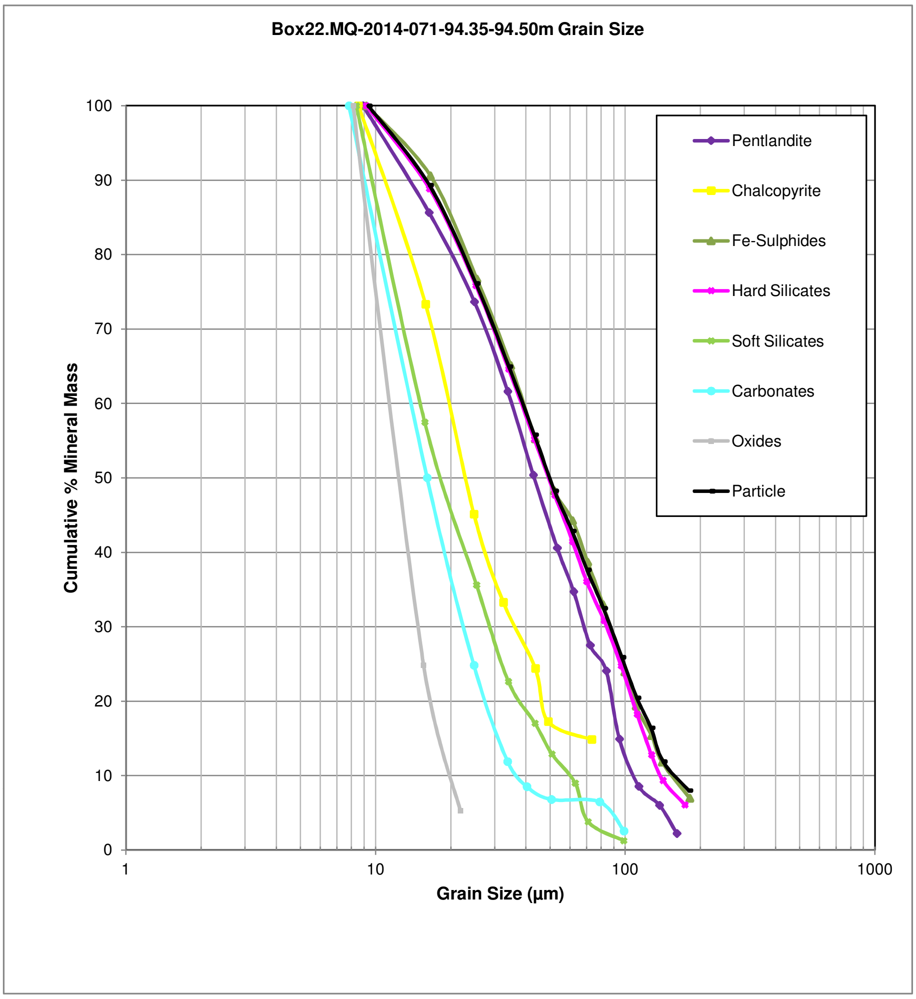
High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Cumulative Grain Size Distribution



North American Nickel
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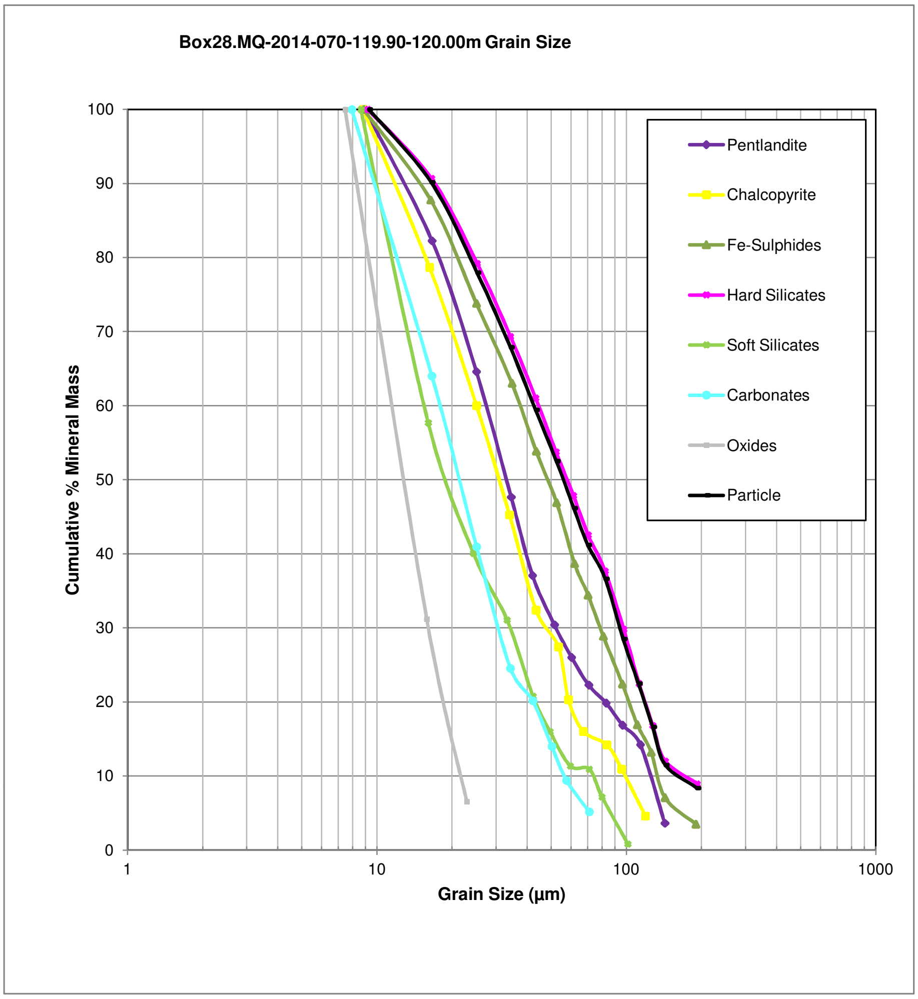
High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Cumulative Grain Size Distribution



North American Nickel
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High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Cumulative Grain Size Distribution