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**Analytical Evaluation of Garnet Samples
from RJM Garnets Inc. property
Mattawan Township
Sudbury Mining Division, Ontario**

LEGACY CLAIMS 4254066 and 4271820

MLAS CLAIM CELLS 132190 and 294732

January 14, 2018

Prepared for RJM Garnets Inc. by

Jim Ireland,

Consultant

Ranger Bay Consulting

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Attachment 1: SGS Revised Proposal 16538-PR1-R1 for RJM Garnet Oct 27, 2017

Attachment 2: Terminology and Definitions Custom Mineralogy - RJM Garnets

Attachment 3: QEMSCAN Data Results RJM MI5002-Nov 2017

Attachment 4: SGS Canada Inc. Invoice

Evaluation of Garnet Samples from RJM Garnets Inc. property, Mattawan Township, Ontario

Introduction

Several samples of garnet-bearing rock, collected during prospecting trips over the RJM Garnets Inc. property (Figure 1) in August and October of 2017, were evaluated and two composite samples were selected for detailed analysis of their garnet content (Figure 2).

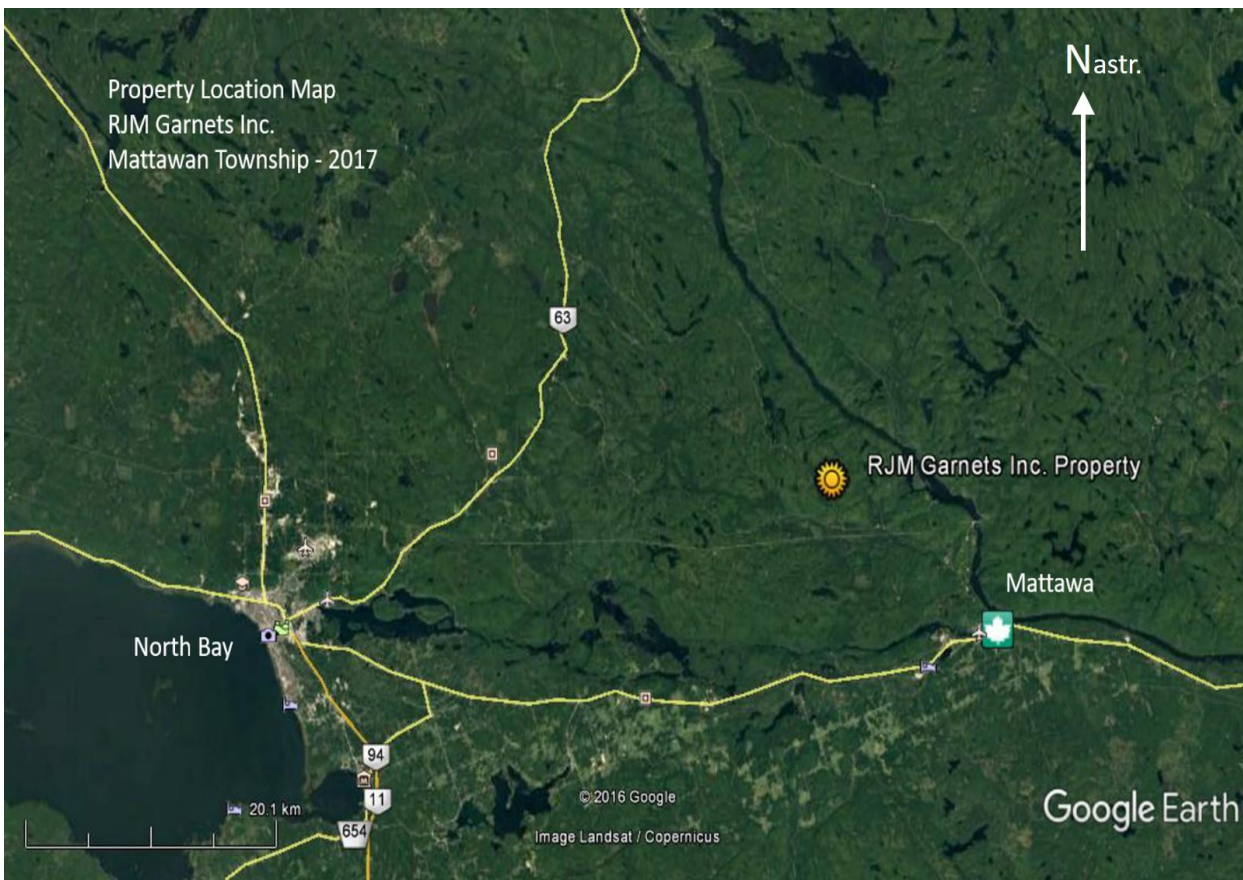


Figure 1: RJM Garnets Inc. Property location Map

SGS Canada Inc. was contracted to evaluate two composite samples using QEMSCAN™ analysis methodology to determine the modal percentage content of garnet in each sample and provide whole rock geochemical analysis of the samples. A detailed description of the QEMSCAN™ analytical process is provided in **Attachment 1**. Technical specifications and definitions are provided in **Attachment 2**. Analytical results are provided in **Attachment 3**.

Location and Access

The RJM Garnets Inc. property is located in NW-central Mattawan Township, approximately 14 km north of the town of Mattawa. Highway 533 bisects the property. Numerous forest access roads and trails provide

excellent access to most of the property. Legacy claim 4254066 (MLAS claim cell 132190) occupies the south half of Lots 9 and 10, Concession 10 and Claim 4271820 (MLAS claim cell 294732) occupies the south half of Lots 13 and 14, Concession 12, Mattawan Township. (figure 2).

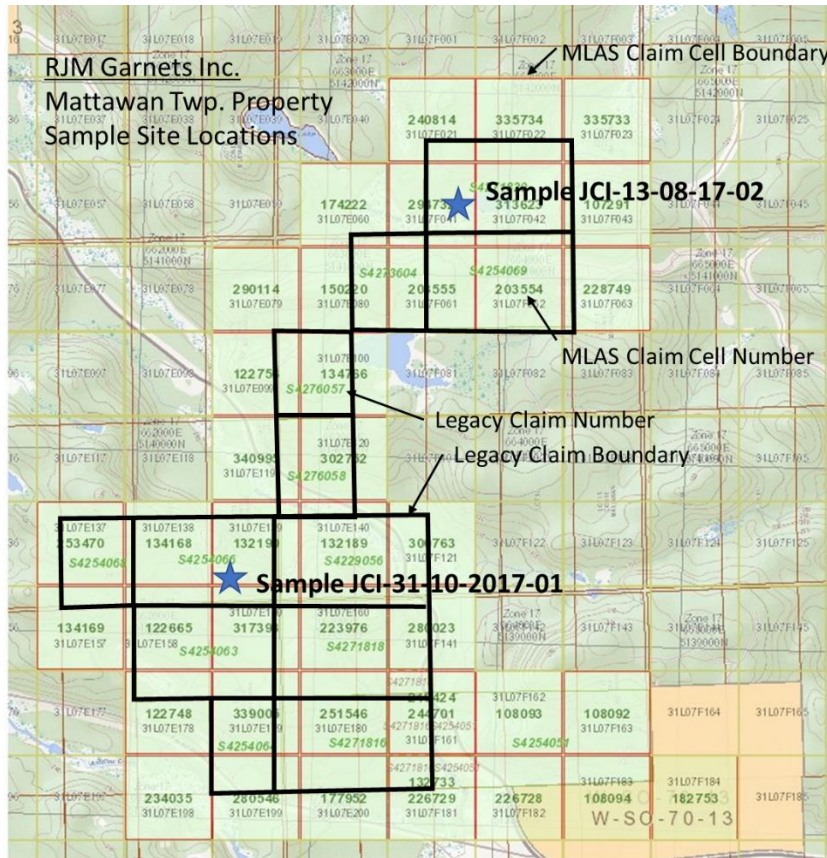


Figure 2: RJM Garnets Inc. MLAS Claim Cell Group showing sample collection sites.

Analytical Method

Two samples collected on the property in 2017, were shipped to SGS Canada Inc. in Lakefield, Ontario for analysis of garnet content and mineral composition utilizing the QEMSCAN™ methodology, described in **Attachments 1 and 2**.

Each sample consisted of approximately 15 pieces of mineralized material totalling about 3 kg, collected randomly over an area approximately 1 m², with the goal of obtaining a representative sample off of each sample site. Samples were bagged, labeled, secured and transferred to SGS Canada Inc.

Sample Descriptions

JCI-13-08-17-02: UTM 17, 0663785mE, 5141312mN

Collected during a prospecting traverse on RJM Garnets Inc. claim 4271820 (MLAS 294732) on August 13, 2017. The sample site was described in a Prospecting Report submitted for assessment in 2017. GPS position

is approximate due to extensive foliage cover over the site. An abbreviated description of the sample is provided, below:

SAMPLE JCI-13-08-17-02

A well exposed, west facing ridge comprised of garnet-pyroxene-amphibolite. Garnet content was equal to or greater than the rocks observed on the east side of the ridge – Sample JCI-13-08-17-01. Style of mineralization is identical to rocks observed in Area 4; abundant coarse-grained, pseudomorphitic pyroxene with bands, lenses and disseminations of fine-grained garnet.

JCI-31-10-17-01: UTM 17, 0662494mE, 5139278mN

Collected while mapping **Stripped Area Number 1**, located on RJM Garnets Inc. claim 4254066 (MLAS 132190) on October 31, 2017. The sample was collected from the southwest side of a prominent, ENE trending ridge located adjacent to the stripped area being mapped. The garnets have a distinctly orange coloration and range in size from 2mm to 1cm. The sample was collected within a 1.0 m² exposure of rock that appeared well mineralized with garnet. Garnet-poor, feldspar-rich gneiss and garnetiferous amphibolite bands were present within the sample area and were included in the sample.

Conclusions

Results of the analyses is provided in **Attachment 3**. Sample JC1-13-08-17-02 contained 36.5% garnet and JC1-31-10-17-1 returned 6.39% garnet. Sample JCI-13-08-17-02 was visually estimated to contain approximately 30% garnet while sample JCI-31-10-17-01 was visually estimated to contain between 15% and 20% garnet.

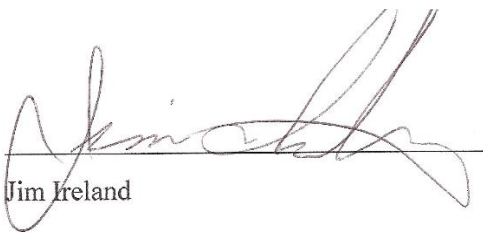
The results suggest that the garnet-poor bands of felsic gneiss included in sample JCI-31-10-17-01 are more prevalent than observed and their presence has a significant diluting effect.

Jim Ireland

March 2, 2018

Statement of Expenditures

Analytical Costs	Two Samples Analysed using SGS Canada Inc. QEMSCAN™ process (Attachment 4) - HST Included		\$2542.50
Subtotal Analyses			\$2542.50
Travel Cost No HST	14-08-2017 - North Bay to Lakefield, Ontario, return, to deliver samples to SGS Canada Inc. 872km @ \$0.50/km		\$436.00
Travel Cost No HST	07-11-2018 - Alban to Garson, Return, to ship sample to SGS Canada Inc. 160km @ \$0.50/km		\$80.00
Subtotal Travel			\$516.00
Consultant Fees	Report Writing and Diagrams 6 hrs@ \$40/hr	Jan. 16, 18, Feb. 11, 22, Mar.1, 2 2018	\$240.00
Consultant Fees	Research - 6 hours @ \$40/hr.	Oct. 16, 31, Nov. 1, 9, 10, 14, Dec. 7, 15, 19	\$240.00
Consultant Fees	HST @ 13%		\$62.40
Subtotal Consultant Fees			\$542.40
Total Cost			\$3600.90



Jim Ireland

March 2, 2018.

Metallurgical Operations Proposal

Switchboard: (705) 652-2000
Direct Phone: (705) 652-2422
Direct Fax: (705) 652-6365
E-mail: chris.gunning@sgs.com

Date: October 27, 2017

To: Mr. Marty Williams
Company: RJM Garnets
E-mail: martwill500@gmail.com

CC: Mr. Rodney Cross
rodneycross@gmail.com
Mr. Jim Ireland
irelandj@in-works.net

Re: Proposal #16538-PR1-R1 for QEMSCAN Analysis of Two Garnet Samples

Dear Mr. Williams,

Please find attached a proposal for QEMSCAN analysis of two garnet samples.

The overall cost for the program is CAD\$2,250.

If you have any questions regarding this proposal or require any modifications, please do not hesitate to contact us.

Kind regards,

A handwritten signature in blue ink, appearing to read 'C. Gunning'.

Chris Gunning, H.B.Sc.
Senior Mineralogist



Metallurgical Operations Proposal

PROPOSAL #16538-PR1-R1

QEMSCAN Analysis of Two Garnet Samples

prepared for

RJM GARNETS

October 27, 2017

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INTRODUCTION

This proposal was prepared in response to a request from Mr. Marty Williams from RJM Garnets for QEMSCAN Analysis of Two Garnet Samples. Two samples labelled JC1-13-08-17-03 (WP017) and JC1-13-08-17-02 each weighting approximately 2.8 kg's received as rock pieces are currently at the SGS Lakefield site. The objectives are to quantify the modal abundances with emphasis on the garnet content, and the locking and liberation characteristics of the various silicates, oxides and other minerals that might be of interest.

PROGRAM DELIVERABLES

The proposed testwork is listed below:

- Sample preparation;
 - Crush half of each sample to -10 mesh to blend and homogenize;
 - The other rock samples will be kept as reject and not crushed;
 - Take a cut from -10 mesh material and further stage crush to 80% passing 150 µm.
- From the stage crushed material;
 - Submit a cut for Chemical Analysis for Whole Rock Analysis;
 - Submit a cut for Polished Section Preparation.
- The QEMSCAN Particle Mineral Analysis (PMA) will be conducted on each polished section
- QEMSCAN Data Processing;
- Chemical Analysis – Whole Rock Analysis (WRA) by X-Ray fluorescence

The program deliverables are listed below:

- Assay reconciliation;
- Modal distributions
- Liberation, association data and images grids for:
 - Garnets;
 - Silicates;
 - Any other minerals of interest that are in appreciable quantities.
- Cumulative grain size distributions;

TEST PROGRAM

1. Mineralogy

1.1. QEMSCAN Mineralogy

QEMSCAN is an acronym for Quantitative Evaluation of Materials by Scanning Electron Microscopy, a system which differs from image analysis systems in that it is configured to measure mineralogical variability based on chemistry at the micrometer-scale. QEMSCAN utilizes both the back-scattered electron (BSE) signal intensity, as well as an Energy Dispersive X-ray Signal (EDS) at each measurement point. It thus makes no simplification or assumption of homogeneity based on the BSE intensity, as many mineral phases show BSE overlap. EDS signals are used to assign mineral identities to each measurement point by comparing the EDS spectrum against a mineral species identification program (SIP) or database.

There are two general types of measurement: those using the linear intercept, and those based on particle mapping. Bulk mineral analysis (BMA) is performed using the linear intercept method, and is used to provide statistically abundant data for speciation and mineral distribution. Particle mapping modes, including Particle Mineral Analysis (PMA), Specific Mineral Search (SMS) analysis and Trace Mineral Search (TMS) analysis provide information on spatial relationships of minerals, including liberation and association data and provide a visual representation of mineral textures.

1.1.1 PMA Analysis

Particle Mineral Analysis, or PMA is a two-dimensional mapping analysis aimed at resolving liberation and locking characteristics of a generic set of particles. A pre-defined number of particles are mapped at a point spacing selected in order to spatially resolve and describe mineral textures and associations. This mode is often selected to characterize feed and concentrate products, as both gangue and value minerals report in statistically abundant quantities.

1.2. QEMSCAN Data Processing

The raw data as collected by the instrument is extracted, reviewed for quality, processed offline using the iDiscover software and reported in a standardized format. Processing includes textural and chemical refining of the data and classification into categories in order to extract appropriate mineralogical data for the program.

2. Health and Safety

SGS Minerals require all personnel and contractors engaged in piloting or laboratory testwork to have completed a full safety induction.

All persons on site have a duty to report incidents or potential hazards and are encouraged to do so through our incident or accident reporting system.

3. Project Management and Reporting

SGS has always taken the approach that the effective management of metallurgical projects is best achieved by encouraging the intimate participation of the client or his elected representative at all stages of project development and execution. This facilitates a continuous flow of communication, information and ideas.

Our clients are encouraged to discuss with us the project scope and timing during the initial planning and proposal preparation stages of the project. This discussion and consultation process continues throughout the test program. During critical and intensive periods of test programs many of our clients elect to stay in the immediate vicinity. In these circumstances, SGS can offer office and meeting spaces.

All test results will be summarized and reported to the client as results become available.

A final report will be prepared at the end of the program. The report will be issued in electronic (PDF) and can also be issued as hard copies (paper and/or compact disk) upon request.

4. Sample Management

The Sample Management policy is in place to efficiently manage the project sample inventory over the course of a project life. The client retains ownership of all project samples (all test products, assay rejects, unused ore samples, *etc.*) and will be consulted on a regular basis for instruction regarding whether the samples are to be returned, disposed of or sent to the SGS Storage Group. The frequency of this review is relative to the project size and schedule. Costs associated with sample return, disposal and storage are exclusive of the budget of this proposal. The client is referred to the appended Sample Storage, Return, and Disposal Fee Schedule. Once instructions have been received by SGS from the client regarding how the samples are to be handled the action plan and budget will be provided to the client for approval.

It should be noted that SGS is not licensed for the disposal of radioactive material. SGS can assist in the return of radioactive samples to the client or transferring to a third party facility that is permitted to accept and dispose of such material.

INTEGRATED SERVICES

SGS Minerals

SGS is the global leader in inspection, verification, certification and testing services and has been active in Canada for 75 years. SGS' global Centres of Excellence for our market-leading metallurgical and geochemical businesses are located in Lakefield, Vancouver, Toronto and Quebec City.

Our flowsheet development, geometallurgy, pilot plant testing, chemical analysis and laboratory outsourcing staff have earned the respect of the global minerals industry and we are the world's leading provider of bankable metallurgical services. We have over 200 metallurgists, chemists and related professionals who bring significant expertise and experience to all these areas. Our services cover the following and more detail may be accessed at the links shown below:

- **Geochemistry** – Our market leading network of geochemistry labs is linked globally to provide an unparalleled suite of target elements. We also offer full services for check samples, MMI™ and on-site labs. www.sgs.com/geochem
- **Mineralogy** - Our automated, instrumented mineralogy capability allows SGS to provide cutting-edge High Definition Mineralogy. Our comprehensive Advanced Mineralogy Facilities can help with detailed characterizations. www.sgs.com/mining/mineralogy
- **Metallurgy** - SGS has earned the reputation as market leader in bankable metallurgical testing in every commodity for scoping, pre-feasibility and feasibility testing and in-plant services. www.sgs.com/metallurgy
- **Geometallurgy** - The SGS Geometallurgical Framework successfully integrates mineralogy and textural information with metallurgical liberation and selectivity parameters based on a statistically rigorous sampling plan. www.sgs.com/mining/geometallurgy
- **Technical Reports & Resource Calculations** - SGS geologists can act as Qualified Persons to provide technical reports compliant to NI 43-101 and perform due diligence, property evaluations and pre-feasibility studies as well as resource estimations. www.sgs.com/mining/exploration
- **Advanced Systems:** SGS is a recognized leader in the development and integration of turnkey advanced control solutions. We can help you take advantage of the proven benefits of advanced control via the implementation of an expert system, scheduling, simulation or optimization. www.sgs.com/advanced-systems
- **Production Optimization:** SGS can help decrease risk and increase bankability. We offer production optimization contracts and preproduction/prestart-up, with the commencement of mining and during any year of production. www.sgs.com/metallurgy
- **Environmental Sustainability:** Unite the testing and technical strengths of SGS with the stringent needs of the mining industry and the environmental community. We can deliver in:
 - Acid rock drainage testing and mitigation
 - Waste characterization
 - Water and effluent treatment www.sgs.com/mining/closure
- **In-plant Services:** SGS provides world-class technical support to ensure constant optimal mill throughput and metallurgy. We support on-site operations with:
 - Periodic technical auditing
 - Trouble-shooting
 - Complete on-site daily metallurgical management www.sgs.com/mining/in-plant
- **Engineering Services:** SGS' multi-disciplined experts deliver proven integrated solutions for plant upgrades, retrofits, and brownfields expansion projects. We offer cost-effective solutions including metallurgical process, civil, structural, mechanical, and electrical engineering. www.sgs.com/mining-engineering

QUOTATION

The overall cost for the program is CAD \$2,250. Please see the full cost schedule below (Table 1). Upon project acceptance, we will submit an invoice for CAD \$2,250 plus applicable taxes. This prepayment will be applied to the final project invoice. Once this proposal is finalised and we have agreed on the scope of work, please sign the 'Approval & Acceptance' (page 11) and return via email or fax to acknowledge your acceptance of this proposal. We will then establish an account (project number) under which we will issue an invoice for the prepayment amount.

If you have any questions regarding this proposal or require any modifications, please do not hesitate to contact us.

Please note that in order to more efficiently streamline sample/product handling at the end of the project we have made some changes to our sample handling policies, which are described in the Client Information sheet.

Note that, unless specifically stated in the proposal and quotation table, the scope of work does not include any provision for a qualified person (QP) as required for all National Instrument (NI) 43-101 Technical Reports by SGS.

Table 1: Cost Schedule

Sample Perperation and Analysis	Total Cost
Sample Prep, Section Prep, QEMSCAN Analysis of Crushed Material Chemical Analysis for Whole Rock Suite of Elements and Sulphur	\$2,250

SCHEDULE

The test program including sample preparation, testing and reporting should take about 4 - 5 weeks to complete. Interim data will be provided as completed which is usually 3 weeks from project start up. This includes a excel file with the entire program deliverables mentioned above. A formal schedule will be established at project acceptance based on work load and equipment availability at the time, and revisited every time there is a significant change of scope.

STATEMENT OF QUALIFICATIONS

SGS Minerals in Lakefield is accredited to the requirements of ISO/IEC 17025 for specific tests including Mineralogical Tests for QEMSCAN, XRD and Precious Metal Studies, Diamond and Indicator Mineral Studies as listed on our scope of accreditation. Please visit <http://www.scc.ca/en/search/palcan/sgs>.

CLIENT INFORMATION

All costs are quoted in Canadian currency. All tests/tasks are quoted as a fixed unit cost and will be invoiced monthly, based on the number of tests completed, at the quoted price. Minor variation in the scope of the program will be absorbed in the contingency allowance, as quoted. Significant changes in the scope/cost of the test or program will be addressed through a change in scope notice. Such changes in scope will only proceed with the consent of the Client or a representative thereof.

Upon project acceptance, and prior to work commencing SGS will issue an invoice for 100% (CAD\$2,250) of the total estimated project value, plus applicable taxes. This invoice is due upon receipt and work will commence when payment is received. SGS also reserves the right to pre-invoice any portion of work which will be completed within a 60 day period which will exceed the amount of prepayment on hand in terms of invoiceable project receivables. In this event, a payment / invoicing schedule will be supplied to the client. The prepayment will be applied to the final project invoice and will allow resources to be booked against the project. This reserved time may be forfeited if the samples, testwork, instructions, or authorisation to proceed have not been received at SGS by the agreed-upon start-up date.

The Client will retain ownership of any samples sent to SGS laboratories for testing, and of all test products generated during the testwork program and will have the ultimate responsibility for their return to site or disposal. At the beginning of the project, the client will indicate his preference with respect to sample/product handling method (i.e. store then dispose, store then return, immediate disposal, or immediate return) on the acceptance sheet with the name and email address of his representative and return address as appropriate. This information will be logged in our storage system and an estimated handling fee will be invoiced based on the project assumptions. At the end of the project, SGS will make all reasonable effort to contact the client's representative, who will be given an opportunity to review the inventory and revisit his decision. In the event no response is obtained within four weeks of the initial contact, the sample(s) will be handled per original request. Note that SGS can assist in arranging return or disposal of the samples, but the ultimate cost, which may not be entirely covered in the quotation, will be the entire responsibility of the Client. The sample handling costs will be adjusted on the last invoice if necessary. Typical sample storage and disposal fees are described later in this document.

The prices quoted herein will be honoured for three months from the date of issue of this proposal and for the duration of your project provided testwork, as generally described in this proposal, commences within three months.

If after a credit check, a credit account cannot be established, the job shall be considered COD (cash on delivery) and a pre-payment will be required. In the event of a past due account, SGS Minerals reserves the right to request a payment in full before commencing new work, or to withhold data and/or services until the past due balance is cleared.

Reporting

Final reports are issued electronically in PDF format and can also be issued as hard copies (paper and/or compact disk) upon request.

Shipping Information

Please ship samples via courier to:

Attention: Chris Gunning, H.B.Sc.

SGS Canada Inc.

185 Concession St., Postal Box 4300

Lakefield, ON K0L 2H0 Canada

Terms of Payment

As shown on invoice.

Packages crossing international borders should be labelled:

Metallurgical Ore Samples for Testing Purposes Only

No Commercial Value (but, please assign a value of at least \$10 to each piece shipped)

Large freight items will need to be custom cleared by **Cole International Inc.**

On waybill indicate:

Notify Party: Cole International Inc.

Contact details David Gilbert (david.gilbert@coleintl.com; Ph: (613) 216-2997, Fx: (613) 723-2436)

This is important to speed up clearance at the border.

Small items shipped via international shipping companies such as FedEx, DHL, UPS, etc will be cleared by the couriers themselves.

It is imperative that the recipient's name and proposal number are clearly marked on the shipment.



Metallurgical Operations Proposal

APPROVAL AND ACCEPTANCE

Once this proposal is finalized and you have agreed to the pricing and scope of work, please provide a valid purchase order (PO) and the information requested below (if not included in the PO) by email or fax (705-652-6365) to the author's attention or to Carrie Witt (ca.met@sgs.com) to acknowledge your acceptance of this proposal.

We accept the proposal as per the Scope of Work and General Conditions of Service indicated in this document:

Proposal #16538-PR1-R1 for QEMSCAN Analysis of Two Garnet Samples, prepared for RJM Garnets October 27, 2017

ADDRESS INVOICE TO:

Legal Company Name: _____
Address: _____

SEND INVOICE TO: (specify by mail, email, or fax)

Company Name: _____
Address: _____

Contact Name: _____
Email: _____
Phone: _____

Contact Name: _____
Email: _____
Phone: _____

INVOICE PAYMENT APPROVER:

Contact Name: _____
Email: _____
Phone: _____

Ultimate Sample Destination at End of Project:

Contact Name: _____
Email: _____
Phone: _____

ACCOUNT PAYABLE:

Contact Name: _____
Email: _____
Phone: _____

Store then Dispose: Immediate Disposal:
Store then Return: Immediate Return:

Choice will be confirmed at project completion

APPROVAL DATE: _____ *Address for sample return*
Signature: _____
Name: _____
Title: _____

Please notify us if you are aware of the presence of either asbestos fibres or radioactive minerals in your samples, since special handling procedures will be required to ensure the protection of our staff during preparation of the samples for analysis and testwork.

Asbestos YES NO

Radioactive YES NO

SAMPLE STORAGE, RETURN, AND DISPOSAL

It is the policy of SGS that the client retains ownership of all samples shipped to the SGS site, as well as all products created during the test program. At regular intervals (*no greater than every 90 days*) during the course of the project the sample inventory will be reviewed with the client in order to classify the samples as for 1) return to the client, 2) disposal, or 3) continued storage with the appropriate storage fees applied. At the time of sample return or disposal the client will be invoiced for the related costs. At the completion of the test program, the client will again have the option of requesting return of all samples, storage at the SGS site, or disposal by SGS

All samples considered radioactive will be returned to the client or sent to a regulated third party for disposal at the client's expense. SGS is not licensed for long term storage of radioactive material.

If heated or freezer storage is required for the samples or test products, these costs will be billed to the client from the date the samples are put into heated or cold storage unless indicated in the scope of work.

Within 90 days of the end of a project, the project manager will provide the client the sample inventory that will include a listing of all unused samples and the test products pertaining to the project. At this time the client will be required to provide instructions identifying samples for return, disposal, or storage. Once SGS has received the sample management instructions an invoice for the costs of on-going storage will be issued for samples that are to be stored. A cost estimate for the disposal and/or return shipment of samples and test products will also be provided at that time. If no instructions are received, the samples will be stored at the client's cost for three months, and then disposed of at the client's cost. Every effort will be made to solicit specific instructions from the client prior to disposal of the material, preferably at the project proposal stage.

SGS strives to comply with all environmental regulations. One of our legal obligations is to characterize all material (greater than 500 kg) that leaves our site, as either a hazardous or a non-hazardous waste. This distinction is based on the results of a leachate test (i.e. Ontario Reg. 347). In this regard, it is noted that, while many ore samples may pass the leachate test, concentrates, leach solutions or other products generated from the same ore during testwork may fail the leachate tests, and require either further treatment or management and disposal as a hazardous waste. SGS will process material as efficiently as possible to minimize the mass for disposal. If the samples for disposal pass the regulatory requirements, they will be forwarded to a local landfill site. If the samples do not pass, they will either be shipped to a licensed hazardous material storage facility or returned to the client.

The SGS fee schedule for storage, and/or disposal of samples, is presented in the following section.

SAMPLE STORAGE, RETURN, AND DISPOSAL FEE SCHEDULE

Monthly

A Short Term Storage (invoiced monthly, minimum) \$ 231.75

1. Freezer Storage (controlled low temperature) – billed upon receipt

- 1.1. Drums (200 L) \$ 196.00
- 1.2. Cardboard containers (45 L) \$ 77.25
- 1.3. Pails and coolers \$ 77.25
- 1.4. Super Sack / IBC (1 cubic metre) \$ 618.00

2. Heated Storage (temperature controlled at above 5°C)

- 2.1. Drums (200 L) \$ 231.75
- 2.2. Super Sack / IBC (1000L) / Pallet Box \$ 618.00
- 2.3. Boxes and pails \$ 32.00

3. Refrigerated Storage (year round temperature between 2-10°C)

- 3.1 Drums (200 L) \$ 231.75
- 3.2. Cardboard containers (45 L) \$ 77.25
- 3.3. Pails and coolers \$ 77.25
- 3.4. Super Sacks / IBC (1 cubic metre) \$ 618.00

4. Outside Storage

- 4.1. Bulk Storage Bin (20 cubic metre) \$ 1,290.00

5. Radioactive Materials- NORM Secure Placement Inside (During Project)

- 5.1 Drums (200 L) \$ 231.75

B Long Term Storage (invoiced annually)

Yearly

1. Inside Storage (ambient temperature)

- 1.1. Boxes (45 L) \$ 195.00
- 1.2. Pails \$ 195.00
- 1.3. Rubber bins \$ 465.00
- 1.4. Drums (200 L) \$ 387.00

2. Outside Storage (ambient temperature)

- 2.1. Super sacks \$ 1,290.00
- 2.2. Crates \$ 465.00
- 2.3. IBC (1 cubic metre) \$ 1,290.00
- 2.4. Core box \$ 126.00
- 2.5. Bulk Storage Bin (20 cubic metre) \$15,480.00

3. Refrigerated Storage (year round temperature between 2-10°C)

- 3.1. Drums (200 L) \$ 2,352.00
- 3.2. Cardboard containers (45 L) \$ 927.00
- 3.3. Pails and coolers \$ 927.00
- 3.4. IBC (1 cubic metre) \$ 4,635.00

4. Freezer Storage (controlled low temperature)

- 4.1. Drums (200 L) \$ 2,352.00
- 4.2. Boxes (45 L) \$ 927.00
- 4.3. Pails and coolers \$ 927.00
- 4.4. IBC (1 cubic metre) \$ 4,635.00

C Sample Disposal

- 1. Regulation 347 test (Schedule 4 Limits) per sample \$ 309.00
- 2. Disposal of Reg. 347 (passing material at Landfill) per tonne \$ 231.75
- 3. Disposal of Reg. 347 (failing material to disposal company) per tonne \$ 927.00
- 4. Disposal of toxic materials (cost plus handling) per drum minimum \$ 1,545.00

D Sample Return

- 1. All material is returned to the client at cost
- 2. No long term storage is allowed for radioactive material (NORM).

E Analysis, Liaison and Handling Costs Paid by Client.

- 1. Return \$150.00 per hour labor
- 2. Return quote for shipping costs and applicable taxes

NOTE: Fees Subject to Change

GENERAL CONDITIONS OF SERVICE

1. General

(a) Unless otherwise agreed in writing or except where they are at variance with (i) the regulations governing services performed on behalf of governments, government bodies or any other public entity or (ii) the mandatory provisions of local law, all offers or services and all resulting contractual relationship(s) between any of the affiliated companies of SGS Canada Inc. or any of their agents (each a "Company") and Client (the "Contractual Relationship(s)") shall be governed by these general conditions of service (hereinafter the "General Conditions").

(b) The Company may perform services for persons or entities (private, public or governmental) issuing instructions (hereinafter, the "Client").

(c) Unless the Company receives prior written instructions to the contrary from Client, no other party is entitled to give instructions, particularly on the scope of the services or the delivery of reports or certificates resulting therefrom (the "Reports of Findings"). Client hereby irrevocably authorises the Company to deliver Reports of Findings to a third party where so instructed by Client or, at its discretion, where it implicitly follows from circumstances, trade custom, usage or practice.

2. Provision of Services

(a) The Company will provide services using reasonable care and skill and in accordance with Client's specific instructions as confirmed by the Company or, in the absence of such instructions:

- (1) the terms of any standard order form or standard specification sheet of the Company; and/or
- (2) any relevant trade custom, usage or practice; and/or
- (3) such methods as the Company shall consider appropriate on technical, operational and/or financial grounds.

(b) Information stated in Reports of Findings is derived from the results of inspection or testing procedures carried out in accordance with the instructions of Client, and/or our assessment of such results on the basis of any technical standards, trade custom or practice, or other circumstances which should in our professional opinion be taken into account.

(c) Reports of Findings issued further to the testing of samples contain the Company's opinion on those samples only and do not express any opinion upon the lot from which the samples were drawn.

(d) Should Client request that the Company witness any third party intervention, Client agrees that the Company's sole responsibility is to be present at the time of the third party's intervention and to forward the results, or confirm the occurrence, of the intervention. Client agrees that the Company is not responsible for the condition or calibration of apparatus, instruments and measuring devices used, the analysis methods applied, the qualifications, actions or omissions of third party personnel or the analysis results.

(e) Reports of Findings issued by the Company will reflect the facts as recorded by it at the time of its intervention only and within the limits of the instructions received or, in the absence of such instructions, within the limits of the alternative parameters applied as provided for in clause 2(a). The Company is under no obligation to refer to, or report upon, any facts or circumstances which are outside the specific instructions received or alternative parameters applied.

(f) The Company may delegate the performance of all or part of the services to an agent or subcontractor and Client authorises Company to disclose all information necessary for such performance to the agent or subcontractor.

(g) Should Company receive documents reflecting engagements contracted between Client and third parties or third party documents, such as copies of sale contracts, letters of credit, bills of lading, etc., they are considered to be for information only, and do not extend or restrict the scope of the services or the obligations accepted by the Company.

(h) Client acknowledges that the Company, by providing the services, neither takes the place of Client or any third party, nor releases them from any of their obligations, nor otherwise assumes, abridges, abrogates or undertakes to discharge any duty of Client to any third party or that of any third party to Client.

(i) All samples shall be retained for a maximum of 3 months or such other shorter time period as the nature of the sample permits and then returned to Client or otherwise disposed of at the Company's discretion after which time Company shall cease to have any responsibility for such samples. Storage of samples for more than 3 months shall incur a storage charge payable by Client. Client will be billed a handling and freight fee if samples are returned. Special disposal charges will be billed to Client if incurred.

3. Obligations of Client

The Client will:

(a) ensure that sufficient information, instructions and documents are given in due time (and, in any event not later than 48 hours prior to the desired intervention) to enable the required services to be performed;

(b) procure all necessary access for the Company's representatives to the premises where the services are to be performed and take all necessary steps to eliminate or remedy any obstacles to, or interruptions in, the performance of the services;

(c) supply, if required, any special equipment and personnel necessary for the performance of the services;

(d) ensure that all necessary measures are taken for safety and security of working conditions, sites and installations during the performance of services and will not rely, in this respect, on the Company's advice whether required or not;

(e) inform Company in advance of any known hazards or dangers, actual or potential, associated with any order or samples or testing including, for example, presence or risk of radiation, toxic or noxious or explosive elements or materials, environmental pollution or poisons;

(f) fully exercise all its rights and discharge all its liabilities under any relevant sales or other contract with a third party and at law.

4. Fees and Payment

(a) Fees not established between the Company and Client at the time the order is placed or a contract is negotiated shall be at the Company's standard rates (which are subject to change) and all applicable taxes shall be payable by Client.

(b) Unless a shorter period is established in the invoice, Client will promptly pay not later than 30 days from the relevant invoice date or within such other period as may be established by the Company in the invoice (the "Due Date") all fees due to the Company failing which interest will become due at a rate of 1.5% per month (or such other rate as may be established in the invoice) from the Due Date up to and including the date payment is actually received.

(c) Client shall not be entitled to retain or defer payment of any sums due to the Company on account of any dispute, counter claim or set off which it may allege against the Company.

(d) Company may elect to bring action for the collection of unpaid fees in any court having competent jurisdiction.

(e) Client shall pay all of the Company's collection costs, including attorney's fees and related costs.

(f) In the event any unforeseen problems or expenses arise in the course of carrying out the services the Company shall endeavour to inform Client and shall be entitled to charge additional fees to cover extra time and cost necessarily incurred to complete the services.

(g) If the Company is unable to perform all or part of the services for any cause whatsoever outside the Company's control including failure by Client to comply with any of its obligations provided for in clause 3 above the Company shall nevertheless be entitled to payment of:

- (1) the amount of all non-refundable expenses incurred by the Company; and

(2) a proportion of the agreed fee equal to the proportion of the services actually carried out.

5. Suspension or Termination of Services

The Company shall be entitled to immediately and without liability either suspend or terminate provision of the services in the event of:

(a) failure by the Client to comply with any of its obligations hereunder and such failure is not remedied within 10 days that notice of such failure has been notified to Client; or

(b) any suspension of payment, arrangement with creditors, bankruptcy, insolvency, receivership or cessation of business by Client.

6. Liability and Indemnification

(a) Limitation of Liability:

(1) The Company is neither an insurer nor a guarantor and disclaims all liability in such capacity. Clients seeking a guarantee against loss or damage should obtain appropriate insurance.

(2) Reports of Findings are issued on the basis of information, documents and/or samples provided by, or on behalf of, Client and solely for the benefit of Client who is responsible for acting as it sees fit on the basis of such Reports of Findings. Neither the Company nor any of its officers, employees, agents or subcontractors shall be liable to Client nor any third party for any actions taken or not taken on the basis of such Reports of Findings nor for any incorrect results arising from unclear, erroneous, incomplete, misleading or false information provided to the Company.

(3) The Company shall not be liable for any delayed, partial or total non-performance of the services arising directly or indirectly from any event outside the Company's control including failure by Client to comply with any of its obligations hereunder.

(4) The liability of the Company in respect of any claim for loss, damage or expense of any nature and howsoever arising shall in no circumstances exceed a total aggregate sum equal to 10 times the amount of the fee paid in respect of the specific service which gives rise to such claim or US\$20,000 (or its equivalent in local currency), whichever is the lesser.

(5) The Company shall have no liability for any indirect or consequential loss including without limitation loss of profits, loss of business, loss of opportunity, loss of goodwill and cost of product recall. It shall further have no liability for any loss, damage or expense arising from the claims of any third party (including, without limitation, product liability claims) that may be incurred by the Client.

(6) In the event of any claim, Client must give written notice to the Company

(7) within 30 days of discovery of the facts alleged to justify such claim and, in any case, the Company shall be discharged from all liability for all claims for loss, damage or expense unless suit is brought within one year from:

(i) the date of performance by the Company of the service which gives rise to the claim; or

(ii) the date when the service should have been completed in the event of any alleged non-performance.

(b) Indemnification: Client shall guarantee, hold harmless and indemnify the Company and its officers, employees, agents or subcontractors against all claims (actual or threatened) by any third party for loss, damage or expense of whatsoever nature including all legal expenses and related costs and howsoever arising relating to the performance, purported performance or non-performance, of any services.

7. Fiscal Allowances In Canada for Organizations Conducting Experimental Research

Company may apply to Canada Customs and Revenue Agency ("CCRA") for fiscal allowances permitted to Canadian laboratories undertaking accreditable experimental research and development within Canada. The high success rate of Company in meeting the technological objectives of its clients and in providing quality experimental work and results requires it to undertake internal experimental research. This is done to improve the Company's technological approaches and

methodologies, as well as overcome unanticipated or unavoidable technical challenges that occur in the course of much work undertaken by it for its clients.

It is implicit in these General Conditions that the experimental work performed by the Company may sometimes be cited, in an anonymous manner, for the purpose of requesting fiscal credits for risks assumed by the Company in the course of performing services for its clients.

Notwithstanding the presence of an obligatory agreement of confidentiality between CCRA and Company, any information used by the latter to support claims for the assumption of risk in experimental research, will be presented in an anonymous form. For example, no mention will be made of the name of Client, ore bodies or proprietary processes in these claims. Throughout this process, Company will fully respect the trust and the agreements of confidentiality that exist with Client.

8. Miscellaneous

(a) If any one or more provisions of these General Conditions are found to be illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

(b) During the course of providing the services and for a period of one year thereafter Client shall not directly or indirectly entice, encourage or make any offer to Company's employees to leave their employment with the Company.

(c) Use of the Company's corporate name or registered marks for advertising purposes is not permitted without the Company's prior written authorisation.

9. Governing Law, Jurisdiction and Dispute Resolution

Unless specifically agreed otherwise, all disputes arising out or in connection with Contractual Relationship(s) hereunder shall be governed by the substantive laws of the Province of Ontario exclusive of any rules with respect to conflicts of laws and be finally settled under the Rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said rules. The arbitration shall take place in Toronto (Canada) and be conducted in the English language.

***Custom Mineralogy – RJM Garnets – Terminology
and Definitions***

Sample Receipt

Two samples labelled JC1-13-08-17-02 and JC1-31-10-17-1 each weighting approximately 2.8 kg's received as rock pieces were received at the SGS Lakefield site. The objectives of this program are to quantify the modal abundances with emphasis on the garnet content, and the locking and liberation characteristics of the various silicates, oxides and other minerals that might be of interest. The project name/number "Custom Mineralogy" and Laboratory Information Management System number (LIMS) MI5002-NOV17 were assigned to the testwork.

Sample Preparation

The follow was conducted to each sample;

- half of each sample was crushed to -10 mesh to blend and homogenize;
- the other half of the rock samples was kept as reject and not crushed;
- A cut from -10 mesh material and further stage crush to 80% passing 150 µm for;
 - a cut for Chemical Analysis for Whole Rock Analysis;
 - cuts for Polished Section Preparation.
- QEMSCAN Particle Mineral Analysis (PMA) was conducted on each polished section

Modal Mineralogy

Note: The size of the minerals as shown in the modal mineralogy tables is calculated statistically from the length of all the horizontal intercepts through each particle. It uses an assumption of random sectioning of spherical particles having uniform size, to obtain an estimate of the stereologically-corrected grain size in microns. The size calculation is a statistical property, which means that it is only valid when applied to a population of particles, and its accuracy increases as the population size increases. The accuracy of the size calculation is extremely low if applied to just a single cross-section.

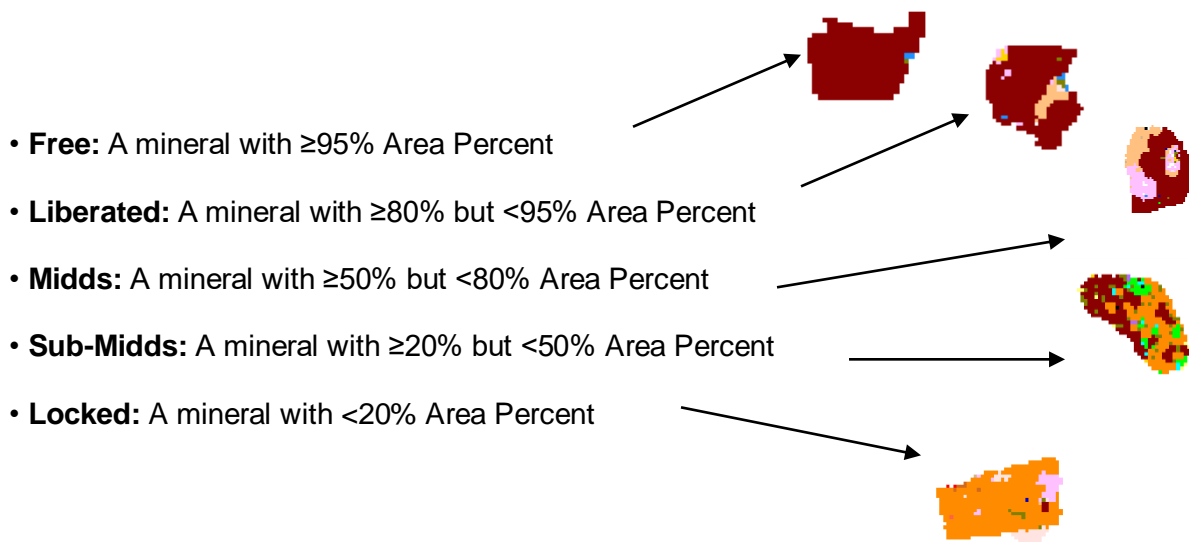
Liberation and Association

For the purposes of this analysis, particle liberation is defined based on 2D particle area percent. Particles are classified in the following groups (in descending order) based on mineral-of-interest area percent: free ($\geq 95\%$ of the total particle area) and liberated ($\geq 80\%$). The non-liberated grains have been classified according to association characteristics, where binary association groups refer to particle area percent greater than or equal to 95% of the two minerals or mineral groups. The complex groups refer to particles with ternary, quaternary, and greater mineral associations including the mineral of interest.

The liberation and association characteristics of these minerals for each sample are given below. Note that when minerals are present in trace amounts, roughly <0.2 wt%, statistical data might not be adequate to calculate the liberation and association. Thus, results must be interpreted with caution.

Terminology developed for liberation and association presented in the report.

Liberation classes were defined as the following;



Association classes were defined as the follows:

Association classes were defined as the following;

- **Free Garnet=** - A particle that has $\geq 95\%$ of Garnet
- **Lib Garnet=**: A particle that has ≥ 80 but < 95 area% of Garnet
- **Garnet: Amphiboles** - A particle that has ≥ 90 area% of Garnet + Amphiboles
- **Garnet: Pyroxene** - A particle that has ≥ 90 area% of Garnet + Pyroxene
- **Garnet: Micas** - A particle that has ≥ 90 area% of Garnet + Micas
- **Garnet: Quartz** - A particle that has ≥ 90 area% of Garnet + Quartz
- **Garnet: Feldspars** - A particle that has ≥ 90 area% of Garnet + Feldspars
- **Garnet: Other Silicates** - A particle that has ≥ 90 area% of Garnet + Other Silicates (eg. Epidote)
- **Garnet: Ilmenite** - A particle that has ≥ 90 area% of Garnet + Ilmenite
- **Garnet: Other Oxides**- A particle that has ≥ 90 area% of Garnet + Other Oxides (eg. Fe-Oxides)
- **Garnet: Sulphides** - A particle that has ≥ 90 area% of Garnet + Sulphides
- **Garnet: Apatite** - A particle that has ≥ 90 area% of Garnet + Apatite
- **Garnet: Other** - A particle that has ≥ 90 area% of Garnet + Other
- **Complex**: Any combination of the above definitions has been defined as a complex particle.

Note: the complex category refers to ternary and quaternary particles, and does not necessarily reflect the complexity of the middling particles.

The same criteria were used for the liberation and association data for Cu-Sulphides, Sphalerite, Galena and Gangue (All silicate/oxides and carbonate minerals combined).



QEMSCAN DATA

prepared for:

RJM

Project Custom

MI5002-NOV17

November 27, 2017

Prepared by:



Kareen Fleury-Frenette/Chris Gunning
Mineralogist / Senior Mineralogist

High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy) (METH# 8.11.1) used by SGS Minerals Services

SGS Canada

P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0
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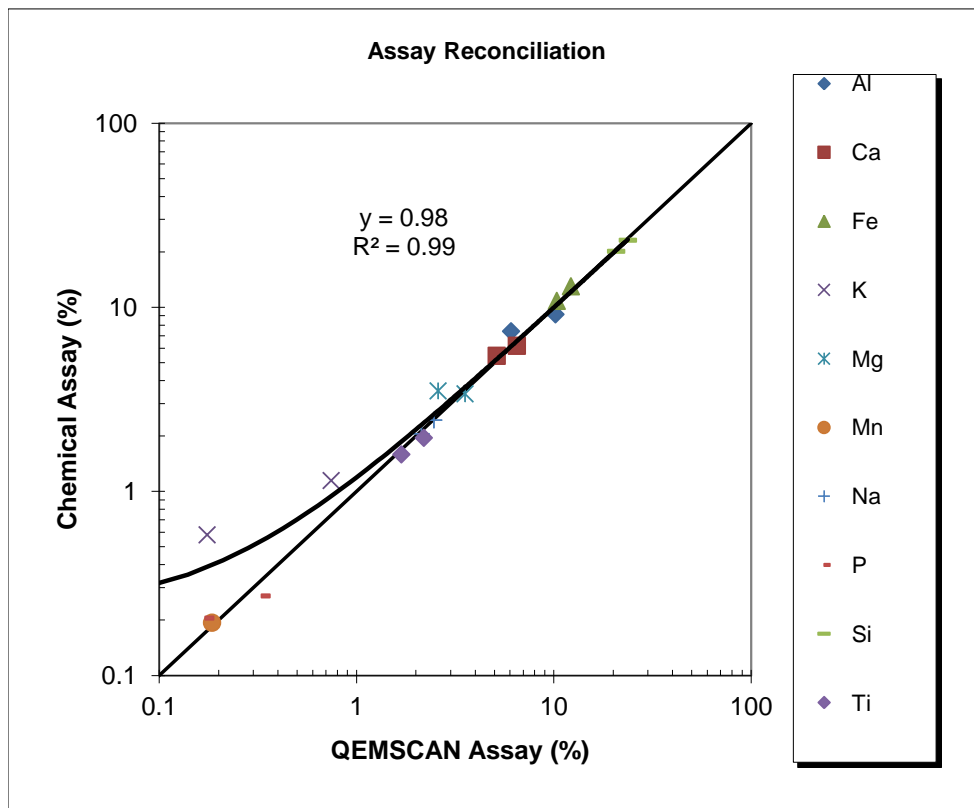
Member of the SGS Group (SGS SA)

Assay Reconciliation

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

Assay Reconciliation



Sample	JC1-13-08-17-02	JC1-31-10-17-1
Element	-300/+3um	-300/+3um
Al (QEMSCAN)	10.2	6.07
Al (Chemical)	9.16	7.41
Ca (QEMSCAN)	6.49	5.14
Ca (Chemical)	6.18	5.45
Fe (QEMSCAN)	12.2	10.4
Fe (Chemical)	13.0	10.8
K (QEMSCAN)	0.17	0.74
K (Chemical)	0.58	1.15
Mg (QEMSCAN)	2.59	3.55
Mg (Chemical)	3.52	3.39
Mn (QEMSCAN)	0.19	0.07
Mn (Chemical)	0.19	0.13
Na (QEMSCAN)	2.13	2.47
Na (Chemical)	2.05	2.44
P (QEMSCAN)	0.17	0.33
P (Chemical)	0.21	0.27
Si (QEMSCAN)	20.7	23.7
Si (Chemical)	20.1	23.1
Ti (QEMSCAN)	2.19	1.69
Ti (Chemical)	1.95	1.59

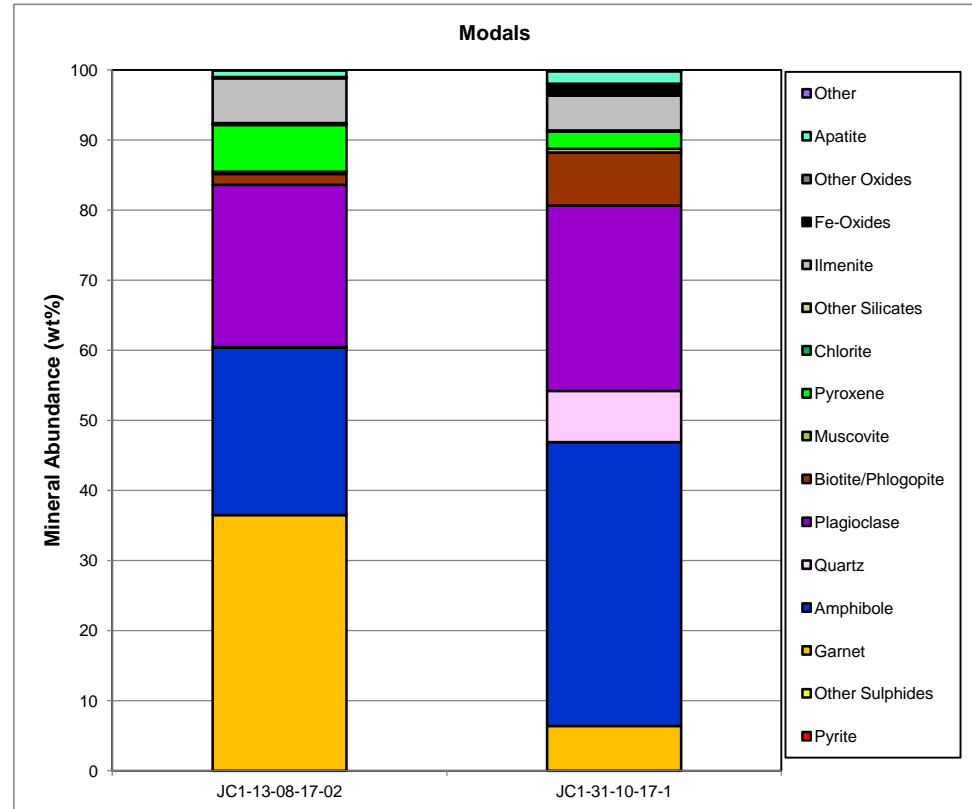
Modals

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

Modals

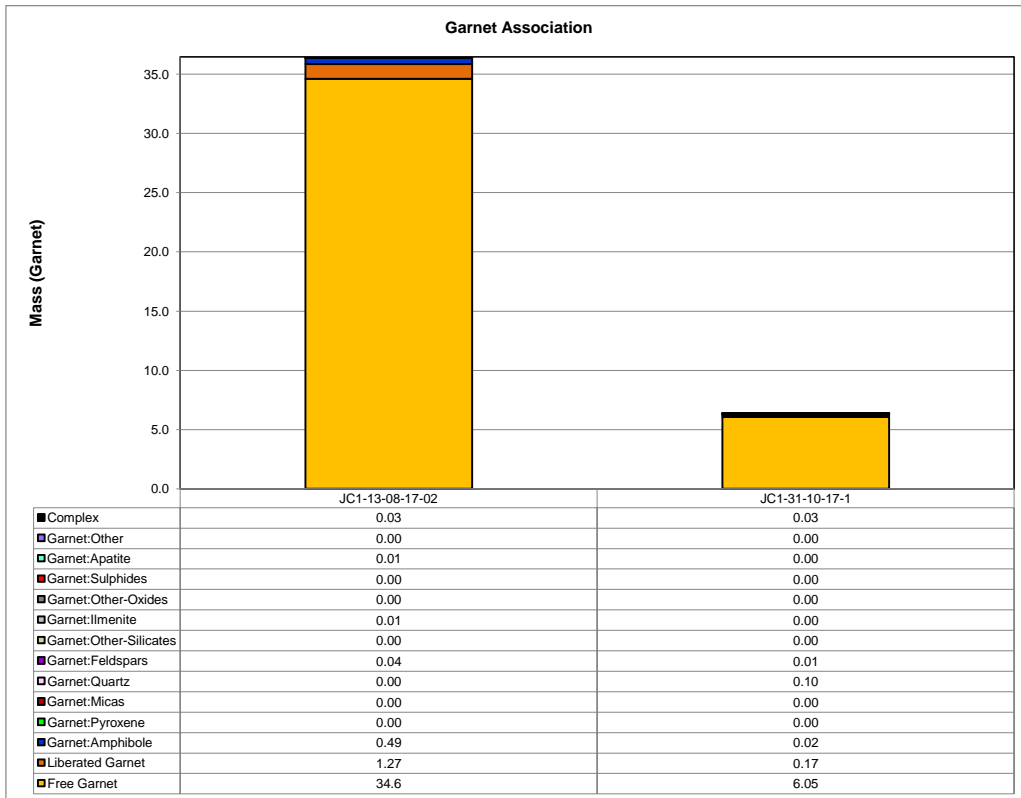
Survey		Custom / MI5002-NOV17		
Project		RJM		
Sample		JC1-13-08-17-02	JC1-31-10-17-1	
Fraction		-300/+3um	-300/+3um	
Mass Size Distribution (%)		100.0	100.0	
Calculated ESD Particle Size		40	35	
		Sample	Sample	
Mineral Mass (%)	Pyrite	0.01	0.00	
	Other Sulphides	0.01	0.00	
	Garnet	36.5	6.39	
	Amphibole	23.9	40.5	
	Quartz	0.12	7.28	
	Plagioclase	23.1	26.4	
	Biotite/Phlogopite	1.54	7.56	
	Muscovite	0.35	0.58	
	Pyroxene	6.65	2.46	
	Chlorite	0.06	0.10	
	Other Silicates	0.23	0.02	
	Ilmenite	6.39	4.99	
	Fe-Oxides	0.14	1.64	
	Other Oxides	0.05	0.06	
	Apatite	0.92	1.78	
	Other	0.07	0.17	
	Total		100.0	100.0
	Mean Grain Size by Frequency (µm)	Pyrite	10	8
Other Sulphides		12	8	
Garnet		44	30	
Amphibole		33	32	
Quartz		7	31	
Plagioclase		37	35	
Biotite/Phlogopite		27	26	
Muscovite		15	17	
Pyroxene		30	22	
Chlorite		12	11	
Other Silicates		25	8	
Ilmenite		41	40	
Fe-Oxides		18	30	
Other Oxides		14	25	
Apatite		25	31	
Other	14	14		



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

Garnet Association



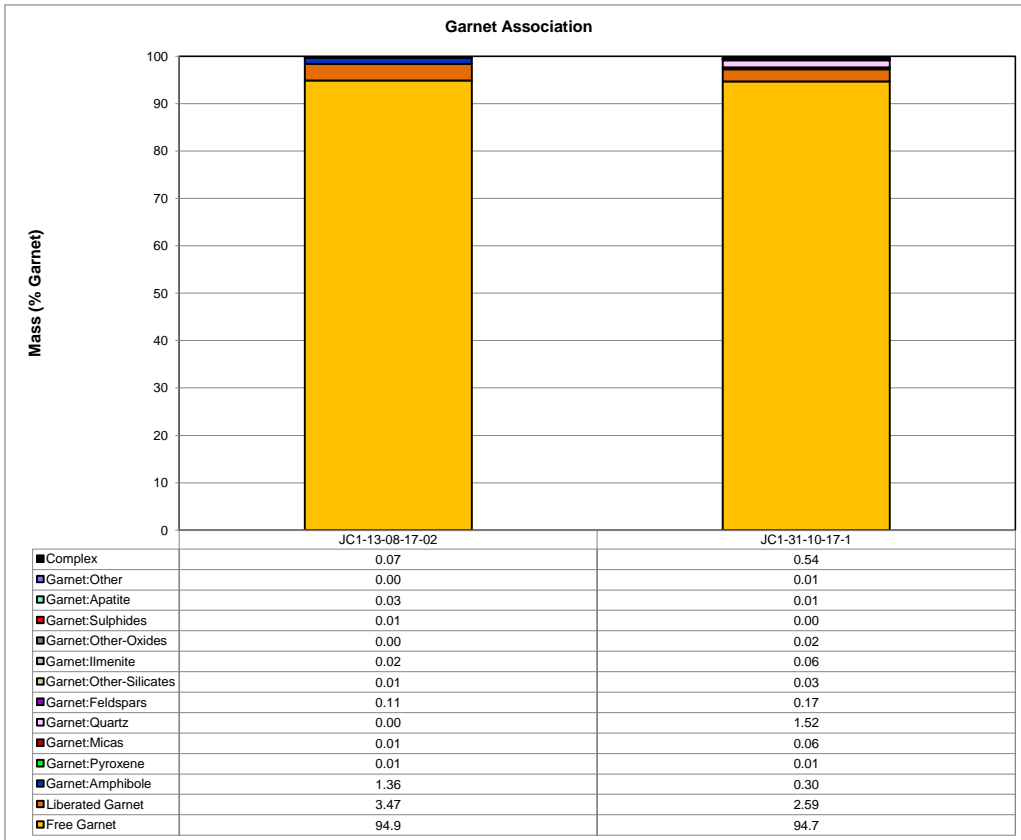
Absolute Mass of Garnet Across Samples

Mineral Name	JC1-13-08-17-02	JC1-31-10-17-1
Free Garnet	34.6	6.05
Liberated Garnet	1.27	0.17
Garnet:Amphibole	0.49	0.02
Garnet:Pyroxene	0.00	0.00
Garnet:Micas	0.00	0.00
Garnet:Quartz	0.00	0.10
Garnet:Feldspars	0.04	0.01
Garnet:Other-Silicates	0.00	0.00
Garnet:Ilmenite	0.01	0.00
Garnet:Other-Oxides	0.00	0.00
Garnet:Sulphides	0.00	0.00
Garnet:Apatite	0.01	0.00
Garnet:Other	0.00	0.00
Complex	0.03	0.03
Total	36.5	6.39

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

Garnet Association

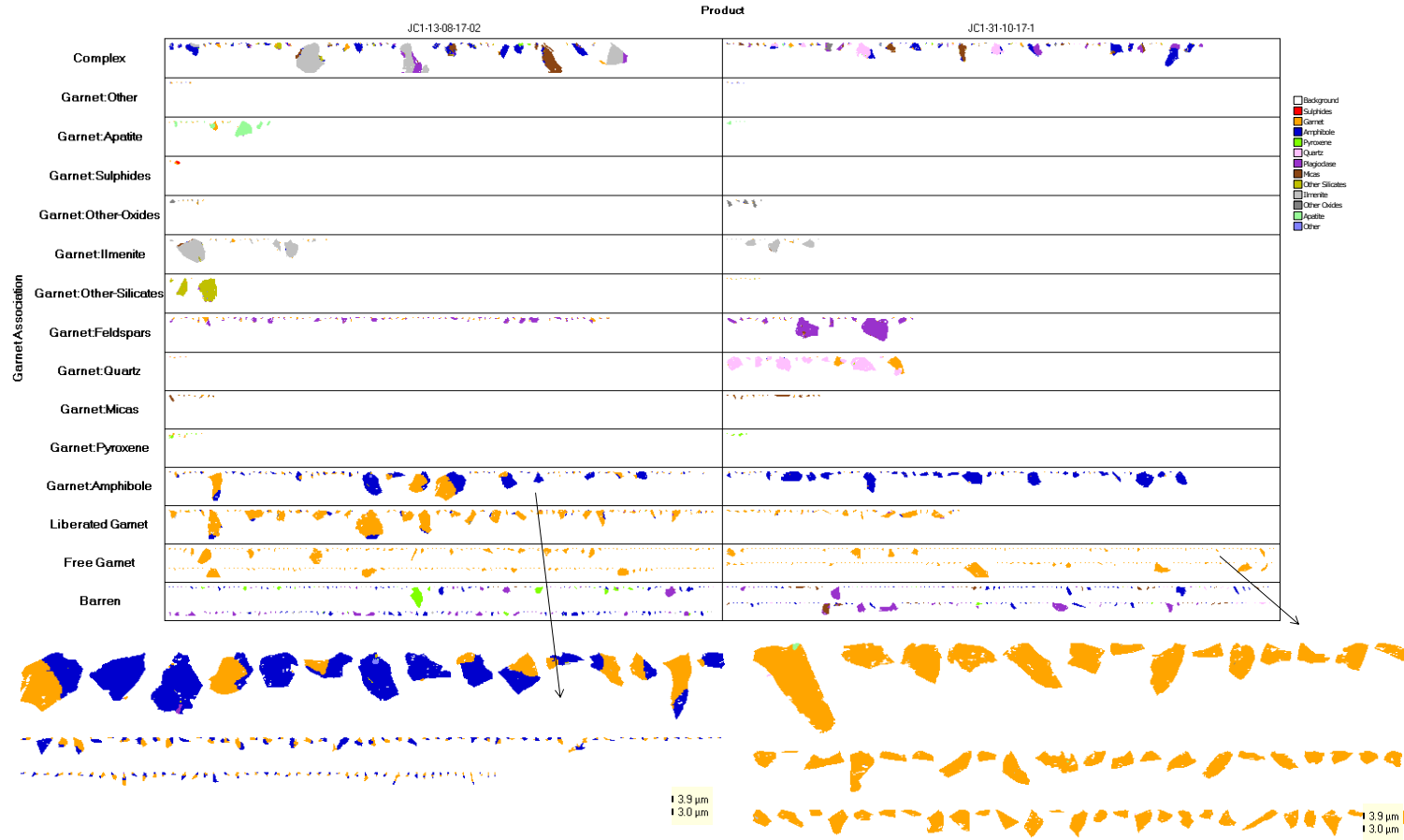


Mineral Name	JC1-13-08-17-02	JC1-31-10-17-1
Free Garnet	94.9	94.7
Liberated Garnet	3.47	2.59
Garnet:Amphibole	1.36	0.30
Garnet:Pyroxene	0.01	0.01
Garnet:Micas	0.01	0.06
Garnet:Quartz	0.00	1.52
Garnet:Feldspars	0.11	0.17
Garnet:Other-Silicates	0.01	0.03
Garnet:Ilmenite	0.02	0.06
Garnet:Other-Oxides	0.00	0.02
Garnet:Sulphides	0.01	0.00
Garnet:Apatite	0.03	0.01
Garnet:Other	0.00	0.01
Complex	0.07	0.54
Total	100.0	100.0

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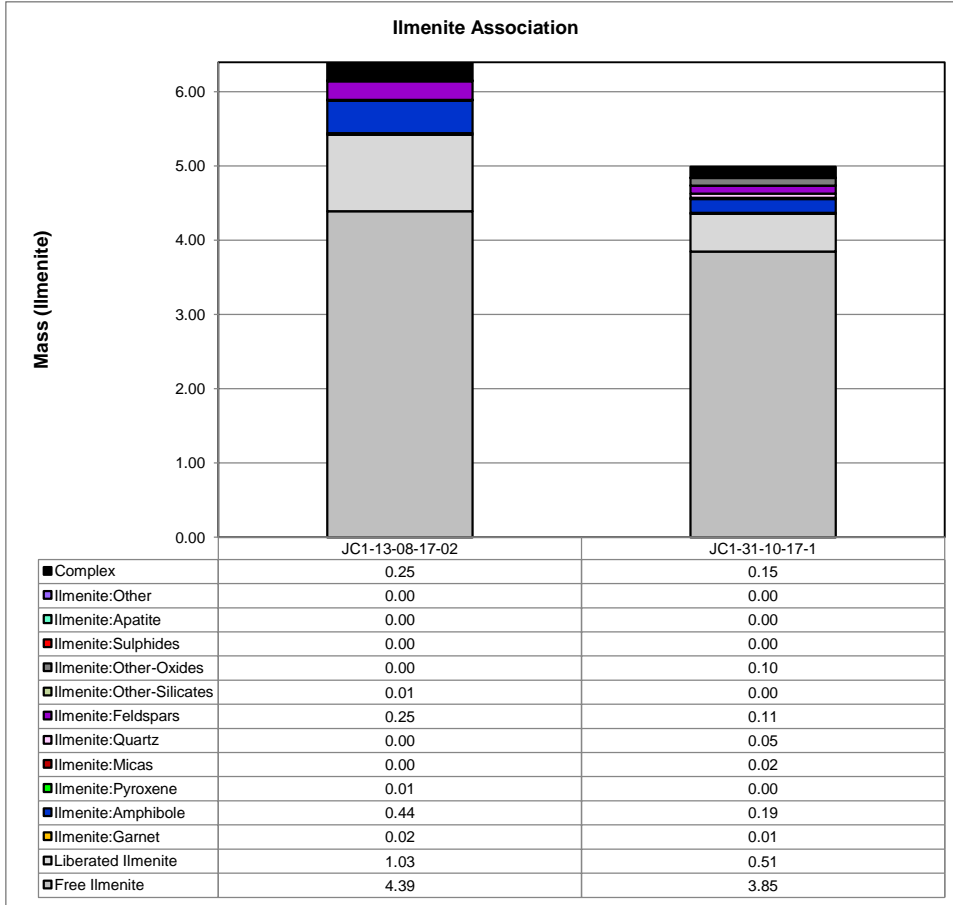
Garnet Association Image Grid



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

Ilmenite Association



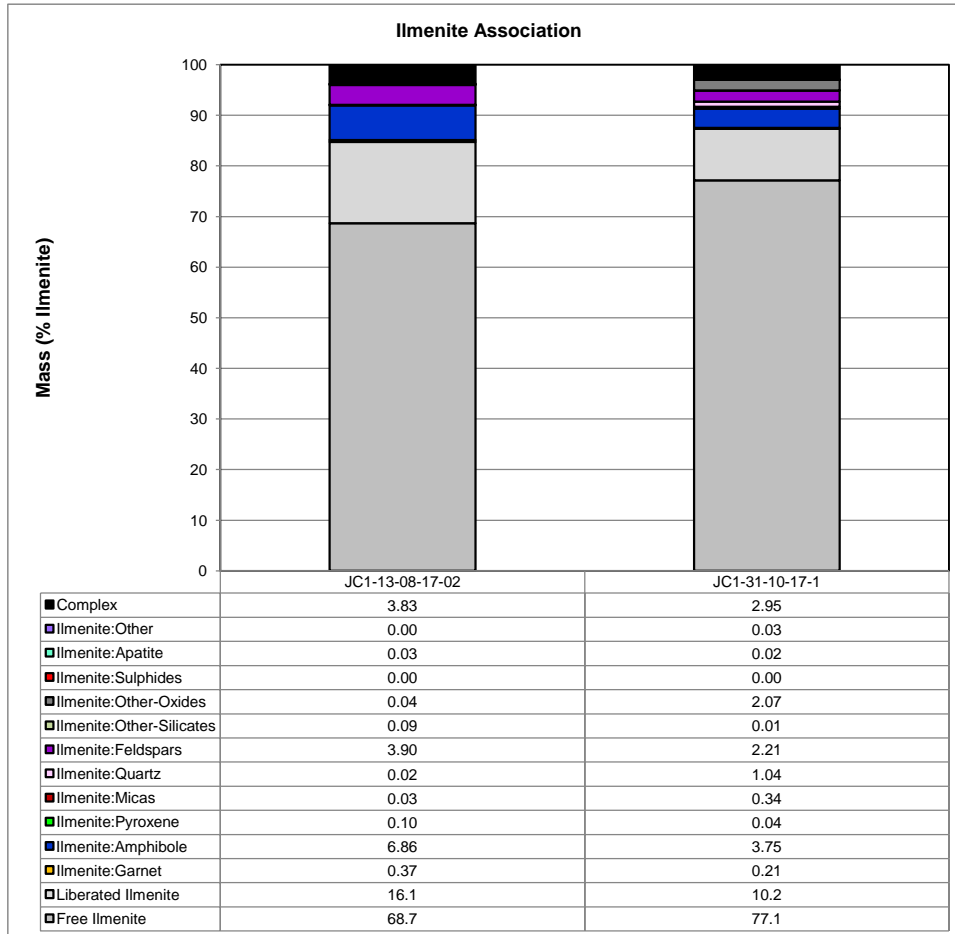
Absolute Mass of Ilmenite Across Samples

Mineral Name	JC1-13-08-17-02	JC1-31-10-17-1
Free Ilmenite	4.39	3.85
Liberated Ilmenite	1.03	0.51
Ilmenite:Garnet	0.02	0.01
Ilmenite:Amphibole	0.44	0.19
Ilmenite:Pyroxene	0.01	0.00
Ilmenite:Micas	0.00	0.02
Ilmenite:Quartz	0.00	0.05
Ilmenite:Feldspars	0.25	0.11
Ilmenite:Other-Silicates	0.01	0.00
Ilmenite:Other-Oxides	0.00	0.10
Ilmenite:Sulphides	0.00	0.00
Ilmenite:Apatite	0.00	0.00
Ilmenite:Other	0.00	0.00
Complex	0.25	0.15
Total	6.39	4.99

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

Ilmenite Association



Normalized Mass of Ilmenite Across Samples

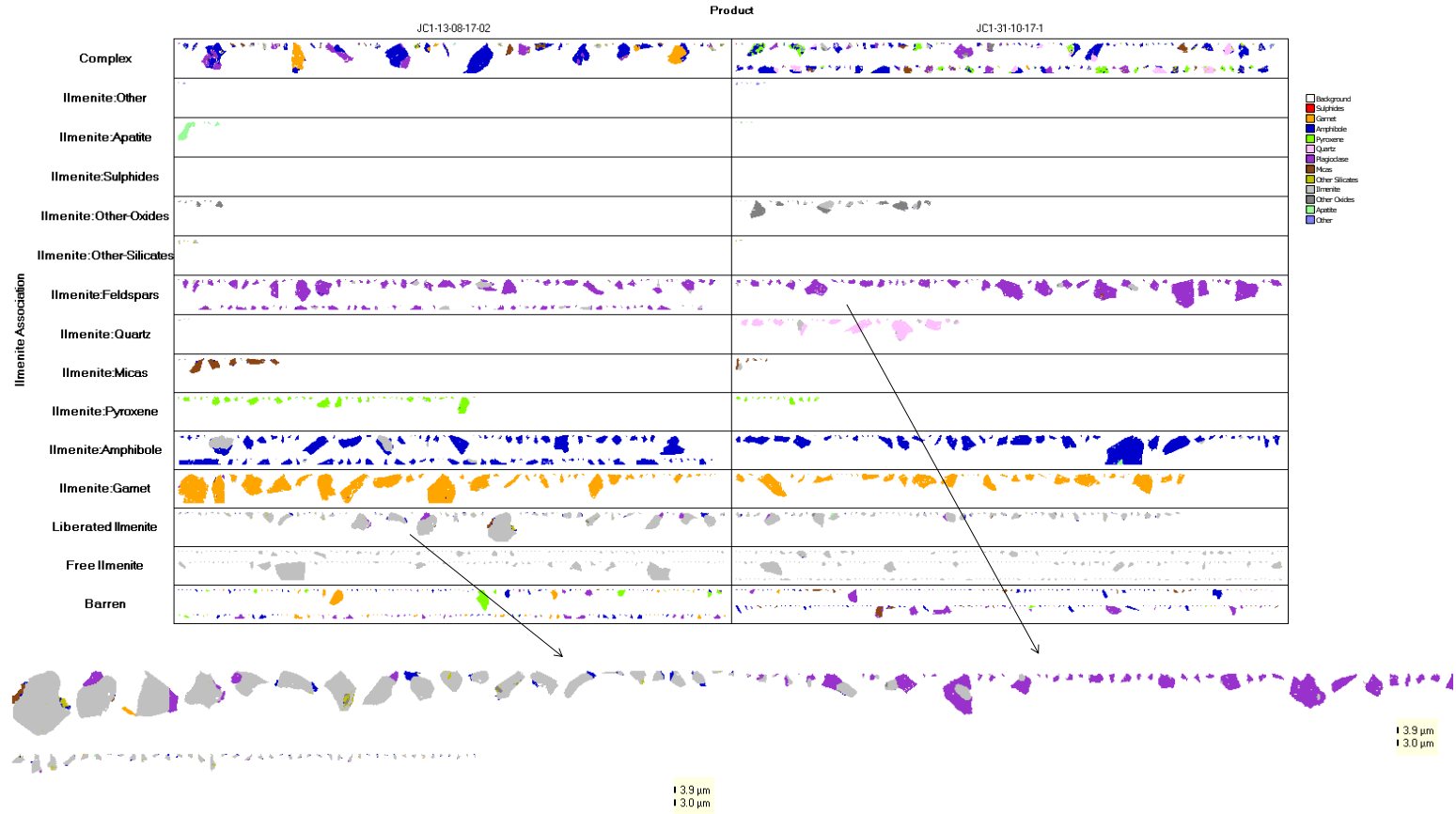
Mineral Name	JC1-13-08-17-02	JC1-31-10-17-1
Free Ilmenite	68.7	77.1
Liberated Ilmenite	16.1	10.2
Ilmenite:Garnet	0.37	0.21
Ilmenite:Amphibole	6.86	3.75
Ilmenite:Pyroxene	0.10	0.04
Ilmenite:Micas	0.03	0.34
Ilmenite:Quartz	0.02	1.04
Ilmenite:Feldspars	3.90	2.21
Ilmenite:Other-Silicates	0.09	0.01
Ilmenite:Other-Oxides	0.04	2.07
Ilmenite:Sulphides	0.00	0.00
Ilmenite:Apatite	0.03	0.02
Ilmenite:Other	0.00	0.03
Complex	3.83	2.95
Total	100.0	100.0

Ilmenite Image Grid

RJM
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 M15002-NOV17

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

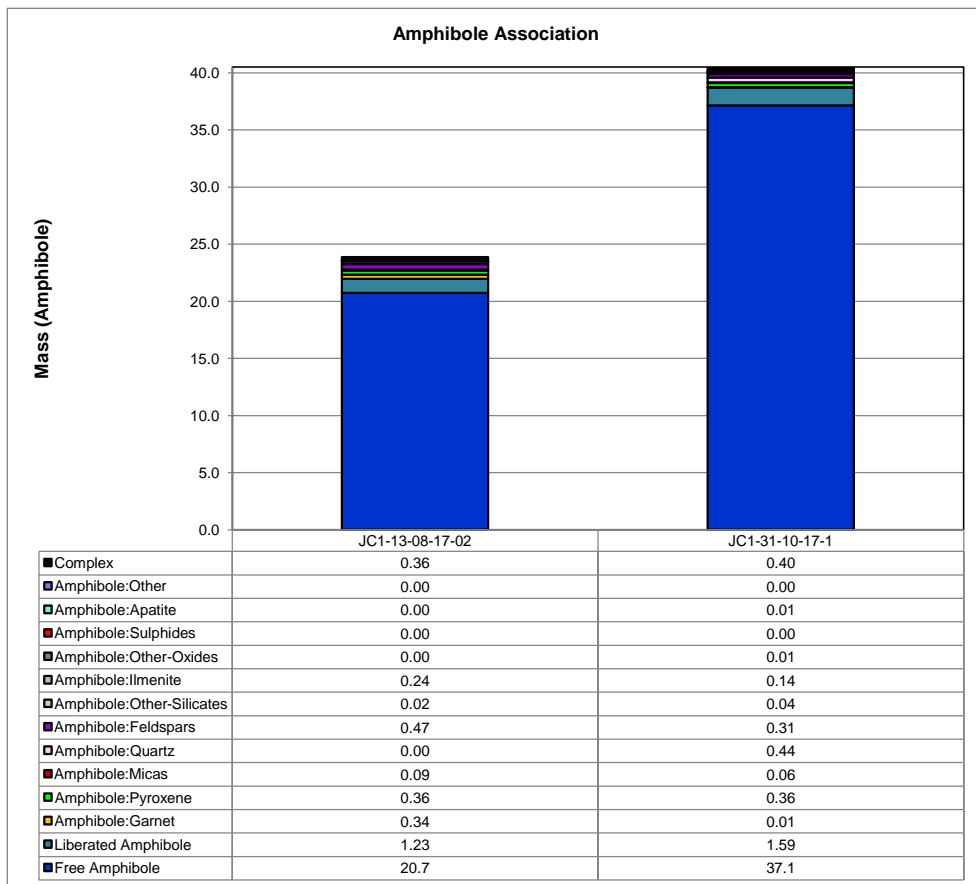
Ilmenite Association Image Grid



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

Amphibole Association



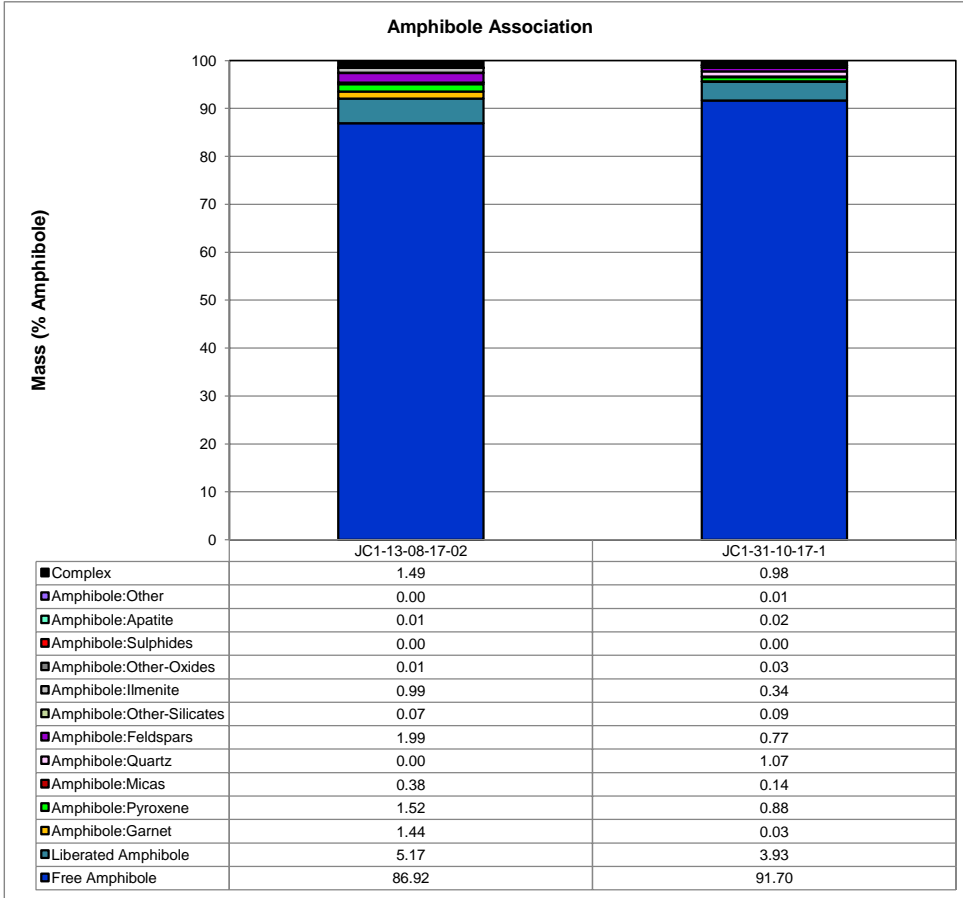
Absolute Mass of Amphibole Across Samples

Mineral Name	JC1-13-08-17-02	JC1-31-10-17-1
Free Amphibole	20.7	37.1
Liberated Amphibole	1.23	1.59
Amphibole:Garnet	0.34	0.01
Amphibole:Pyroxene	0.36	0.36
Amphibole:Micas	0.09	0.06
Amphibole:Quartz	0.00	0.44
Amphibole:Feldspars	0.47	0.31
Amphibole:Other-Silicates	0.02	0.04
Amphibole:Ilmenite	0.24	0.14
Amphibole:Other-Oxides	0.00	0.01
Amphibole:Sulphides	0.00	0.00
Amphibole:Apatite	0.00	0.01
Amphibole:Other	0.00	0.00
Complex	0.36	0.40
Total	23.9	40.5

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

Amphibole Association



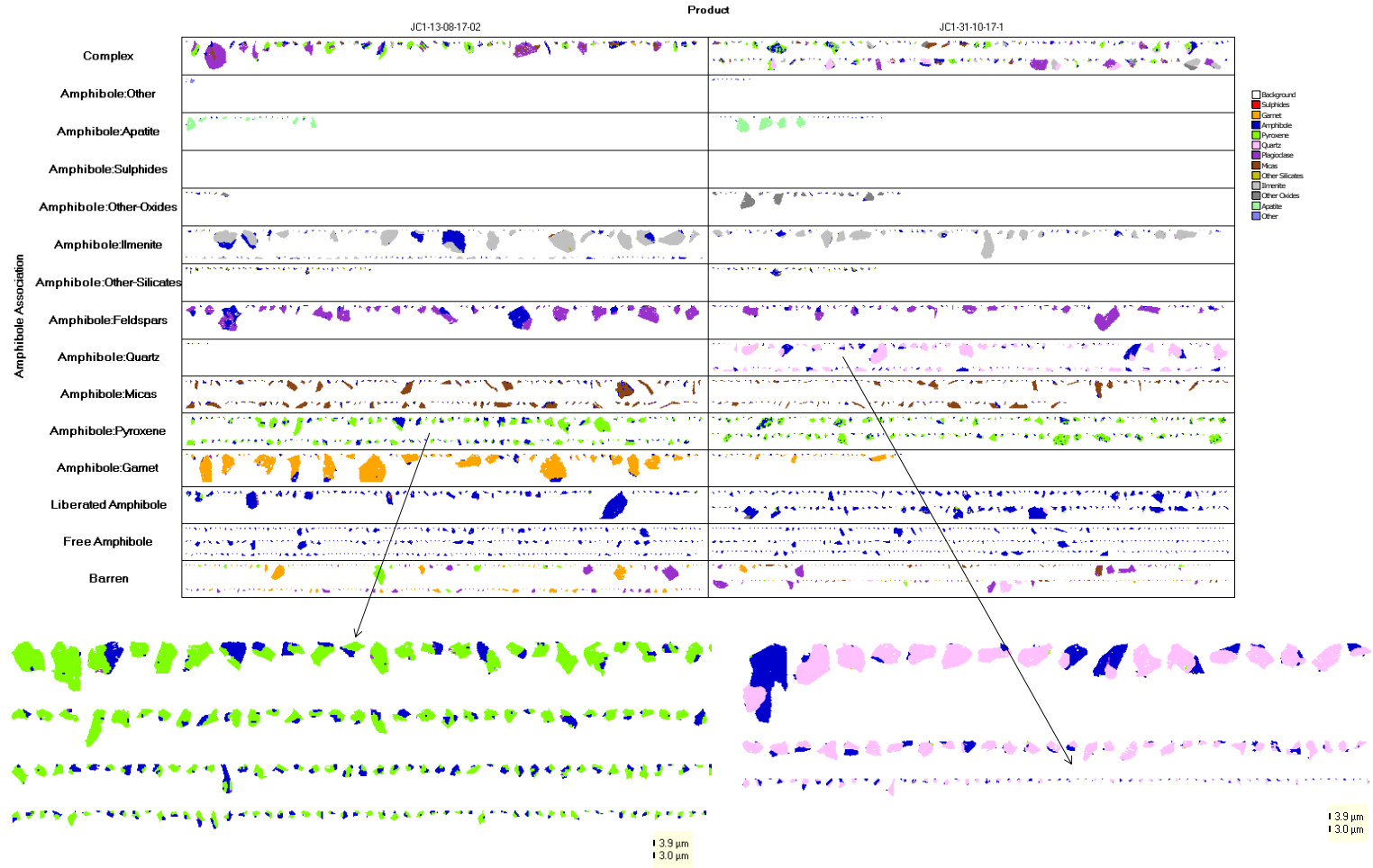
Normalized Mass of Amphibole Across Samples

Mineral Name	JC1-13-08-17-02	JC1-31-10-17-1
Free Amphibole	86.92	91.70
Liberated Amphibole	5.17	3.93
Amphibole:Garnet	1.44	0.03
Amphibole:Pyroxene	1.52	0.88
Amphibole:Micas	0.38	0.14
Amphibole:Quartz	0.00	1.07
Amphibole:Feldspars	1.99	0.77
Amphibole:Other-Silicates	0.07	0.09
Amphibole:Ilmenite	0.99	0.34
Amphibole:Other-Oxides	0.01	0.03
Amphibole:Sulphides	0.00	0.00
Amphibole:Apatite	0.01	0.02
Amphibole:Other	0.00	0.01
Complex	1.49	0.98
Total	100.00	100.00

RJM
Custom
MIS002-NOV17

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

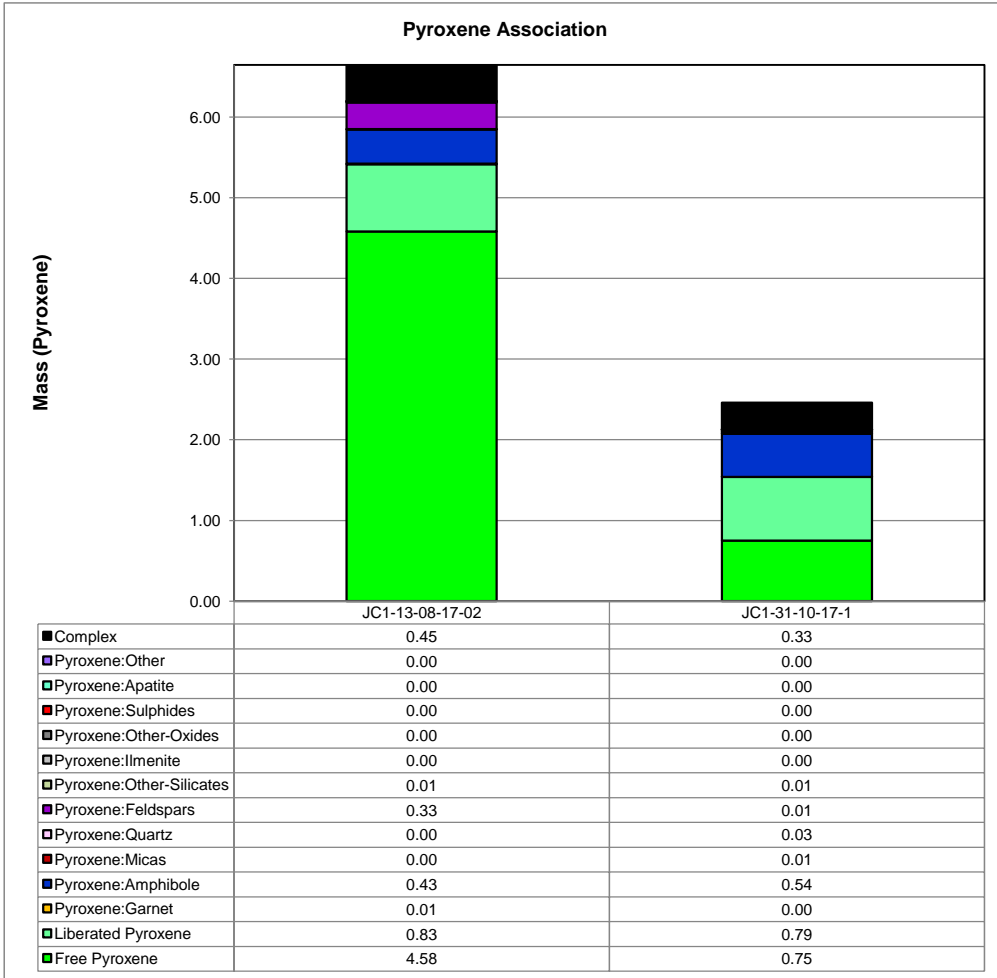
Amphibole Association Image Grid



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

Pyroxene Association



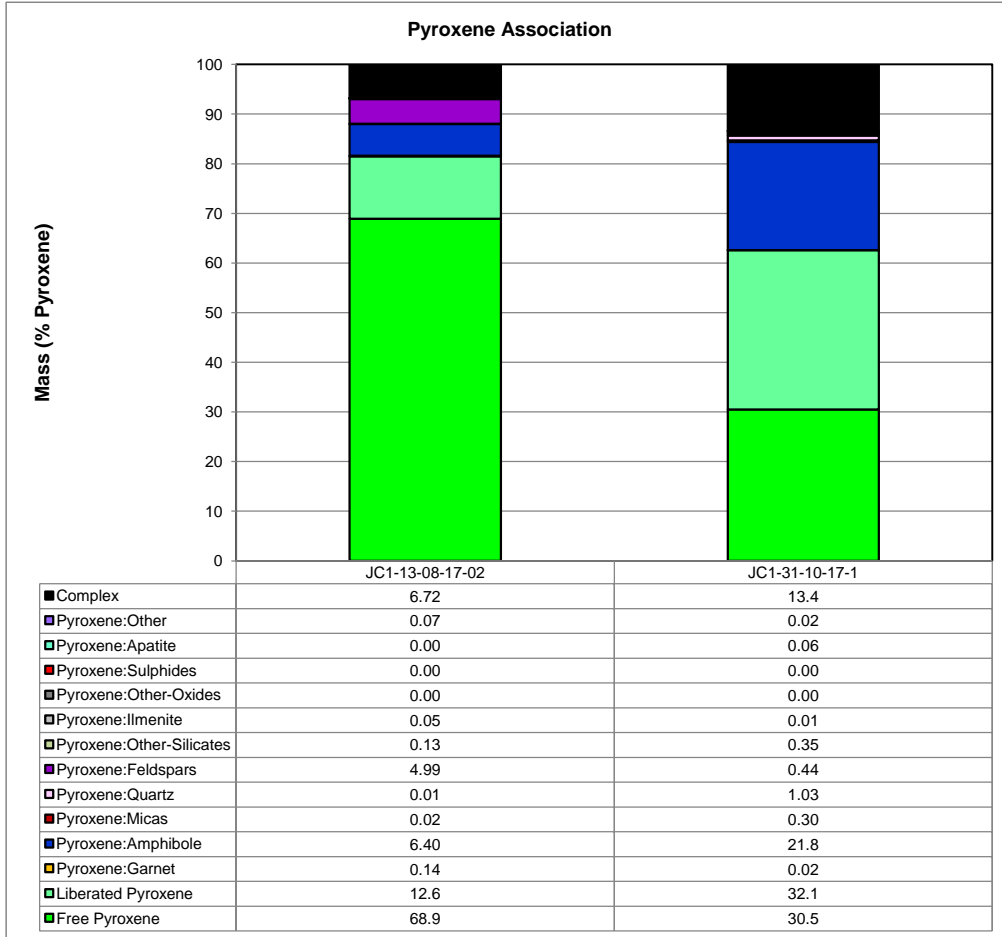
Absolute Mass of Pyroxene Across Samples

Mineral Name	JC1-13-08-17-02	JC1-31-10-17-1
Free Pyroxene	4.58	0.75
Liberated Pyroxene	0.83	0.79
Pyroxene:Garnet	0.01	0.00
Pyroxene:Amphibole	0.43	0.54
Pyroxene:Micas	0.00	0.01
Pyroxene:Quartz	0.00	0.03
Pyroxene:Feldspars	0.33	0.01
Pyroxene:Other-Silicates	0.01	0.01
Pyroxene:Ilmenite	0.00	0.00
Pyroxene:Other-Oxides	0.00	0.00
Pyroxene:Sulphides	0.00	0.00
Pyroxene:Apatite	0.00	0.00
Pyroxene:Other	0.00	0.00
Complex	0.45	0.33
Total	6.65	2.46

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

Pyroxene Association



Normalized Mass of Pyroxene Across Samples

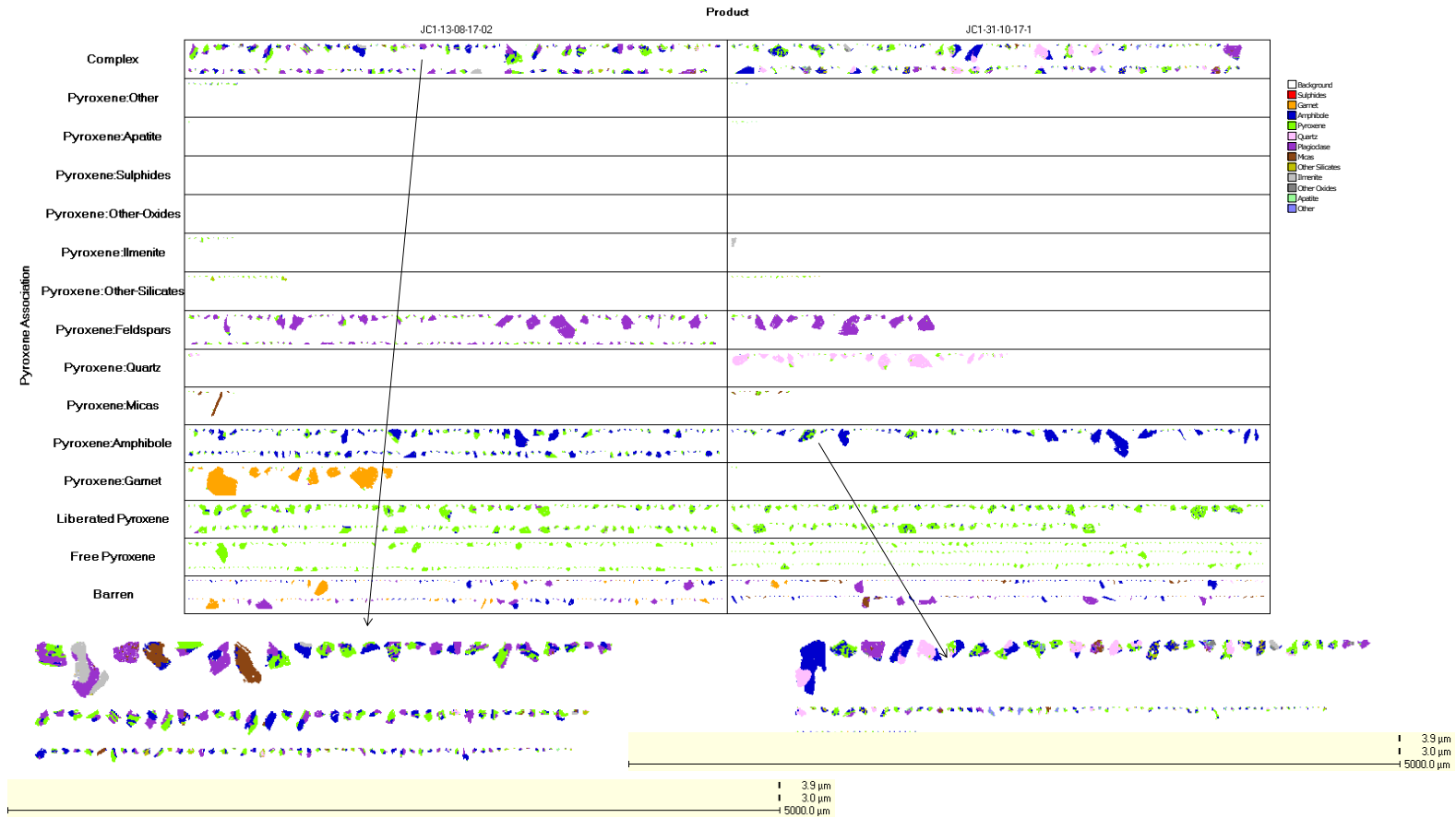
Mineral Name	JC1-13-08-17-02	JC1-31-10-17-1
Free Pyroxene	68.9	30.5
Liberated Pyroxene	12.6	32.1
Pyroxene:Garnet	0.14	0.02
Pyroxene:Amphibole	6.40	21.8
Pyroxene:Micas	0.02	0.30
Pyroxene:Quartz	0.01	1.03
Pyroxene:Feldspars	4.99	0.44
Pyroxene:Other-Silicates	0.13	0.35
Pyroxene:Ilmenite	0.05	0.01
Pyroxene:Other-Oxides	0.00	0.00
Pyroxene:Sulphides	0.00	0.00
Pyroxene:Apatite	0.00	0.06
Pyroxene:Other	0.07	0.02
Complex	6.72	13.4
Total	100.0	100.0

Pyroxene Image Grid

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

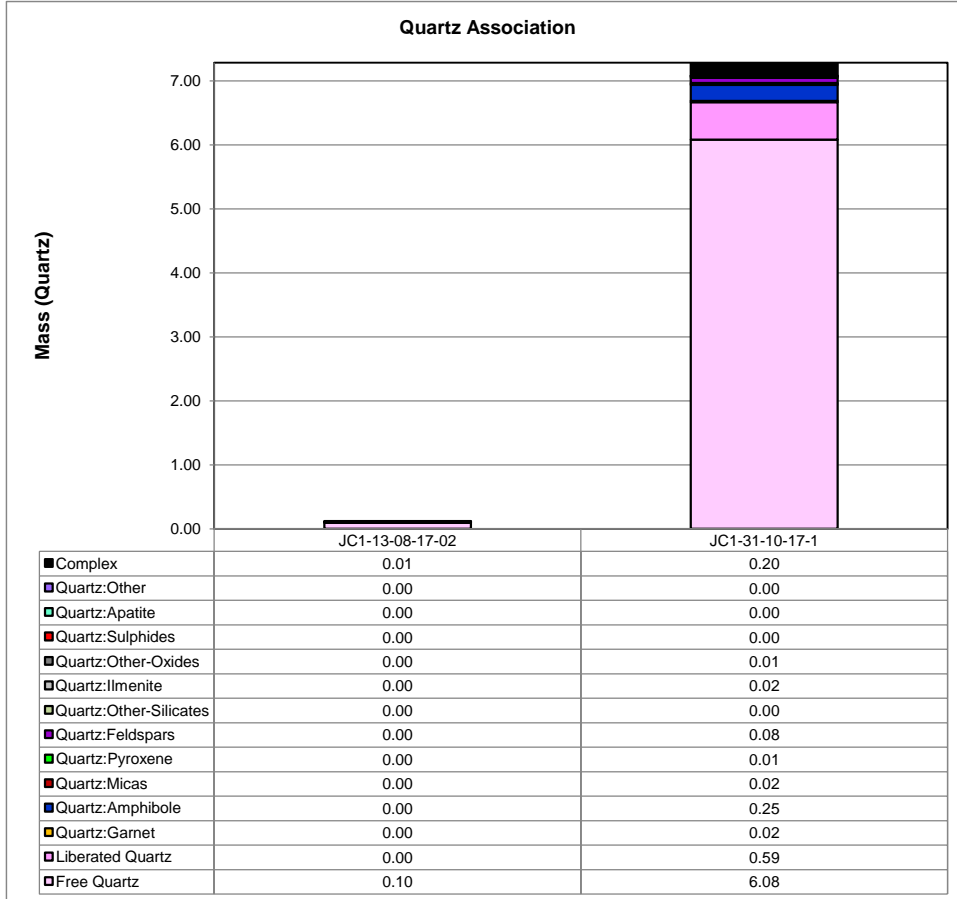
Pyroxene Association Image Grid



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

Quartz Association



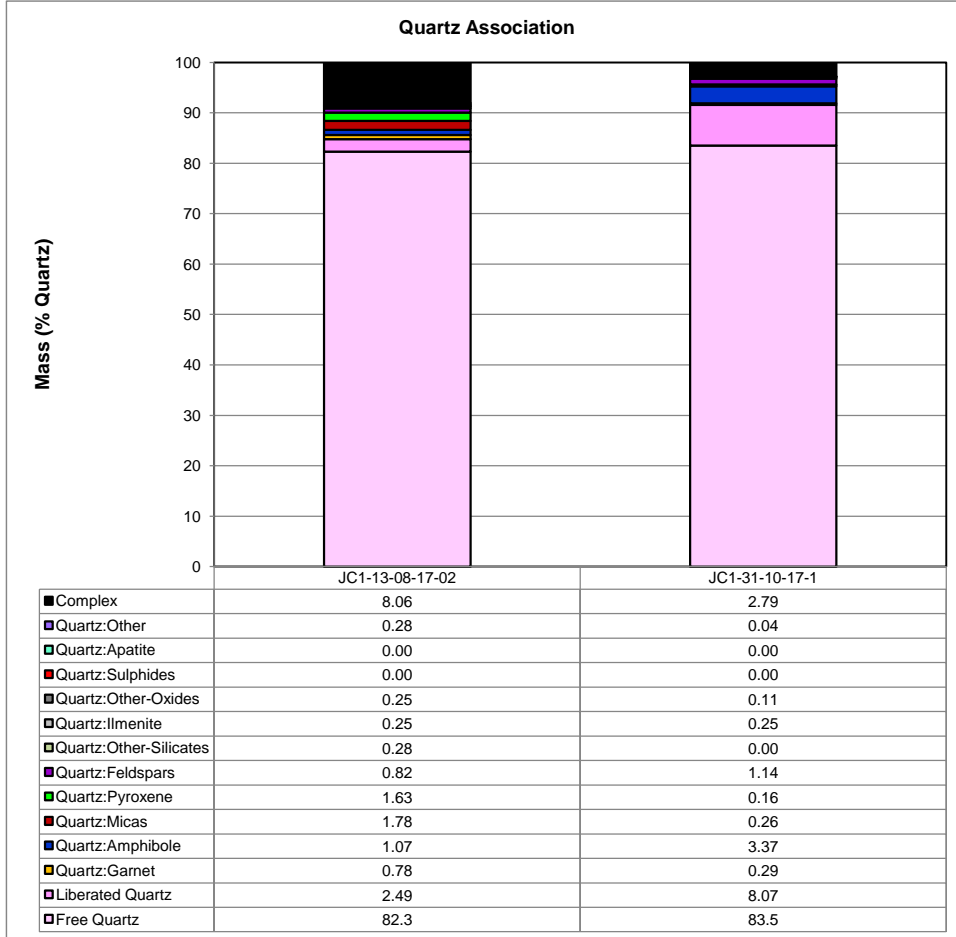
Absolute Mass of Quartz Across Samples

Mineral Name	JC1-13-08-17-02	JC1-31-10-17-1
Free Quartz	0.10	6.08
Liberated Quartz	0.00	0.59
Quartz:Garnet	0.00	0.02
Quartz:Amphibole	0.00	0.25
Quartz:Micas	0.00	0.02
Quartz:Pyroxene	0.00	0.01
Quartz:Feldspars	0.00	0.08
Quartz:Other-Silicates	0.00	0.00
Quartz:Ilmenite	0.00	0.02
Quartz:Other-Oxides	0.00	0.01
Quartz:Sulphides	0.00	0.00
Quartz:Apatite	0.00	0.00
Quartz:Other	0.00	0.00
Complex	0.01	0.20
Total	0.12	7.28

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

Quartz Association



Normalized Mass of Quartz Across Samples

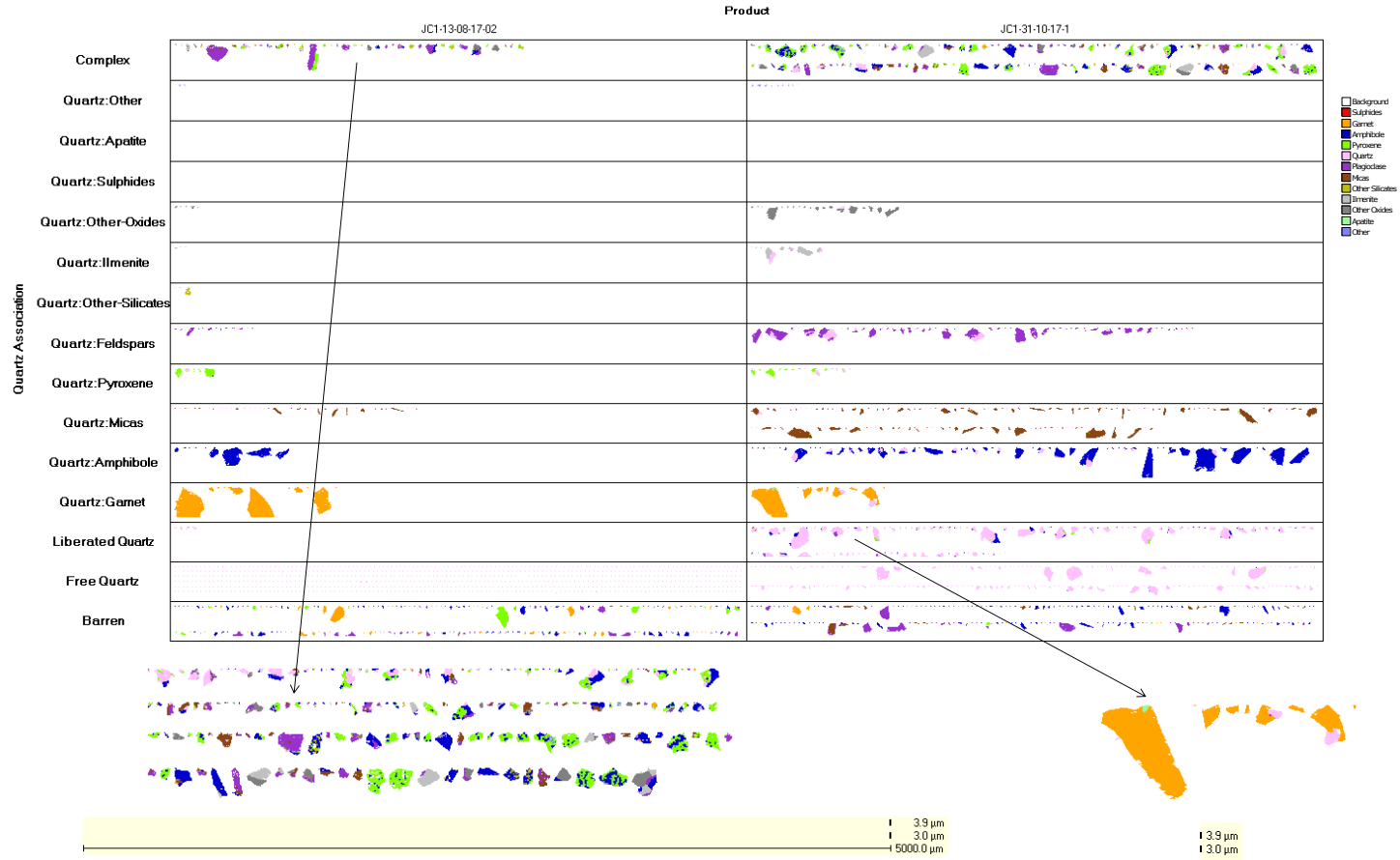
Mineral Name	JC1-13-08-17-02	JC1-31-10-17-1
Free Quartz	82.3	83.5
Liberated Quartz	2.49	8.07
Quartz:Garnet	0.78	0.29
Quartz:Amphibole	1.07	3.37
Quartz:Micas	1.78	0.26
Quartz:Pyroxene	1.63	0.16
Quartz:Feldspars	0.82	1.14
Quartz:Other-Silicates	0.28	0.00
Quartz:Ilmenite	0.25	0.25
Quartz:Other-Oxides	0.25	0.11
Quartz:Sulphides	0.00	0.00
Quartz:Apatite	0.00	0.00
Quartz:Other	0.28	0.04
Complex	8.06	2.79
Total	100.0	100.0

Quartz Image Grid

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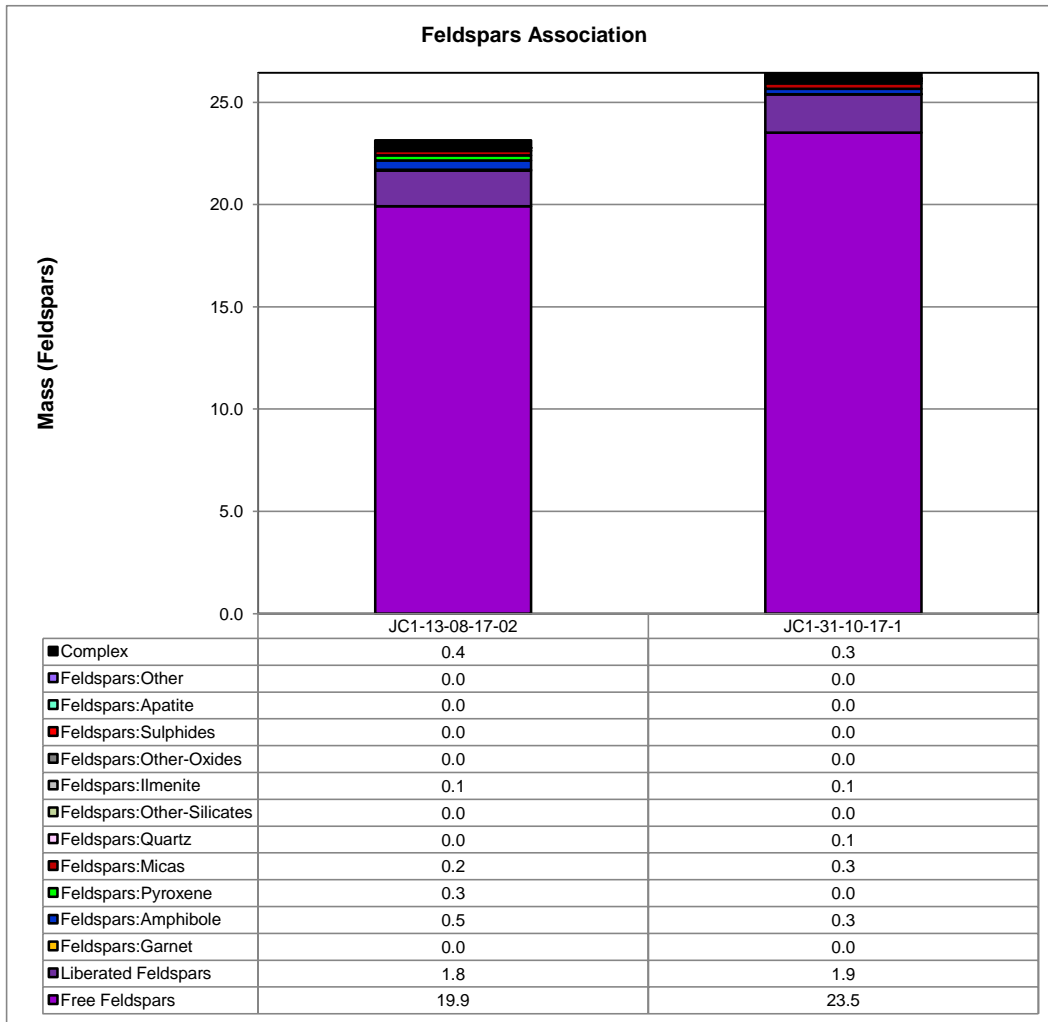
Quartz Association Image Grid



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

Feldspars Association



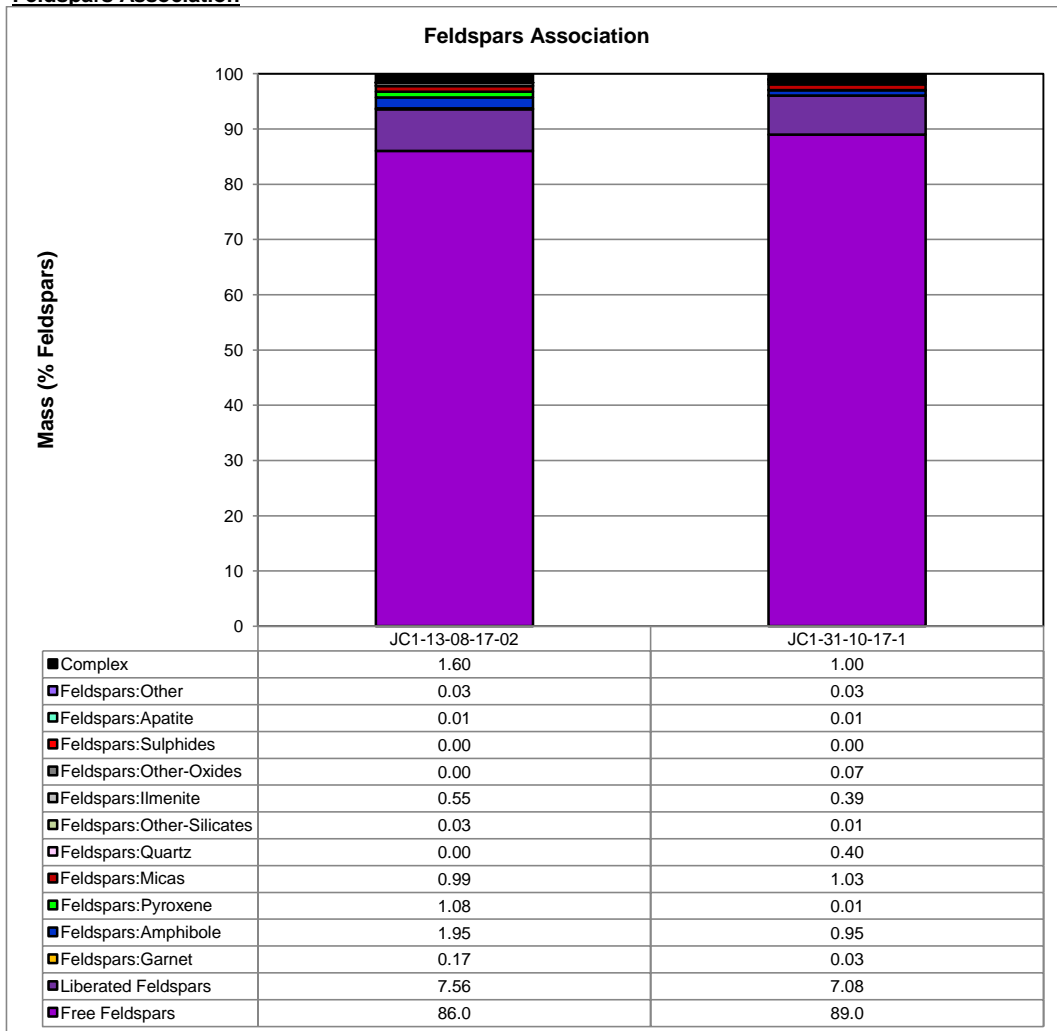
Absolute Mass of Feldspars Across Samples

Mineral Name	JC1-13-08-17-02	JC1-31-10-17-1
Free Feldspars	19.9	23.5
Liberated Feldspars	1.8	1.9
Feldspars:Garnet	0.0	0.0
Feldspars:Amphibole	0.5	0.3
Feldspars:Pyroxene	0.3	0.0
Feldspars:Micas	0.2	0.3
Feldspars:Quartz	0.0	0.1
Feldspars:Other-Silicates	0.0	0.0
Feldspars:Ilmenite	0.1	0.1
Feldspars:Other-Oxides	0.0	0.0
Feldspars:Sulphides	0.0	0.0
Feldspars:Apatite	0.0	0.0
Feldspars:Other	0.0	0.0
Complex	0.4	0.3
Total	23.1	26.4

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

Feldspars Association



Normalized Mass of Feldspars Across Samples

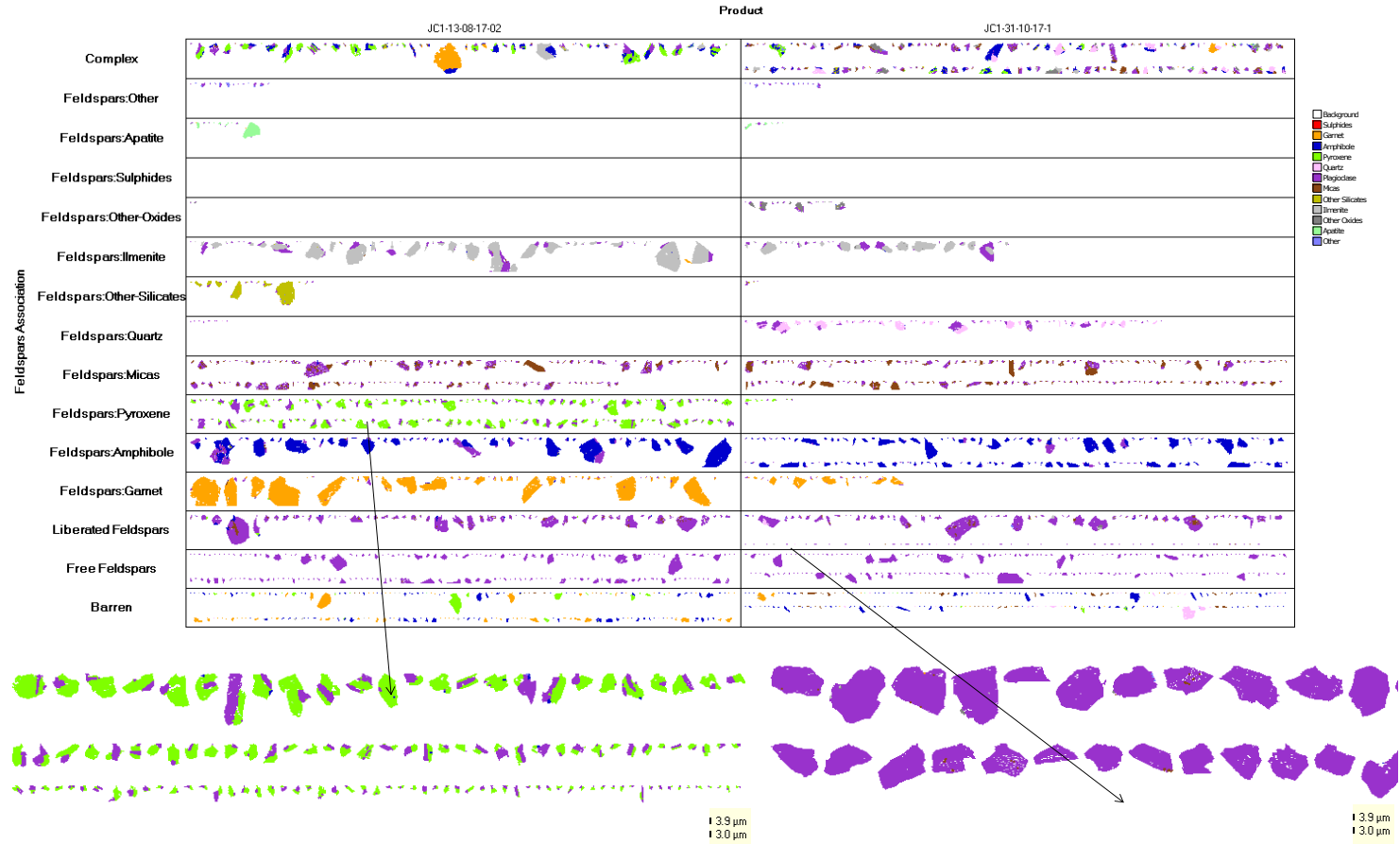
Mineral Name	JC1-13-08-17-02	JC1-31-10-17-1
Free Feldspars	86.0	89.0
Liberated Feldspars	7.56	7.08
Feldspars:Garnet	0.17	0.03
Feldspars:Amphibole	1.95	0.95
Feldspars:Pyroxene	1.08	0.01
Feldspars:Micas	0.99	1.03
Feldspars:Quartz	0.00	0.40
Feldspars:Other-Silicates	0.03	0.01
Feldspars:Ilmenite	0.55	0.39
Feldspars:Other-Oxides	0.00	0.07
Feldspars:Sulphides	0.00	0.00
Feldspars:Apatite	0.01	0.01
Feldspars:Other	0.03	0.03
Complex	1.60	1.00
Total	100.0	100.0

Feldspars Image Grid

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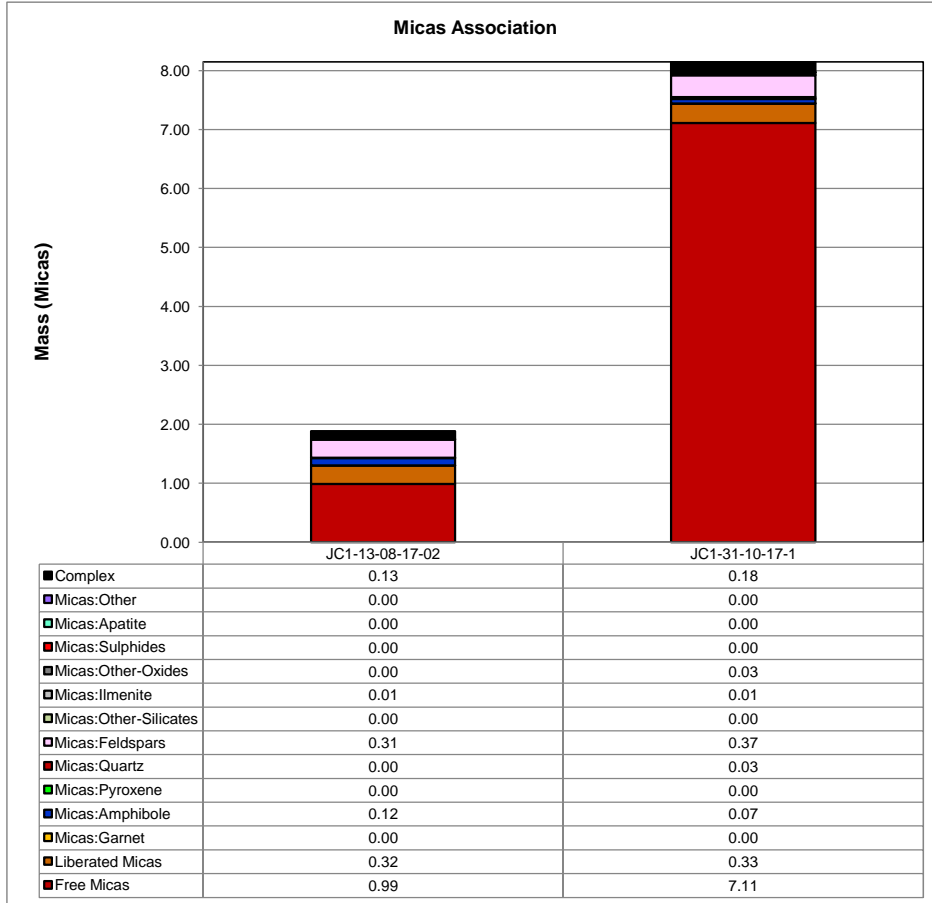
Feldspars Association Image Grid



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

Micas Association



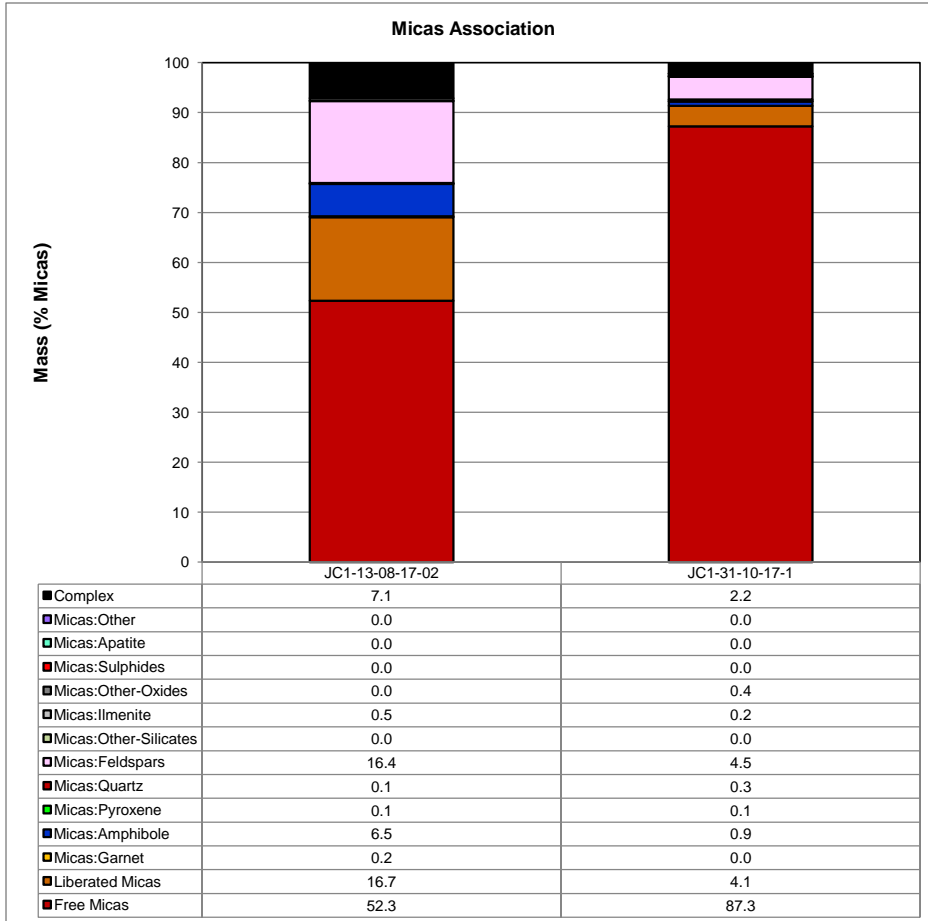
Absolute Mass of Micas Across Samples

Mineral Name	JC1-13-08-17-02	JC1-31-10-17-1
Free Micas	0.99	7.11
Liberated Micas	0.32	0.33
Micas:Garnet	0.00	0.00
Micas:Amphibole	0.12	0.07
Micas:Pyroxene	0.00	0.00
Micas:Quartz	0.00	0.03
Micas:Feldspars	0.31	0.37
Micas:Other-Silicates	0.00	0.00
Micas:Ilmenite	0.01	0.01
Micas:Other-Oxides	0.00	0.03
Micas:Sulphides	0.00	0.00
Micas:Apatite	0.00	0.00
Micas:Other	0.00	0.00
Complex	0.13	0.18
Total	1.89	8.15

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

Micas Association



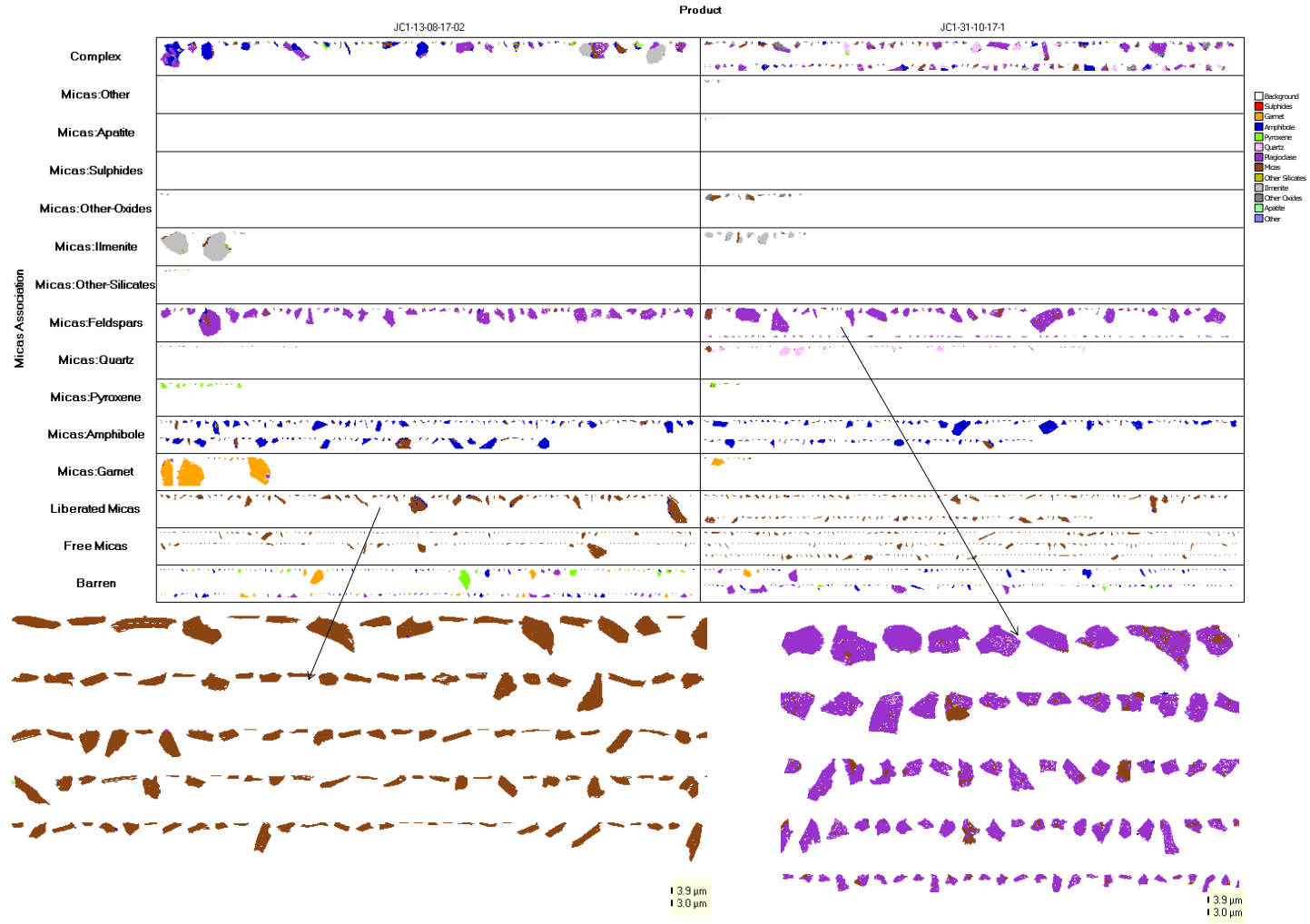
Normalized Mass of Micas Across Samples

Mineral Name	JC1-13-08-17-02	JC1-31-10-17-1
Free Micas	52.3	87.3
Liberated Micas	16.7	4.1
Micas:Garnet	0.2	0.0
Micas:Amphibole	6.5	0.9
Micas:Pyroxene	0.1	0.1
Micas:Quartz	0.1	0.3
Micas:Feldspars	16.4	4.5
Micas:Other-Silicates	0.0	0.0
Micas:Ilmenite	0.5	0.2
Micas:Other-Oxides	0.0	0.4
Micas:Sulphides	0.0	0.0
Micas:Apatite	0.0	0.0
Micas:Other	0.0	0.0
Complex	7.1	2.2
Total	100.0	100.0

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

Micas Association Image Grid



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*High Definition Mineralogical Analysis using QEMSCAN
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Microscopy)*

Cumulative Grain Size Distribution

Mineral	Sample ID	
	JC1-13-08-17- 02 Grain Size	JC1-31-10-17- 1 Grain Size
Garnet	94	70
Ilmenite	96	80
Pyroxene	46	36
Amphibole	57	57
Micas	35	40
Plagioclase	64	64
Quartz	---	60
All Particles	72	63

REP No. CA02382-NOV17
Customer Mineralogy
Attention Chris Gunning
Reference MI5002-NOV17
Project -
Chargeld OTHER
Batch
Samples 2
Chemist wattt

Title
Date 09-Nov-17 15:48

Sample ID	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	V2O5 %	LOI %	Sum %
JC1-13-08-17-02	43.1	17.3	18.6	5.83	8.65	2.77	0.7	3.26	0.47	0.25	0.05	0.05	0.18	101.2
JC1-31-10-17-1	49.5	14	15.5	5.62	7.63	3.29	1.38	2.65	0.62	0.17	0.02	0.07	0.66	101