Corona Minerals

MEMORANDUM

TO: FILE	**FROM: C Hughes**
FAX NUMBER:	**DATE: 17 April 2015**
COMPANY:	**TOTAL NO. OF PAGES INCLUDING COVER:**

RE: Initial metallurgical testwork at Garfield, Queenstown Project, Tasmania

Summary
ALS Metallurgy, Burnie Laboratory was contracted to undertake first pass metallurgical investigations on mineralisation at Garfield. The purpose of the testwork was to investigate potential flow paths for eventual economic recovery of the copper and gold at Garfield. Broadly speaking results indicate that flotation of a copper concentrate would produce a clean, high grade product. A surprising amount of molybdenite was found to be present in the concentrate. There has been no investigation of other potential flow paths at this stage, a heap leach flow path should be investigated.

Samples selected for testing
Four of the highest grade 1m intersections were selected for the testwork (see Appendix 1 for details). The four 1m ¼ core samples (half core already being despatched to Genalysis for assaying), 11603, 11829, 11838, 11843, from holes GPD001 and GPD002 were sent to ALS laboratories 39 River Rd, Wivenhoe, Tasmania, 7320. The contact there was Shengli Zhao: shengli.zhao@alsglobal.com, +61 3 6431 6333.

Metallurgical testwork
Metallurgical testwork flow diagram is presented in Appendix 2, and results of testwork are presented in Appendix 3. In short a rougher concentrate was produced that graded ~4% Cu, which Shengli Zhao indicated was very good quality and has the potential to produce a high grade low impurity concentrate (record of correspondence with Shengli Zhao is recorded in Appendix 4)

Mineralogical testwork
As part of the overall test work, Gary McArthur of MODA was contracted (by ALS) to undertake mineralogical descrition of the LM5 concentrate. This data is presented in Appendix 5. A surprising amount of Molybdenite was

present in the concentrate, molybdenite has been hitherto undetected at Garfield, and Mo has not been assayed for routinely.

Multielement analysis

A selection of samples were dispatched by Shengli Zhao to ALS Brisbane for multielement analysis. The sample details are presented in Appendix 6 and the data in Appendix 7. A sample was also sent for detailed PGE analysis, the data being presented in Appendix 8. Overall result is that there was negligible gold in the Head, but 150ppm Mo, which is significant. There are very minor amount of deleterious elements.

Conclusion and further work

The initial testwork suggests that Garfield mineralisation could produce a high value saleable Cu-Au concentrate through crushing, grinding, floatation and cleaning.

The next stage of metallurgical testwork should include further grind establishment testing, a preliminary Molybdenum float, and further cleaner work to get the concentrate up to a saleable quality. Further drilling would be required to perform this. Preliminary leach testwork should also be investigated.

The high amount of molybdenite discovered could have a significant impact on the overall project economics, some work should be done to as certain the amount of Mo in existing Garfield holes. This could be done quite cheaply with a Niton XRF (or similar instrument) on the core stored at MRT and at the Queenstown core yard.

Charles Hughes
Exploration manager

APPENDIX 1
Initial sample details

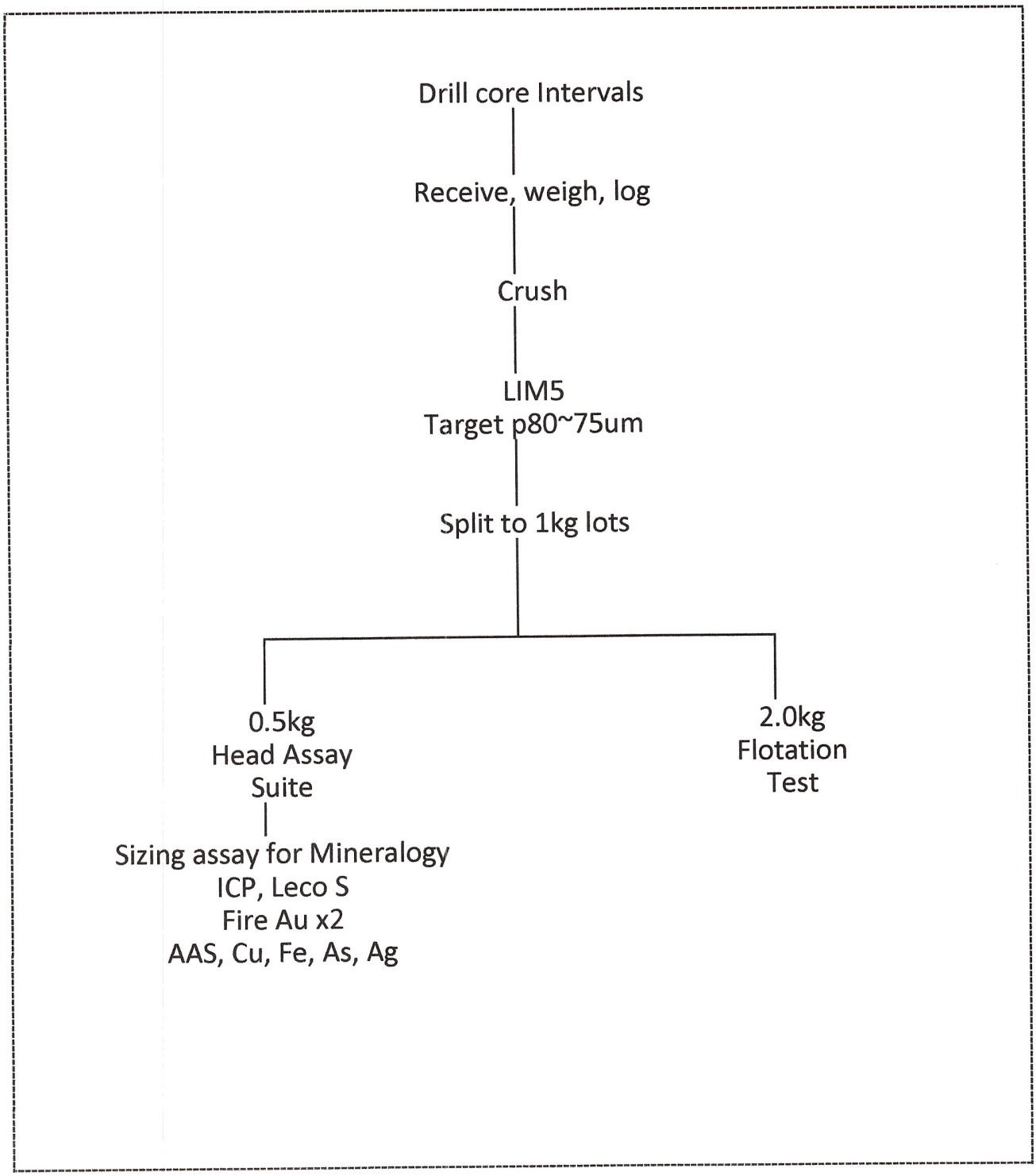
Sample ID	Type	Weight	Hole	From m	To m	Genalysis reported Cu	Description
11603	¼ NQ	1kg	GPD001	136	137	6047ppm	Light green, hard, foliated, moderate silica sericite pyrite chlorite altered quartz phyric rhyolite.
11829	¼ NQ	1kg	GPD002	183	184	7977ppm	Dark green, hard, foliated, mineralised altered andesite, with strong pervasive sericite-chlorite-pyrite alteration, with moderate carbonate spotting and hematite veining.
11838	¼ NQ	1kg	GPD002	191	192	5437ppm	Dark green, hard, foliated, mineralised altered andesite, with strong pervasive sericite-chlorite-pyrite alteration, with moderate carbonate spotting and hematite veining.
11843	¼ NQ	1kg	GPD002	195	196	55026ppm	Dark green, hard, foliated, mineralised altered andesite, with strong pervasive sericite-chlorite-pyrite alteration, with moderate carbonate spotting and hematite veining.

Appendix 2
Testwork Flow diagram

ALS Metallurgy

BURNIE LABORATORY

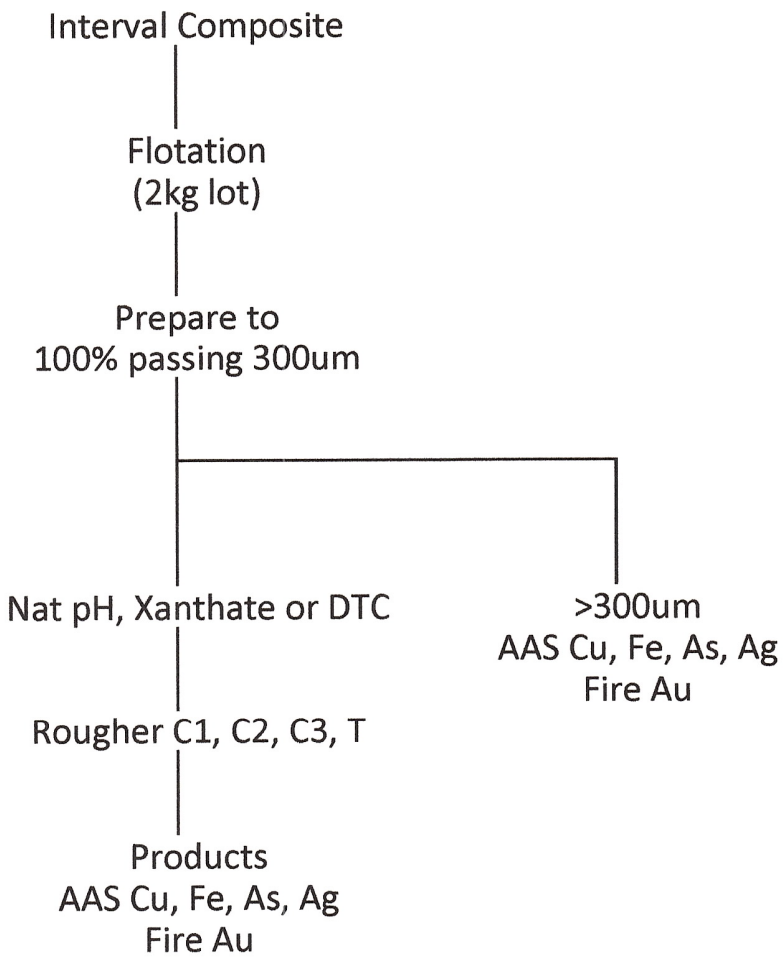
Corona Min: Garfield Core	STAGE: Preparation of Core	1



ALS Metallurgy

BURNIE LABORATORY

Corona Min: Garfield Core	STAGE: Flotation	2



Appendix3
Testwork results

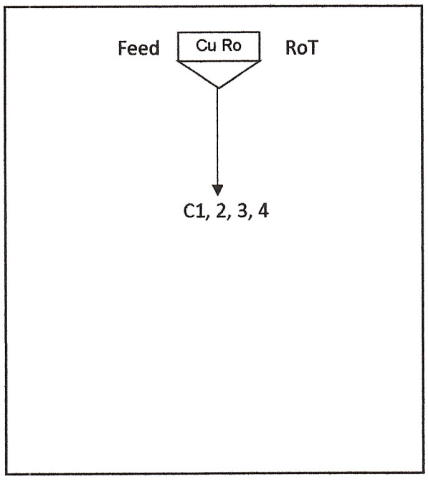
ALS Metallurgy

BURNIE LABORATORY: ROUGHER/CLEANER FLOTATION REPORT SHEET

PROJECT	T0938
TEST NO	T01
DATE	250215
TECHNICIAN	ANB

Milling		Primary	Regrind
Mill	type		
Media	type		
Media	kg		
Solids	g		
Water	g		
Time	Min/Sec		
Speed	rpm		
Lime	g		
End pH	pH		
End p80	µm	157	

Float Cell	Volume	Regrind Power	
Rougher	2.7	Start	
		Finish	
		W/h	
Speed	800	kWh/t	



PRODUCT FLOATED
Corona
Garfield Comp -300

NOTES
Ground for 2 Min in LM5

	pH	100 Lime g/t	0.5 PAX g/t	0.6675 W22 g/t					Cond Time min	Air L/min	Float Time min	Cum Float Time	Wet Wt g	Con % Solids
Condition														
Condition	8.8			27					2					
Cu Ro C1	8.7									1-4	2.0	2.0	95	22
Condition			10	13					1					
Cu Ro C2	8.7									2-5	3.0	5.0	230	32
Condition			20						1					
Cu Ro C3										5-8	3.0	8.0	200	9
Condition			20						1					
Cu Ro C4										5-9	4.0	12.0	290	7
REAGENT TOTALS (g/t)			50	40										

PRODUCTS	WT g	WT %	Cu %	Dist %	Fe %	Dist %	As %	Dist ppm	Ag ppm	Dist %	S %	Dist ppm	Au ppm	Dist
T01 +300	154.5	15.5	0.42	11.8	4.71	11.5	0.01	13.0	2	16.4	1.66	7.8	0.01	3.1
Ro C1	20.8	2.1	14.0	52.7	30.3	9.9	0.03	5.3	14	15.5	30.6	19.4	0.88	36.4
C2	73.2	7.3	1.77	23.5	30.7	35.4	0.03	18.5	6	23.3	30.0	67.0	0.29	42.2
C3	17.3	1.7	0.99	3.11	11.1	3.0	0.01	1.5	4	3.7	6.67	3.5	0.11	3.8
C4	19.7	2.0	0.51	1.82	5.49	1.7	0.01	1.7	3	3.1	1.46	0.9	0.01	0.4
RoT	713.8	71.4	0.06	7.13	3.42	38.5	0.01	60.1	1	37.9	0.06	1.3	0.01	14.2
CALC	999.3	100.0	0.55	100.0	6.35	100.0	0.01	100.0	2	100.0	3.28	100.0	0.05	100.0
ASSAY HEAD			0.56		6.57		0.001		1		3.60		0.05	

CUM PRODUCTS	CUM Wt	WT %	Cu %	Cum %	Fe %	Cum %	As %	Cum ppm	Ag ppm	Cum %	S %	Cum ppm	Au ppm	Cum %
T01 +300	154.5	15.5	0.42	11.8	4.71	11.5	0.01	13.0	2	16.4	1.66	7.8	0.01	3.1
Ro C1	20.8	2.1	14.0	52.7	30.3	9.9	0.03	5.3	14	15.5	30.6	19.4	0.88	36.4
C2	94.0	9.4	4.47	76.2	30.6	45.3	0.03	23.8	8	38.8	30.1	86.5	0.42	78.6
C3	111.3	11.1	3.93	79.3	27.6	48.4	0.03	25.2	7	42.5	26.5	90.0	0.37	82.4
C4	131.0	13.1	3.41	81.1	24.3	50.1	0.02	26.9	7	45.6	22.7	90.9	0.32	82.7
FEED	999.3	100.0	0.55	100.0	6.35	100.0	0.01	100.0	2	100.0	3.28	100.0	0.05	100.0

Appendix 4
Correspondence with ALS

Charles Hughes

From: Shengli Zhao <Shengli.Zhao@alsglobal.com>
Sent: Thursday, 9 April 2015 12:51 PM
To: Charles Hughes
Subject: Flotation results comments
Attachments: ALS T0938 Dispatch Sheet.xlsx

Hi Charles,

As per discussion, please see our sample dispatch sheet attached.

From the first copper rougher flotation, we believe this composite is a very good copper ore for flotation treatment. By right grinding, rougher and cleaner circuit, we would not see any difficult to get a high grade copper grade product with good recovery. Congratulations!

For further tests, on one hand, we need do the right grinding to get a better copper liberation following copper rougher investigation to get a good copper recovery by using right collector (try such as SIBX, 9810 ect.). On the other hand, We need do more investigation on cleaner stage as well (try regrinding, 2 stage cleaners).

Another issue you mentioned is Mo. At this stage, I do not think Mo is a big issue as only 103ppm Mo in head assay. But we can try Mo prefloat before copper flotation.

Regards,

Shengli Zhao
Project Metallurgist
ALS Metallurgy
39 River Rd, Wivenhoe, Tasmania, 7320
phone: +61 3 6431 6333
fax: +61 3 6431 6896
Email: shengli.zhao@alsglobal.com

From: Charles Hughes [mailto:c.hughes@coronaminerals.com]
Sent: Friday, 13 March 2015 2:24 PM
To: Shengli Zhao
Subject: RE: Flotation results for garfield core

Thanks Shengli,

Yes please send the Rh assay to Canada.

Many thanks.

Charles Hughes

Exploration Manager
Corona Minerals Ltd

Charles Hughes

From: Shengli Zhao <Shengli.Zhao@alsglobal.com>
Sent: Tuesday, 10 March 2015 11:12 AM
To: Charles Hughes
Subject: Flotation results for garfield core
Attachments: ALS T0938 Ro Cl Float Sheet MF.xlsx

Hi Charles,

Please see the flotation testwork results attached.

The results indicate:

1. Flotation test was performed on the <300um fraction. Some 12% copper was in >300um fractions.
2. Some 81% Copper was recovered in rougher float at some 3.4% copper grade.
3. Sulphur recovery in rougher float is some 91%.
4. Some 83% Au was recovered to rougher concentrate at some 0.3ppm Au grade.
5. The Au grade in feed is very low, approximately 0.05ppm.

Regards,

Shengli Zhao
Project Metallurgist
ALS Metallurgy
39 River Rd, Wivenhoe, Tasmania, 7320
phone: +61 3 6431 6333
fax: +61 3 6431 6896
Email: shengli.zhao@alsglobal.com

From: Charles Hughes [mailto:c.hughes@coronaminerals.com]
Sent: Thursday, 26 February 2015 2:31 PM
To: Shengli Zhao
Subject: RE: metallurgy testing for garfield core

Shengli what about the grind testwork?

Charles Hughes

Exploration Manager
Corona Minerals Ltd

CORONA MINERALS

M: +61 (0) 408 122 202|P:+61 (0) 894 864 482|E: c.hughes@coronaminerals.com|PO Box 183 WEST PERTH WA 6872| 703 Murray Street WEST PERTH WA 6005| |www.coronaminerals.com

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From: Shengli Zhao [mailto:Shengli.Zhao@alsglobal.com]
Sent: Thursday, 26 February 2015 11:28 AM
To: Charles Hughes
Subject: RE: metallurgy testing for garfield core

Hi Charles,

The sulphide copper flotation test was completed yesterday. Flotation looks pretty good. But we still await for the assay results.

The mineralogy analysis and head assay samples were dispatched. Once the assay results were reported, I will let you know asap.

Regards,

Shengli Zhao
Project Metallurgist
ALS Metallurgy
39 River Rd, Wivenhoe, Tasmania, 7320
phone: +61 3 6431 6333
fax: +61 3 6431 6896
Email: shengli.zhao@alsglobal.com

From: Charles Hughes [mailto:c.hughes@coronaminerals.com]
Sent: Thursday, 26 February 2015 2:11 PM
To: Shengli Zhao
Subject: RE: metallurgy testing for garfield core

Hi Shengli,

Can you send me an email please confirming the nature of the testwork that you will be undertaking on our Garfield Project core and the likely timeframe this will take.

Regards

Charles Hughes

Exploration Manager
Corona Minerals Ltd

CORONA MINERALS

M: +61 (0) 408 122 202|P:+61 (0) 894 864 482|E: c.hughes@coronaminerals.com|PO Box 183 WEST PERTH WA 6872| 703 Murray Street WEST PERTH WA 6005||www.coronaminerals.com

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From: Shengli Zhao [mailto:Shengli.Zhao@alsglobal.com]
Sent: Monday, 23 February 2015 11:14 AM

To: Charles Hughes
Subject: RE: metallurgy testing for garfield core

Hi Charles,

Thanks for advice.

Please see the revised tasksheet attached for flotation and mineralogy analysis.

Regards,

Shengli Zhao
Project Metallurgist
ALS Metallurgy
39 River Rd, Wivenhoe, Tasmania, 7320
phone: +61 3 6431 6333
fax: +61 3 6431 6896
Email: shengli.zhao@alsglobal.com

From: Charles Hughes [mailto:c.hughes@coronaminerals.com]
Sent: Monday, 23 February 2015 2:01 PM
To: Shengli Zhao
Subject: RE: metallurgy testing for garfield core

Hi Shengli,

This task sheet is for LM5 pulps and you've got ¼ core. So, I would presume you need to crush and grind?

Also,

1: I don't want any leach work completed for gold as the idea here would be (at this stage) to form a copper-gold concentrate and there wasn't a great deal of gold in there anyway.

2: I would like Gary McArthur to conduct mineragraphic descriptions

3: I would the head assay suite to be analysed for all elements

Regards,

Charles Hughes

Exploration Manager
Corona Minerals Ltd

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M: +61 (0) 408 122 202|P:+61 (0) 894 864 482|E: c.hughes@coronaminerals.com|PO Box 183 WEST PERTH WA 6872| 703 Murray Street WEST PERTH WA 6005||www.coronaminerals.com

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From: Shengli Zhao [mailto:Shengli.Zhao@alsglobal.com]
Sent: Monday, 23 February 2015 10:50 AM
To: Charles Hughes
Subject: RE: metallurgy testing for garfield core

Hi Charles,

Please see the task sheets attached for the testing.

We will do a diagnostic leach test and a flotation test on the composite.

Can you please confirm the routine that we can proceed the testing?

Regards,

Shengli Zhao
Project Metallurgist
ALS Metallurgy
39 River Rd, Wivenhoe, Tasmania, 7320
phone: +61 3 6431 6333
fax: +61 3 6431 6896
Email: shengli.zhao@alsglobal.com

From: Charles Hughes [mailto:c.hughes@coronaminerals.com]
Sent: Monday, 23 February 2015 12:51 PM
To: Shengli Zhao
Subject: Re: metallurgy testing for garfield core

Thanks Shengli,

Can you provide me with an updated flow diagram showing the process and testing you will under take on the core.

Regards,

Charles Hughes
Exploration Manager
Corona Minerals Ltd
0408122202

On 23/02/2015, at 9:42, Shengli Zhao <Shengli.Zhao@alsglobal.com> wrote:

> Hi Charles,
>
> The samples were received this morning.
>
> Regards,
>
> **Shengli Zhao**
> **Project Metallurgist**
> **ALS Metallurgy**
> 39 River Rd, Wivenhoe, Tasmania, 7320
> phone: +61 3 6431 6333

fax: +61 3 6431 6896
Email: shengli.zhao@alsglobal.com

From: Charles Hughes [mailto:c.hughes@coronaminerals.com]
Sent: Friday, 20 February 2015 11:48 AM
To: Shengli Zhao
Cc: Ian Rogers
Subject: RE: metallurgy testing for garfield core

Hi Shengli,

We'll have the rest of our sample with you on Monday.

Regards

Charles Hughes

Exploration Manager
Corona Minerals Ltd
<image001.jpg>
M: +61 (0) 408 122 202|P:+61 (0) 894 864 482|E: c.hughes@coronaminerals.com|PO Box 183 WEST PERTH WA 6872| 703 Murray Street WEST PERTH WA 6005||www.coronaminerals.com

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From: Shengli Zhao [mailto:Shengli.Zhao@alsglobal.com]
Sent: Friday, 13 February 2015 9:17 AM
To: Charles Hughes
Cc: Tony Button
Subject: RE: metallurgy testing for garfield core

Hi Charles,

I will be on holiday next week.

If your sample arrives, can you please contact Tony Button, our senior technician? He will organise the tests for you.

Our lab manager, John Glen, will be available as well.

Tony: this is for project T0938. Thanks.

Regards,

Shengli Zhao
Project Metallurgist
ALS Metallurgy
39 River Rd, Wivenhoe, Tasmania, 7320
phone: +61 3 6431 6333
fax: +61 3 6431 6896
Email: shengli.zhao@alsglobal.com

From: Charles Hughes [mailto:c.hughes@coronaminerals.com]
Sent: Tuesday, 10 February 2015 6:42 PM
To: Shengli Zhao
Subject: Re: metallurgy testing for garfield core

Hi Shengli,

Thanks for meeting with me.

I will organise more sample to come your way and will let you know when it will arrive.

Many thanks,

Charles Hughes
Exploration Manager
Corona Minerals Ltd
0408122202

On 10/02/2015, at 12:14, Shengli Zhao <Shengli.Zhao@alsglobal.com> wrote:

> Hi Charles,
>
> Nice to meet you today.
>
> As per discussion, can you please organise more samples for testing?
>
> Regards,
>
> **Shengli Zhao**
> **Project Metallurgist**
> **ALS Metallurgy**
> 39 River Rd, Wivenhoe, Tasmania, 7320
> phone: +61 3 6431 6333
> fax: +61 3 6431 6896
> Email: shengli.zhao@alsglobal.com
>
> **From:** Charles Hughes [mailto:c.hughes@coronaminerals.com]
> **Sent:** Tuesday, 10 February 2015 11:40 AM
> **To:** Shengli Zhao
> **Subject:** Fwd: metallurgy testing for garfield core
>
> Charles Hughes
> Exploration Manager
> Corona Minerals Ltd
> 0408122202

Begin forwarded message:

From: John Glen <John.Glen@alsglobal.com>
Date: 6 November 2014 13:31:46 AEDT
To: Charles Hughes <c.hughes@coronaminerals.com>
Subject: RE: metallurgy testing for garfield core

Hello Charles,

Please find our testing proposal attached as requested.

We can perform either scope in January although it would be a mid January start. The programs are quite small so the bench work would only be about a week.

Regards,
John

John Glen
Manager

ALS | Metallurgy Burnie

39 River Rd,
Wivenhoe, 7320
Tasmania, Australia

phone: +61 3 6431 6333
direct: +61 3 6432 1056
fax: +61 3 6431 6896

From: Charles Hughes [mailto:c.hughes@coronaminerals.com]
Sent: Friday, 31 October 2014 5:24 PM
To: John Glen
Subject: Re: metallurgy testing for garfield core

Hi John,

Thanks for that.

Could you generate a quote as per your initial suggestions, and a quote as per your last email. I shall present to the Board with recommendations dependant on the relevant cost and come back to you.

Just so you're aware I anticipate doing this work in Jan 2015 as it is currently outside the remit of the current budget. Drilling however will commence soon and run throughout November.

Regards,

Charles Hughes
Exploration Manager
Corona Minerals Ltd
0408122202

On 31/10/2014, at 13:25, John Glen <John.Glen@alsglobal.com> wrote:

> Hello Charles,
>
> We do not generally test/process the assay pulps – these contain a high proportion of very fine material (despite the p80 being around 75um.). Indicative work (copper recoverability, gold deportment, assay suite) can be performed to give you a preliminary indication of the metallurgy.
>
> If we do use them I would suggest:
>
> - Perform detailed head analysis by ICP, Leco S, Fire Au.
> - Direct copper float with standard reagents (p80=75), assay products.
> - Diagnostic gold leach (p80=75um) determine CN soluble, S2- locked and SiO2 locked distribution.
>
> Regards,
> John

John Glen
Manager

ALS | Metallurgy Burnie

39 River Rd,
Wivenhoe, 7320
Tasmania, Australia

phone: +61 3 6431 6333
direct: +61 3 6432 1056
fax: +61 3 6431 6896

From: Charles Hughes [mailto:c.hughes@coronaminerals.com]
Sent: Thursday, 30 October 2014 12:59 PM
To: John Glen
Subject: RE: metallurgy testing for garfield core

Hi John,

Thanks for the email, sorry about the confusion Ricky's was the only email address I had.

I have been in touch with Gary and will send some core to him for preparation and polished sections.

As the first pass I was wondering if we could use a composite of the residues/pulp from the lab? I think they grind to 85% passing 75 microns.

Also would it be useful at all to look at a heavy liquid sink to get a handle on the overall heavy mineral content?

Regards

Charles Hughes

Exploration Manager
Corona Minerals Ltd
<image001.jpg>
M: +61 (0) 408 122 202|P:+61 (0) 894 864 482|E: c.hughes@coronaminerals.com|PO Box 183 WEST PERTH WA 6872| 703 Murray Street WEST PERTH WA 6005||www.coronaminerals.com

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From: John Glen [mailto:John.Glen@alsglobal.com]
Sent: Thursday, 30 October 2014 6:51 AM
To: c.hughes@coronaminerals.com
Cc: Ricky Gelston
Subject: metallurgy testing for garfield core

Hello Charles,

I have been forwarded a note from you from Ricky Gelston requesting

metallurgical testing of Garfield core. The ALS labs in Burnie are split into "Assay" and "Metallurgy", I look after the metallurgical side.

As a first pass I would suggest:

- Select core pieces for mineragraphic assessment.
- Generate an intersection composite for preparation to 1.70mm top size.
- Perform detailed head analysis by ICP, Leco S, Fire Au.
- Wet grind to a size of 300um top size, size to six fractions to 20um, fraction assays.
- Submit fractions for optical mineralogy: copper mineral locking and liberation, sulphide assessment.
- Grind and diagnostic gold leach (p80=150um) determine CN soluble, S2- locked and SiO2 locked distribution.

These tests will give a good indication of the copper and gold residence and separability and give direction for a more detailed assessment.
We would use a local mineralogist (Gary McArthur of MODA) who gives excellent service and fast turnaround.

Please advise if this suits your program and I will make up a detailed proposal and costing,

Regards,
John

John Glen
Manager

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http://www.mailguard.com.au

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http://www.mailguard.com.au

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http://www.mailguard.com.au

Appendix 5
Mineralogy report

ALS Metallurgy

CORONA MINERALS LIMITED
GARFIELD PROSPECT

LM5 Mineralogy

MARCH 2015

MODA microscopy

McArthur Ore Deposit Assessments Pty Ltd

Gary J McArthur PhD FAusIMM MMICA MSEG

Suite 6, 1st Floor, Brownell Place, 11 Wilson St (P.O. Box 1303) Burnie TAS 7320 AUSTRALIA
Tel (03) 6431 1701 Fax (03) 6431 1278 Mobile 0419 367240 email gary@modapl.com.au

ALS METALLURGY

Corona Minerals Limited
Garfield Feed Composite
Mineralogy

Method

John Glen (ALS, acting for Corona Minerals), requested a mineralogical assessment of a Feed Composite (drillhole LM5) from the Corona Garfield Prospect near Queenstown, TAS. The sample was sized into 4 fractions: +212µm, +106µm, +53µm, and +20µm. The fractions were prepared as polished grain mounts by Australian Petrographics (Queanbeyan, NSW).

These fractions were logged in two scans using the normal MODA technique with a modified Mt Lyell template.

In the first scan, for each of the 4 fractions, 100 randomly selected grains were logged microscopically by estimating the area% of each mineral present. The minerals logged were *pyrite* (Py), *chalcopyrite* (Cp), *covellite* (Cv), *magnetite* (Mt), *hematite* (He), *sphalerite* (Sp), *molybdenite* (Mo) and gangue (*quartz, sericite, carbonate, chlorite, rutile,* etc: Ga). *Covellite* was not observed.

In the second scan, for each of the 4 fractions, 100 randomly selected grains containing any sulphide, were logged as previously, to gain more data for the potentially economic components.

In addition, for each grain logged, a schematic textural icon was chosen and logged. The results were merged and tallied and the liberation parameters computed for each fraction.

General photomicrographs were taken of all fractions and annotated using PowerPoint.

Composition – Quantitative Optical Microscopy

The quantitative optical mineralogy gave the following composition:

Garfield LM5 ***Vol% Composition from total scan***

Fraction	Wt%	Py	Cp	Mt	He	Sp	Mo	Ga
+212µm	10.7	4.2	1.6	0.1	0	0	0.1	94.1
+106µm	18.1	7.9	0.7	0	0	0	Tr	91.4
+53µm	12.6	6.8	2.3	0.1	Tr	0	Tr	90.9
+20µm	11.6	13.1	2.1	0	0	Tr	0	84.9
TOTAL	**53.0**	**8.0**	**1.6**	**Tr**	**Tr**	**Tr**	**Tr**	**90.4**

Py=pyrite, Cp=chalcopyrite, Mt=magnetite, He=hematite, Sp=sphalerite, Mo=molybdenite, Ga=gangue. Tr is <0.05%

Garfield LM5 ***Vol% Composition of grains containing sulphide***

Fraction	Wt%	Py	Cp	Mt	He	Sp	Mo	Ga
+212µm	11.7	24.0	4.2	0.1	0	0	0.1	71.7
+106µm	27.4	34.1	7.0	0.1	0	0	0.1	58.7
+53µm	19.3	52.4	11.0	0.1	0.1	0	0.1	36.4
+20µm	20.3	60.1	32.1	0.1	0	1.0	0	6.7
TOTAL	**78.7**	**43.8**	**14.0**	**0.1**	**Tr**	**0.3**	**0.1**	**41.8**

The ***pyrite*** occurs exclusively as quite coarse crystalline *pyrite*. No oxidation was observed.

The disseminated ***chalcopyrite*** is mostly hosted by gangue, with some *pyrite* binaries.

The ***molybdenite*** occurs as fine flakes <25µm, sometimes with *chalcopyrite*, hosted by gangue.

No ***electrum*** was observed.

Liberation – *chalcopyrite*

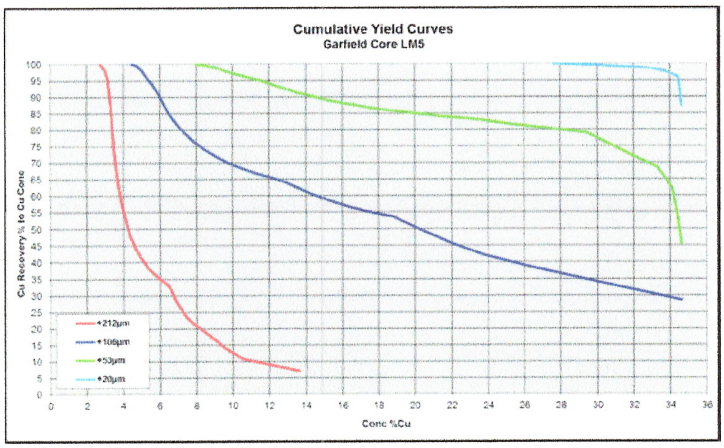
Garfield LM5 Chalcopyrite Distribution

Fraction	Cu Dist%	Free	Binary with					Ternary+
			Py	Mt	Sp	Mo	Ga	
+212µm	7.8	0	1	0	0	0	80	19
+106µm	12.8	29	11	0	0	0	54	5
+53µm	10.7	45	5	0	0	0	43	7
+20µm	28.6	87	2	3	0	0	7	0
TOTAL	**59.9**	**62**	**4**	**2**	**0**	**0**	**28**	**4**

Py=pyrite, Mt=magnetite, Sp=sphalerite, Mo=molybdenite, Ga=gangue. Tr is <0.05%

Cumulative Yield (Grade-Recovery) Curves

Cumulative yield curves for Cu have been calculated from the quantitative logging. Excellent liberation of *chalcopyrite* would be achieved at a 25µm grind.



Comparison with Mt Lyell Feed

Compared to recent Mt Lyell Feed, this Garfield sample is quite similar mineralogically, but with lower sulphide and *magnetite* content.

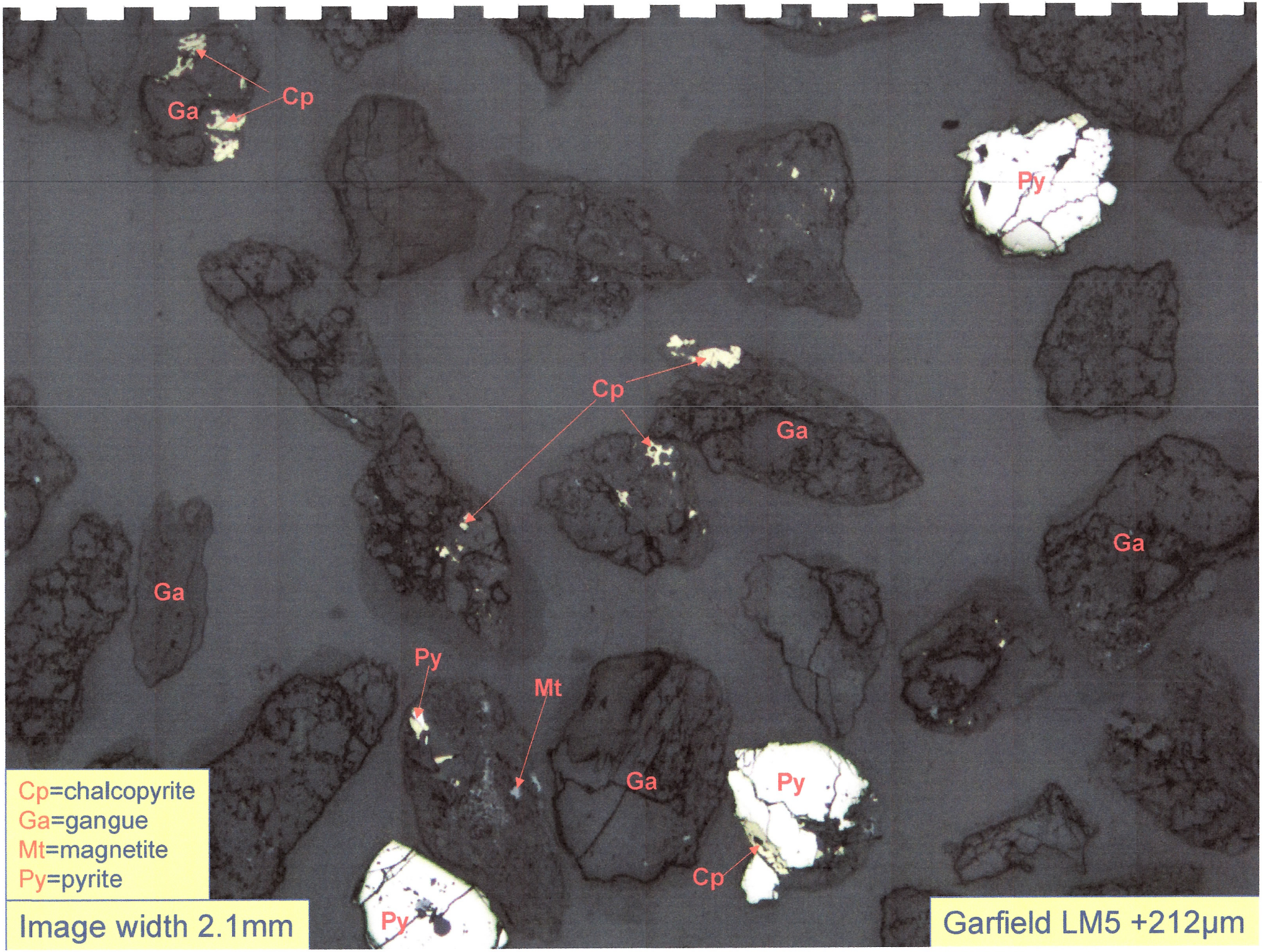
Garfield LM5 vs Mt Lyell Feed Vol% Composition

Deposit	Py	Cp	Mt	He	Sp	Mo	Ga
Mt Lyell	10.9	3.8	1.8	0.5	0.1	Tr	82.8
Garfield LM5	8.0	1.6	Tr	Tr	Tr	Tr	90.4

Miscellaneous Comments

The finest fraction contains ragged, oxidised grains of grinding media steel.

G.J.McArthur PhD FAusIMM MMICA MSEG
Principal Mineralogist 11.3.15


Ga
Cp
Py
Cp
Ga
Ga
Ga
Py
Mt
Ga
Py
Cp
Py
Cp=chalcopyrite
Ga=gangue
Mt=magnetite
Py=pyrite
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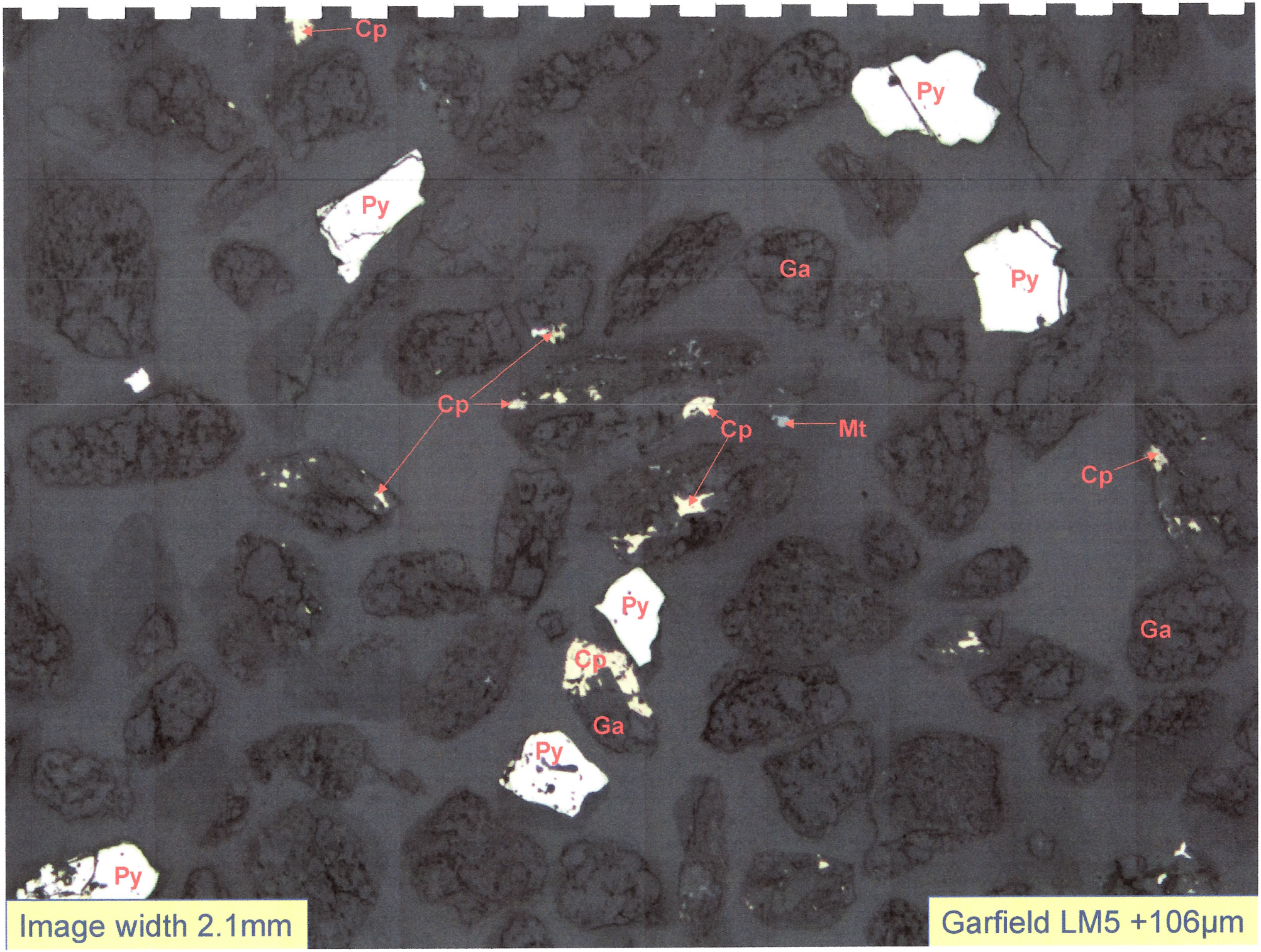
Garfield LM5 +212µm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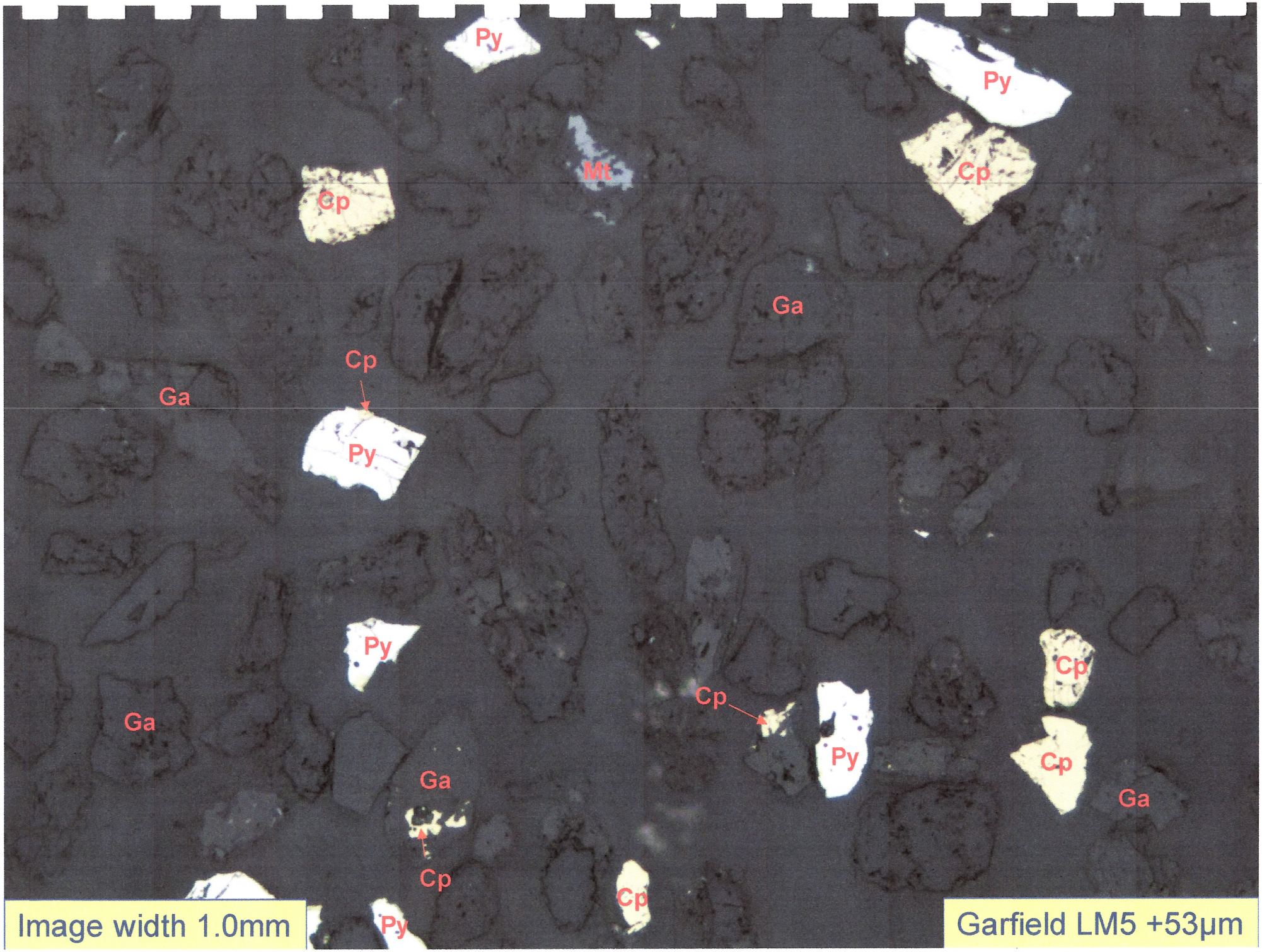
Garfield LM5 +106µm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Py
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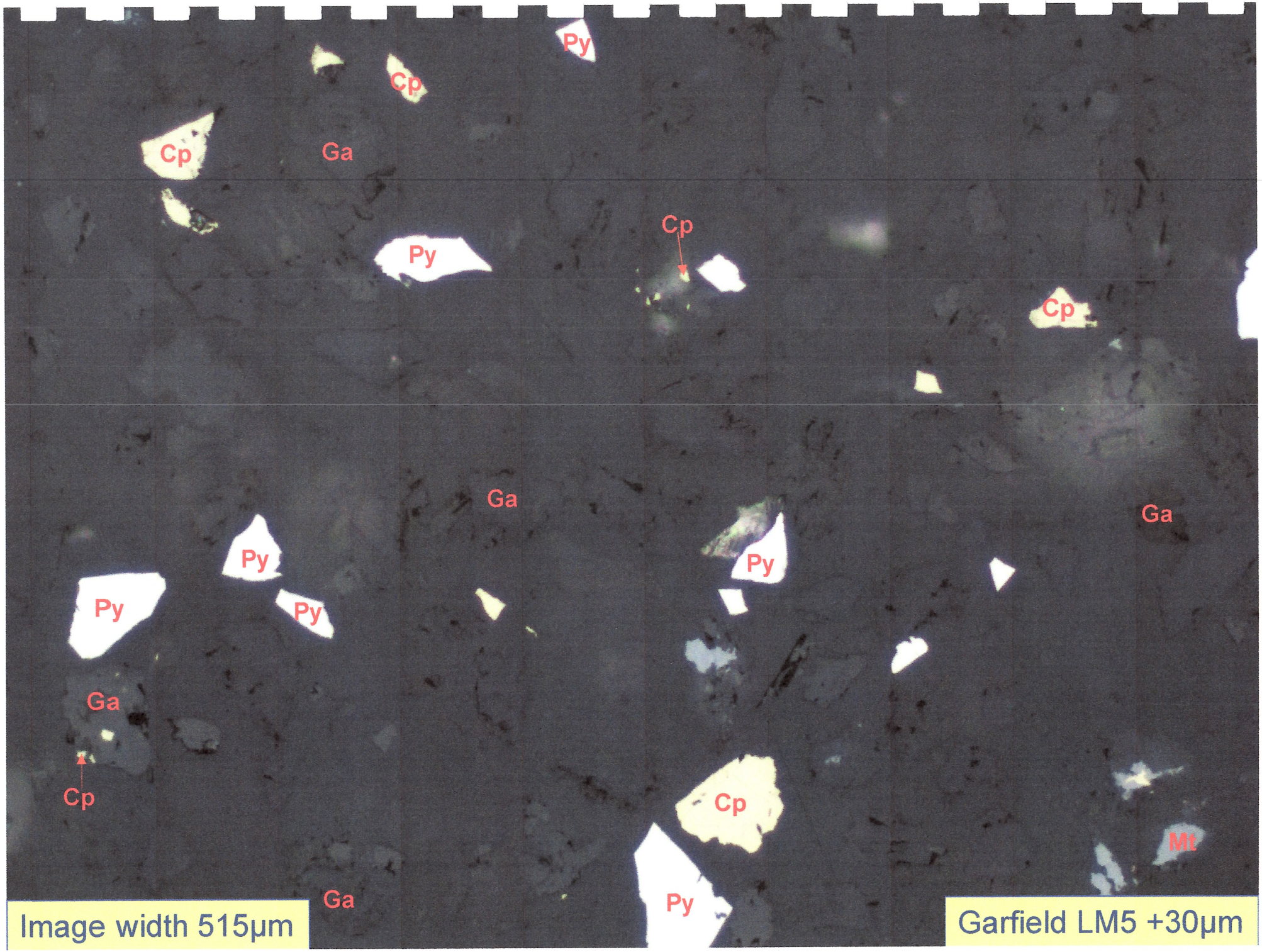
Garfield LM5 +53µm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Cp
Cp
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Py
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Py
Py
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Ga
Cp
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Mt
Py
Ga
Image width 515µm
Garfield LM5 +30µm

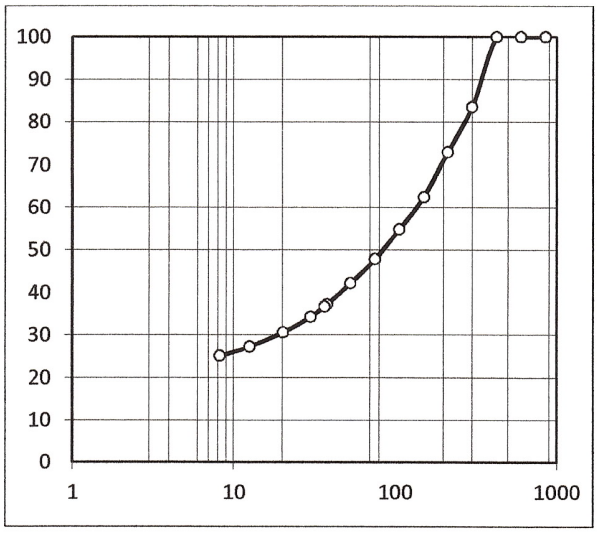
ALS Metallurgy

BURNIE LABORATORY

MINERALOGY SIZING REPORT SHEET

PROJECT	T0938
SAMPLE	Garfield Core LM5
FROM TEST	
DATE	230215
TECHNICIAN	MS

Product Sized Garfield Core LM5		SIZE um	WEIGHTS g	(%)	%PASS
30 Sec per Kg	P80	850	0.00	0.00	100.0
		600	0.00	0.00	100.0
		425	0.00	0.00	100.0
		300	25.48	16.38	83.6
	270	212	16.62	10.68	72.9
		150	16.27	10.46	62.5
		106	11.91	7.66	54.8
		75	10.93	7.03	47.8
		53	8.70	5.59	42.2
		38	7.82	5.03	37.2
CYCLOSIZER	CS1	37	0.79	0.51	36.7
FLOW 185	CS2	30	3.79	2.44	34.2
TEMP 21	CS3	20	5.61	3.61	30.6
SG **2.20**	CS4	13	5.28	3.39	27.2
MINS 20	CS5	8	3.28	2.11	25.1
		SUB	39.08	25.12	
		TOTAL	155.56	100.00	



ANALYSES

SIZE um	WT %	Cu %	Cu dist	Fe %	Fe dist	As %	As dist	Ag ppm	Ag dist	S %	S dist	Mount Number
300	16.38	0.43	13.4	5.32	13.6	0.001	6.6	0.4	10.5	2.06	9.4	
212	10.68	0.39	7.8	6.71	11.2	0.001	7.2	0.5	8.1	3.93	11.7	938002
106	18.12	0.37	12.8	8.01	22.6	0.002	19.5	0.6	14.5	5.46	27.4	938003
53	12.62	0.45	10.7	8.27	16.3	0.002	16.4	0.6	11.6	5.50	19.3	938004
CS3	11.58	1.31	28.6	9.74	17.6	0.002	17.3	1.3	21.3	6.31	20.3	938005
CS5	5.50	1.12	11.6	7.45	6.4	0.001	4.3	1.1	9.0	2.93	4.5	
<CS5	25.12	0.32	15.1	3.14	12.3	0.002	28.7	0.7	24.9	1.08	7.5	
CALC	100.00	0.53	100.0	6.41	100.0	0.002	100.0	0.7	100.0	3.60	100.0	
ASSAY		0.56		6.57		0.001		0.6		3.60		

ANALYSES

SIZE um	WT %	Au ppm	Au dist	Mount Number
300	16.38	0.03	0.9	
212	10.68	0.02	0.4	938002
106	18.12	0.05	1.5	938003
53	12.62	0.03	0.7	938004
CS3	11.58	0.08	1.6	938005
CS5	5.50	0.06	0.6	
<CS5	25.12	0.32	15.2	
CALC	100.00	0.11	21.1	
ASSAY		0.05		

MODA microscopy

PARTICLE MINERALOGY REPORT

GJMcA 11.3.15

Garfield Core LM5 March 2015

A +212µm — 11 % by weight

Average composition - all grains

Py	Cp	Cv	Mt	He	Sp	Mo	Ga	n
4.2	1.6	0.0	0.1	0.0	0.0	0.1	94.1	100
60	6	0	3	0	0	2	98	

ASSAYS

	SG	Cu	Pb	Zn	Ag	As	Fe
Calc'd	2.89	0.81	0.0	0.0	6	0.0	6.3
Actual		**0.39**					**6.7**

COMPOSITE PROPORTIONS

	Py	Cp	Cv	Mt	Sp	Mo	Ga	
Mono	63	0	0	0	0	0	73	
Binary	19	81	0	71	0	71	25	
Ternary	18	19	0	29	0	29	2	
Quat.y+	0	0	0	0	0	0	0	
#Grains	7	21	0	4	0	1	96	1.29

BINARY ASSOCIATION MATRIX

	Py	Cp	Cv	Mt	Sp	Mo	Ga
Py		20	0	0	0	0	80
Cp	1		0	0	0	0	99
Cv	0	0		0	0	0	0
Mt	0	0	0		0	0	100
Sp	0	0	0	0		0	0
Mo	0	0	0	0	0		100
Ga	12	75	0	8	0	4	

TOTAL ASSOCIATION MATRIX

		Py	Cp	Cv	Mt	Sp	Mo	Ga
	Py		22	0	0	0	0	34
	Cp	15		0	3	0	2	99
of	Cv	0	0		0	0	0	0
all	Mt	0	29	0		0	0	100
	Sp	0	0	0	0		0	0
	Mo	0	29	0	0	0		100
	Ga	3	21	0	4	0	1	

DISTRIBUTION MATRIX

	Free	Binary							Tern	Quat
		Py	Cp	Cv	Mt	Sp	Mo	Ga		
Py	63		4	0	0	0	0	15	18	0
Cp	0	1		0	0	0	0	80	19	0
Cv	0	0	0		0	0	0	0	0	0
Mt	0	0	0	0		0	0	71	29	0
Sp	0	0	0	0	0		0	0	0	0
Mo	0	0	0	0	0	0		71	29	0
Ga	73	3	19	0	2	0	1		2	0

B +106µm — 18 % by weight

Average composition - all grains

Py	Cp	Cv	Mt	He	Sp	Mo	Ga	n
7.9	0.7	0.0	0.0	0.0	0.0	0.0	91.4	100
76	10	0	0	0	0	5	95	

ASSAYS

	SG	Cu	Pb	Zn	Ag	As	Fe
Calc'd	2.96	0.34	0.0	0.0	10	0.0	8.5
Actual		**0.37**					**8.0**

COMPOSITE PROPORTIONS

	Py	Cp	Cv	Mt	Sp	Mo	Ga	
Mono	62	29	0	0	0	0	91	
Binary	29	66	0	0	0	100	8	
Ternary	9	5	0	0	0	0	1	
Quat.y+	0	0	0	0	0	0	0	
#Grains	10	10	0	0	0	0	96	1.16

BINARY ASSOCIATION MATRIX

	Py	Cp	Cv	Mt	Sp	Mo	Ga
Py		72	0	0	0	0	28
Cp	17		0	0	0	0	83
Cv	0	0		0	0	0	0
Mt	0	0	0		0	0	0
Sp	0	0	0	0		0	0
Mo	0	0	0	0	0		100
Ga	15	85	0	0	0	0	

TOTAL ASSOCIATION MATRIX

		Py	Cp	Cv	Mt	Sp	Mo	Ga
	Py		30	0	0	0	0	17
	Cp	15		0	2	0	0	60
of	Cv	0	0		0	0	0	0
all	Mt	0	0	0		0	0	0
	Sp	0	0	0	0		0	0
	Mo	0	0	0	0	0		100
	Ga	2	8	0	0	0	0	

DISTRIBUTION MATRIX

	Free	Binary							Tern	Quat
		Py	Cp	Cv	Mt	Sp	Mo	Ga		
Py	62		21	0	0	0	0	8	9	0
Cp	29	11		0	0	0	0	54	5	0
Cv	0	0	0		0	0	0	0	0	0
Mt	0	0	0	0		0	0	0	0	0
Sp	0	0	0	0	0		0	0	0	0
Mo	0	0	0	0	0	0		100	0	0
Ga	91	1	7	0	0	0	0		1	0

C +53µm — 13 % by weight

Average composition - all grains

Py	Cp	Cv	Mt	He	Sp	Mo	Ga	n
6.8	2.3	0.0	0.1	0.0	0.0	0.0	90.9	100
90	20	0	5	2	0	5	98	

ASSAYS

	SG	Cu	Pb	Zn	Ag	As	Fe
Calc'd	2.96	1.12	0.0	0.0	10	0.0	8.3
Actual		**0.45**					**8.3**

COMPOSITE PROPORTIONS

	Py	Cp	Cv	Mt	Sp	Mo	Ga	
Mono	63	45	0	0	0	0	96	
Binary	26	47	0	100	0	100	4	
Ternary	11	7	0	0	0	0	0	
Quat.y+	0	0	0	0	0	0	0	
#Grains	7	7	0	1	0	0	93	1.09

BINARY ASSOCIATION MATRIX

	Py	Cp	Cv	Mt	Sp	Mo	Ga
Py		55	0	0	0	0	38
Cp	10		0	0	0	0	90
Cv	0	0		0	0	0	0
Mt	0	0	0		0	0	100
Sp	0	0	0	0		0	0
Mo	0	0	0	0	0		100
Ga	4	72	0	24	0	0	

TOTAL ASSOCIATION MATRIX

		Py	Cp	Cv	Mt	Sp	Mo	Ga
	Py		25	0	0	0	0	17
	Cp	7		0	4	0	0	49
of	Cv	0	0		0	0	0	0
all	Mt	0	0	0		0	0	100
	Sp	0	0	0	0		0	0
	Mo	0	0	0	0	0		100
	Ga	0	3	0	1	0	0	

DISTRIBUTION MATRIX

	Free	Binary							Tern	Quat
		Py	Cp	Cv	Mt	Sp	Mo	Ga		
Py	63		14	0	0	0	0	10	11	0
Cp	45	5		0	0	0	0	43	7	0
Cv	0	0	0		0	0	0	0	0	0
Mt	0	0	0	0		0	0	100	0	0
Sp	0	0	0	0	0		0	0	0	0
Mo	0	0	0	0	0	0		100	0	0
Ga	96	0	3	0	1	0	0		0	0

D +20µm — 12 % by weight

Average composition - all grains

Py	Cp	Cv	Mt	He	Sp	Mo	Ga	n
13.1	2.1	0.0	0.0	0.0	0.0	0.0	84.9	100
95	78	0	0	0	100	0	99	

ASSAYS

	SG	Cu	Pb	Zn	Ag	As	Fe
Calc'd	3.09	0.96	0.0	0.0	16	0.0	12.4
Actual		**1.31**					**9.7**

COMPOSITE PROPORTIONS

	Py	Cp	Cv	Mt	Sp	Mo	Ga	
Mono	88	87	0	0	100	0	98	
Binary	10	12	0	0	0	0	2	
Ternary	1	0	0	0	0	0	0	
Quat.y+	0	0	0	0	0	0	0	
#Grains	14	3	0	0	0	0	86	1.03

BINARY ASSOCIATION MATRIX

	Py	Cp	Cv	Mt	Sp	Mo	Ga
Py		52	0	15	0	0	33
Cp	20		0	24	0	0	56
Cv	0	0		0	0	0	0
Mt	0	0	0		0	0	0
Sp	0	0	0	0		0	0
Mo	0	0	0	0	0		0
Ga	50	50	0	0	0	0	

TOTAL ASSOCIATION MATRIX

		Py	Cp	Cv	Mt	Sp	Mo	Ga
	Py		7	0	2	0	0	5
	Cp	3		0	3	0	0	7
of	Cv	0	0		0	0	0	0
all	Mt	0	0	0		0	0	0
	Sp	0	0	0	0		0	0
	Mo	0	0	0	0	0		0
	Ga	1	1	0	0	0	0	

DISTRIBUTION MATRIX

	Free	Binary							Tern	Quat
		Py	Cp	Cv	Mt	Sp	Mo	Ga		
Py	88		5	0	2	0	0	3	1	0
Cp	87	2		0	3	0	0	7	0	0
Cv	0	0	0		0	0	0	0	0	0
Mt	0	0	0	0		0	0	0	0	0
Sp	100	0	0	0	0		0	0	0	0
Mo	0	0	0	0	0	0		0	0	0
Ga	98	1	1	0	0	0	0		0	0

All sizings combined — 53 % of sample

Average composition - all grains

Py	Cp	Cv	Mt	He	Sp	Mo	Ga	n
8.0	1.6	0.0	0.0	0.0	0.0	0.0	90.4	**400**
80	26	0	4	2	100	4	97	

ASSAYS

	SG	Cu	Pb	Zn	Ag	As	Fe
Calc'd	2.97	0.76	0.0	0.0	10	0.0	8.8
Actual		**0.60**					**8.2**

COMPOSITE PROPORTIONS

	Py	Cp	Cv	Mt	Sp	Mo	Ga	
Mono	70	62	0	0	100	0	90	
Binary	21	34	0	80	0	93	9	
Ternary	8	4	0	20	0	7	1	
Quat.y+	0	0	0	0	0	0	0	
%Grains	9.6	10.0	0.0	1.0	0.0	0.2	93.1	1.14

BINARY ASSOCIATION MATRIX

	Py	Cp	Cv	Mt	Sp	Mo	Ga
Py		57	0	2	0	0	38
Cp	13		0	5	0	0	82
Cv	0	0		0	0	0	0
Mt	0	0	0		0	0	100
Sp	0	0	0	0		0	0
Mo	0	0	0	0	0		100
Ga	14	77	0	7	0	2	

TOTAL ASSOCIATION MATRIX

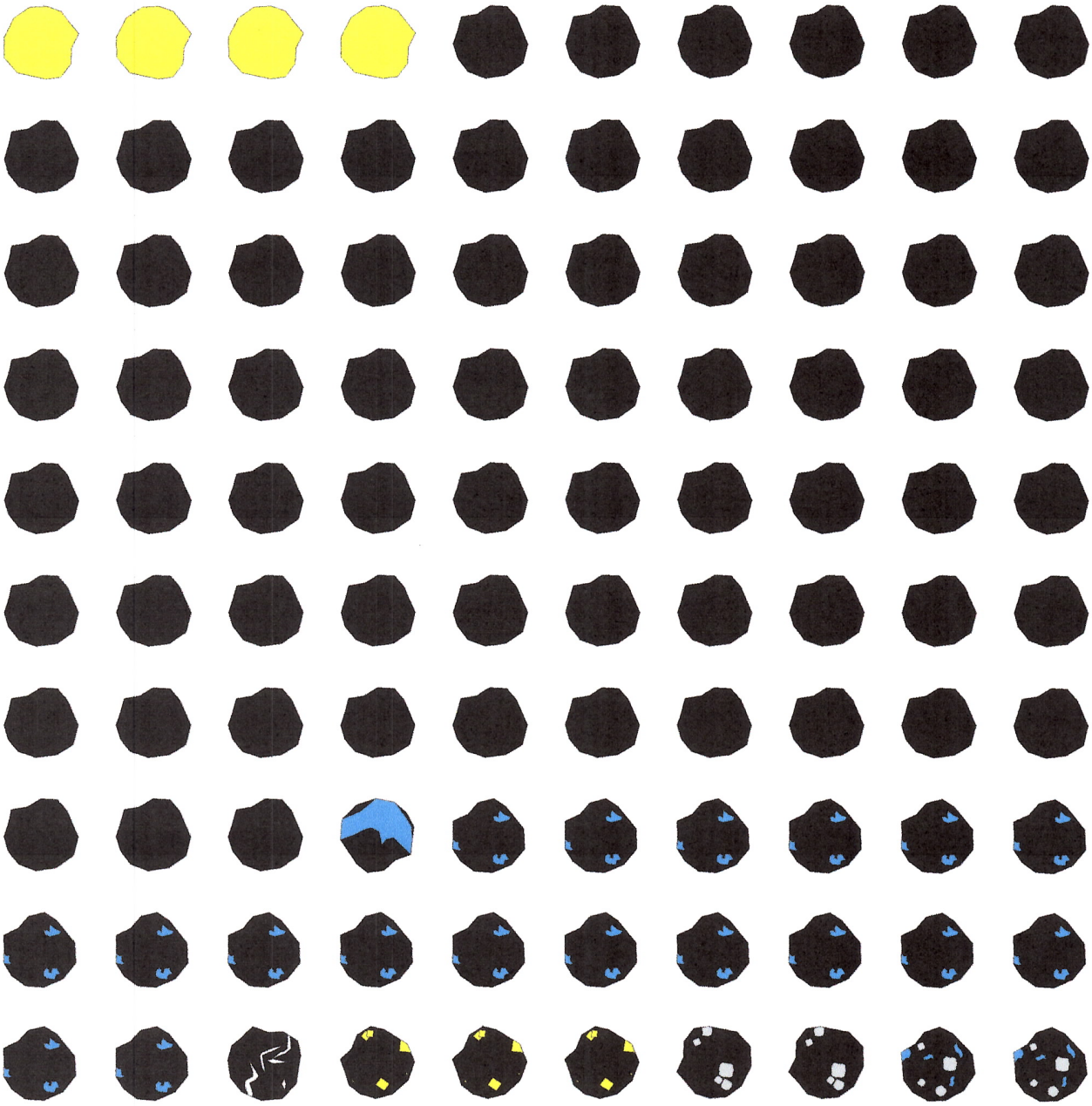
		Py	Cp	Cv	Mt	Sp	Mo	Ga
	Py		20	0	1	0	0	15
	Cp	7		0	3	0	0	32
of	Cv	0	0		0	0	0	0
all	Mt	0	20	0		0	0	100
	Sp	0	0	0	0		0	0
	Mo	0	7	0	0	0		100
	Ga	2	8	0	1	0	0	

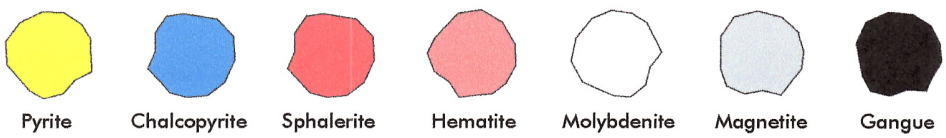
DISTRIBUTION MATRIX

	Free	Binary							Tern	Quat
		Py	Cp	Cv	Mt	Sp	Mo	Ga		
Py	70		12	0	0	0	0	8	8	0
Cp	62	4		0	2	0	0	28	4	0
Cv	0	0	0		0	0	0	0	0	0
Mt	0	0	0	0		0	0	80	20	0
Sp	100	0	0	0	0		0	0	0	0
Mo	0	0	0	0	0	0		93	7	0
Ga	90	1	7	0	1	0	0		1	0

ALS Metallugy - Corona Testwork Mineralogy

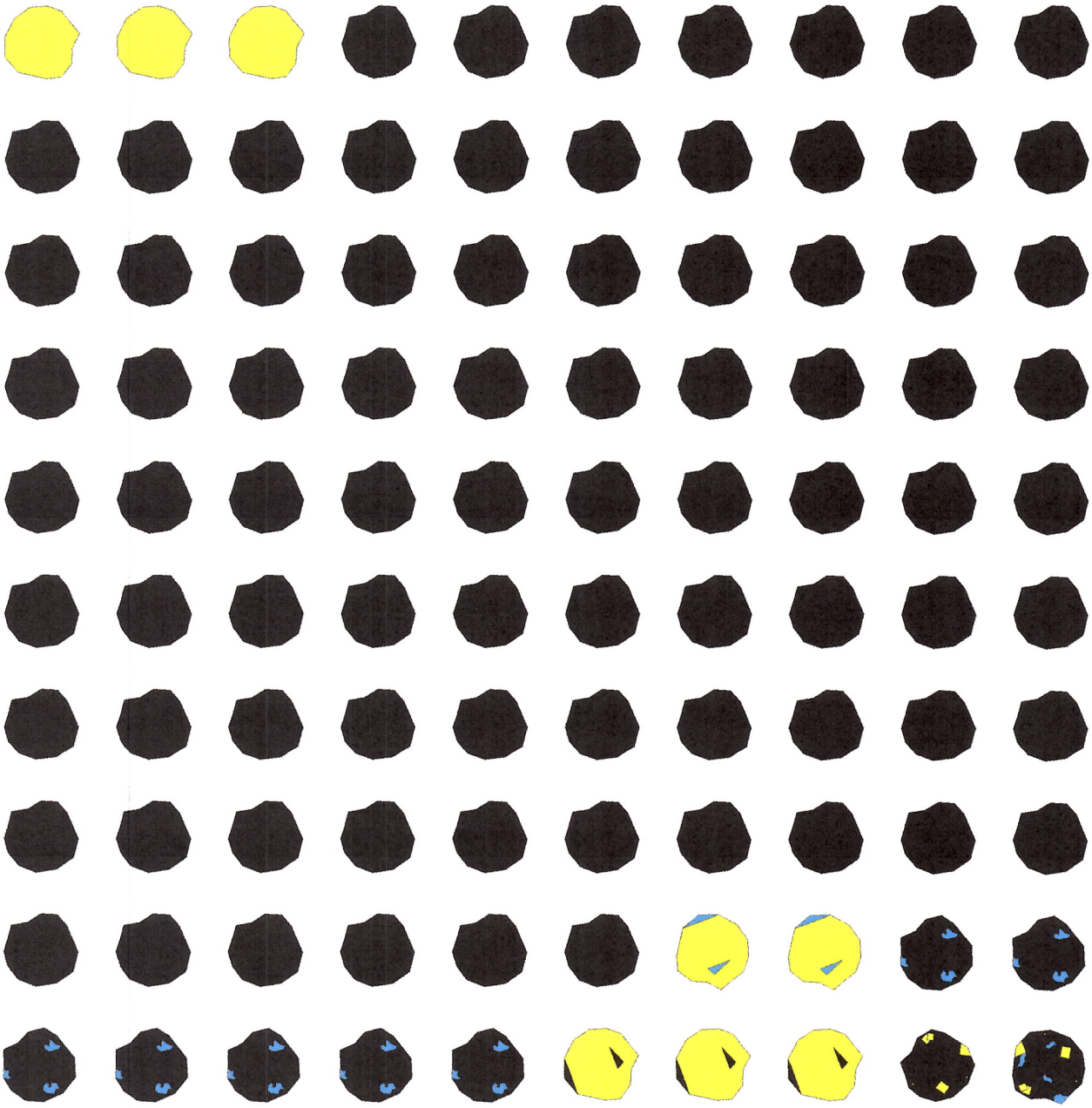
Garfield Core LM5 **A +212µm** **March 2015**

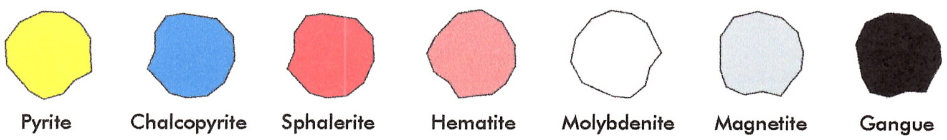




ALS Metallugy - Corona Testwork Mineralogy

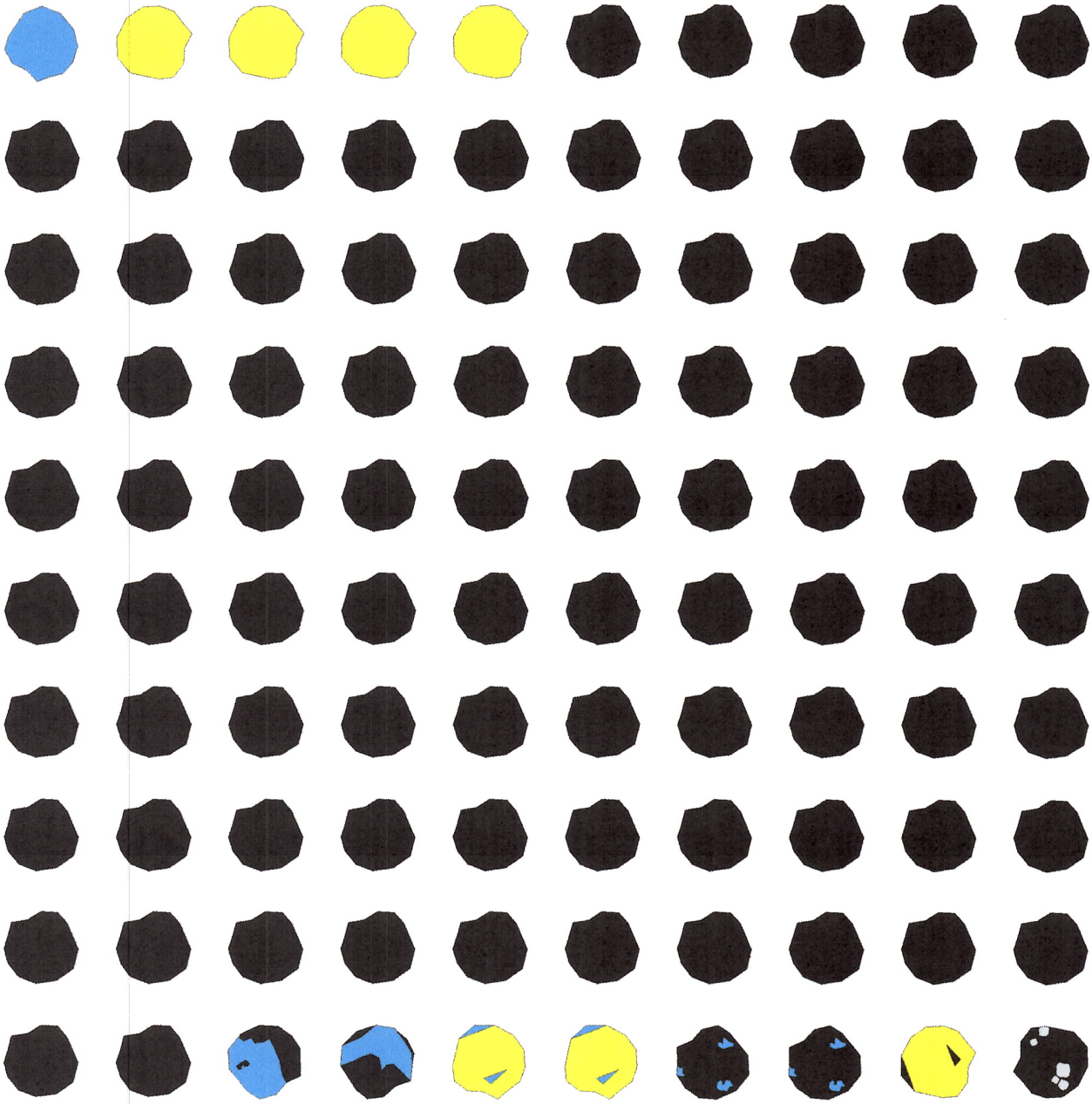
Garfield Core LM5 **B +106µm** **March 2015**

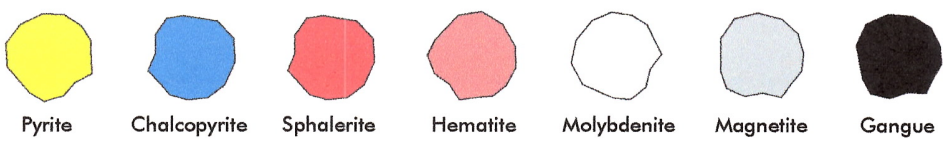




ALS Metallugy - Corona Testwork Mineralogy

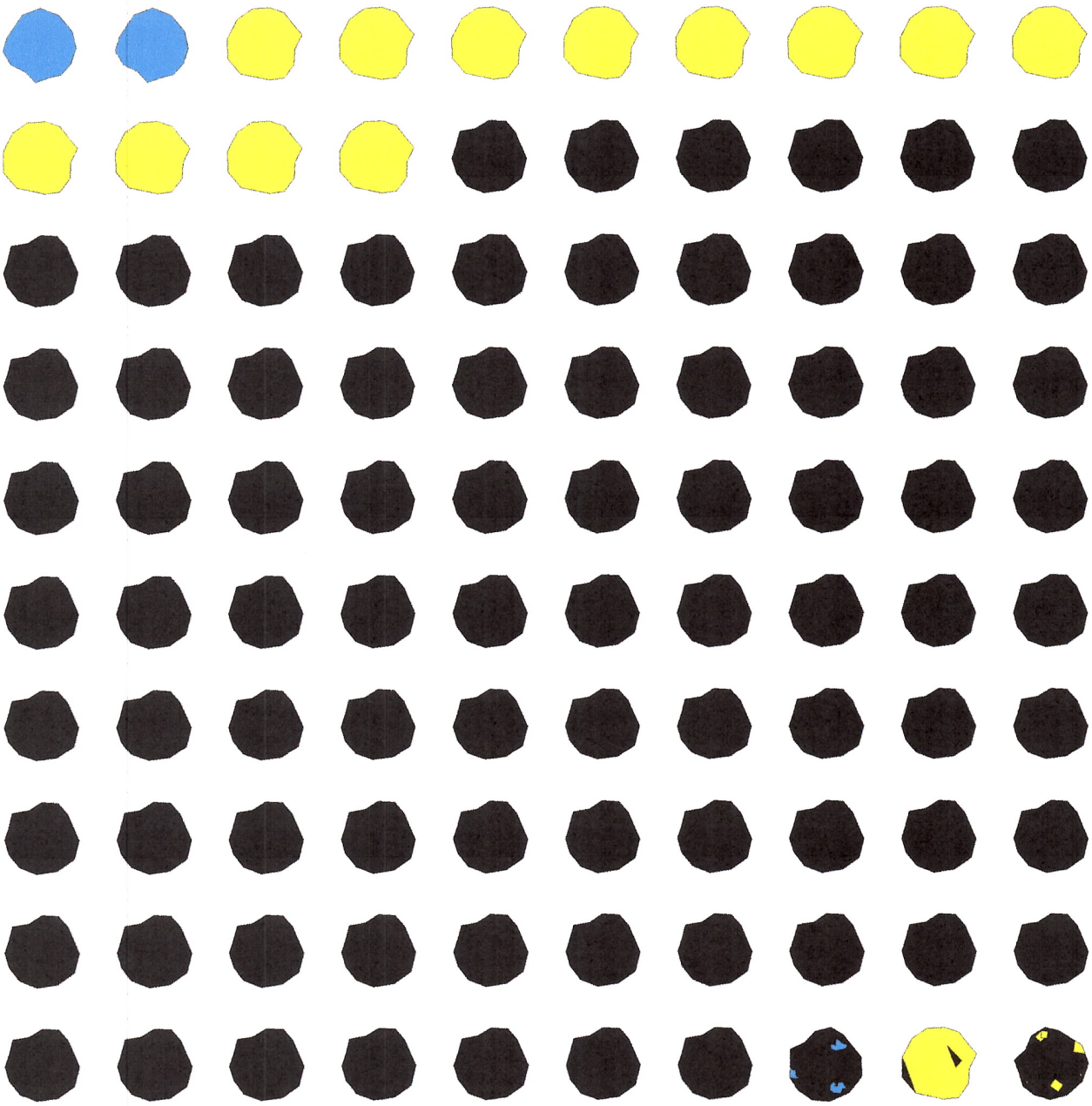
Garfield Core LM5 **C +53µm** **March 2015**

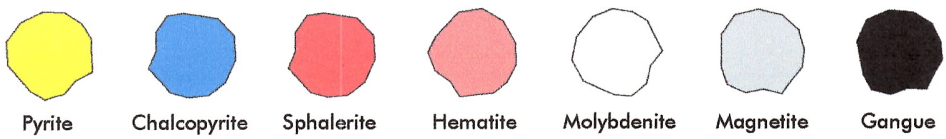




ALS Metallugy - Corona Testwork Mineralogy

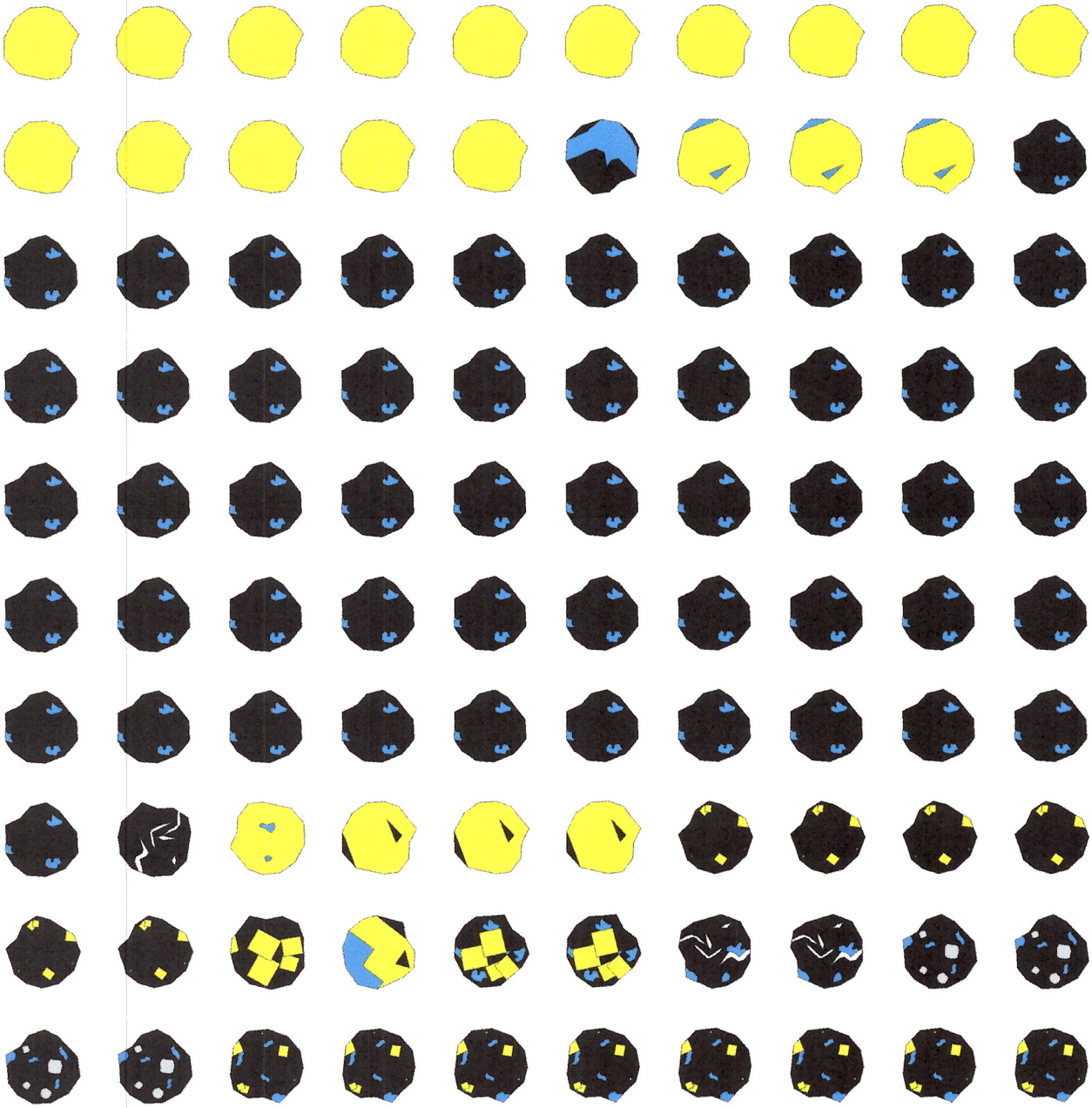
Garfield Core LM5 **D +20µm** **March 2015**

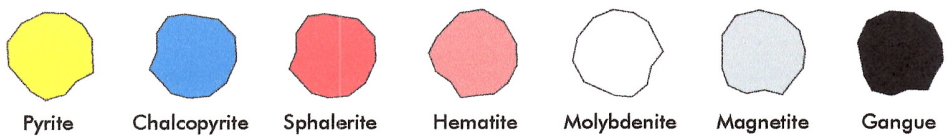




ALS Metallugy - Corona Testwork Mineralogy

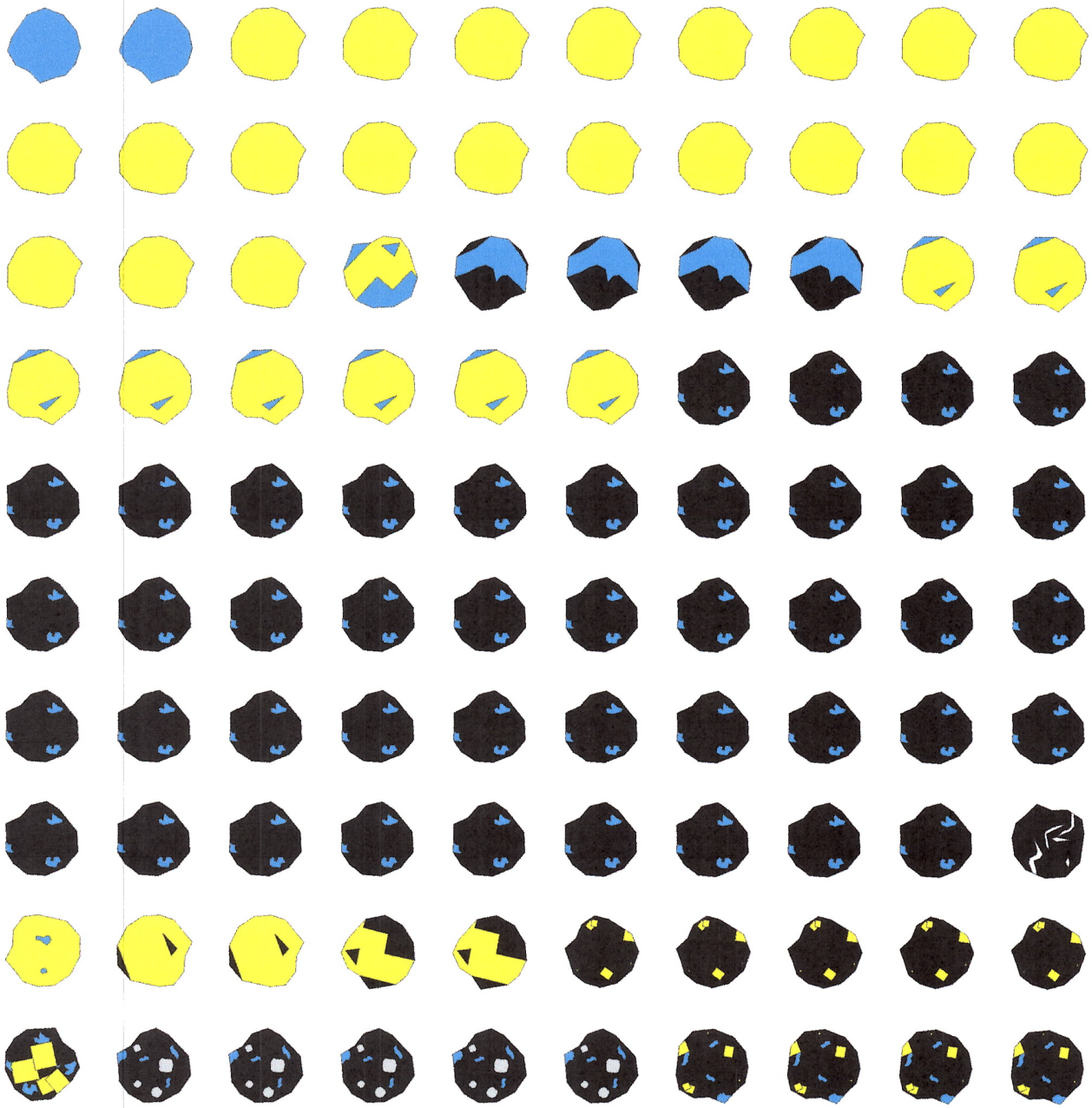
Garfield Core LM5 **A +212µm** **March 2015**
Sulphide SCAN

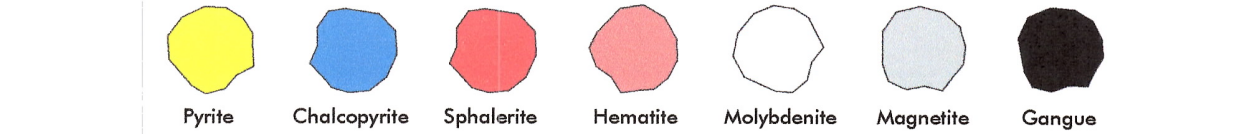




ALS Metallugy - Corona Testwork Mineralogy

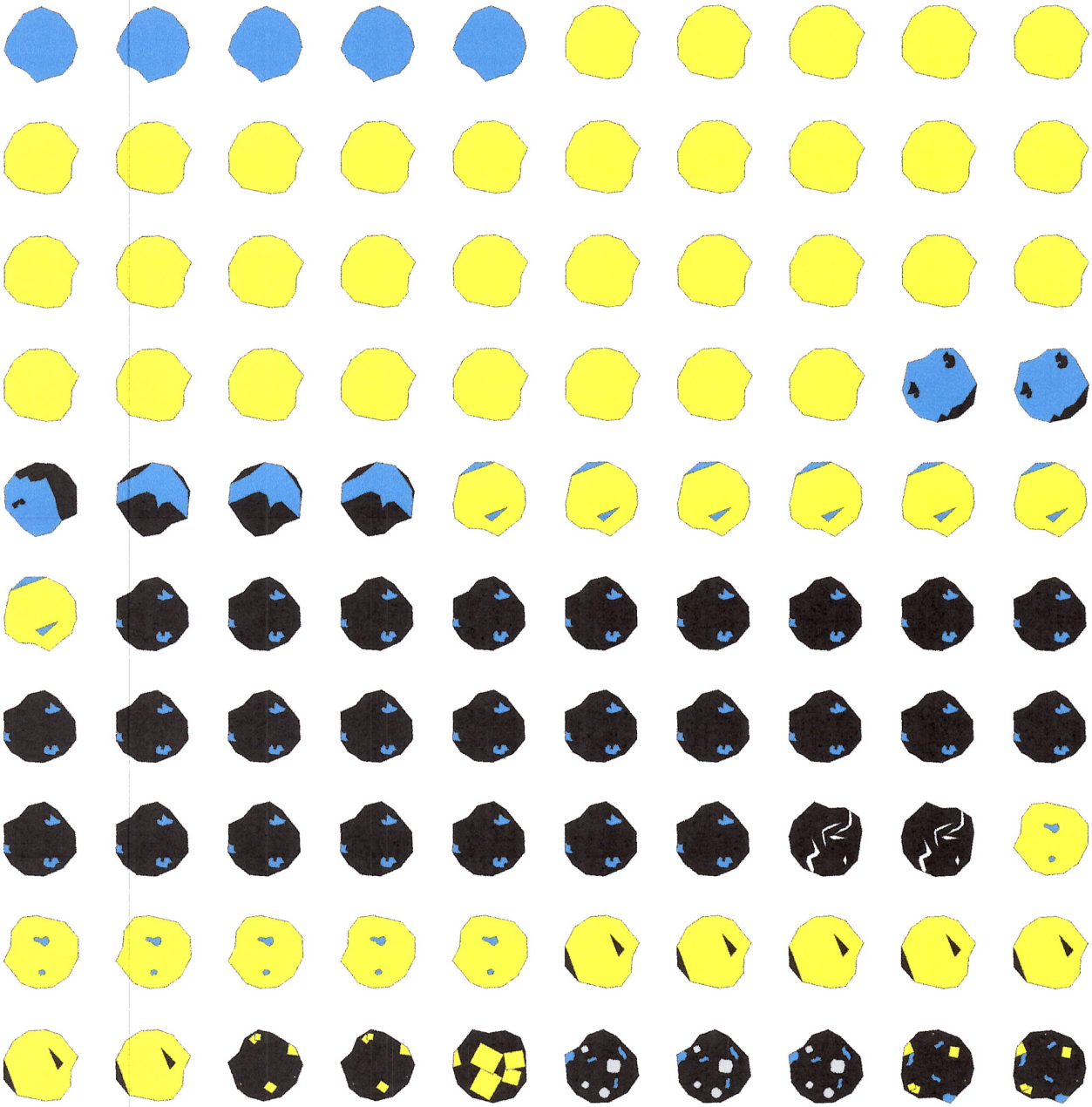
Garfield Core LM5 **B +106µm** **March 2015**
Sulphide SCAN

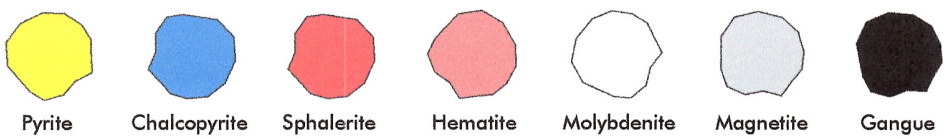




ALS Metallugy - Corona Testwork Mineralogy

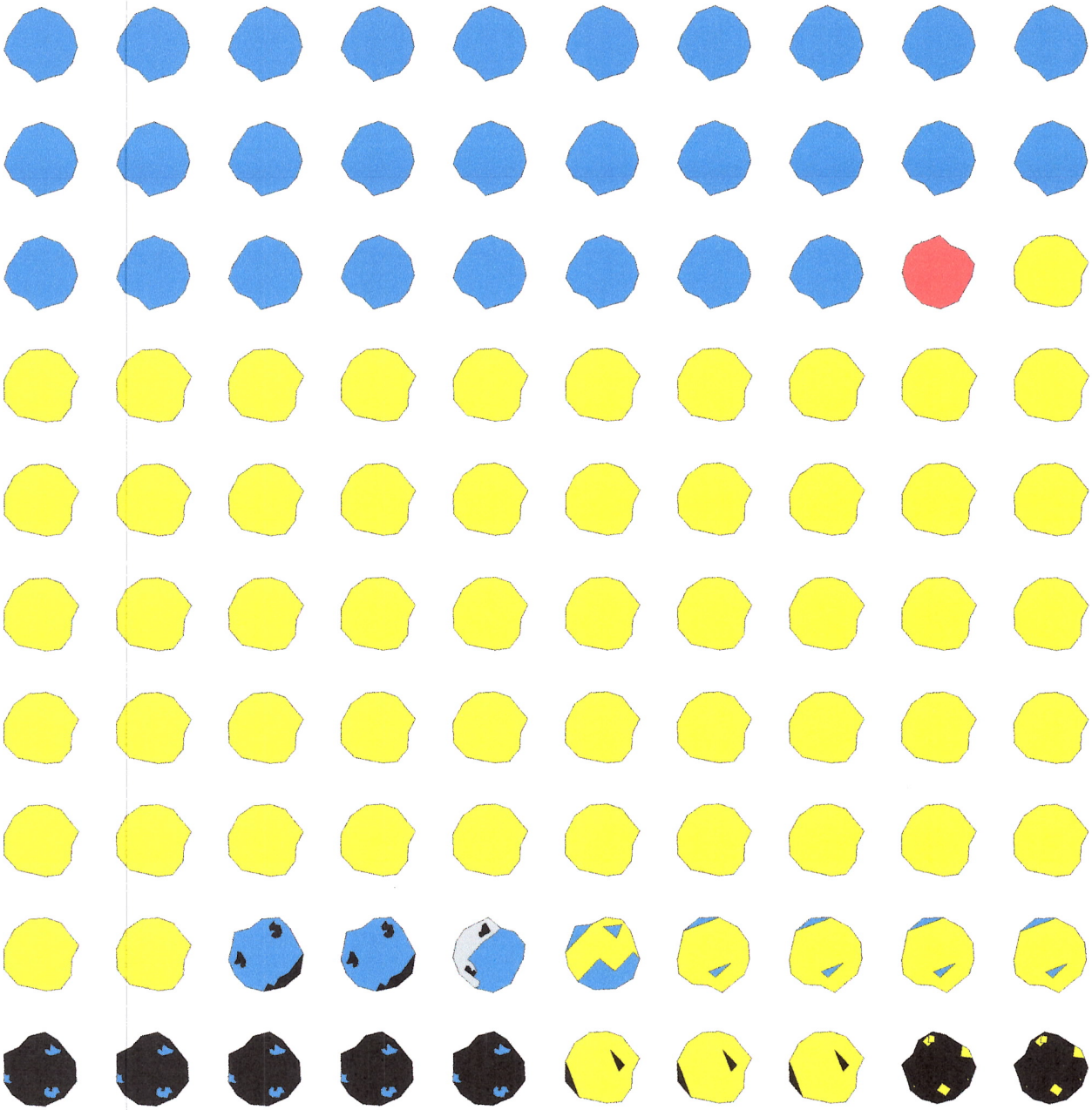
Garfield Core LM5 **C +53µm** **March 2015**
Sulphide SCAN

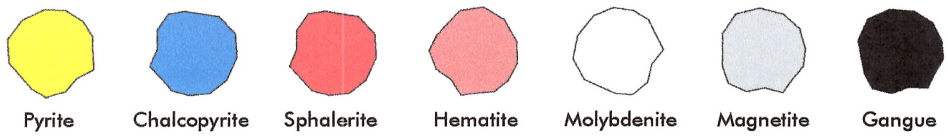




ALS Metallugy - Corona Testwork Mineralogy

Garfield Core LM5 **D +20μm** **March 2015**
Sulphide SCAN





Appendix 6
Geochemical analysis Sample details

ALS Metallurgy

BURNIE: SAMPLE DISPATCH SHEET

Submission Details	
Dispatch Number	938009
Priority (days)	3
Number of Samples	6
Results To	SLZ
Laboratory	BURRE
SSF Date	260215
Sample Type	Solids
Submitted By	TF
Analyses Requested	LM2 PUL-31m
	Cu, Fe, As, Ag by AAS
	Leco S
	Au-AA27 Fire Au

Notes

Sample Description	Sample Number	Prep	Weight (g)
T01 +300	**938009**	PUL-31m	154.5
Ro C1	938010	PUL-31m	20.8
C2	938011	PUL-31m	73.2
C3	938012	PUL-31m	17.3
C4	938013	PUL-31m	19.7
RoT	938014	PUL-31m	713.8

ALS Metallurgy

BURNIE: SAMPLE DISPATCH SHEET

Submission Details	
Dispatch Number	938008
Priority (days)	3
Number of Samples	1
Results To	SLZ
Laboratory	BURRE
SSF Date	130315
Sample Type	Solids
Submitted By	ANB
Analyses Requested	PGM NAAA26 include Rh
	ICP ME-MS61M

Notes
PGM sent to Becqueral in Canada

Sample Description	Sample Number	Prep	Weight (g)
Garfield Core Head	938008	PUL-31m	50.0

ALS Metallurgy

BURNIE: SAMPLE DISPATCH SHEET

Submission Details	
Dispatch Number	938001
Priority (days)	3
Number of Samples	8
Results To	SLZ
Laboratory	BURRE
SSF Date	250215
Sample Type	Solids
Submitted By	MS
Analyses Requested	ICP ME-MS61m
	Leco S
	Au-AA27 Dup Fire Au

Notes
4 Samples sent for Mineralogy
Sample was LM5'd for 2 min
938008 sent for PGM and ICP

Sample Description	Sample Number	Prep	Weight (g)
Garfield Core +300	938001	PUL-31m	
212	938002	PUL-31m	
+106	938003	PUL-31m	
+53	938004	PUL-31m	
+CS3	938005	PUL-31m	
+CS5	938006	PUL-31m	
-CS5	938007	PUL-31m	
Head	938008	PUL-31m	

Appendix 7
Geochemical analysis results for multielements

Australian Laboratory Services Pty. Ltd.
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www.alsglobal.com

CERTIFICATE BU15035267

P.O. No.: 938008

This report is for 1 Pulp sample submitted to our lab in Burnie, TAS, Australia on 13-MAR-2015.

The following have access to data associated with this certificate:

TONY BUTTON MICHAEL REVELL SHENGLI ZHAO	DONNA KEMP CAROLYNE SULLIVAN	ACCOUNTS PAYABLE MAREE WILLIAMS

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
LOG-22	Sample login - Rcd w/o BarCode

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

To: **ALS METALLURGY PTY LTD**
ATTN: ACCOUNTS PAYABLE
ATF AMMTEC UNIT TRUST
PO BOX 952
BURNIE TAS 7320

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Shaun Kenny, Brisbane Laboratory Manager

Australian Laboratory Services Pty. Ltd.
32 Shand Street
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Brisbane QLD 4053
Phone: +61 (7) 3243 7222 Fax: +61 (7) 3243 7218
www.alsglobal.com

CERTIFICATE OF ANALYSIS BU15035267

Sample Description	Method / Analyte / Units / LOR	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2	ME-MS61 Fe % 0.01	ME-MS61 Ga ppm 0.05
938008		0.67	7.27	13.3	700	2.05	0.50	2.34	0.09	223	127.0	7	9.23	5440	6.19	16.35

***** See Appendix Page for comments regarding this certificate *****

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www.alsglobal.com

CERTIFICATE OF ANALYSIS BU15035267

Sample Description	Method	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOR	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10	0.5
938008		0.23	2.8	0.413	0.091	2.80	124.0	21.5	1.18	443	103.0	0.62	8.1	12.9	1330	33.3

***** See Appendix Page for comments regarding this certificate *****

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CERTIFICATE OF ANALYSIS BU15035267

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	LOR	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1	1
938008		141.0	0.091	3.28	1.21	13.9	5	4.7	66.7	0.36	0.19	27.9	0.186	0.68	12.0	126

***** See Appendix Page for comments regarding this certificate *****

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CERTIFICATE OF ANALYSIS BU15035267

Sample Description	Method Analyte Units LOR	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
938008		30.6	14.9	65	130.5

***** See Appendix Page for comments regarding this certificate *****

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CERTIFICATE OF ANALYSIS BU15035267

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Brisbane located at 32 Shand Street, Stafford, Brisbane, QLD, Australia.
Hg-MS42 ME-MS61

Australian Laboratory Services Pty. Ltd.
32 Shand Street
Stafford
Brisbane QLD 4053
Phone: +61 (7) 3243 7222 Fax: +61 (7) 3243 7218
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CERTIFICATE BU15035267

P.O. No.: 938008

This report is for 1 Pulp sample submitted to our lab in Burnie, TAS, Australia on 13-MAR-2015.

The following have access to data associated with this certificate:

TONY BUTTON MICHAEL REVELL SHENGLI ZHAO	DONNA KEMP CAROLYNE SULLIVAN	ACCOUNTS PAYABLE MAREE WILLIAMS

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
LOG-22	Sample login - Rcd w/o BarCode

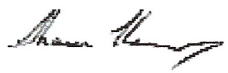
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

To: **ALS METALLURGY PTY LTD**
ATTN: ACCOUNTS PAYABLE
ATF AMMTEC UNIT TRUST
PO BOX 952
BURNIE TAS 7320

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature: 

Shaun Kenny, Brisbane Laboratory Manager

Australian Laboratory Services Pty. Ltd.
32 Shand Street
Stafford
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Phone: +61 (7) 3243 7222 Fax: +61 (7) 3243 7218
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CERTIFICATE OF ANALYSIS BU15035267

Sample Description	Method / Analyte / Units / LOR	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2	ME-MS61 Fe % 0.01	ME-MS61 Ga ppm 0.05
938008		0.67	7.27	13.3	700	2.05	0.50	2.34	0.09	223	127.0	7	9.23	5440	6.19	16.35

***** See Appendix Page for comments regarding this certificate *****

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www.alsglobal.com

CERTIFICATE OF ANALYSIS BU15035267

Sample Description	Method / Analyte / Units / LOR	ME-MS61 Ge ppm 0.05	ME-MS61 Hf ppm 0.1	Hg-MS42 Hg ppm 0.005	ME-MS61 In ppm 0.005	ME-MS61 K % 0.01	ME-MS61 La ppm 0.5	ME-MS61 Li ppm 0.2	ME-MS61 Mg % 0.01	ME-MS61 Mn ppm 5	ME-MS61 Mo ppm 0.05	ME-MS61 Na % 0.01	ME-MS61 Nb ppm 0.1	ME-MS61 Ni ppm 0.2	ME-MS61 P ppm 10	ME-MS61 Pb ppm 0.5
938008		0.23	2.8	0.413	0.091	2.80	124.0	21.5	1.18	443	103.0	0.62	8.1	12.9	1330	33.3

***** See Appendix Page for comments regarding this certificate *****

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CERTIFICATE OF ANALYSIS BU15035267

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	LOR	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1	1
938008		141.0	0.091	3.28	1.21	13.9	5	4.7	66.7	0.36	0.19	27.9	0.186	0.68	12.0	126

***** See Appendix Page for comments regarding this certificate *****

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CERTIFICATE OF ANALYSIS BU15035267

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm
	LOR	0.1	0.1	2	0.5
938008		30.6	14.9	65	130.5

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CERTIFICATE OF ANALYSIS BU15035267

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Brisbane located at 32 Shand Street, Stafford, Brisbane, QLD, Australia.
Hg-MS42 ME-MS61

Australian Laboratory Services Pty. Ltd.

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QC CERTIFICATE BU15027116

P.O. No.: 938001

This report is for 8 Metallurg. Prod samples submitted to our lab in Burnie, TAS, Australia on 25-FEB-2015.

The following have access to data associated with this certificate:

TONY BUTTON MICHAEL REVELL SHENGLI ZHAO	DONNA KEMP CAROLYNE SULLIVAN	ACCOUNTS PAYABLE MAREE WILLIAMS

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
LOG-22	Sample login - Rcd w/o BarCode
PUL-31m	Metallurgy Sample

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Cu-OG62	Ore Grade Cu - Four Acid	VARIABLE
S-IR08	Total Sulphur (Leco)	LECO
Au-AA27	Various Wt. FA AA for met/cons	AAS
Au-AA27D	Various Wt. FA AA for met/cons - D	AAS

To: **ALS METALLURGY PTY LTD**
ATTN: ACCOUNTS PAYABLE
ATF AMMTEC UNIT TRUST
PO BOX 952
BURNIE TAS 7320

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Ricky Gelston, Laboratory Manager, Burnie

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QC CERTIFICATE OF ANALYSIS BU15027116

Sample Description / Method / Analyte / Units / LOR	S-IR08 S % 0.01	Au-AA27 Au ppm 0.01	Au-AA27D Au ppm 0.01	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05
STANDARDS															
BP-13		0.39	0.39												
Target Range - Lower Bound		0.32	0.32												
Upper Bound		0.39	0.39												
G311-8		1.53													
Target Range - Lower Bound		1.45													
Upper Bound		1.69													
GBM306-12															
Target Range - Lower Bound															
Upper Bound															
GBM908-14															
Target Range - Lower Bound															
Upper Bound															
GS310-7	11.10														
Target Range - Lower Bound	10.50														
Upper Bound	11.30														
GS901-8	1.69														
Target Range - Lower Bound	1.59														
Upper Bound	1.73														
OGGeo08															
Target Range - Lower Bound															
Upper Bound															
OGGeo08															
Target Range - Lower Bound															
Upper Bound															
OGGeo08				18.85	7.07	98.4	900	3.12	9.81	2.28	19.70	66.1	91.7	88	10.50
Target Range - Lower Bound				18.15	6.07	106.0	700	2.59	9.44	1.98	16.70	64.8	87.2	78	9.85
Upper Bound				22.2	7.44	130.0	980	3.27	11.55	2.44	20.5	79.2	107.0	98	12.15
OREAS 210		5.35													
Target Range - Lower Bound		5.10													
Upper Bound		5.88													
OREAS-45e															
Target Range - Lower Bound															
Upper Bound															
OREAS-45e				0.34	7.00	16.4	270	0.75	0.28	0.07	0.02	24.9	55.1	997	1.25
Target Range - Lower Bound				0.27	6.09	14.5	200	0.49	0.24	0.04	<0.02	21.1	51.2	880	1.08
Upper Bound				0.35	7.47	18.1	300	0.75	0.32	0.09	0.07	25.9	62.8	1080	1.44
OxJ111		2.18	2.18												
Target Range - Lower Bound		2.00	2.00												
Upper Bound		2.33	2.33												

***** See Appendix Page for comments regarding this certificate *****

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QC CERTIFICATE OF ANALYSIS BU15027116

Sample Description	Method / Analyte / Units / LOR	ME-MS61 Cu ppm 0.2	ME-MS61 Fe % 0.01	ME-MS61 Ga ppm 0.05	ME-MS61 Ge ppm 0.05	ME-MS61 Hf ppm 0.1	Hg-MS42 Hg ppm 0.005	ME-MS61 In ppm 0.005	ME-MS61 K % 0.01	ME-MS61 La ppm 0.5	ME-MS61 Li ppm 0.2	ME-MS61 Mg % 0.01	ME-MS61 Mn ppm 5	ME-MS61 Mo ppm 0.05	ME-MS61 Na % 0.01	ME-MS61 Nb ppm 0.1
STANDARDS																
BP-13																
Target Range - Lower Bound																
Upper Bound																
G311-8																
Target Range - Lower Bound																
Upper Bound																
GBM306-12																
Target Range - Lower Bound																
Upper Bound																
GBM908-14																
Target Range - Lower Bound																
Upper Bound																
GS310-7																
Target Range - Lower Bound																
Upper Bound																
GS901-8																
Target Range - Lower Bound																
Upper Bound																
OGGeo08																
Target Range - Lower Bound																
Upper Bound																
OGGeo08							0.488									
Target Range - Lower Bound							0.436									
Upper Bound							0.544									
OGGeo08		8400	5.47	16.30	0.46	2.8		1.420	3.01	33.8	32.6	1.29	521	930	1.88	17.0
Target Range - Lower Bound		7800	4.81	16.05	0.25	2.5		1.320	2.59	31.0	29.7	1.11	447	841	1.62	15.4
Upper Bound		8980	5.91	19.75	0.49	3.3		1.620	3.19	39.0	36.7	1.38	557	1030	2.00	19.0
OREAS 210																
Target Range - Lower Bound																
Upper Bound																
OREAS-45e							0.012									
Target Range - Lower Bound							0.009									
Upper Bound							0.031									
OREAS-45e		808	24.8	16.85	1.16	3.3		0.101	0.34	11.8	7.2	0.15	558	2.38	0.06	7.4
Target Range - Lower Bound		725	21.7	14.80	0.88	2.7		0.084	0.28	9.4	5.7	0.13	490	2.11	0.04	6.0
Upper Bound		835	26.5	18.20	1.18	3.5		0.114	0.37	12.6	7.4	0.18	610	2.69	0.08	7.6
OxJ111																
Target Range - Lower Bound																
Upper Bound																

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QC CERTIFICATE OF ANALYSIS BU15027116

Sample Description	Method / Analyte / Units / LOR	ME-MS61 Ni ppm 0.2	ME-MS61 P ppm 10	ME-MS61 Pb ppm 0.5	ME-MS61 Rb ppm 0.1	ME-MS61 Re ppm 0.002	ME-MS61 S % 0.01	ME-MS61 Sb ppm 0.05	ME-MS61 Sc ppm 0.1	ME-MS61 Se ppm 1	ME-MS61 Sn ppm 0.2	ME-MS61 Sr ppm 0.2	ME-MS61 Ta ppm 0.05	ME-MS61 Te ppm 0.05	ME-MS61 Th ppm 0.2	ME-MS61 Ti % 0.005
STANDARDS																
BP-13																
Target Range - Lower Bound																
Upper Bound																
G311-8																
Target Range - Lower Bound																
Upper Bound																
GBM306-12																
Target Range - Lower Bound																
Upper Bound																
GBM908-14																
Target Range - Lower Bound																
Upper Bound																
GS310-7																
Target Range - Lower Bound																
Upper Bound																
GS901-8																
Target Range - Lower Bound																
Upper Bound																
OGGeo08																
Target Range - Lower Bound																
Upper Bound																
OGGeo08																
Target Range - Lower Bound																
Upper Bound																
OGGeo08		9050	880	7490	184.5	1.285	2.82	23.2	10.4	9	13.2	267	1.27	0.41	17.0	0.427
Target Range - Lower Bound		8000	760	6520	164.5	1.285	2.51	22.8	9.2	8	12.5	224	1.19	0.09	16.7	0.353
Upper Bound		9770	950	7970	201	1.575	3.09	31.0	11.4	14	15.7	274	1.57	0.31	20.9	0.443
OREAS 210																
Target Range - Lower Bound																
Upper Bound																
OREAS-45e																
Target Range - Lower Bound																
Upper Bound																
OREAS-45e		477	350	17.8	22.5	<0.002	0.05	0.99	98.2	3	1.3	15.8	0.61	0.27	13.0	0.584
Target Range - Lower Bound		408	300	15.9	19.0	<0.002	0.02	0.80	83.6	<1	0.9	14.1	0.43	0.07	11.4	0.498
Upper Bound		500	380	20.5	23.4	0.004	0.07	1.20	102.5	5	1.8	17.7	0.69	0.28	14.4	0.620
OxJ111																
Target Range - Lower Bound																
Upper Bound																

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QC CERTIFICATE OF ANALYSIS BU15027116

Sample Description	Method / Analyte / Units / LOR	ME-MS61 Tl ppm 0.02	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	Cu-OG62 Cu % 0.001
STANDARDS									
BP-13									
Target Range - Lower Bound									
Upper Bound									
G311-8									
Target Range - Lower Bound									
Upper Bound									
GBM306-12									1.460
Target Range - Lower Bound									1.425
Upper Bound									1.535
GBM908-14									2.35
Target Range - Lower Bound									2.29
Upper Bound									2.46
GS310-7									
Target Range - Lower Bound									
Upper Bound									
GS901-8									
Target Range - Lower Bound									
Upper Bound									
OGGeo08									0.833
Target Range - Lower Bound									0.809
Upper Bound									0.869
OGGeo08									
Target Range - Lower Bound									
Upper Bound									
OGGeo08		1.75	5.1	89	4.0	21.8	7330	95.5	
Target Range - Lower Bound		1.43	4.5	77	3.9	21.1	6500	78.6	
Upper Bound		1.98	5.8	97	5.4	26.0	7950	107.5	
OREAS 210									
Target Range - Lower Bound									
Upper Bound									
OREAS-45e									
Target Range - Lower Bound									
Upper Bound									
OREAS-45e		0.18	2.6	333	1.0	8.4	44	119.0	
Target Range - Lower Bound		0.10	2.1	289	0.8	6.7	40	93.0	
Upper Bound		0.21	2.8	355	1.4	8.5	53	127.0	
OxJ111									
Target Range - Lower Bound									
Upper Bound									

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Sample Description	Method	S-IR08	Au-AA27	Au-AA27D	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	S	Au	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs
	Units	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
	LOR	0.01	0.01	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05
BLANKS																
BLANK			<0.01													
Target Range - Lower Bound			<0.01													
Upper Bound			0.02													
BLANK			<0.01	<0.01												
Target Range - Lower Bound			<0.01	<0.01												
Upper Bound			0.02	0.02												
BLANK																
Target Range - Lower Bound																
Upper Bound																
BLANK																
Target Range - Lower Bound																
Upper Bound																
BLANK					<0.01	<0.01	<0.2	<10	<0.05	<0.01	<0.01	<0.02	<0.01	<0.1	<1	<0.05
Target Range - Lower Bound					<0.01	<0.01	<0.2	<10	<0.05	<0.01	<0.01	<0.02	<0.01	<0.1	<1	<0.05
Upper Bound					0.02	0.02	0.4	20	0.10	0.02	0.02	0.04	0.02	0.2	2	0.10
BLANK		<0.01														
BLANK		<0.01														
Target Range - Lower Bound		<0.01														
Upper Bound		0.02														
DUPLICATES																
938008		3.60														
DUP		3.64														
Target Range - Lower Bound		3.52														
Upper Bound		3.72														
ORIGINAL			0.93													
DUP			0.92													
Target Range - Lower Bound			0.87													
Upper Bound			0.98													
ORIGINAL					0.04	8.39	22.6	410	2.10	0.02	5.83	0.06	58.6	35.3	128	2.04
DUP					0.03	8.52	20.7	410	1.87	0.02	5.91	0.06	56.7	32.6	131	1.97
Target Range - Lower Bound					0.02	8.02	20.4	370	1.84	<0.01	5.57	0.04	54.8	32.2	122	1.85
Upper Bound					0.05	8.89	22.9	450	2.13	0.03	6.17	0.08	60.5	35.7	137	2.16

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QC CERTIFICATE OF ANALYSIS BU15027116

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb
	Units	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
	LOR	0.2	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1
BLANKS																
BLANK																
Target Range - Lower Bound																
Upper Bound																
BLANK																
Target Range - Lower Bound																
Upper Bound																
BLANK																
Target Range - Lower Bound																
Upper Bound																
BLANK							<0.005									
Target Range - Lower Bound							<0.005									
Upper Bound							0.010									
BLANK		<0.2	<0.01	<0.05	<0.05	<0.1		<0.005	<0.01	<0.5	<0.2	<0.01	<5	<0.05	<0.01	<0.1
Target Range - Lower Bound		<0.2	<0.01	<0.05	<0.05	<0.1		<0.005	<0.01	<0.5	<0.2	<0.01	<5	<0.05	<0.01	<0.1
Upper Bound		0.4	0.02	0.10	0.10	0.2		0.010	0.02	1.0	0.4	0.02	10	0.10	0.02	0.2
BLANK																
BLANK																
Target Range - Lower Bound																
Upper Bound																
DUPLICATES																
938008							0.350									
DUP							0.358									
Target Range - Lower Bound							0.331									
Upper Bound							0.377									
ORIGINAL																
DUP																
Target Range - Lower Bound																
Upper Bound																
ORIGINAL		48.1	6.33	19.80	0.24	5.4		0.086	0.65	25.8	26.1	1.90	1310	1.45	3.90	27.1
DUP		45.5	6.43	18.05	0.22	4.5		0.083	0.66	25.0	24.5	1.93	1320	1.37	3.98	26.1
Target Range - Lower Bound		45.0	6.05	17.95	0.17	4.6		0.075	0.61	23.6	23.8	1.81	1245	1.29	3.73	25.2
Upper Bound		48.6	6.71	19.90	0.29	5.3		0.094	0.70	27.2	26.8	2.02	1385	1.53	4.15	28.0

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QC CERTIFICATE OF ANALYSIS BU15027116

Sample Description	Method / Analyte / Units / LOR	ME-MS61 Ni ppm 0.2	ME-MS61 P ppm 10	ME-MS61 Pb ppm 0.5	ME-MS61 Rb ppm 0.1	ME-MS61 Re ppm 0.002	ME-MS61 S % 0.01	ME-MS61 Sb ppm 0.05	ME-MS61 Sc ppm 0.1	ME-MS61 Se ppm 1	ME-MS61 Sn ppm 0.2	ME-MS61 Sr ppm 0.2	ME-MS61 Ta ppm 0.05	ME-MS61 Te ppm 0.05	ME-MS61 Th ppm 0.2	ME-MS61 Ti % 0.005
BLANKS																
BLANK																
Target Range - Lower Bound																
Upper Bound																
BLANK																
Target Range - Lower Bound																
Upper Bound																
BLANK																
Target Range - Lower Bound																
Upper Bound																
BLANK																
Target Range - Lower Bound																
Upper Bound																
BLANK		<0.2	<10	<0.5	<0.1	<0.002	<0.01	<0.05	<0.1	<1	<0.2	<0.2	<0.05	<0.05	<0.2	<0.005
Target Range - Lower Bound		<0.2	<10	<0.5	<0.1	<0.002	<0.01	<0.05	<0.1	<1	<0.2	<0.2	<0.05	<0.05	<0.2	<0.005
Upper Bound		0.4	20	1.0	0.2	0.004	0.02	0.10	0.2	5	0.4	0.4	0.10	0.10	0.4	0.010
BLANK																
BLANK																
Target Range - Lower Bound																
Upper Bound																
DUPLICATES																
938008																
DUP																
Target Range - Lower Bound																
Upper Bound																
ORIGINAL																
DUP																
Target Range - Lower Bound																
Upper Bound																
ORIGINAL		79.1	2390	2.7	18.3	<0.002	0.03	4.60	28.9	1	2.3	239	1.74	<0.05	1.9	1.700
DUP		75.5	2430	2.6	17.1	<0.002	0.03	4.42	27.1	1	2.2	243	1.67	<0.05	1.7	1.730
Target Range - Lower Bound		73.2	2280	2.0	16.7	<0.002	0.02	4.12	26.5	<1	1.9	229	1.57	<0.05	1.5	1.625
Upper Bound		81.4	2540	3.3	18.7	0.004	0.04	4.90	29.5	2	2.6	253	1.84	0.10	2.1	1.805

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QC CERTIFICATE OF ANALYSIS BU15027116

Sample Description / Method / Analyte / Units / LOR	ME-MS61 Tl ppm 0.02	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	Cu-OG62 Cu % 0.001
BLANKS								
BLANK								
Target Range - Lower Bound								
Upper Bound								
BLANK								
Target Range - Lower Bound								
Upper Bound								
BLANK								0.001
Target Range - Lower Bound								<0.001
Upper Bound								0.002
BLANK								
Target Range - Lower Bound								
Upper Bound								
BLANK	<0.02	<0.1	<1	<0.1	<0.1	<2	<0.5	
Target Range - Lower Bound	<0.02	<0.1	<1	<0.1	<0.1	<2	<0.5	
Upper Bound	0.04	0.2	2	0.2	0.2	4	1.0	
BLANK								
BLANK								
Target Range - Lower Bound								
Upper Bound								
DUPLICATES								
938008								
DUP								
Target Range - Lower Bound								
Upper Bound								
ORIGINAL								
DUP								
Target Range - Lower Bound								
Upper Bound								
ORIGINAL	0.13	0.9	251	3.3	27.1	116	255	
DUP	0.13	0.8	249	3.1	24.7	118	230	
Target Range - Lower Bound	0.10	0.7	237	2.9	24.5	109	230	
Upper Bound	0.16	1.0	264	3.5	27.3	125	255	

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QC CERTIFICATE OF ANALYSIS BU15027116

Sample Description	Method	S-IR08	Au-AA27	Au-AA27D	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	S	Au	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs
	Units	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
	LOR	0.01	0.01	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05
DUPLICATES																
ORIGINAL					0.23	7.27	6.3	620	1.59	0.07	1.17	0.05	32.0	3.9	31	6.80
DUP					0.24	7.01	6.1	610	1.48	0.07	1.12	0.05	30.5	3.7	25	6.68
Target Range - Lower Bound					0.21	6.77	5.7	560	1.41	0.06	1.08	0.03	29.7	3.5	26	6.35
Upper Bound					0.26	7.51	6.7	670	1.66	0.08	1.21	0.07	32.8	4.1	30	7.13

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QC CERTIFICATE OF ANALYSIS BU15027116

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb
	Units	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
	LOR	0.2	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1
DUPLICATES																
ORIGINAL		10.7	2.03	12.70	0.08	1.6		0.021	2.88	17.3	16.3	0.37	624	5.26	3.00	4.7
DUP		8.9	1.95	12.30	0.09	1.5		0.019	2.80	16.4	15.5	0.36	606	5.15	2.96	4.6
Target Range - Lower Bound		9.3	1.88	11.85	<0.05	1.4		0.014	2.69	15.5	14.9	0.34	579	4.89	2.82	4.3
Upper Bound		10.3	2.10	13.20	0.10	1.7		0.026	2.99	18.2	16.9	0.39	651	5.52	3.14	5.0

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QC CERTIFICATE OF ANALYSIS BU15027116

Sample Description	Method / Analyte / Units / LOR	ME-MS61 Ni ppm 0.2	ME-MS61 P ppm 10	ME-MS61 Pb ppm 0.5	ME-MS61 Rb ppm 0.1	ME-MS61 Re ppm 0.002	ME-MS61 S % 0.01	ME-MS61 Sb ppm 0.05	ME-MS61 Sc ppm 0.1	ME-MS61 Se ppm 1	ME-MS61 Sn ppm 0.2	ME-MS61 Sr ppm 0.2	ME-MS61 Ta ppm 0.05	ME-MS61 Te ppm 0.05	ME-MS61 Th ppm 0.2	ME-MS61 Ti % 0.005
DUPLICATES																
ORIGINAL		15.6	380	15.7	144.0	0.002	0.85	1.30	4.5	<1	1.0	240	0.38	0.09	7.8	0.192
DUP		12.3	370	14.8	140.5	0.002	0.82	1.29	4.3	<1	1.0	234	0.37	0.10	7.3	0.188
Target Range - Lower Bound		13.1	350	14.0	135.0	<0.002	0.78	1.15	4.1	<1	0.8	225	0.31	<0.05	7.0	0.176
Upper Bound		14.8	400	16.5	149.5	0.004	0.89	1.44	4.7	2	1.3	249	0.44	0.10	8.1	0.205

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QC CERTIFICATE OF ANALYSIS BU15027116

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Cu-OG62
	Analyte	Tl	U	V	W	Y	Zn	Zr	Cu
	Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOR	0.02	0.1	1	0.1	0.1	2	0.5	0.001
DUPLICATES									
ORIGINAL		1.56	2.0	31	13.4	9.7	48	48.7	
DUP		1.52	1.9	30	13.7	9.2	47	48.0	
Target Range - Lower Bound		1.40	1.8	28	12.4	8.9	43	45.4	
Upper Bound		1.68	2.1	33	14.7	10.0	52	51.3	

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QC CERTIFICATE OF ANALYSIS BU15027116

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

	NSS is non-sufficient sample.
Applies to Method:	ALL METHODS
	REE's may not be totally soluble in this method.
Applies to Method:	ME-MS61

LABORATORY ADDRESSES

	Processed at ALS Brisbane located at 32 Shand Street, Stafford, Brisbane, QLD, Australia.			
Applies to Method:	Cu-OG62	Hg-MS42	ME-MS61	ME-OG62
	S-IR08			
	Processed at ALS Burnie located at 39 River Road, Burnie, TAS, Australia.			
Applies to Method:	Au-AA27	Au-AA27D	LOG-22	PUL-31m

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CERTIFICATE BU15027244

Project: T01

P.O. No.: 938009

This report is for 6 Metallurg. Prod samples submitted to our lab in Burnie, TAS, Australia on 26-FEB-2015.

The following have access to data associated with this certificate:

TONY BUTTON MICHAEL REVELL SHENGLI ZHAO	DONNA KEMP CAROLYNE SULLIVAN	ACCOUNTS PAYABLE MAREE WILLIAMS

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
LOG-22	Sample login - Rcd w/o BarCode
PUL-31m	Metallurgy Sample

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
S-IR07	Sulphide Sulphur (Leco)	LECO
Au-AA27	Various Wt. FA AA for met/cons	AAS
Cu-AA46	Ore grade Cu - aqua regia/AA	AAS
Fe-AA46	Ore grade Fe - aqua regia/AA	AAS
As-AA46	Ore grade As - aqua regia/AA	AAS
Ag-AA46	Ore grade Ag - aqua regia/AA	AAS

To: **ALS METALLURGY PTY LTD**
ATTN: ACCOUNTS PAYABLE
ATF AMMTEC UNIT TRUST
PO BOX 952
BURNIE TAS 7320

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature: R. Gelston.

Ricky Gelston, Laboratory Manager, Burnie

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Project: T01

CERTIFICATE OF ANALYSIS BU15027244

Sample Description	Method / Analyte / Units / LOR	Cu-AA46 Cu % 0.001	Fe-AA46 Fe % 0.01	As-AA46 As % 0.01	Ag-AA46 Ag ppm 1	S-IR07 Sulphide % 0.01	Au-AA27 Au ppm 0.01
938009		0.419	4.71	<0.01	2	1.66	<0.01
938010		13.965	30.3	0.03	14	30.6	0.88
938011		1.766	30.7	0.03	6	30.0	0.29
938012		0.991	11.05	0.01	4	6.67	0.11
938013		0.509	5.49	0.01	3	1.46	<0.01
938014		0.055	3.42	<0.01	1	0.06	<0.01

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Project: T01

CERTIFICATE OF ANALYSIS BU15027244

CERTIFICATE COMMENTS

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Brisbane located at 32 Shand Street, Stafford, Brisbane, QLD, Australia.
S-IR07

Applies to Method: Processed at ALS Burnie located at 39 River Road, Burnie, TAS, Australia.

Ag-AA46	As-AA46	Au-AA27	Cu-AA46
Fe-AA46	LOG-22	PUL-31m	

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CERTIFICATE BU15027116

P.O. No.: 938001

This report is for 8 Metallurg. Prod samples submitted to our lab in Burnie, TAS, Australia on 25-FEB-2015.

The following have access to data associated with this certificate:

TONY BUTTON MICHAEL REVELL SHENGLI ZHAO	DONNA KEMP CAROLYNE SULLIVAN	ACCOUNTS PAYABLE MAREE WILLIAMS

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
LOG-22	Sample login - Rcd w/o BarCode
PUL-31m	Metallurgy Sample

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Cu-OG62	Ore Grade Cu - Four Acid	VARIABLE
S-IR08	Total Sulphur (Leco)	LECO
Au-AA27	Various Wt. FA AA for met/cons	AAS
Au-AA27D	Various Wt. FA AA for met/cons - D	AAS

To: **ALS METALLURGY PTY LTD**
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***** See Appendix Page for comments regarding this certificate *****

Signature: R. Gelston.

Ricky Gelston, Laboratory Manager, Burnie

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CERTIFICATE OF ANALYSIS BU15027116

Sample Description	Method	S-IR08	Au-AA27	Au-AA27D	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	S	Au	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs
	Units	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
	LOR	0.01	0.01	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05
938001		2.06	0.05	<0.01	0.44	6.93	6.2	650	1.75	5.27	2.46	0.07	183.0	79.9	111	6.76
938002		3.93	0.03	<0.01	0.52	6.28	10.3	500	1.66	0.71	2.46	0.07	175.5	161.0	7	6.25
938003		5.46	0.06	0.03	0.55	6.28	16.5	460	1.78	4.82	2.55	0.10	189.0	237	85	6.45
938004		5.50	0.02	0.04	0.63	6.37	20.0	390	1.87	0.95	2.70	0.20	208	234	8	6.69
938005		6.31	0.09	0.06	1.26	5.72	22.9	320	1.50	7.48	3.59	1.40	272	242	69	5.39
938006		2.93	0.06	NSS	1.12	6.28	12.1	540	1.55	1.25	3.60	1.11	331	83.1	10	5.35
938007		1.08	0.23	0.41	0.68	10.05	17.5	2800	3.33	1.06	0.42	0.42	81.9	20.6	17	12.65
938008		3.60	0.05	0.04	0.64	7.77	10.2	510	2.06	0.48	2.52	0.08	187.0	134.0	8	8.14

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CERTIFICATE OF ANALYSIS BU15027116

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb
	Units	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
	LOR	0.2	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1
938001		4310	5.32	13.50	0.25	2.6	0.352	0.080	2.57	108.0	17.7	1.21	466	76.3	0.75	6.6
938002		3860	6.71	12.55	0.30	2.5	0.379	0.075	2.33	101.5	17.3	1.15	474	75.4	0.68	6.6
938003		3740	8.01	12.95	0.33	2.4	0.370	0.071	2.35	109.0	17.5	1.14	478	80.0	0.64	6.9
938004		4480	8.27	13.75	0.37	2.5	0.403	0.092	2.39	118.5	20.0	1.20	498	82.6	0.61	7.9
938005		>10000	9.74	12.30	0.39	2.5	0.517	0.268	1.99	156.5	22.4	1.51	654	83.1	0.54	9.9
938006		>10000	7.45	13.55	0.37	3.0	0.412	0.216	2.12	195.0	27.6	1.73	716	145.0	0.54	10.3
938007		3180	3.14	25.0	0.18	3.2	0.489	0.122	5.03	44.2	21.5	0.74	107	132.5	0.73	6.8
938008		5610	6.57	15.45	0.27	2.7	0.350	0.082	3.04	107.5	19.6	1.25	476	97.4	0.66	6.9

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CERTIFICATE OF ANALYSIS BU15027116

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti
	Units	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOR	0.2	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005
938001		9.4	1080	183.5	113.0	0.057	2.23	1.05	12.3	2	4.5	56.2	0.30	0.12	21.7	0.183
938002		13.0	1160	441	103.0	0.058	4.07	0.95	11.5	4	3.8	55.0	0.30	0.22	20.6	0.172
938003		18.5	1410	84.0	107.5	0.060	5.70	1.02	11.7	6	3.7	57.2	0.31	0.29	21.5	0.176
938004		20.7	1820	152.0	111.5	0.070	5.69	1.26	12.3	6	4.4	59.0	0.37	0.28	24.2	0.187
938005		22.2	2700	167.5	90.2	0.065	6.41	2.13	11.6	7	4.9	71.5	0.45	0.36	29.1	0.239
938006		12.7	2200	210	95.5	0.112	2.82	1.72	12.3	4	4.6	73.9	0.46	0.15	34.5	0.251
938007		6.5	650	56.1	197.0	0.106	1.14	1.36	15.1	1	7.4	30.5	0.30	0.12	16.0	0.196
938008		12.4	1390	26.9	124.0	0.075	3.59	1.13	13.4	4	4.3	60.6	0.32	0.20	23.1	0.187

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CERTIFICATE OF ANALYSIS BU15027116

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Cu-OG62
	Analyte	Tl	U	V	W	Y	Zn	Zr	Cu
	Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOR	0.02	0.1	1	0.1	0.1	2	0.5	0.001
938001		0.57	10.6	125	39.5	11.9	57	121.5	
938002		0.55	10.2	111	124.5	11.9	56	112.0	
938003		0.54	11.3	113	37.9	13.0	57	109.5	
938004		0.58	13.2	116	115.0	14.8	80	110.0	
938005		0.56	18.0	104	193.5	18.4	378	112.5	1.305
938006		0.55	16.0	114	118.0	18.2	349	138.5	1.115
938007		1.18	10.2	234	71.4	6.7	154	143.5	
938008		0.68	12.8	141	24.7	12.7	70	120.5	

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CERTIFICATE OF ANALYSIS BU15027116

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

	NSS is non-sufficient sample.
Applies to Method:	ALL METHODS
	REE's may not be totally soluble in this method.
Applies to Method:	ME-MS61

LABORATORY ADDRESSES

	Processed at ALS Brisbane located at 32 Shand Street, Stafford, Brisbane, QLD, Australia.			
Applies to Method:	Cu-OG62	Hg-MS42	ME-MS61	ME-OG62
	S-IR08			
	Processed at ALS Burnie located at 39 River Road, Burnie, TAS, Australia.			
Applies to Method:	Au-AA27	Au-AA27D	LOG-22	PUL-31m