

Appendix 1: Data Generated Under the Monitoring Plan



LUPIN MINES INCORPORATED
ATTN: D. Vokey
201 - 750 West Pender Street
VANCOUVER BC V6C 2T7

Date Received: 03-AUG-12
Report Date: 10-AUG-12 16:21 (MT)
Version: FINAL

Client Phone: 604-682-3366

Certificate of Analysis

Lab Work Order #: L1189243
Project P.O. #: NOT SUBMITTED
Job Reference:
C of C Numbers:
Legal Site Desc:

Shannon Akkerman
Senior Account Manager

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ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1189243-1	MTF-HAZ-D/S							
Sampled By: D. VOKEY on 24-JUL-12 @ 15:30								
Matrix: soil								
Miscellaneous Parameters								
% Moisture		5.11		0.10	%		07-AUG-12	R2412011
CCME Total Extractable Hydrocarbons								
Surrogate: 2-Bromobenzotrifluoride		100.4		70-130	%	07-AUG-12	08-AUG-12	R2414462
Prep/Analysis Dates						07-AUG-12	08-AUG-12	R2414462
CCME Total Hydrocarbons								
F2 (C10-C16)		<20		20	mg/kg		10-AUG-12	
F3 (C16-C34)		45		20	mg/kg		10-AUG-12	
F4 (C34-C50)		<20		20	mg/kg		10-AUG-12	

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ETL-TVH,TEH-CCME-ED	Soil	CCME Total Hydrocarbons	CCME CWS-PHC Dec-2000 - Pub# 1310
Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.			
Hydrocarbon results are expressed on a dry weight basis.			
In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.			
In samples where BTEX and F1 were analyzed , F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.			
In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.			
Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:			
1. All extraction and analysis holding times were met.			
2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.			
3. Linearity of gasoline response within 15% throughout the calibration range.			
Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:			
1. All extraction and analysis holding times were met.			
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.			
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.			
4. Linearity of diesel or motor oil response within 15% throughout the calibration range.			
F2-4-TMB-ED	Soil	CCME Total Extractable Hydrocarbons	CCME CWS-PHC Dec-2000 - Pub# 1310
PREP-MOISTURE-ED	Soil	% Moisture	Oven dry 105C-Gravimetric

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg ww - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Quality Control Report

Workorder: L1189243

Report Date: 10-AUG-12

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Client: LUPIN MINES INCORPORATED
201 - 750 West Pender Street
VANCOUVER BC V6C 2T7

Contact: D. Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F2-4-TMB-ED		Soil						
Batch	R2414462							
WG1524420-3	DUP	L1189502-6						
F2 (C10-C16)		<20	<20	RPD-NA	mg/kg	N/A	40	08-AUG-12
F3 (C16-C34)		35	29		mg/kg	16	40	08-AUG-12
F4 (C34-C50)		<20	<20	RPD-NA	mg/kg	N/A	40	08-AUG-12
WG1524420-2	LCS							
F2 (C10-C16)			108.7		%		80-120	08-AUG-12
F3 (C16-C34)			102.5		%		80-120	08-AUG-12
F4 (C34-C50)			105.6		%		80-120	08-AUG-12
WG1524420-1	MB							
F2 (C10-C16)			<20		mg/kg		20	08-AUG-12
F3 (C16-C34)			<20		mg/kg		20	08-AUG-12
F4 (C34-C50)			<20		mg/kg		20	08-AUG-12
Surrogate: 2-Bromobenzotrifluoride			97.1		%		70-130	08-AUG-12
PREP-MOISTURE-ED		Soil						
Batch	R2412011							
WG1521714-3	DUP	L1189502-1						
% Moisture		14.0	14.1		%	0.3	20	07-AUG-12
WG1521714-4	DUP	L1189502-7						
% Moisture		13.3	13.1		%	1.4	20	07-AUG-12
WG1521714-2	LCS							
% Moisture			100.2		%		90-110	07-AUG-12
WG1521714-1	MB							
% Moisture			<0.10		%		0.1	07-AUG-12

Quality Control Report

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Report Date: 10-AUG-12

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201 - 750 West Pender Street
VANCOUVER BC V6C 2T7
Contact: D. Vokey

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

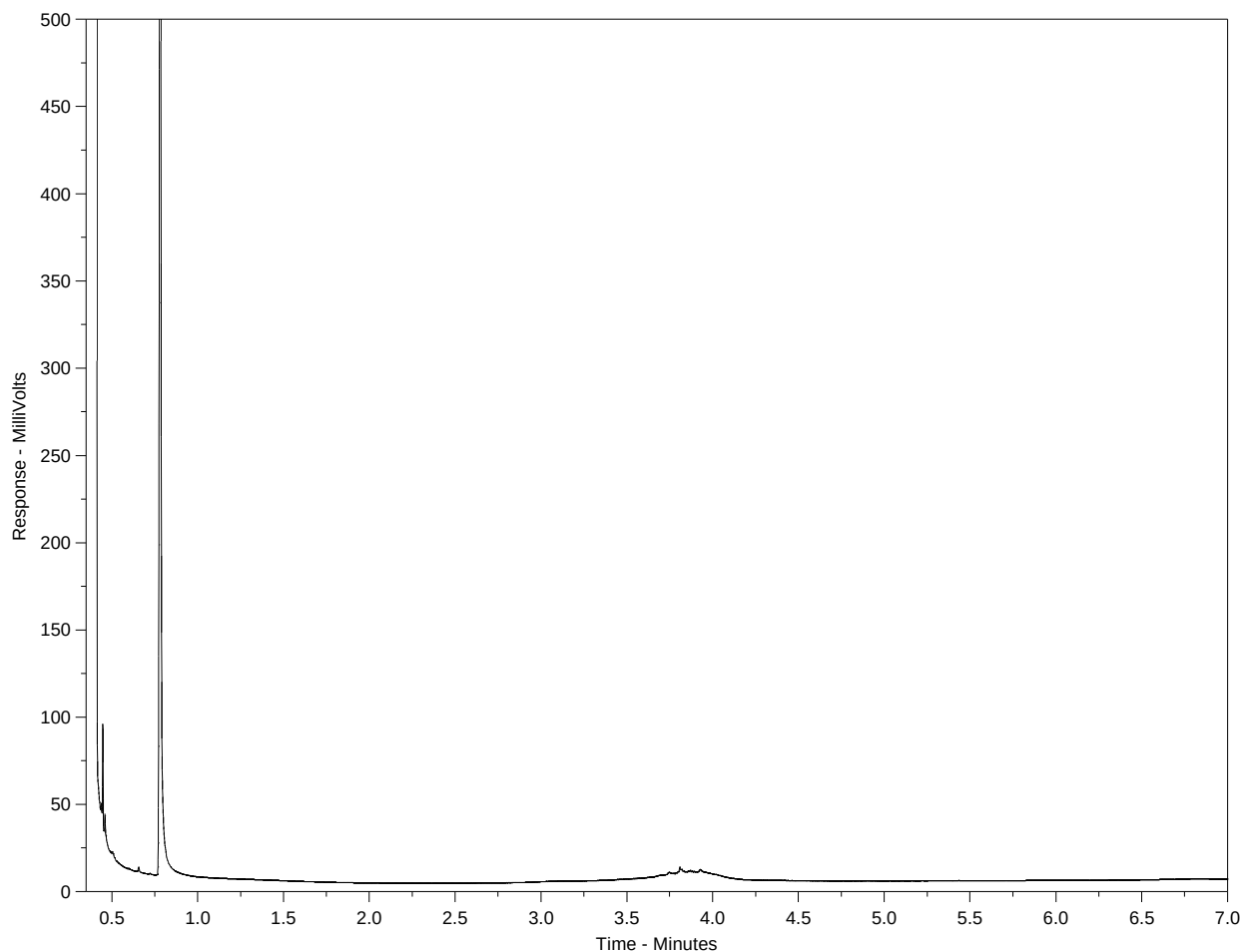
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Hydrocarbon Distribution Report



ALS Sample ID: L1189243-1
Client ID: MTF-HAZ-D/S



<---nC10-----nC16-----nC34-----nC50->
<-----Gasoline-----> <-----Heavy Oils----->
|-----Diesel-----|

The Canada Wide Standard Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products as well as a number of specified n-alkane hydrocarbon marker compounds. Comparison of this report with those of reference standards may also assist in characterizing hydrocarbons present in the sample.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.

Note: This chromatogram was produced with a high temperature GC method that is specific to the Canada-Wide Standard method (December 2007 version). Note that retention times and distribution profiles from reports produced using different GC programs will differ.



LUPIN MINES INCORPORATED
ATTN: David Vokey
201, 750W Perderst
Vancouver BC V6T 2T7

Date Received: 18-AUG-12
Report Date: 07-SEP-12 12:52 (MT)
Version: FINAL REV. 2

Client Phone: 604-682-3366

Certificate of Analysis

Lab Work Order #: L1196149
Project P.O. #: NOT SUBMITTED
Job Reference: LUPIN
C of C Numbers: 08-011364
Legal Site Desc:

Shannon Akkerman
Senior Account Manager

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ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1196149-1	POND-2-D Sampled By: L. COEDY on 17-AUG-12 @ 10:00 Matrix: Water Miscellaneous Parameters Daphnia Magna - LC50	See attached				21-AUG-12	21-AUG-12	R2427792
L1196149-2	POND-2-T Sampled By: L. COEDY on 17-AUG-12 @ 10:00 Matrix: Water Miscellaneous Parameters Trout Bioassay - Pass/Fail	See attached				21-AUG-12	21-AUG-12	R2430825
L1196149-3	KIMBERLITE (sample miss labelled, it was not Kimberlite) Sampled By: L. COEDY on 17-AUG-12 @ 10:30 Matrix: Soil Metals in Soil by ICPMS Aluminum (Al) Antimony (Sb) Arsenic (As) Barium (Ba) Beryllium (Be) Bismuth (Bi) Cadmium (Cd) Calcium (Ca) Chromium (Cr) Cobalt (Co) Copper (Cu) Iron (Fe) Lead (Pb) Lithium (Li) Magnesium (Mg) Manganese (Mn) Molybdenum (Mo) Nickel (Ni) Phosphorus (P) Potassium (K) Selenium (Se) Silver (Ag) Sodium (Na) Strontium (Sr) Thallium (Tl) Tin (Sn) Titanium (Ti) Uranium (U) Vanadium (V) Zinc (Zn)	11300 0.22 1790 125 <1.0 <0.50 <0.50 1820 49.9 10.3 27.5 28900 9.0 37.3 7480 171 1.3 29.0 480 4860 <0.50 <1.0 120 16.7 <0.50 <5.0 697 <2.0 36.6 43		50 0.20 0.20 5.0 1.0 0.50 0.50 100 0.50 1.0 2.0 200 5.0 1.0 100 1.0 1.0 2.0 100 0.50 1.0 100 1.0 0.50 5.0 5.0 2.0 1.0 10	mg/kg mg			

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1196149-4	TAILINGS							
Sampled By:	L. COEDY on 17-AUG-12 @ 11:00							
Matrix:	Soil							
Metals in Soil by ICPMS								
Beryllium (Be)		<1.0		1.0	mg/kg		01-SEP-12	R2425638
Bismuth (Bi)		<0.50		0.50	mg/kg		01-SEP-12	R2425638
Cadmium (Cd)		<0.50		0.50	mg/kg		01-SEP-12	R2425638
Calcium (Ca)		3800		100	mg/kg		01-SEP-12	R2425638
Chromium (Cr)		23.1		0.50	mg/kg		01-SEP-12	R2425638
Cobalt (Co)		4.7		1.0	mg/kg		01-SEP-12	R2425638
Copper (Cu)		12.6		2.0	mg/kg		01-SEP-12	R2425638
Iron (Fe)		13300		200	mg/kg		01-SEP-12	R2425638
Lead (Pb)		23.6		5.0	mg/kg		01-SEP-12	R2425638
Lithium (Li)		15.6		1.0	mg/kg		01-SEP-12	R2425638
Magnesium (Mg)		3020		100	mg/kg		01-SEP-12	R2425638
Manganese (Mn)		88.0		1.0	mg/kg		01-SEP-12	R2425638
Molybdenum (Mo)		<1.0		1.0	mg/kg		01-SEP-12	R2425638
Nickel (Ni)		13.3		2.0	mg/kg		01-SEP-12	R2425638
Phosphorus (P)		510		100	mg/kg		01-SEP-12	R2425638
Potassium (K)		1740		100	mg/kg		01-SEP-12	R2425638
Selenium (Se)		<0.50		0.50	mg/kg		01-SEP-12	R2425638
Silver (Ag)		<1.0		1.0	mg/kg		01-SEP-12	R2425638
Sodium (Na)		270		100	mg/kg		01-SEP-12	R2425638
Strontium (Sr)		27.7		1.0	mg/kg		01-SEP-12	R2425638
Thallium (Tl)		<0.50		0.50	mg/kg		01-SEP-12	R2425638
Tin (Sn)		<5.0		5.0	mg/kg		01-SEP-12	R2425638
Titanium (Ti)		297		5.0	mg/kg		01-SEP-12	R2425638
Uranium (U)		<2.0		2.0	mg/kg		01-SEP-12	R2425638
Vanadium (V)		17.5		1.0	mg/kg		01-SEP-12	R2425638
Zinc (Zn)		21		10	mg/kg		01-SEP-12	R2425638

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
DAPHNIA-LC50-WP	Water	Daphnia Magna LC50	EPS/1/RM/11, EPS 1/RM/14
Daphnia Magna, grown under controlled conditions, are introduced into various concentrations of a sample in order to obtain an LC50, a concentration where 50% of the organisms die.			
Studies have shown the major contributor to measurement uncertainty (MU) for this test is the biological response. The best estimation of MU is therefore provided in the test report as the 95% CI of the reference toxicant.			
MET-200.2-MS-ED	Soil	Metals in Soil by ICPMS	EPA 200.2/6020A
TROUT-P/F-WP	Water	Trout Bioassay Pass/Fail	EPS 1/RM/13, EPS 1/RM/9
Certified, disease-free rainbow trout (<i>Oncorhynchus mykiss</i>) are exposed to the full-strength (100%) sample, under static conditions in order to obtain a pass/fail indication of toxicity. A sample is considered to "fail" if >50% mortality is observed within a 96-hour exposure period.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA

Chain of Custody Numbers:

08-011364

GLOSSARY OF REPORT TERMS

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mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg ww - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

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< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

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Quality Control Report

Workorder: L1196149

Report Date: 07-SEP-12

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Client:

LUPIN MINES INCORPORATED
201, 750W Perderst
Vancouver BC V6T 2T7

Contact:

David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-ED		Soil						
Batch	R2425638							
WG1534244-3	CRM	TILL-1_SOIL						
Aluminum (Al)			73.0		%		70-130	01-SEP-12
Antimony (Sb)			115.0		%		70-130	01-SEP-12
Arsenic (As)			104.2		%		70-130	01-SEP-12
Barium (Ba)			104.6		%		70-130	01-SEP-12
Chromium (Cr)			102.0		%		70-130	01-SEP-12
Cobalt (Co)			107.9		%		70-130	01-SEP-12
Copper (Cu)			99.8		%		70-130	01-SEP-12
Lead (Pb)			96.8		%		70-130	01-SEP-12
Magnesium (Mg)			87.1		%		70-130	01-SEP-12
Manganese (Mn)			71.4		%		70-130	01-SEP-12
Nickel (Ni)			98.7		%		70-130	01-SEP-12
Phosphorus (P)			115.7		%		70-130	01-SEP-12
Potassium (K)			85.4		%		70-130	01-SEP-12
Strontium (Sr)			110.7		%		70-130	01-SEP-12
Titanium (Ti)			111.9		%		70-130	01-SEP-12
Vanadium (V)			101.5		%		70-130	01-SEP-12
Zinc (Zn)			89.6		%		70-130	01-SEP-12
WG1534244-4	CRM	PACS-2_SOIL						
Aluminum (Al)			73.4		%		70-130	01-SEP-12
Antimony (Sb)			128.7		%		70-130	01-SEP-12
Arsenic (As)			104.6		%		70-130	01-SEP-12
Barium (Ba)			114.9		%		70-130	01-SEP-12
Cadmium (Cd)			108.5		%		70-130	01-SEP-12
Calcium (Ca)			101.1		%		70-130	01-SEP-12
Chromium (Cr)			100.7		%		70-130	01-SEP-12
Cobalt (Co)			107.5		%		70-130	01-SEP-12
Copper (Cu)			96.9		%		70-130	01-SEP-12
Lead (Pb)			97.6		%		70-130	01-SEP-12
Lithium (Li)			91.9		%		70-130	01-SEP-12
Magnesium (Mg)			85.0		%		70-130	01-SEP-12
Manganese (Mn)			96.2		%		70-130	01-SEP-12
Molybdenum (Mo)			131.1	G	%		70-130	01-SEP-12
Nickel (Ni)			101.1		%		70-130	01-SEP-12
Phosphorus (P)			113.6		%		70-130	01-SEP-12



Quality Control Report

Workorder: L1196149

Report Date: 07-SEP-12

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Client: LUPIN MINES INCORPORATED
201, 750W Perderst
Vancouver BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-ED		Soil						
Batch	R2425638							
WG1534244-4	CRM	PACS-2_SOIL						
Potassium (K)			98.9		%		70-130	01-SEP-12
Sodium (Na)			95.3		%		70-130	01-SEP-12
Strontium (Sr)			114.2		%		70-130	01-SEP-12
Tin (Sn)			108.4		%		70-130	01-SEP-12
Titanium (Ti)			110.1		%		70-130	01-SEP-12
Vanadium (V)			100.4		%		70-130	01-SEP-12
Zinc (Zn)			86.3		%		70-130	01-SEP-12
COMMENTS: Mo recovery is 1% off.ok								
WG1534244-5	DUP	L1196149-4						
Aluminum (Al)		4250	3740		mg/kg	13	50	01-SEP-12
Antimony (Sb)		<0.20	<0.20	RPD-NA	mg/kg	N/A	30	01-SEP-12
Arsenic (As)		963	783		mg/kg	21	30	01-SEP-12
Barium (Ba)		41.8	37.5		mg/kg	11	50	01-SEP-12
Beryllium (Be)		<1.0	<1.0	RPD-NA	mg/kg	N/A	30	01-SEP-12
Bismuth (Bi)		<0.50	<0.50	RPD-NA	mg/kg	N/A	30	01-SEP-12
Cadmium (Cd)		<0.50	<0.50	RPD-NA	mg/kg	N/A	30	01-SEP-12
Calcium (Ca)		3800	3160		mg/kg	19	30	01-SEP-12
Chromium (Cr)		23.1	19.9		mg/kg	15	30	01-SEP-12
Cobalt (Co)		4.7	4.1		mg/kg	13	30	01-SEP-12
Copper (Cu)		12.6	11.7		mg/kg	7.6	30	01-SEP-12
Iron (Fe)		13300	11500		mg/kg	14	30	01-SEP-12
Lead (Pb)		23.6	19.9		mg/kg	17	50	01-SEP-12
Lithium (Li)		15.6	12.9		mg/kg	19	30	01-SEP-12
Magnesium (Mg)		3020	2630		mg/kg	14	30	01-SEP-12
Manganese (Mn)		88.0	76.3		mg/kg	14	30	01-SEP-12
Molybdenum (Mo)		<1.0	<1.0	RPD-NA	mg/kg	N/A	50	01-SEP-12
Nickel (Ni)		13.3	11.3		mg/kg	16	30	01-SEP-12
Phosphorus (P)		510	420		mg/kg	19	50	01-SEP-12
Potassium (K)		1740	1530		mg/kg	13	40	01-SEP-12
Selenium (Se)		<0.50	<0.50	RPD-NA	mg/kg	N/A	30	01-SEP-12
Silver (Ag)		<1.0	<1.0	RPD-NA	mg/kg	N/A	50	01-SEP-12
Sodium (Na)		270	240		mg/kg	13	40	01-SEP-12
Strontium (Sr)		27.7	24.1		mg/kg	14	50	01-SEP-12



Quality Control Report

Workorder: L1196149

Report Date: 07-SEP-12

Page 3 of 6

Client: LUPIN MINES INCORPORATED
201, 750W Perderst
Vancouver BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-ED		Soil						
Batch	R2425638							
WG1534244-5	DUP	L1196149-4						
Thallium (Tl)		<0.50	<0.50	RPD-NA	mg/kg	N/A	30	01-SEP-12
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	50	01-SEP-12
Titanium (Ti)		297	257		mg/kg	15	50	01-SEP-12
Uranium (U)		<2.0	<2.0	RPD-NA	mg/kg	N/A	30	01-SEP-12
Vanadium (V)		17.5	15.5		mg/kg	12	30	01-SEP-12
Zinc (Zn)		21	18		mg/kg	15	30	01-SEP-12
WG1534244-6	DUP	L1197576-18						
Aluminum (Al)		5360	5340		mg/kg	0.4	50	31-AUG-12
Antimony (Sb)		0.47	0.46		mg/kg	3.1	30	31-AUG-12
Arsenic (As)		10.1	10.4		mg/kg	2.7	30	31-AUG-12
Barium (Ba)		148	150		mg/kg	1.3	50	31-AUG-12
Beryllium (Be)		<1.0	<1.0	RPD-NA	mg/kg	N/A	30	31-AUG-12
Bismuth (Bi)		<0.50	<0.50	RPD-NA	mg/kg	N/A	30	31-AUG-12
Cadmium (Cd)		<0.50	<0.50	RPD-NA	mg/kg	N/A	30	31-AUG-12
Calcium (Ca)		10900	10900		mg/kg	0.4	30	31-AUG-12
Chromium (Cr)		14.5	14.6		mg/kg	0.5	30	31-AUG-12
Cobalt (Co)		8.6	8.6		mg/kg	0.0	30	31-AUG-12
Copper (Cu)		21.3	21.4		mg/kg	0.4	30	31-AUG-12
Iron (Fe)		15200	15200		mg/kg	0.1	30	31-AUG-12
Lead (Pb)		11.8	11.9		mg/kg	1.1	50	31-AUG-12
Lithium (Li)		12.4	12.1		mg/kg	2.5	30	31-AUG-12
Magnesium (Mg)		3180	3140		mg/kg	1.2	30	31-AUG-12
Manganese (Mn)		240	241		mg/kg	0.7	30	31-AUG-12
Molybdenum (Mo)		1.3	1.3		mg/kg	2.4	50	31-AUG-12
Nickel (Ni)		24.4	24.4		mg/kg	0.1	30	31-AUG-12
Phosphorus (P)		640	650		mg/kg	1.1	50	31-AUG-12
Potassium (K)		1140	1150		mg/kg	0.9	40	31-AUG-12
Selenium (Se)		<0.50	0.57	RPD-NA	mg/kg	N/A	30	31-AUG-12
Silver (Ag)		<1.0	<1.0	RPD-NA	mg/kg	N/A	50	31-AUG-12
Sodium (Na)		130	130		mg/kg	0.5	40	31-AUG-12
Strontium (Sr)		50.0	50.2		mg/kg	0.5	50	31-AUG-12
Thallium (Tl)		<0.50	<0.50	RPD-NA	mg/kg	N/A	30	31-AUG-12
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	50	31-AUG-12



Quality Control Report

Workorder: L1196149

Report Date: 07-SEP-12

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Client: LUPIN MINES INCORPORATED
201, 750W Perderst
Vancouver BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-ED		Soil						
Batch	R2425638							
WG1534244-6	DUP	L1197576-18						
Titanium (Ti)		84.5	84.2		mg/kg	0.4	50	31-AUG-12
Uranium (U)		<2.0	<2.0	RPD-NA	mg/kg	N/A	30	31-AUG-12
Vanadium (V)		23.8	24.1		mg/kg	1.4	30	31-AUG-12
Zinc (Zn)		69	70		mg/kg	1.7	30	31-AUG-12
WG1534244-1	MB							
Aluminum (Al)			<50		mg/kg		50	30-AUG-12
Antimony (Sb)			<0.20		mg/kg		0.2	30-AUG-12
Arsenic (As)			<0.20		mg/kg		0.2	30-AUG-12
Barium (Ba)			<5.0		mg/kg		5	30-AUG-12
Beryllium (Be)			<1.0		mg/kg		1	30-AUG-12
Bismuth (Bi)			<0.50		mg/kg		0.5	30-AUG-12
Cadmium (Cd)			<0.50		mg/kg		0.5	30-AUG-12
Calcium (Ca)			<100		mg/kg		100	30-AUG-12
Chromium (Cr)			<0.50		mg/kg		0.5	30-AUG-12
Cobalt (Co)			<1.0		mg/kg		1	30-AUG-12
Copper (Cu)			<2.0		mg/kg		2	30-AUG-12
Iron (Fe)			<200		mg/kg		200	30-AUG-12
Lead (Pb)			<5.0		mg/kg		5	30-AUG-12
Lithium (Li)			<1.0		mg/kg		1	30-AUG-12
Magnesium (Mg)			<100		mg/kg		100	30-AUG-12
Manganese (Mn)			<1.0		mg/kg		1	30-AUG-12
Molybdenum (Mo)			<1.0		mg/kg		1	30-AUG-12
Nickel (Ni)			<2.0		mg/kg		2	30-AUG-12
Phosphorus (P)			<100		mg/kg		100	30-AUG-12
Potassium (K)			<100		mg/kg		100	30-AUG-12
Selenium (Se)			<0.50		mg/kg		0.5	30-AUG-12
Silver (Ag)			<1.0		mg/kg		1	30-AUG-12
Sodium (Na)			<100		mg/kg		100	30-AUG-12
Strontium (Sr)			<1.0		mg/kg		1	30-AUG-12
Thallium (Tl)			<0.50		mg/kg		0.5	30-AUG-12
Tin (Sn)			<5.0		mg/kg		5	30-AUG-12
Titanium (Ti)			<5.0		mg/kg		5	30-AUG-12
Uranium (U)			<2.0		mg/kg		2	30-AUG-12
Vanadium (V)			<1.0				1	



Quality Control Report

Workorder: L1196149

Report Date: 07-SEP-12

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Client: LUPIN MINES INCORPORATED
201, 750W Perderst
Vancouver BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-ED		Soil						
Batch	R2425638							
WG1534244-1	MB							
Vanadium (V)			<1.0		mg/kg		1	30-AUG-12
Zinc (Zn)			<10		mg/kg		10	30-AUG-12
WG1534244-2	MB							
Aluminum (Al)			<50		mg/kg		50	30-AUG-12
Antimony (Sb)			<0.20		mg/kg		0.2	30-AUG-12
Arsenic (As)			<0.20		mg/kg		0.2	30-AUG-12
Barium (Ba)			<5.0		mg/kg		5	30-AUG-12
Beryllium (Be)			<1.0		mg/kg		1	30-AUG-12
Bismuth (Bi)			<0.50		mg/kg		0.5	30-AUG-12
Cadmium (Cd)			<0.50		mg/kg		0.5	30-AUG-12
Calcium (Ca)			<100		mg/kg		100	30-AUG-12
Chromium (Cr)			<0.50		mg/kg		0.5	30-AUG-12
Cobalt (Co)			<1.0		mg/kg		1	30-AUG-12
Copper (Cu)			<2.0		mg/kg		2	30-AUG-12
Iron (Fe)			<200		mg/kg		200	30-AUG-12
Lead (Pb)			<5.0		mg/kg		5	30-AUG-12
Lithium (Li)			<1.0		mg/kg		1	30-AUG-12
Magnesium (Mg)			<100		mg/kg		100	30-AUG-12
Manganese (Mn)			<1.0		mg/kg		1	30-AUG-12
Molybdenum (Mo)			<1.0		mg/kg		1	30-AUG-12
Nickel (Ni)			<2.0		mg/kg		2	30-AUG-12
Phosphorus (P)			<100		mg/kg		100	30-AUG-12
Potassium (K)			<100		mg/kg		100	30-AUG-12
Selenium (Se)			<0.50		mg/kg		0.5	30-AUG-12
Silver (Ag)			<1.0		mg/kg		1	30-AUG-12
Sodium (Na)			<100		mg/kg		100	30-AUG-12
Strontium (Sr)			<1.0		mg/kg		1	30-AUG-12
Thallium (Tl)			<0.50		mg/kg		0.5	30-AUG-12
Tin (Sn)			<5.0		mg/kg		5	30-AUG-12
Titanium (Ti)			<5.0		mg/kg		5	30-AUG-12
Uranium (U)			<2.0		mg/kg		2	30-AUG-12
Vanadium (V)			<1.0		mg/kg		1	30-AUG-12
Zinc (Zn)			<10		mg/kg		10	30-AUG-12

Quality Control Report

Workorder: L1196149

Report Date: 07-SEP-12

Client: LUPIN MINES INCORPORATED
201, 750W Perderst
Vancouver BC V6T 2T7
Contact: David Vokey

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
G	QC result did not meet ALS DQO. Refer to narrative comments for further information.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



Daphnia Magna Bioassay Test Report - LC50

Sample ID:	L1196149-1
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Summary Results

48-hour LC50:	Non Lethal
95% Lower Confidence Interval v/v (%):	N/A
95% Upper Confidence Interval v/v (%):	N/A
Method of Calculation:	N/A
Confirmed by Graph:	N/A

Sample Information

Sample Origin:	Lupin Mines Inc.
Sample Description:	Pond-2-D
Sampling Date and Time:	17-Aug-12 10:00
Sampling Method:	Grab
Sampled By:	L. Coedy
Container(s) Description:	2x1L opaque plastic bottles
Sample Volume:	2L
Date and Time Received:	20-Aug-12 00:00
Transit Irregularities:	None
Storage Temperature (°C):	20

Test Information

Test Organism:	Daphnia magna
Test Description:	Acute, 48-hour, Static, LC50
Reference Method(s):	EPS 1/RM/14, 2nd Ed. Dec. 2000, Environment Canada EPS 1/RM/11, July 1990, Environment Canada
Performed By:	AMB
Starting Date and Time:	21-Aug-12 12:30
Deviations from Reference Method:	None



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Condition of Effluent at 100% v/v Before Preparing Dilutions

Observations

Colour:	None
Odour:	Moderate
Turbidity:	Moderate
Solids:	Moderate
Temperature (°C):	20
Dissolved Oxygen (mg/L):	9.41
Conductivity (µmhos/cm):	660
pH:	8.59
pH Adjustment:	Not Adjusted
pH Adjustment Procedure:	n/a
Hardness (mg/L) Before Adjustment:	2.3 mL Titration Solution/ 10 mL of Sample x 1000 = 230
Hardness (mg/L) After Adjustment:	N/A mL Titration Solution/ N/A mL of Sample x 1000 = N/A
Alkalinity (mg/L):	0.2 mL Titration Solution/ 10 mL of Sample x 1000 = 20

Pre-Aeration

Aeration Rate (25-50 mL/min/L):	33.5 ± 0.2	
Aeration Time (min):	0	
Sample Test Concentration (v/v):	100%	0%
Dissolved Oxygen (D.O.) Before Pre-Aeration (%):	97.8	96.8
Average D.O. After Pre-Aeration (%):	N/A	N/A

Test Organism Data

Average age of daphnia at first brood (days):	10
Average number of neonates per brood:	25
Weekly Mortality Preceding Test (%):	2.2
Date Parents Born:	17-Jul-12
Loading Density (organisms/20 mL):	1
Age of test organisms at beginning of test (hrs):	<24

Conditions Common to All Concentrations During Test

Volume Tested:	200 mL
Duplicate solutions for control & 100%:	Yes
Neonates per Vessel:	10
Volume per Neonate:	20 mL
Test Solution Depth:	70 mm
Container Description:	Plastic Cups
Source of Holding/Dilution Water:	Dechlorinated UV Treated City of Winnipeg Tap Water





Conditions During Test

Concentration (% v/v)	Temperature (°C)			Dissolved Oxygen (mg/L)		pH		Conductivity (µmhos/cm)	Hardness (mg/L)	Immobility (# of daphnids)		Mortality (# of daphnids)
	0h	24h	48h	0h	48h	0h	48h	0h	0h	24h	48h	48h
0	20	20	20	8.12	8.50	7.62	7.75	336	86	0	0	0
0	20	20	20	8.17	8.49	7.66	7.76	338	86	0	0	0
12.5	20	20	20	8.51	8.51	7.73	7.74	381	n/a	0	0	0
25	20	20	20	8.53	8.47	7.79	7.70	426	n/a	0	0	0
50	20	20	20	8.84	8.43	7.89	7.62	519	n/a	0	0	0
75	20	20	20	9.01	8.45	8.16	7.57	623	n/a	0	0	0
100	20	20	20	9.66	8.43	8.67	7.60	688	230	0	0	0
100	20	20	20	9.69	8.40	8.69	7.64	687	230	0	0	0

Mortality and Immobility Information

Conc. (% v/v)	Mean Number of Daphnids at End of Test		Mean Rate of Daphnids at End of Test (%)	
	Dead	Immobile	Dead	Immobile
0	0	0	0	0
12.5	0	0	0	0
25	0	0	0	0
50	0	0	0	0
75	0	0	0	0
100	0	0	0	0



Median Lethal Concentration Results for Multi-Concentration Tests

LC50:	Non Lethal
LC50 Lower 95% Confidence Limit:	N/A
LC50 Upper 95% Confidence Limit:	N/A
EC50:	N/A
EC50 Lower 95% Confidence Limit:	N/A
EC50 Upper 95% Confidence Limit:	N/A
Statistical Method:	N/A

Note: Non-lethal = 0 mortality

Reference Toxicant Test Results

Reference Toxicant:	Sodium Chloride
Date Reference Toxicant Initiated:	15-Aug-12
Recent 48h Reference Toxicant Test LC50 (mg/L NaCl):	5710
Lower 95% Confidence Limit (mg/L NaCl):	5391
Upper 95% Confidence Limit (mg/L NaCl):	6784
Historic Geometric Mean LC50 (mg/L NaCl):	5387
Lower Warning Limit (-2 S.D.):	4684
Upper Warning Limit (+2 S.D.):	6196
Method of Calculation:	Stephan LC50 Program, Probit
Confirmed by Graph:	Yes

Observations/Comments

No toxicity observed.



Rainbow Trout Bioassay Test Report - Pass/Fail

Sample ID:	L1196149-2
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Summary Results

96-hour Pass/Fail:	Pass
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Sample Information

Sample Origin:	Lupin Mines Inc.
Sample Description:	Pond-2-T
Sampling Date and Time:	17-Aug-12 10:00
Sampling Method:	Grab
Sampled By:	L. Coedy
Container(s) Description:	1x20L polyethylene pail with liner
Sample Volume:	20L
Date and Time Received:	20-Aug-12 00:00
Transit Irregularities:	None
Storage Temperature (°C):	15

Test Information

Test Organism:	Oncorhynchus mykiss
Test Description:	Acute, 96-hour, Static, Pass/Fail
Reference Method(s):	EPS 1/RM/13, 2nd Ed. Dec. 2000, with May 2007 amendments, Environment Canada EPS 1/RM/9, May 1996 with May 2007 amendments, Environment Canada
Performed By:	AMB
Starting Date and Time:	21-Aug-12 11:00
Deviations from Reference Method:	None



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Initial Parameters

Observations

Colour:	None				
Odour:	Moderate				
Turbidity:	Moderate				
Solids:	Moderate				
Hardness (mg/L):	2.3	mL Titration Solution/	10	mL of Sample x 1000 =	230
Alkalinity (mg/L):	0.2	mL Titration Solution/	10	mL of Sample x 1000 =	20
Temperature (°C):	15				
Dissolved Oxygen (mg/L):	9.41				
Conductivity (µmhos/cm):	660				
pH (5.5-8.5 pH units):	8.59				
pH Adjustment:	Not Adjusted				
pH Adjustment Procedure:	n/a				

Pre-Aeration

Aeration Rate (5.5-7.5 mL/min/L):	6.40 ± 0.6	
Aeration Time (min):	30	
Sample Test Concentration (v/v):	100%	0%
Dissolved Oxygen (D.O.) Before Pre-Aeration (%):	97.8	96.8
Average D.O. After Pre-Aeration (%):	96.9	96.8

Test Organism Data

Lot Number:	11/07/12 T1
Weekly Mortality Preceding Test (%):	0.17
Sample Size:	10

Conditions Common to All Concentrations During Test

Source of Holding/Dilution Water:	Dechlorinated UV Treated City of Winnipeg Tap Water
Container Description:	20 L Polyethylene Pail with Liner
Aeration Method:	Compressed air bubbled through silica-glass air diffuser
Aeration Rate (5.5-7.5 mL/min/L):	6.40 ± 0.6
Test Solution Volume (L):	20
Test Solution Depth (cm):	34
Number of Test Organisms per Container:	10
Loading Density (g/L):	0.24



Conditions During Test

Concentration (% v/v)	Temperature (°C) (15 ± 1°C)					Dissolved Oxygen (mg/L)					pH (pH units)				
	0h	24h	48h	72h	96h	0h	24h	48h	72h	96h	0h	24h	48h	72h	96h
0	15	n/a	n/a	n/a	15	9.39	n/a	n/a	n/a	9.12	7.38	n/a	n/a	n/a	7.52
100	15	n/a	n/a	n/a	15	9.62	n/a	n/a	n/a	9.61	8.53	n/a	n/a	n/a	7.51

Conc. (% v/v)	Conductivity (µmhos/cm)	Number of Fish Dead				Number of Fish Stressed			
	0h	24h	48h	72h	96h	24h	48h	72h	96h
0	285	0	n/a	n/a	0	0	n/a	n/a	0
100	629	0	n/a	n/a	0	0	n/a	n/a	0

Control Fish Information at End of Test

Mean Fork Length (mm):	37
Lower Range Fork Length (mm):	32
Upper Range Fork Length (mm):	42
Mean Wet Weight:	0.48

Mortality and Stressed Behaviour Information

Conc. (% v/v)	Mean Number of Fish at End of Test		Mean Rate of Fish at End of Test (%)	
	Dead	Stressed	Dead	Stressed
0	0	0	0	0
100	0	0	0	0



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Reference Toxicant Test Results

Reference Toxicant:	Zinc Sulfate
Date Reference Toxicant Initiated:	24-Jul-12
Recent 96h Reference Toxicant Test LC50 (mg/L Zinc):	0.91
Lower 95% Confidence Limit (mg/L Zinc):	0.72
Upper 95% Confidence Limit (mg/L Zinc):	1.15
Historic Geometric Mean LC50 (mg/L Zinc):	0.65
Lower 95% Confidence Limit (mg/L Zinc):	0.25
Upper 95% Confidence Limit (mg/L Zinc):	1.71
Method of Calculation:	Stephan LC50 Program, Probit
Confirmed by Graph:	Yes

Sublethal Biological Effects

No sublethal biological effects observed.

Observations/Comments

No toxicity observed.

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION



LUPIN MINES INCORPORATED
ATTN: David Vokey
201-750 W Pender St.
Vancouver BC V6T 2T7

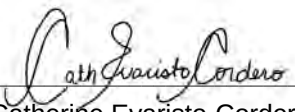
Date Received: 13-SEP-12
Report Date: 18-OCT-12 12:05 (MT)
Version: FINAL

Client Phone: 604-682-3366

Certificate of Analysis

Lab Work Order #: L1208947
Project P.O. #: NOT SUBMITTED
Job Reference: LUPIN
C of C Numbers: 09-010542
Legal Site Desc:

Comments: L1208947- Cyanide analysis analyzed from unpreserved sample


Catherine Evaristo-Cordero
Senior Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1208947-2 LUP-21 MONTHLY Sampled By: L. Luedy on 10-SEP-12 @ 10:30 Matrix: Water							
Total Metals in Water by ICPMS (Low)							
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		04-OCT-12	R2449006
Arsenic (As)-Total	0.00214		0.00040	mg/L		04-OCT-12	R2449006
Barium (Ba)-Total	0.0390		0.0030	mg/L		04-OCT-12	R2449006
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		04-OCT-12	R2449006
Boron (B)-Total	<0.050		0.050	mg/L		04-OCT-12	R2449006
Cadmium (Cd)-Total	0.000330		0.000050	mg/L		04-OCT-12	R2449006
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		04-OCT-12	R2449006
Cobalt (Co)-Total	0.0335		0.0020	mg/L		04-OCT-12	R2449006
Copper (Cu)-Total	0.0033		0.0010	mg/L		04-OCT-12	R2449006
Lead (Pb)-Total	0.00016		0.00010	mg/L		04-OCT-12	R2449006
Lithium (Li)-Total	0.018		0.010	mg/L		04-OCT-12	R2449006
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		04-OCT-12	R2449006
Nickel (Ni)-Total	0.117		0.0020	mg/L		04-OCT-12	R2449006
Selenium (Se)-Total	<0.00040		0.00040	mg/L		04-OCT-12	R2449006
Silver (Ag)-Total	<0.00010		0.00010	mg/L		04-OCT-12	R2449006
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		04-OCT-12	R2449006
Tin (Sn)-Total	<0.050		0.050	mg/L		04-OCT-12	R2449006
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		04-OCT-12	R2449006
Uranium (U)-Total	<0.00010		0.00010	mg/L		04-OCT-12	R2449006
Vanadium (V)-Total	<0.0010		0.0010	mg/L		04-OCT-12	R2449006
Zinc (Zn)-Total	0.183		0.0040	mg/L		04-OCT-12	R2449006
Total Metals in Water by ICPOES (Low)							
Calcium (Ca)-Total	52.5		0.50	mg/L		03-OCT-12	R2448567
Iron (Fe)-Total	0.109		0.010	mg/L		03-OCT-12	R2448567
Magnesium (Mg)-Total	8.49		0.10	mg/L		03-OCT-12	R2448567
Manganese (Mn)-Total	0.597		0.0020	mg/L		03-OCT-12	R2448567
Potassium (K)-Total	4.06		0.10	mg/L		03-OCT-12	R2448567
Sodium (Na)-Total	39.6		1.0	mg/L		03-OCT-12	R2448567
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	3.5		2.0	mg/L		26-SEP-12	R2444393
Ammonia, Total (as N)	<0.050		0.050	mg/L		03-OCT-12	R2448346
Hardness (as CaCO3)	166			mg/L		04-OCT-12	
Nitrate (as N)	1.71		0.0050	mg/L		03-OCT-12	R2448523
Nitrite (as N)	0.0015		0.0010	mg/L		03-OCT-12	R2448523
Ra-226	0.0093		0.010	Bq/L		12-OCT-12	
Cyanide, Total	<0.0050		0.0050	mg/L		22-SEP-12	R2442124
Total Suspended Solids	<3.0		3.0	mg/L		27-SEP-12	R2445406
pH	5.68		0.10	pH		01-OCT-12	R2447516
L1208947-3 LUP-24 MONTHLY Sampled By: L. Luedy on 10-SEP-12 @ 11:00 Matrix: Water							
Total Metals - CCME							
Mercury (Hg) - Total							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		04-OCT-12	R2449148
Total Metals in Water by ICPMS (Low)							
Aluminum (Al)-Total	0.014		0.010	mg/L		04-OCT-12	R2449006
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		04-OCT-12	R2449006
Arsenic (As)-Total	0.00045		0.00040	mg/L		04-OCT-12	R2449006
Barium (Ba)-Total	<0.0030		0.0030	mg/L		04-OCT-12	R2449006
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		04-OCT-12	R2449006

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1208947-3	LUP-24 MONTHLY							
Sampled By:	L. Luedy on 10-SEP-12 @ 11:00							
Matrix:	Water							
Total Metals in Water by ICPMS (Low)								
Boron (B)-Total	<0.050			0.050	mg/L		04-OCT-12	R2449006
Cadmium (Cd)-Total	0.000164			0.000050	mg/L		04-OCT-12	R2449006
Chromium (Cr)-Total	<0.0050			0.0050	mg/L		04-OCT-12	R2449006
Cobalt (Co)-Total	<0.0020			0.0020	mg/L		04-OCT-12	R2449006
Copper (Cu)-Total	0.0012			0.0010	mg/L		04-OCT-12	R2449006
Lead (Pb)-Total	0.00011			0.00010	mg/L		04-OCT-12	R2449006
Lithium (Li)-Total	<0.010			0.010	mg/L		04-OCT-12	R2449006
Molybdenum (Mo)-Total	<0.0050			0.0050	mg/L		04-OCT-12	R2449006
Nickel (Ni)-Total	<0.0020			0.0020	mg/L		04-OCT-12	R2449006
Selenium (Se)-Total	<0.00040			0.00040	mg/L		04-OCT-12	R2449006
Silver (Ag)-Total	<0.00010			0.00010	mg/L		04-OCT-12	R2449006
Thallium (Tl)-Total	<0.00010			0.00010	mg/L		04-OCT-12	R2449006
Tin (Sn)-Total	<0.050			0.050	mg/L		04-OCT-12	R2449006
Titanium (Ti)-Total	<0.0010			0.0010	mg/L		04-OCT-12	R2449006
Uranium (U)-Total	<0.00010			0.00010	mg/L		04-OCT-12	R2449006
Vanadium (V)-Total	<0.0010			0.0010	mg/L		04-OCT-12	R2449006
Zinc (Zn)-Total	0.0043			0.0040	mg/L		04-OCT-12	R2449006
Total Metals in Water by ICPOES (Low)								
Calcium (Ca)-Total	1.01			0.50	mg/L		03-OCT-12	R2448567
Iron (Fe)-Total	0.032			0.010	mg/L		03-OCT-12	R2448567
Magnesium (Mg)-Total	0.50			0.10	mg/L		03-OCT-12	R2448567
Manganese (Mn)-Total	0.0026			0.0020	mg/L		03-OCT-12	R2448567
Potassium (K)-Total	0.50			0.10	mg/L		03-OCT-12	R2448567
Sodium (Na)-Total	<1.0			1.0	mg/L		03-OCT-12	R2448567
Miscellaneous Parameters								
Alkalinity, Total (as CaCO3)	3.6			2.0	mg/L		26-SEP-12	R2444393
Ammonia, Total (as N)	<0.050			0.050	mg/L		03-OCT-12	R2448346
Hardness (as CaCO3)	4.6				mg/L		04-OCT-12	
Nitrate (as N)	<0.050	DLM		0.050	mg/L		05-OCT-12	R2451147
Nitrite (as N)	<0.0010			0.0010	mg/L		03-OCT-12	R2448523
Ra-226	BDL			0.010	Bq/L		12-OCT-12	
Cyanide, Total	<0.0050			0.0050	mg/L		22-SEP-12	R2442124
Total Suspended Solids	<3.0			3.0	mg/L		27-SEP-12	R2445406
pH	6.80			0.10	pH		01-OCT-12	R2447516
L1208947-4	LUP-10 DAILY							
Sampled By:	L. Luedy on 08-SEP-12 @ 10:30							
Matrix:	Water							
Total Metals - CCME								
Mercury (Hg) - Total								
Mercury (Hg)-Total	<0.00010			0.00010	mg/L		04-OCT-12	R2449148
Total Metals in Water by ICPMS (Low)								
Aluminum (Al)-Total	0.064			0.010	mg/L		04-OCT-12	R2449006
Antimony (Sb)-Total	<0.00040			0.00040	mg/L		04-OCT-12	R2449006
Arsenic (As)-Total	0.00772			0.00040	mg/L		04-OCT-12	R2449006
Barium (Ba)-Total	0.0135			0.0030	mg/L		04-OCT-12	R2449006
Beryllium (Be)-Total	<0.0010			0.0010	mg/L		04-OCT-12	R2449006
Boron (B)-Total	<0.050			0.050	mg/L		04-OCT-12	R2449006
Cadmium (Cd)-Total	0.000205			0.000050	mg/L		04-OCT-12	R2449006
Chromium (Cr)-Total	<0.0050			0.0050	mg/L		04-OCT-12	R2449006
Cobalt (Co)-Total	0.0278			0.0020	mg/L		04-OCT-12	R2449006

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1208947-4 LUP-10 DAILY Sampled By: L. Luedy on 08-SEP-12 @ 10:30 Matrix: Water Total Metals in Water by ICPMS (Low) Copper (Cu)-Total0.00340.0010mg/L04-OCT-12R2449006 Lead (Pb)-Total<0.000100.00010mg/L04-OCT-12R2449006 Lithium (Li)-Total0.0200.010mg/L04-OCT-12R2449006 Molybdenum (Mo)-Total<0.00500.0050mg/L04-OCT-12R2449006 Nickel (Ni)-Total0.06480.0020mg/L04-OCT-12R2449006 Selenium (Se)-Total<0.000400.00040mg/L04-OCT-12R2449006 Silver (Ag)-Total<0.000100.00010mg/L04-OCT-12R2449006 Thallium (Tl)-Total<0.000100.00010mg/L04-OCT-12R2449006 Tin (Sn)-Total<0.0500.050mg/L04-OCT-12R2449006 Titanium (Ti)-Total<0.00100.0010mg/L04-OCT-12R2449006 Uranium (U)-Total<0.000100.00010mg/L04-OCT-12R2449006 Vanadium (V)-Total<0.00100.0010mg/L04-OCT-12R2449006 Zinc (Zn)-Total0.2110.0040mg/L04-OCT-12R2449006 Total Metals in Water by ICPOES (Low) Calcium (Ca)-Total66.20.50mg/L03-OCT-12R2448567 Iron (Fe)-Total0.1920.010mg/L03-OCT-12R2448567 Magnesium (Mg)-Total7.120.10mg/L03-OCT-12R2448567 Manganese (Mn)-Total0.7430.0020mg/L03-OCT-12R2448567 Potassium (K)-Total5.030.10mg/L03-OCT-12R2448567 Sodium (Na)-Total52.91.0mg/L03-OCT-12R2448567 Miscellaneous Parameters Hardness (as CaCO3)194mg/L04-OCT-12 Cyanide, Total<0.00500.0050mg/L20-SEP-12R2440797 Total Suspended Solids3.33.0mg/L05-OCT-12R2450696 pH6.270.10pH05-OCT-12R2451562							
L1208947-5 LUP-10 DAILY Sampled By: L. Luedy on 09-SEP-12 @ 10:30 Matrix: Water Total Metals - CCME Mercury (Hg) - Total Mercury (Hg)-Total<0.000100.00010mg/L04-OCT-12R2449148 Total Metals in Water by ICPMS (Low) Aluminum (Al)-Total0.0420.010mg/L04-OCT-12R2449006 Antimony (Sb)-Total<0.000400.00040mg/L04-OCT-12R2449006 Arsenic (As)-Total0.006490.00040mg/L04-OCT-12R2449006 Barium (Ba)-Total0.01400.0030mg/L04-OCT-12R2449006 Beryllium (Be)-Total<0.00100.0010mg/L04-OCT-12R2449006 Boron (B)-Total0.0540.050mg/L04-OCT-12R2449006 Cadmium (Cd)-Total0.0002020.000050mg/L04-OCT-12R2449006 Chromium (Cr)-Total<0.00500.0050mg/L04-OCT-12R2449006 Cobalt (Co)-Total0.02890.0020mg/L04-OCT-12R2449006 Copper (Cu)-Total0.00310.0010mg/L04-OCT-12R2449006 Lead (Pb)-Total<0.000100.00010mg/L04-OCT-12R2449006 Lithium (Li)-Total0.0210.010mg/L04-OCT-12R2449006 Molybdenum (Mo)-Total<0.00500.0050mg/L04-OCT-12R2449006 Nickel (Ni)-Total0.06680.0020mg/L04-OCT-12R2449006 Selenium (Se)-Total<0.000400.00040mg/L04-OCT-12R2449006 Silver (Ag)-Total<0.000100.00010mg/L04-OCT-12R2449006 Thallium (Tl)-Total<0.000100.00010mg/L04-OCT-12R2449006 Tin (Sn)-Total<0.0500.050mg/L04-OCT-12R2449006 Titanium (Ti)-Total<0.00100.0010mg/L04-OCT-12R2449006							

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1208947-5	LUP-10 DAILY							
Sampled By:	L. Luedy on 09-SEP-12 @ 10:30							
Matrix:	Water							
Total Metals in Water by ICPMS (Low)								
Uranium (U)-Total	<0.00010		0.00010	mg/L		04-OCT-12	R2449006	
Vanadium (V)-Total	<0.0010		0.0010	mg/L		04-OCT-12	R2449006	
Zinc (Zn)-Total	0.213		0.0040	mg/L		04-OCT-12	R2449006	
Total Metals in Water by ICPOES (Low)								
Calcium (Ca)-Total	63.4		0.50	mg/L		03-OCT-12	R2448567	
Iron (Fe)-Total	0.131		0.010	mg/L		03-OCT-12	R2448567	
Magnesium (Mg)-Total	6.65		0.10	mg/L		03-OCT-12	R2448567	
Manganese (Mn)-Total	0.687		0.0020	mg/L		03-OCT-12	R2448567	
Potassium (K)-Total	4.82		0.10	mg/L		03-OCT-12	R2448567	
Sodium (Na)-Total	49.0		1.0	mg/L		03-OCT-12	R2448567	
Miscellaneous Parameters								
Hardness (as CaCO3)	186			mg/L		04-OCT-12		
Cyanide, Total	<0.0050		0.0050	mg/L		21-SEP-12	R2441941	
Total Suspended Solids	<3.0		3.0	mg/L		05-OCT-12	R2450696	
pH	6.40		0.10	pH		05-OCT-12	R2451562	
L1208947-6	LUP-10 DAILY							
Sampled By:	L. Luedy on 11-SEP-12 @ 16:00							
Matrix:	Water							
Total Metals - CCME								
Mercury (Hg) - Total								
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		04-OCT-12	R2449148	
Total Metals in Water by ICPMS (Low)								
Aluminum (Al)-Total	0.065		0.010	mg/L		04-OCT-12	R2449006	
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		04-OCT-12	R2449006	
Arsenic (As)-Total	0.00923		0.00040	mg/L		04-OCT-12	R2449006	
Barium (Ba)-Total	0.0125		0.0030	mg/L		04-OCT-12	R2449006	
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		04-OCT-12	R2449006	
Boron (B)-Total	0.054		0.050	mg/L		04-OCT-12	R2449006	
Cadmium (Cd)-Total	0.000194		0.000050	mg/L		04-OCT-12	R2449006	
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		04-OCT-12	R2449006	
Cobalt (Co)-Total	0.0277		0.0020	mg/L		04-OCT-12	R2449006	
Copper (Cu)-Total	0.0031		0.0010	mg/L		04-OCT-12	R2449006	
Lead (Pb)-Total	<0.00010		0.00010	mg/L		04-OCT-12	R2449006	
Lithium (Li)-Total	0.021		0.010	mg/L		04-OCT-12	R2449006	
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		04-OCT-12	R2449006	
Nickel (Ni)-Total	0.0631		0.0020	mg/L		04-OCT-12	R2449006	
Selenium (Se)-Total	<0.00040		0.00040	mg/L		04-OCT-12	R2449006	
Silver (Ag)-Total	<0.00010		0.00010	mg/L		04-OCT-12	R2449006	
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		04-OCT-12	R2449006	
Tin (Sn)-Total	<0.050		0.050	mg/L		04-OCT-12	R2449006	
Titanium (Ti)-Total	0.0015		0.0010	mg/L		04-OCT-12	R2449006	
Uranium (U)-Total	<0.00010		0.00010	mg/L		04-OCT-12	R2449006	
Vanadium (V)-Total	<0.0010		0.0010	mg/L		04-OCT-12	R2449006	
Zinc (Zn)-Total	0.219		0.0040	mg/L		04-OCT-12	R2449006	
Total Metals in Water by ICPOES (Low)								
Calcium (Ca)-Total	60.3		0.50	mg/L		03-OCT-12	R2448567	
Iron (Fe)-Total	0.211		0.010	mg/L		03-OCT-12	R2448567	
Magnesium (Mg)-Total	6.64		0.10	mg/L		03-OCT-12	R2448567	
Manganese (Mn)-Total	0.708		0.0020	mg/L		03-OCT-12	R2448567	
Potassium (K)-Total	4.68		0.10	mg/L		03-OCT-12	R2448567	
Sodium (Na)-Total	50.0		1.0	mg/L		03-OCT-12	R2448567	

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1208947-8 LUP-20 WEEKLY Sampled By: L. Luedy on 12-SEP-12 @ 11:00 Matrix: Water							
Total Metals in Water by ICPMS (Low)							
Aluminum (Al)-Total	0.143		0.010	mg/L		04-OCT-12	R2449006
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		04-OCT-12	R2449006
Arsenic (As)-Total	0.00178		0.00040	mg/L		04-OCT-12	R2449006
Barium (Ba)-Total	0.0343		0.0030	mg/L		04-OCT-12	R2449006
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		04-OCT-12	R2449006
Boron (B)-Total	<0.050		0.050	mg/L		04-OCT-12	R2449006
Cadmium (Cd)-Total	0.000227		0.000050	mg/L		04-OCT-12	R2449006
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		04-OCT-12	R2449006
Cobalt (Co)-Total	0.0228		0.0020	mg/L		04-OCT-12	R2449006
Copper (Cu)-Total	0.0023		0.0010	mg/L		04-OCT-12	R2449006
Lead (Pb)-Total	<0.00010		0.00010	mg/L		04-OCT-12	R2449006
Lithium (Li)-Total	0.014		0.010	mg/L		04-OCT-12	R2449006
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		04-OCT-12	R2449006
Nickel (Ni)-Total	0.0932		0.0020	mg/L		04-OCT-12	R2449006
Selenium (Se)-Total	<0.00040		0.00040	mg/L		04-OCT-12	R2449006
Silver (Ag)-Total	<0.00010		0.00010	mg/L		04-OCT-12	R2449006
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		04-OCT-12	R2449006
Tin (Sn)-Total	<0.050		0.050	mg/L		04-OCT-12	R2449006
Titanium (Ti)-Total	0.0041		0.0010	mg/L		04-OCT-12	R2449006
Uranium (U)-Total	<0.00010		0.00010	mg/L		04-OCT-12	R2449006
Vanadium (V)-Total	<0.0010		0.0010	mg/L		04-OCT-12	R2449006
Zinc (Zn)-Total	0.156		0.0040	mg/L		04-OCT-12	R2449006
Total Metals in Water by ICPOES (Low)							
Calcium (Ca)-Total	46.5		0.50	mg/L		03-OCT-12	R2448567
Iron (Fe)-Total	0.195		0.010	mg/L		03-OCT-12	R2448567
Magnesium (Mg)-Total	8.32		0.10	mg/L		03-OCT-12	R2448567
Manganese (Mn)-Total	0.482		0.0020	mg/L		03-OCT-12	R2448567
Potassium (K)-Total	3.65		0.10	mg/L		03-OCT-12	R2448567
Sodium (Na)-Total	37.3		1.0	mg/L		03-OCT-12	R2448567
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	3.6		2.0	mg/L		26-SEP-12	R2444393
Hardness (as CaCO3)	150			mg/L		04-OCT-12	
Cyanide, Total	<0.0050		0.0050	mg/L		26-SEP-12	R2444685
Total Suspended Solids	7.2		3.0	mg/L		27-SEP-12	R2445406
pH	8.18		0.10	pH		01-OCT-12	R2447516
L1208947-9 LUP-21 WEEKLY Sampled By: L. Luedy on 12-SEP-12 @ 11:00 Matrix: Water							
Total Metals - CCME							
Mercury (Hg) - Total							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		17-OCT-12	R2456862
Total Metals in Water by ICPMS (Low)							
Aluminum (Al)-Total	<0.010		0.010	mg/L		04-OCT-12	R2449006
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		04-OCT-12	R2449006
Arsenic (As)-Total	<0.00040		0.00040	mg/L		04-OCT-12	R2449006
Barium (Ba)-Total	<0.0030		0.0030	mg/L		04-OCT-12	R2449006
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		04-OCT-12	R2449006
Boron (B)-Total	<0.050		0.050	mg/L		04-OCT-12	R2449006
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		04-OCT-12	R2449006
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		04-OCT-12	R2449006
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		04-OCT-12	R2449006

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

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Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1208947-9 LUP-21 WEEKLY Sampled By: L. Luedy on 12-SEP-12 @ 11:00 Matrix: Water Total Metals in Water by ICPMS (Low) Copper (Cu)-Total Lead (Pb)-Total Lithium (Li)-Total Molybdenum (Mo)-Total Nickel (Ni)-Total Selenium (Se)-Total Silver (Ag)-Total Thallium (Tl)-Total Tin (Sn)-Total Titanium (Ti)-Total Uranium (U)-Total Vanadium (V)-Total Zinc (Zn)-Total Total Metals in Water by ICPOES (Low) Calcium (Ca)-Total Iron (Fe)-Total Magnesium (Mg)-Total Manganese (Mn)-Total Potassium (K)-Total Sodium (Na)-Total Miscellaneous Parameters Alkalinity, Total (as CaCO3) Hardness (as CaCO3) Cyanide, Total Total Suspended Solids pH	<0.0010 <0.00010 <0.010 <0.0050 <0.0020 <0.00040 <0.00010 <0.00010 <0.00010 <0.050 <0.0010 <0.00010 <0.0010 <0.0040 1.13 0.063 0.62 0.0033 0.42 <1.0 3.8 5.4 <0.0050 <3.0 6.81		0.0010 0.00010 0.010 0.0050 0.0020 0.00040 0.00010 0.00010 0.00010 0.050 0.0010 0.00010 0.0010 0.0040 0.50 0.010 0.10 0.0020 0.10 1.0 2.0 0.0050 3.0 0.10	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L		04-OCT-12 04-OCT-12 04-OCT-12 04-OCT-12 04-OCT-12 04-OCT-12 04-OCT-12 04-OCT-12 04-OCT-12 04-OCT-12 04-OCT-12 04-OCT-12 04-OCT-12 04-OCT-12 03-OCT-12 03-OCT-12 03-OCT-12 03-OCT-12 03-OCT-12 03-OCT-12 26-SEP-12 04-OCT-12 26-SEP-12 27-SEP-12 01-OCT-12	R2449006 R2449006 R2449006 R2449006 R2449006 R2449006 R2449006 R2449006 R2449006 R2449006 R2449006 R2449006 R2449006 R2449006 R2448567 R2448567 R2448567 R2448567 R2448567 R2448567 R2444393 R2444685 R2445406 R2447516
L1208947-10 LUP-22 WEEKLY Sampled By: L. Luedy on 12-SEP-12 @ 11:00 Matrix: Water Total Metals - CCME Mercury (Hg) - Total Mercury (Hg)-Total Total Metals in Water by ICPMS (Low) Aluminum (Al)-Total Antimony (Sb)-Total Arsenic (As)-Total Barium (Ba)-Total Beryllium (Be)-Total Boron (B)-Total Cadmium (Cd)-Total Chromium (Cr)-Total Cobalt (Co)-Total Copper (Cu)-Total Lead (Pb)-Total Lithium (Li)-Total Molybdenum (Mo)-Total Nickel (Ni)-Total Selenium (Se)-Total Silver (Ag)-Total Thallium (Tl)-Total Tin (Sn)-Total	<0.00010 0.022 <0.00040 0.00068 <0.0030 <0.0010 <0.050 <0.000050 <0.0050 <0.0020 0.0011 <0.00010 <0.010 <0.0050 <0.0020 <0.00040 <0.00010 <0.00010 <0.00010 <0.00040 <0.00010 <0.00010 <0.00010 <0.050		0.00010 0.010 0.00040 0.00040 0.0030 0.0010 0.050 0.000050 0.0050 0.0020 0.0010 0.00010 0.010 0.0050 0.0020 0.0010 0.00010 0.010 0.0050 0.0020 0.00040 0.00010 0.00010 0.00010 0.050	mg/L mg/L		04-OCT-12 04-OCT-12	R2449148 R2449006

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1208947-10	LUP-22 WEEKLY							
Sampled By: L. Luedy on 12-SEP-12 @ 11:00								
Matrix: Water								
Total Metals in Water by ICPMS (Low)								
Titanium (Ti)-Total		<0.0010		0.0010	mg/L		04-OCT-12	R2449006
Uranium (U)-Total		<0.00010		0.00010	mg/L		04-OCT-12	R2449006
Vanadium (V)-Total		<0.0010		0.0010	mg/L		04-OCT-12	R2449006
Zinc (Zn)-Total		0.0074		0.0040	mg/L		04-OCT-12	R2449006
Total Metals in Water by ICPOES (Low)								
Calcium (Ca)-Total		1.20		0.50	mg/L		03-OCT-12	R2448567
Iron (Fe)-Total		0.066		0.010	mg/L		03-OCT-12	R2448567
Magnesium (Mg)-Total		0.62		0.10	mg/L		03-OCT-12	R2448567
Manganese (Mn)-Total		0.0034		0.0020	mg/L		03-OCT-12	R2448567
Potassium (K)-Total		0.48		0.10	mg/L		03-OCT-12	R2448567
Sodium (Na)-Total		<1.0		1.0	mg/L		03-OCT-12	R2448567
Miscellaneous Parameters								
Alkalinity, Total (as CaCO3)		<5.0		5.0	mg/L		15-SEP-12	R2438173
Hardness (as CaCO3)		5.6			mg/L		04-OCT-12	
Cyanide, Total		<0.0050		0.0050	mg/L		26-SEP-12	R2444685
Total Suspended Solids		<3.0		3.0	mg/L		17-SEP-12	R2437561
pH		6.71		0.10	pH		15-SEP-12	R2438173
L1208947-11	LUP-24 WEEKLY							
Sampled By: L. Luedy on 12-SEP-12 @ 11:00								
Matrix: Water								
Total Metals - CCME								
Mercury (Hg) - Total								
Mercury (Hg)-Total		<0.00010		0.00010	mg/L		04-OCT-12	R2449148
Total Metals in Water by ICPMS (Low)								
Aluminum (Al)-Total		0.011		0.010	mg/L		04-OCT-12	R2449006
Antimony (Sb)-Total		<0.00040		0.00040	mg/L		04-OCT-12	R2449006
Arsenic (As)-Total		0.00047		0.00040	mg/L		04-OCT-12	R2449006
Barium (Ba)-Total		<0.0030		0.0030	mg/L		04-OCT-12	R2449006
Beryllium (Be)-Total		<0.0010		0.0010	mg/L		04-OCT-12	R2449006
Boron (B)-Total		<0.050		0.050	mg/L		04-OCT-12	R2449006
Cadmium (Cd)-Total		<0.000050		0.000050	mg/L		04-OCT-12	R2449006
Chromium (Cr)-Total		<0.0050		0.0050	mg/L		04-OCT-12	R2449006
Cobalt (Co)-Total		<0.0020		0.0020	mg/L		04-OCT-12	R2449006
Copper (Cu)-Total		<0.0010		0.0010	mg/L		04-OCT-12	R2449006
Lead (Pb)-Total		<0.00010		0.00010	mg/L		04-OCT-12	R2449006
Lithium (Li)-Total		<0.010		0.010	mg/L		04-OCT-12	R2449006
Molybdenum (Mo)-Total		<0.0050		0.0050	mg/L		04-OCT-12	R2449006
Nickel (Ni)-Total		<0.0020		0.0020	mg/L		04-OCT-12	R2449006
Selenium (Se)-Total		<0.00040		0.00040	mg/L		04-OCT-12	R2449006
Silver (Ag)-Total		<0.00010		0.00010	mg/L		04-OCT-12	R2449006
Thallium (Tl)-Total		<0.00010		0.00010	mg/L		04-OCT-12	R2449006
Tin (Sn)-Total		<0.050		0.050	mg/L		04-OCT-12	R2449006
Titanium (Ti)-Total		<0.0010		0.0010	mg/L		04-OCT-12	R2449006
Uranium (U)-Total		<0.00010		0.00010	mg/L		04-OCT-12	R2449006
Vanadium (V)-Total		<0.0010		0.0010	mg/L		04-OCT-12	R2449006
Zinc (Zn)-Total		<0.0040		0.0040	mg/L		04-OCT-12	R2449006
Total Metals in Water by ICPOES (Low)								
Calcium (Ca)-Total		1.12		0.50	mg/L		03-OCT-12	R2448567
Iron (Fe)-Total		0.052		0.010	mg/L		03-OCT-12	R2448567
Magnesium (Mg)-Total		0.58		0.10	mg/L		03-OCT-12	R2448567
Manganese (Mn)-Total		0.0037		0.0020	mg/L		03-OCT-12	R2448567

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

[illegible]

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
DLM	Detection Limit Adjusted For Sample Matrix Effects

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	EPA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
ALK-TOT-ED	Water	Alkalinity, Total	APHA 2320 B-Auto-Pot. Titration
ANIONS-NO2-IC-VA	Water	Nitrite in Water by Ion Chromatography	EPA 300.0
This analysis is carried out using procedures adapted from EPA Method 300.0 "Determination of Inorganic Anions by Ion Chromatography". Nitrite is detected by UV absorbance.			
ANIONS-NO3-IC-VA	Water	Nitrate in Water by Ion Chromatography	EPA 300.0
This analysis is carried out using procedures adapted from EPA Method 300.0 "Determination of Inorganic Anions by Ion Chromatography". Nitrate is detected by UV absorbance.			
CN-T-CFA-VA	Water	Total Cyanide in water by CFA	ISO 14403:2002
This analysis is carried out using procedures adapted from ISO Method 14403:2002 "Determination of Total Cyanide using Flow Analysis (FIA and CFA)". Total or strong acid dissociable (SAD) cyanide is determined by in-line UV digestion along with sample distillation and final determination by colourimetric analysis. Method Limitation: This method is susceptible to interference from thiocyanate (SCN). If SCN is present in the sample, there could be a positive interference with this method, but it would be less than 1% and could be as low as zero.			
ETL-HARDNESS-TOT-ED	Water	Hardness (from Total Ca and Mg)	APHA 2340 B-Calculation
HG-T-CVAA-ED	Water	Mercury (Hg) - Total	EPA 245.7 / EPA 245.1
MET-T-L-ICP-ED	Water	Total Metals in Water by ICPOES (Low)	APHA 3120 B-ICP-OES
MET-T-L-MS-ED	Water	Total Metals in Water by ICPMS (Low)	SW 846 - 6020-ICPMS
NH3-CFA-ED	Water	Ammonia in Water by Colour	APHA 4500 NH3-NITROGEN (AMMONIA)
This analysis is carried out using procedures adapted from APHA Method 4500 NH3 "NITROGEN (AMMONIA)". Ammonia is determined using the automated phenate colourimetric method.			
PH-ED	Water	pH	APHA 4500 H-Electrode
All samples analyzed by this method for pH will have exceeded the 15 minute recommended hold time from time of sampling (field analysis is recommended for pH where highly accurate results are needed)			
PH-MAN-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
It is recommended that this analysis be conducted in the field.			
PH-MAN-VA	Water	pH by Manual Meter	APHA 4500-H pH Value
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.			
It is recommended that this analysis be conducted in the field.			
PH-PCT-VA	Water	pH by Meter (Automated)	APHA 4500-H "pH Value"
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode			
It is recommended that this analysis be conducted in the field.			
PH-PCT-VA	Water	pH by Meter (Automated)	APHA 4500-H pH Value
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode			
It is recommended that this analysis be conducted in the field.			
RA226-MMER-FC	Water	Ra226 by Alpha Scint., MDC=0.01 Bq/L	EPA 903.1
SOLIDS-TOTSUS-ED	Water	Total Suspended Solids	APHA 2540 D-Gravimetric
TSS-VA	Water	Total Suspended Solids by Gravimetric	APHA 2540 D - GRAVIMETRIC

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
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This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA
FC	ALS ENVIRONMENTAL - FORT COLLINS, COLORADO, USA

Chain of Custody Numbers:

09-010542

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg ww - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Quality Control Report

Workorder: L1208947

Report Date: 18-OCT-12

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Client: LUPIN MINES INCORPORATED
201-750 W Pender St.
Vancouver BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ALK-COL-VA		Water						
Batch	R2444393							
WG1554605-2 CRM		VA-ALKL-CONTROL						
Alkalinity, Total (as CaCO3)			92.4		%		85-115	26-SEP-12
WG1554605-5 CRM		VA-ALKM-CONTROL						
Alkalinity, Total (as CaCO3)			98.6		%		85-115	26-SEP-12
WG1554605-8 CRM		VA-ALKH-CONTROL						
Alkalinity, Total (as CaCO3)			101.7		%		85-115	26-SEP-12
WG1554605-11 DUP		L1212028-3						
Alkalinity, Total (as CaCO3)		12.8	12.8		mg/L	0.6	20	26-SEP-12
WG1554605-12 DUP		L1212092-5						
Alkalinity, Total (as CaCO3)		131	131		mg/L	0.0	20	26-SEP-12
WG1554605-1 MB								
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	26-SEP-12
WG1554605-4 MB								
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	26-SEP-12
WG1554605-7 MB								
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	26-SEP-12
ALK-TOT-ED		Water						
Batch	R2438173							
WG1547090-4 LCS								
Alkalinity, Total (as CaCO3)			102.8		%		85-115	15-SEP-12
WG1547090-1 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L		5	15-SEP-12
ANIONS-NO2-IC-VA		Water						
Batch	R2448523							
WG1558871-3 DUP		L1212310-14						
Nitrite (as N)		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	03-OCT-12
WG1558871-6 DUP		L1212909-1						
Nitrite (as N)		0.070	0.064		mg/L	10	20	03-OCT-12
WG1558871-9 DUP		L1214199-1						
Nitrite (as N)		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	03-OCT-12
WG1558871-15 LCS								
Nitrite (as N)			105.9		%		85-115	03-OCT-12
WG1558871-2 LCS								
Nitrite (as N)			104.6		%		85-115	03-OCT-12
WG1558871-1 MB								
Nitrite (as N)			<0.0010		mg/L		0.001	03-OCT-12
WG1558871-10 MB								
Nitrite (as N)			<0.0010		mg/L		0.001	03-OCT-12



Quality Control Report

Workorder: L1208947

Report Date: 18-OCT-12

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Client: LUPIN MINES INCORPORATED
201-750 W Pender St.
Vancouver BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ANIONS-NO2-IC-VA		Water						
Batch	R2448523							
WG1558871-13 MB								
Nitrite (as N)			<0.0010		mg/L		0.001	03-OCT-12
WG1558871-4 MB								
Nitrite (as N)			<0.0010		mg/L		0.001	03-OCT-12
WG1558871-7 MB								
Nitrite (as N)			<0.0010		mg/L		0.001	03-OCT-12
WG1558871-11 MS		L1214199-1						
Nitrite (as N)			99.2		%		75-125	03-OCT-12
WG1558871-14 MS		L1214487-1						
Nitrite (as N)			99.6		%		75-125	03-OCT-12
WG1558871-5 MS		L1212310-10						
Nitrite (as N)			102.7		%		75-125	03-OCT-12
WG1558871-8 MS		L1212370-15						
Nitrite (as N)			99.8		%		75-125	03-OCT-12
ANIONS-NO3-IC-VA		Water						
Batch	R2448523							
WG1558871-12 DUP		L1218175-2						
Nitrate (as N)		<0.050	<0.050	RPD-NA	mg/L	N/A	20	03-OCT-12
WG1558871-3 DUP		L1212310-14						
Nitrate (as N)		0.609	0.609		mg/L	0.0	20	03-OCT-12
WG1558871-6 DUP		L1212909-1						
Nitrate (as N)		0.32	0.32		mg/L	2.6	20	03-OCT-12
WG1558871-9 DUP		L1214199-1						
Nitrate (as N)		0.0839	0.0840		mg/L	0.1	20	03-OCT-12
WG1558871-15 LCS								
Nitrate (as N)			107.0		%		85-115	03-OCT-12
WG1558871-2 LCS								
Nitrate (as N)			107.1		%		85-115	03-OCT-12
WG1558871-1 MB								
Nitrate (as N)			<0.0050		mg/L		0.005	03-OCT-12
WG1558871-10 MB								
Nitrate (as N)			<0.0050		mg/L		0.005	03-OCT-12
WG1558871-13 MB								
Nitrate (as N)			<0.0050		mg/L		0.005	03-OCT-12
WG1558871-4 MB								
Nitrate (as N)			<0.0050		mg/L		0.005	03-OCT-12
WG1558871-7 MB								
Nitrate (as N)			<0.0050		mg/L		0.005	03-OCT-12



Quality Control Report

Workorder: L1208947

Report Date: 18-OCT-12

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Client: LUPIN MINES INCORPORATED
201-750 W Pender St.
Vancouver BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ANIONS-NO3-IC-VA		Water						
Batch	R2448523							
WG1558871-11	MS	L1214199-1						
Nitrate (as N)			105.8		%		75-125	03-OCT-12
WG1558871-14	MS	L1214487-1						
Nitrate (as N)			106.1		%		75-125	03-OCT-12
WG1558871-5	MS	L1212310-10						
Nitrate (as N)			105.0		%		75-125	03-OCT-12
WG1558871-8	MS	L1212370-15						
Nitrate (as N)			105.4		%		75-125	03-OCT-12
Batch	R2451147							
WG1560806-1	DUP	L1218876-4						
Nitrate (as N)		0.12	0.14		mg/L	15	20	05-OCT-12
WG1560806-3	DUP	L1219444-10						
Nitrate (as N)		6.18	6.16		mg/L	0.3	20	05-OCT-12
WG1560806-6	DUP	L1216613-3						
Nitrate (as N)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	05-OCT-12
WG1560806-9	DUP	L1216908-9						
Nitrate (as N)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	05-OCT-12
WG1560806-12	LCS							
Nitrate (as N)			107.2		%		85-115	05-OCT-12
WG1560806-10	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	05-OCT-12
WG1560806-4	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	05-OCT-12
WG1560806-7	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	05-OCT-12
WG1560806-11	MS	L1216908-3						
Nitrate (as N)			106.4		%		75-125	05-OCT-12
WG1560806-5	MS	L1219444-9						
Nitrate (as N)			89.0		%		75-125	05-OCT-12
WG1560806-8	MS	L1216613-3						
Nitrate (as N)			107.9		%		75-125	05-OCT-12
CN-T-CFA-VA		Water						
Batch	R2440797							
WG1550745-13	DUP	L1208509-29						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	20-SEP-12
WG1550745-17	DUP	L1208509-2						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	20-SEP-12
WG1550745-18	DUP	L1209882-1						



Quality Control Report

Workorder: L1208947

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Client: LUPIN MINES INCORPORATED
201-750 W Pender St.
Vancouver BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-CFA-VA		Water						
Batch	R2440797							
WG1550745-18	DUP	L1209882-1						
Cyanide, Total		0.191	0.194		mg/L	1.3	20	20-SEP-12
WG1550745-9	DUP	L1208509-11						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	20-SEP-12
WG1550745-12	LCS							
Cyanide, Total			96.7		%		80-120	20-SEP-12
WG1550745-16	LCS							
Cyanide, Total			93.6		%		80-120	20-SEP-12
WG1550745-2	LCS							
Cyanide, Total			93.8		%		80-120	20-SEP-12
WG1550745-21	LCS							
Cyanide, Total			93.7		%		80-120	20-SEP-12
WG1550745-25	LCS							
Cyanide, Total			90.7		%		80-120	20-SEP-12
WG1550745-4	LCS							
Cyanide, Total			95.9		%		80-120	20-SEP-12
WG1550745-8	LCS							
Cyanide, Total			96.2		%		80-120	20-SEP-12
WG1550745-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	20-SEP-12
WG1550745-11	MB							
Cyanide, Total			<0.0050		mg/L		0.005	20-SEP-12
WG1550745-15	MB							
Cyanide, Total			<0.0050		mg/L		0.005	20-SEP-12
WG1550745-20	MB							
Cyanide, Total			<0.0050		mg/L		0.005	20-SEP-12
WG1550745-24	MB							
Cyanide, Total			<0.0050		mg/L		0.005	20-SEP-12
WG1550745-3	MB							
Cyanide, Total			<0.0050		mg/L		0.005	20-SEP-12
WG1550745-7	MB							
Cyanide, Total			<0.0050		mg/L		0.005	20-SEP-12
WG1550745-10	MS	L1208509-11						
Cyanide, Total			101.8		%		70-130	20-SEP-12
WG1550745-14	MS	L1208509-29						
Cyanide, Total			102.2		%		70-130	20-SEP-12
WG1550745-19	MS	L1209882-1						
Cyanide, Total			92.1		%		70-130	20-SEP-12



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Client: LUPIN MINES INCORPORATED
201-750 W Pender St.
Vancouver BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-CFA-VA		Water						
Batch	R2442124							
WG1551867-12 MB								
Cyanide, Total			<0.0050		mg/L		0.005	22-SEP-12
WG1551867-5 MB								
Cyanide, Total			<0.0050		mg/L		0.005	22-SEP-12
WG1551867-9 MB								
Cyanide, Total			<0.0050		mg/L		0.005	22-SEP-12
WG1551867-4 MS		L1213041-1						
Cyanide, Total			102.1		%		70-130	22-SEP-12
Batch	R2443890							
WG1553349-17 DUP		L1209491-1						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	25-SEP-12
WG1553349-3 DUP		L1209566-11						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	25-SEP-12
WG1553349-7 DUP		L1210328-11						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	25-SEP-12
WG1553349-10 LCS								
Cyanide, Total			91.5		%		80-120	25-SEP-12
WG1553349-14 LCS								
Cyanide, Total			90.5		%		80-120	25-SEP-12
WG1553349-16 LCS								
Cyanide, Total			91.0		%		80-120	25-SEP-12
WG1553349-2 LCS								
Cyanide, Total			91.2		%		80-120	25-SEP-12
WG1553349-21 LCS								
Cyanide, Total			89.9		%		80-120	25-SEP-12
WG1553349-6 LCS								
Cyanide, Total			92.0		%		80-120	25-SEP-12
WG1553349-1 MB								
Cyanide, Total			<0.0050		mg/L		0.005	25-SEP-12
WG1553349-13 MB								
Cyanide, Total			<0.0050		mg/L		0.005	25-SEP-12
WG1553349-15 MB								
Cyanide, Total			<0.0050		mg/L		0.005	25-SEP-12
WG1553349-20 MB								
Cyanide, Total			<0.0050		mg/L		0.005	25-SEP-12
WG1553349-5 MB								
Cyanide, Total			<0.0050		mg/L		0.005	25-SEP-12
WG1553349-9 MB								



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Client: LUPIN MINES INCORPORATED
201-750 W Pender St.
Vancouver BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-CFA-VA		Water						
Batch	R2443890							
WG1553349-9	MB	L1209566-11						
Cyanide, Total			<0.0050		mg/L		0.005	25-SEP-12
WG1553349-4	MS							
Cyanide, Total			95.4		%		70-130	25-SEP-12
WG1553349-8	MS	L1210328-11						
Cyanide, Total			98.4		%		70-130	25-SEP-12
Batch	R2444685							
WG1554193-13	DUP	L1212891-4						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	26-SEP-12
WG1554193-21	DUP	L1210258-4						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	26-SEP-12
WG1554193-25	DUP	L1210041-1						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	26-SEP-12
WG1554193-27	DUP	L1211486-5						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	26-SEP-12
WG1554193-31	DUP	L1211423-2						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	26-SEP-12
WG1554193-9	DUP	L1212509-9						
Cyanide, Total		0.0898	0.0894		mg/L	0.4	20	26-SEP-12
WG1554193-12	LCS							
Cyanide, Total			95.2		%		80-120	26-SEP-12
WG1554193-16	LCS							
Cyanide, Total			93.1		%		80-120	26-SEP-12
WG1554193-2	LCS							
Cyanide, Total			91.1		%		80-120	26-SEP-12
WG1554193-20	LCS							
Cyanide, Total			93.9		%		80-120	26-SEP-12
WG1554193-24	LCS							
Cyanide, Total			91.0		%		80-120	26-SEP-12
WG1554193-30	LCS							
Cyanide, Total			92.4		%		80-120	26-SEP-12
WG1554193-34	LCS							
Cyanide, Total			89.8		%		80-120	26-SEP-12
WG1554193-8	LCS							
Cyanide, Total			93.5		%		80-120	26-SEP-12
WG1554193-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	26-SEP-12
WG1554193-11	MB							



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Client: LUPIN MINES INCORPORATED
201-750 W Pender St.
Vancouver BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-CFA-VA		Water						
Batch	R2444685							
WG1554193-11 MB								
Cyanide, Total			<0.0050		mg/L		0.005	26-SEP-12
WG1554193-15 MB								
Cyanide, Total			<0.0050		mg/L		0.005	26-SEP-12
WG1554193-19 MB								
Cyanide, Total			<0.0050		mg/L		0.005	26-SEP-12
WG1554193-23 MB								
Cyanide, Total			<0.0050		mg/L		0.005	26-SEP-12
WG1554193-29 MB								
Cyanide, Total			<0.0050		mg/L		0.005	26-SEP-12
WG1554193-33 MB								
Cyanide, Total			<0.0050		mg/L		0.005	26-SEP-12
WG1554193-7 MB								
Cyanide, Total			<0.0050		mg/L		0.005	26-SEP-12
WG1554193-10 MS		L1212509-9						
Cyanide, Total			98.9		%		70-130	26-SEP-12
WG1554193-14 MS		L1212891-4						
Cyanide, Total			102.0		%		70-130	26-SEP-12
WG1554193-22 MS		L1210258-4						
Cyanide, Total			99.8		%		70-130	26-SEP-12
WG1554193-26 MS		L1210041-1						
Cyanide, Total			99.0		%		70-130	26-SEP-12
WG1554193-28 MS		L1211486-5						
Cyanide, Total			100.1		%		70-130	26-SEP-12
WG1554193-32 MS		L1211423-2						
Cyanide, Total			97.6		%		70-130	26-SEP-12
HG-T-CVAA-ED		Water						
Batch	R2449148							
WG1560552-6 DUP		L1208947-12						
Mercury (Hg)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	04-OCT-12
WG1560552-2 LCS								
Mercury (Hg)-Total			96.7		%		80-120	04-OCT-12
WG1560552-3 LCSD		WG1560552-2						
Mercury (Hg)-Total		96.7	98.5		%	1.9	20	04-OCT-12
WG1560552-1 MB								
Mercury (Hg)-Total			<0.00010		mg/L		0.0001	04-OCT-12
WG1560552-7 MS		L1208947-12						
Mercury (Hg)-Total			101.0		%		70-130	04-OCT-12



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Client: LUPIN MINES INCORPORATED
201-750 W Pender St.
Vancouver BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-T-CVAA-ED		Water						
Batch	R2456862							
WG1567817-10	DUP	L1216778-8						
Mercury (Hg)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	17-OCT-12
WG1567817-12	DUP	L1216778-9						
Mercury (Hg)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	17-OCT-12
WG1567817-8	DUP	L1216778-7						
Mercury (Hg)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	17-OCT-12
WG1567817-2	LCS							
Mercury (Hg)-Total			86.5		%		80-120	17-OCT-12
WG1567817-3	LCSD	WG1567817-2						
Mercury (Hg)-Total		86.5	83.5		%	3.6	20	17-OCT-12
WG1567817-1	MB							
Mercury (Hg)-Total			<0.00010		mg/L		0.0001	17-OCT-12
WG1567817-11	MS	L1216778-8						
Mercury (Hg)-Total			87.9		%		70-130	17-OCT-12
WG1567817-13	MS	L1216778-9						
Mercury (Hg)-Total			89.3		%		70-130	17-OCT-12
WG1567817-9	MS	L1216778-7						
Mercury (Hg)-Total			91.1		%		70-130	17-OCT-12
MET-T-L-ICP-ED		Water						
Batch	R2448567							
WG1558555-5	DUP	L1208947-1						
Calcium (Ca)-Total		68.0	63.1		mg/L	7.4	20	03-OCT-12
Iron (Fe)-Total		0.237	0.225		mg/L	4.9	20	03-OCT-12
Magnesium (Mg)-Total		7.21	6.95		mg/L	3.7	20	03-OCT-12
Manganese (Mn)-Total		0.766	0.739		mg/L	3.6	20	03-OCT-12
Potassium (K)-Total		5.25	4.92		mg/L	6.3	20	03-OCT-12
Sodium (Na)-Total		54.1	53.7		mg/L	0.8	20	03-OCT-12
WG1558555-3	LCS							
Calcium (Ca)-Total			99.8		%		80-120	03-OCT-12
Iron (Fe)-Total			101.5		%		80-120	03-OCT-12
Magnesium (Mg)-Total			99.3		%		80-120	03-OCT-12
Manganese (Mn)-Total			98.4		%		80-120	03-OCT-12
Potassium (K)-Total			90.1		%		80-120	03-OCT-12
Sodium (Na)-Total			102.4		%		80-120	03-OCT-12
WG1558555-4	LCS							
Calcium (Ca)-Total			94.0		%		80-120	03-OCT-12



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Client: LUPIN MINES INCORPORATED
201-750 W Pender St.
Vancouver BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-ICP-ED		Water						
Batch	R2448567							
WG1558555-4	LCS							
Iron (Fe)-Total			94.3		%		80-120	03-OCT-12
Magnesium (Mg)-Total			92.6		%		80-120	03-OCT-12
Manganese (Mn)-Total			92.3		%		80-120	03-OCT-12
Potassium (K)-Total			85.7		%		80-120	03-OCT-12
Sodium (Na)-Total			95.2		%		80-120	03-OCT-12
WG1558087-1	MB							
Calcium (Ca)-Total			<0.50		mg/L		0.5	03-OCT-12
Iron (Fe)-Total			<0.01		mg/L		0.01	03-OCT-12
Magnesium (Mg)-Total			<0.10		mg/L		0.1	03-OCT-12
Manganese (Mn)-Total			<0.0020		mg/L		0.002	03-OCT-12
Potassium (K)-Total			<0.10		mg/L		0.1	03-OCT-12
Sodium (Na)-Total			<1.0		mg/L		1	03-OCT-12
WG1558555-1	MB							
Calcium (Ca)-Total			<0.50		mg/L		0.5	03-OCT-12
Iron (Fe)-Total			<0.010		mg/L		0.01	03-OCT-12
Magnesium (Mg)-Total			<0.10		mg/L		0.1	03-OCT-12
Manganese (Mn)-Total			<0.0020		mg/L		0.002	03-OCT-12
Potassium (K)-Total			<0.10		mg/L		0.1	03-OCT-12
Sodium (Na)-Total			<1.0		mg/L		1	03-OCT-12
WG1558555-2	MB							
Calcium (Ca)-Total			<0.50		mg/L		0.5	03-OCT-12
Iron (Fe)-Total			<0.010		mg/L		0.01	03-OCT-12
Magnesium (Mg)-Total			<0.10		mg/L		0.1	03-OCT-12
Manganese (Mn)-Total			<0.0020		mg/L		0.002	03-OCT-12
Potassium (K)-Total			<0.10		mg/L		0.1	03-OCT-12
Sodium (Na)-Total			<1.0		mg/L		1	03-OCT-12
MET-T-L-MS-ED		Water						
Batch	R2449006							
WG1558555-5	DUP	L1208947-1						
Aluminum (Al)-Total		0.054	0.055		mg/L	1.6	20	04-OCT-12
Antimony (Sb)-Total		<0.00040	<0.00040	RPD-NA	mg/L	N/A	20	04-OCT-12
Arsenic (As)-Total		0.0103	0.0106		mg/L	2.2	20	04-OCT-12
Barium (Ba)-Total		0.0135	0.0145		mg/L	6.9	20	04-OCT-12
Beryllium (Be)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	04-OCT-12



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Client: LUPIN MINES INCORPORATED
201-750 W Pender St.
Vancouver BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-ED		Water						
Batch	R2449006							
WG1558555-5	DUP	L1208947-1						
Boron (B)-Total		0.061	0.0663		mg/L	8.5	20	04-OCT-12
Cadmium (Cd)-Total		0.000189	0.000219		mg/L	15	20	04-OCT-12
Chromium (Cr)-Total		<0.0050	<0.00080	RPD-NA	mg/L	N/A	20	04-OCT-12
Cobalt (Co)-Total		0.0305	0.0313		mg/L	2.7	20	04-OCT-12
Copper (Cu)-Total		0.0040	0.0042		mg/L	5.8	20	04-OCT-12
Lead (Pb)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	04-OCT-12
Lithium (Li)-Total		0.022	0.0221		mg/L	0.8	20	04-OCT-12
Molybdenum (Mo)-Total		<0.0050	0.00011		mg/L	12	20	04-OCT-12
Nickel (Ni)-Total		0.0667	0.0709		mg/L	6.2	20	04-OCT-12
Selenium (Se)-Total		<0.00040	<0.00040	RPD-NA	mg/L	N/A	20	04-OCT-12
Silver (Ag)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	04-OCT-12
Thallium (Tl)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	04-OCT-12
Tin (Sn)-Total		<0.050	0.00123		mg/L	0.0	20	04-OCT-12
Titanium (Ti)-Total		<0.0010	<0.00060	RPD-NA	mg/L	N/A	20	04-OCT-12
Uranium (U)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	04-OCT-12
Vanadium (V)-Total		<0.0010	<0.00050	RPD-NA	mg/L	N/A	20	04-OCT-12
Zinc (Zn)-Total		0.233	0.248		mg/L	6.4	20	04-OCT-12
WG1558555-3	LCS							
Aluminum (Al)-Total			96.8		%		80-120	04-OCT-12
Antimony (Sb)-Total			102.7		%		80-120	04-OCT-12
Arsenic (As)-Total			100.3		%		80-120	04-OCT-12
Barium (Ba)-Total			102.9		%		80-120	04-OCT-12
Beryllium (Be)-Total			104.0		%		80-120	04-OCT-12
Boron (B)-Total			100.4		%		80-120	04-OCT-12
Cadmium (Cd)-Total			103.4		%		80-120	04-OCT-12
Chromium (Cr)-Total			99.8		%		80-120	04-OCT-12
Cobalt (Co)-Total			97.1		%		80-120	04-OCT-12
Copper (Cu)-Total			97.2		%		80-120	04-OCT-12
Lead (Pb)-Total			98.4		%		80-120	04-OCT-12
Lithium (Li)-Total			93.3		%		80-120	04-OCT-12
Molybdenum (Mo)-Total			104.0		%		80-120	04-OCT-12
Nickel (Ni)-Total			102.0		%		80-120	04-OCT-12
Selenium (Se)-Total			102.7		%		80-120	04-OCT-12



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Client: LUPIN MINES INCORPORATED
201-750 W Pender St.
Vancouver BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-ED		Water						
Batch	R2449006							
WG1558555-3	LCS							
Silver (Ag)-Total			91.9		%		80-120	04-OCT-12
Thallium (Tl)-Total			100.6		%		80-120	04-OCT-12
Tin (Sn)-Total			99.8		%		80-120	04-OCT-12
Titanium (Ti)-Total			97.8		%		80-120	04-OCT-12
Uranium (U)-Total			97.8		%		80-120	04-OCT-12
Vanadium (V)-Total			101.6		%		80-120	04-OCT-12
Zinc (Zn)-Total			100.1		%		80-120	04-OCT-12
WG1558555-4	LCS							
Aluminum (Al)-Total			96.5		%		80-120	04-OCT-12
Antimony (Sb)-Total			98.7		%		80-120	04-OCT-12
Arsenic (As)-Total			100.5		%		80-120	04-OCT-12
Barium (Ba)-Total			98.5		%		80-120	04-OCT-12
Beryllium (Be)-Total			99.0		%		80-120	04-OCT-12
Boron (B)-Total			96.4		%		80-120	04-OCT-12
Cadmium (Cd)-Total			100.1		%		80-120	04-OCT-12
Chromium (Cr)-Total			94.1		%		80-120	04-OCT-12
Cobalt (Co)-Total			95.0		%		80-120	04-OCT-12
Copper (Cu)-Total			91.9		%		80-120	04-OCT-12
Lead (Pb)-Total			95.4		%		80-120	04-OCT-12
Lithium (Li)-Total			91.8		%		80-120	04-OCT-12
Molybdenum (Mo)-Total			101.1		%		80-120	04-OCT-12
Nickel (Ni)-Total			93.9		%		80-120	04-OCT-12
Selenium (Se)-Total			98.8		%		80-120	04-OCT-12
Silver (Ag)-Total			86.5		%		80-120	04-OCT-12
Thallium (Tl)-Total			98.4		%		80-120	04-OCT-12
Tin (Sn)-Total			97.6		%		80-120	04-OCT-12
Titanium (Ti)-Total			105.4		%		80-120	04-OCT-12
Uranium (U)-Total			94.5		%		80-120	04-OCT-12
Vanadium (V)-Total			97.9		%		80-120	04-OCT-12
Zinc (Zn)-Total			95.9		%		80-120	04-OCT-12
WG1558087-1	MB							
Aluminum (Al)-Total			<0.010		mg/L		0.01	04-OCT-12
Antimony (Sb)-Total			<0.00040		mg/L		0.0004	04-OCT-12
Arsenic (As)-Total			<0.00040		mg/L		0.0004	04-OCT-12



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Client: LUPIN MINES INCORPORATED
201-750 W Pender St.
Vancouver BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-ED		Water						
Batch	R2449006							
WG1558087-1 MB								
Barium (Ba)-Total			<0.00020		mg/L		0.0002	04-OCT-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	04-OCT-12
Boron (B)-Total			<0.0040		mg/L		0.004	04-OCT-12
Cadmium (Cd)-Total			<0.000050		mg/L		0.00005	04-OCT-12
Chromium (Cr)-Total			<0.00080		mg/L		0.0008	04-OCT-12
Cobalt (Co)-Total			<0.00020		mg/L		0.0002	04-OCT-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	04-OCT-12
Lead (Pb)-Total			<0.00010		mg/L		0.0001	04-OCT-12
Lithium (Li)-Total			<0.0060		mg/L		0.006	04-OCT-12
Molybdenum (Mo)-Total			<0.00010		mg/L		0.0001	04-OCT-12
Nickel (Ni)-Total			<0.00020		mg/L		0.0002	04-OCT-12
Selenium (Se)-Total			<0.00040		mg/L		0.0004	04-OCT-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	04-OCT-12
Thallium (Tl)-Total			<0.00010		mg/L		0.0001	04-OCT-12
Tin (Sn)-Total			<0.00040		mg/L		0.0004	04-OCT-12
Titanium (Ti)-Total			<0.00060		mg/L		0.0006	04-OCT-12
Uranium (U)-Total			<0.00010		mg/L		0.0001	04-OCT-12
Vanadium (V)-Total			<0.00050		mg/L		0.0005	04-OCT-12
Zinc (Zn)-Total			<0.0040		mg/L		0.004	04-OCT-12
WG1558555-1 MB								
Aluminum (Al)-Total			<0.010		mg/L		0.01	04-OCT-12
Antimony (Sb)-Total			<0.00040		mg/L		0.0004	04-OCT-12
Arsenic (As)-Total			<0.00040		mg/L		0.0004	04-OCT-12
Barium (Ba)-Total			<0.00020		mg/L		0.0002	04-OCT-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	04-OCT-12
Boron (B)-Total			<0.0040		mg/L		0.004	04-OCT-12
Cadmium (Cd)-Total			<0.000050		mg/L		0.00005	04-OCT-12
Chromium (Cr)-Total			<0.00080		mg/L		0.0008	04-OCT-12
Cobalt (Co)-Total			<0.00020		mg/L		0.0002	04-OCT-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	04-OCT-12
Lead (Pb)-Total			<0.00010		mg/L		0.0001	04-OCT-12
Lithium (Li)-Total			<0.0060		mg/L		0.006	04-OCT-12
Molybdenum (Mo)-Total			<0.00010		mg/L		0.0001	04-OCT-12
Nickel (Ni)-Total			<0.00020		mg/L		0.0002	04-OCT-12



Quality Control Report

Workorder: L1208947

Report Date: 18-OCT-12

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Client: LUPIN MINES INCORPORATED
201-750 W Pender St.
Vancouver BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-CFA-ED		Water						
Batch	R2448346							
WG1559111-10	DUP	L1218305-1						
Ammonia, Total (as N)		1.49	1.48		mg/L	0.7	20	03-OCT-12
WG1559111-13	DUP	L1217656-20						
Ammonia, Total (as N)		<0.050	<0.050	RPD-NA	mg/L	N/A	20	03-OCT-12
WG1559111-4	DUP	L1215265-20						
Ammonia, Total (as N)		<0.050	<0.050	RPD-NA	mg/L	N/A	20	03-OCT-12
WG1559111-5	DUP	L1212501-10						
Ammonia, Total (as N)		0.191	0.224		mg/L	6.7	20	03-OCT-12
WG1559111-2	LCS							
Ammonia, Total (as N)			93.6		%		85-115	03-OCT-12
WG1559111-1	MB							
Ammonia, Total (as N)			<0.050		mg/L		0.05	03-OCT-12
WG1559111-12	MS	L1217656-10						
Ammonia, Total (as N)			89.8		%		75-125	03-OCT-12
WG1559111-14	MS	L1207002-37						
Ammonia, Total (as N)			92.9		%		75-125	03-OCT-12
WG1559111-3	MS	L1215265-10						
Ammonia, Total (as N)			96.8		%		75-125	03-OCT-12
WG1559111-6	MS	L1208947-3						
Ammonia, Total (as N)			95.9		%		75-125	03-OCT-12
PH-ED		Water						
Batch	R2438173							
WG1547090-3	LCS							
pH			7.02		pH		6.9-7.1	15-SEP-12
PH-MAN-VA		Water						
Batch	R2451562							
WG1562343-2	CRM	VA-PH7-BUF						
pH			7.00		pH		6.9-7.1	05-OCT-12
WG1562343-3	DUP	L1216895-18						
pH		8.09	8.06	J	pH	0.03	0.2	05-OCT-12
PH-PCT-VA		Water						
Batch	R2447516							
WG1557100-24	CRM	VA-PH7-BUF						
pH			6.99		pH		6.9-7.1	01-OCT-12
WG1557100-25	CRM	VA-PH7-BUF						
pH			7.01		pH		6.9-7.1	01-OCT-12
WG1557100-26	CRM	VA-PH7-BUF						



Quality Control Report

Workorder: L1208947

Report Date: 18-OCT-12

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Client: LUPIN MINES INCORPORATED
201-750 W Pender St.
Vancouver BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH-PCT-VA		Water						
Batch	R2447516							
WG1557100-26	CRM	VA-PH7-BUF						
pH			6.97		pH		6.9-7.1	01-OCT-12
WG1557100-27	CRM	VA-PH7-BUF						
pH			6.97		pH		6.9-7.1	01-OCT-12
WG1557100-28	CRM	VA-PH7-BUF						
pH			6.99		pH		6.9-7.1	01-OCT-12
WG1557100-29	CRM	VA-PH7-BUF						
pH			6.97		pH		6.9-7.1	01-OCT-12
WG1557100-30	CRM	VA-PH7-BUF						
pH			6.97		pH		6.9-7.1	01-OCT-12
WG1557100-31	DUP	L1215600-14						
pH		8.05	8.03	J	pH	0.02	0.2	01-OCT-12
WG1557100-32	DUP	L1215631-1						
pH		8.26	8.27	J	pH	0.01	0.2	01-OCT-12
WG1557100-34	DUP	L1216395-2						
pH		8.30	8.32	J	pH	0.02	0.2	01-OCT-12
WG1557100-35	DUP	L1212975-1						
pH		7.81	7.83	J	pH	0.02	0.2	01-OCT-12
WG1557100-37	DUP	L1208947-9						
pH		6.81	6.87	J	pH	0.06	0.2	01-OCT-12
SOLIDS-TOTSUS-ED		Water						
Batch	R2437561							
WG1547438-3	DUP	L1209199-3						
Total Suspended Solids		<3.0	<3.0	RPD-NA	mg/L	N/A	20	17-SEP-12
WG1547438-4	DUP	L1209206-2						
Total Suspended Solids		28.0	27.0		mg/L	3.6	20	17-SEP-12
WG1547438-5	DUP	L1209266-4						
Total Suspended Solids		<3.0	<3.0	RPD-NA	mg/L	N/A	20	17-SEP-12
WG1547438-2	LCS							
Total Suspended Solids			96.0		%		85-115	17-SEP-12
WG1547438-1	MB							
Total Suspended Solids			<3.0		mg/L		3	17-SEP-12
TSS-VA		Water						
Batch	R2445406							
WG1555375-12	DUP	L1215218-4						
Total Suspended Solids		<3.0	<3.0	RPD-NA	mg/L	N/A	20	27-SEP-12
WG1555375-3	DUP	L1208947-1						
Total Suspended Solids		<3.0	<3.0					



Quality Control Report

Workorder: L1208947

Report Date: 18-OCT-12

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Client: LUPIN MINES INCORPORATED
201-750 W Pender St.
Vancouver BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TSS-VA		Water						
Batch	R2445406							
WG1555375-3	DUP	L1208947-1						
Total Suspended Solids		<3.0	<3.0	RPD-NA	mg/L	N/A	20	27-SEP-12
WG1555375-6	DUP	L1214086-33						
Total Suspended Solids		<3.0	<3.0	RPD-NA	mg/L	N/A	20	27-SEP-12
WG1555375-9	DUP	L1214086-55						
Total Suspended Solids		3.8	5.2	J	mg/L	1.3	6	27-SEP-12
WG1555375-11	LCS							
Total Suspended Solids			95.7		%		85-115	27-SEP-12
WG1555375-2	LCS							
Total Suspended Solids			97.0		%		85-115	27-SEP-12
WG1555375-5	LCS							
Total Suspended Solids			99.7		%		85-115	27-SEP-12
WG1555375-8	LCS							
Total Suspended Solids			95.7		%		85-115	27-SEP-12
WG1555375-1	MB							
Total Suspended Solids			<3.0		mg/L		3	27-SEP-12
WG1555375-10	MB							
Total Suspended Solids			<3.0		mg/L		3	27-SEP-12
WG1555375-4	MB							
Total Suspended Solids			<3.0		mg/L		3	27-SEP-12
WG1555375-7	MB							
Total Suspended Solids			<3.0		mg/L		3	27-SEP-12
Batch	R2450696							
WG1561528-3	DUP	L1208947-4						
Total Suspended Solids		3.3	4.0		mg/L	18	20	05-OCT-12
WG1561528-2	LCS							
Total Suspended Solids			93.3		%		85-115	05-OCT-12
WG1561528-5	LCS							
Total Suspended Solids			93.3		%		85-115	05-OCT-12
WG1561528-1	MB							
Total Suspended Solids			<3.0		mg/L		3	05-OCT-12
WG1561528-4	MB							
Total Suspended Solids			<3.0		mg/L		3	05-OCT-12

Quality Control Report

Workorder: L1208947

Report Date: 18-OCT-12

Client: LUPIN MINES INCORPORATED
201-750 W Pender St.
Vancouver BC V6T 2T7

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Contact: David Vokey

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
DLM	Detection Limit Adjusted For Sample Matrix Effects
J	Duplicate results and limits are expressed in terms of absolute difference.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L1208947

Report Date: 18-OCT-12

Client: LUPIN MINES INCORPORATED
201-750 W Pender St.
Vancouver BC V6T 2T7
Contact: David Vokey

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Total Suspended Solids by Gravimetric							
	1	10-SEP-12 10:00	27-SEP-12 12:16	7	17	days	EHT
	2	10-SEP-12 10:30	27-SEP-12 12:16	7	17	days	EHT
	3	10-SEP-12 11:00	27-SEP-12 12:16	7	17	days	EHT
	4	08-SEP-12 10:30	05-OCT-12 23:38	7	28	days	EHT
	5	09-SEP-12 10:30	05-OCT-12 23:38	7	27	days	EHT
	7	12-SEP-12 10:30	05-OCT-12 23:38	7	24	days	EHT
	8	12-SEP-12 11:00	27-SEP-12 12:16	7	15	days	EHT
	9	12-SEP-12 11:00	27-SEP-12 12:16	7	15	days	EHT
pH							
	10	12-SEP-12 11:00	15-SEP-12 21:56	0.25	83	hours	EHTR-FM
	11	12-SEP-12 11:00	15-SEP-12 22:02	0.25	83	hours	EHTR-FM
	12	12-SEP-12 11:00	15-SEP-12 22:08	0.25	83	hours	EHTR-FM
pH by Manual Meter							
	4	08-SEP-12 10:30	05-OCT-12 04:00	0.25	642	hours	EHTR-FM
	5	09-SEP-12 10:30	05-OCT-12 04:00	0.25	618	hours	EHTR-FM
	7	12-SEP-12 10:30	05-OCT-12 04:00	0.25	546	hours	EHTR-FM
pH by Meter (Automated)							
	1	10-SEP-12 10:00	01-OCT-12 08:09	0.25	502	hours	EHTR-FM
	2	10-SEP-12 10:30	01-OCT-12 08:09	0.25	502	hours	EHTR-FM
	3	10-SEP-12 11:00	01-OCT-12 08:09	0.25	501	hours	EHTR-FM
	8	12-SEP-12 11:00	01-OCT-12 08:09	0.25	453	hours	EHTR-FM
	9	12-SEP-12 11:00	01-OCT-12 08:09	0.25	453	hours	EHTR-FM
Anions and Nutrients							
Alkalinity by Colourimetric (Automated)							
	1	10-SEP-12 10:00	26-SEP-12 18:56	14	16	days	EHT
	2	10-SEP-12 10:30	26-SEP-12 18:56	14	16	days	EHT
	3	10-SEP-12 11:00	26-SEP-12 18:56	14	16	days	EHT
Nitrate in Water by Ion Chromatography							
	1	10-SEP-12 10:00	03-OCT-12 09:24	3	23	days	EHTR
	2	10-SEP-12 10:30	03-OCT-12 09:24	3	23	days	EHTR
	3	10-SEP-12 11:00	05-OCT-12 11:24	3	25	days	EHTR
Nitrite in Water by Ion Chromatography							
	1	10-SEP-12 10:00	03-OCT-12 09:24	3	23	days	EHTR
	2	10-SEP-12 10:30	03-OCT-12 09:24	3	23	days	EHTR
	3	10-SEP-12 11:00	03-OCT-12 09:24	3	23	days	EHTR
Total Metals							
Mercury (Hg) - Total							
	9	12-SEP-12 11:00	17-OCT-12 16:58	28	35	days	EHT

Legend & Qualifier Definitions:

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR: Exceeded ALS recommended hold time prior to sample receipt.
EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT: Exceeded ALS recommended hold time prior to analysis.
Rec. HT: ALS recommended hold time (see units).

Notes*:
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L1208947 were received on 13-SEP-12 15:36.

Quality Control Report

Workorder: L1208947

Report Date: 18-OCT-12

Client: LUPIN MINES INCORPORATED
201-750 W Pender St.
Vancouver BC V6T 2T7

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Contact: David Vokey

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



Radium-226

Case Narrative

ALS Environmental

L1208947

Work Order Number: 1209255

1. This report consists of the analytical results for three water sample received by ALS on 09/18/2012 and 10/03/2012.
2. These samples were prepared and analyzed according to the current revision of SOP 783. The analyss were completed on 10/12/2012.
3. The analysis results for these samples are reported in units of BQ/L. The samples were not filtered prior to analysis.
4. Sample volume was insufficient to allow preparation of a duplicate. A laboratory control sample duplicate (LCSD) was prepared in lieu of a client sample duplicate.
5. The ICP-AES measurement of barium concentrations prior to chemical separation for samples 1209255-1, -3, and all associated QC samples showed concentrations less than zero. To avoid a low bias in the final analytical results, the initial barium concentration was taken to be zero.
6. No anomalous situations were encountered during the preparation or analysis of these samples. All quality control criteria were met.



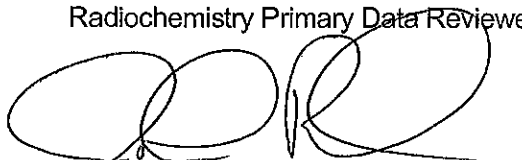
The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.



Jean Anderson

Radiochemistry Primary Data Reviewer

10/15/12
Date



Radiochemistry Final Data Reviewer

10/15/12
Date

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1209255

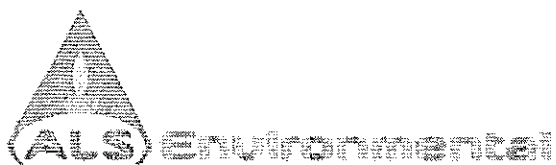
Client Name: ALS Environmental

Client Project Name:

Client Project Number: L1208947

Client PO Number: L1208947

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
LUP-10 MONTHLY	1209255-1		WATER	10-Sep-12	
LUP-21 MONTHLY	1209255-2		WATER	10-Sep-12	
LUP-24 MONTHLY	1209255-3		WATER	10-Sep-12	



L1208947

YELLOWKNIFE

1209255

Subcontract Request Form

Subcontract To:

ALS ENVIRONMENTAL - FORT COLLINS, COLORADO, USA

225 COMMERCE DRIVE
FORT COLLINS, CO 80524

NOTES: Please reference on final report and invoice: PO# L1208947
ALS requires QC data to be provided with your final results.

Please see enclosed 3 sample(s) in 3 Container(s)

SAMPLE NUMBER	CLIENT ID	ANALYTICAL REQUIRED	DATE SAMPLED DUE DATE	Priority Flag
L1208947-1	(1) LUP-10 MONTHLY	Ra226 by Alpha Scint., MDC=0.01 Bq/L (RA226-MMER-FC 1)	9/10/2012 10/8/2012	
L1208947-2	(2) LUP-21 MONTHLY	Ra226 by Alpha Scint., MDC=0.01 Bq/L (RA226-MMER-FC 1)	9/10/2012 10/8/2012	
L1208947-3	(3) LUP-24 MONTHLY	Ra226 by Alpha Scint., MDC=0.01 Bq/L (RA226-MMER-FC 1)	9/10/2012 10/8/2012	

Subcontract Info Contact:

Sean Whitaker (867) 877-5593

Analysis and reporting info contact:

Shannon Luchka

314 OLD AIRPORT ROAD

Unit 116

YELLOWKNIFE, NT X1A 3T3

Phone: (867) 877-5593

Email: Shannon.Luchka@alsglobal.com

Please email confirmation of receipt to:

Shannon.Luchka@alsglobal.com

Shipped By:

Date Shipped:

Received By:

Date Received:

Verified By:

Date Verified:

Temperature:

Sample Integrity Issues:

**L1208947**

YELLOWKNIFE

1209255

Subcontract Request Form**Subcontract To:****ALS ENVIRONMENTAL - FORT COLLINS, COLORADO, USA**225 COMMERCE DRIVE
FORT COLLINS, CO 80524**VA-SHIP-006****NOTES:** Please reference on final report and invoice: PO# L1208947
ALS requires QC data to be provided with your final results.*Additional sample.*Please see enclosed 3 sample(s) in 3 Container(s)

SAMPLE NUMBER	CLIENT ID	ANALYTICAL REQUIRED	DATE SAMPLED	Priority Flag
			DUE DATE	
L1208947-1	① LUP-10 MONTHLY	Ra226 by Alpha Scint., MDC=0.01 Bq/L (RA226-MMER-FC 1)	9/10/2012 10/8/2012	
L1208947-2	② LUP-21 MONTHLY	Ra226 by Alpha Scint., MDC=0.01 Bq/L (RA226-MMER-FC 1)	9/10/2012 10/8/2012	
L1208947-3	③ LUP-24 MONTHLY	Ra226 by Alpha Scint., MDC=0.01 Bq/L (RA226-MMER-FC 1)	9/10/2012 10/8/2012	

Subcontract Info Contact: Sean Whitaker (867) 877-5593

Analysis and reporting info contact: Shannon Luchka
314 OLD AIRPORT ROAD
Unit 116
YELLOWKNIFE, NT X1A 3T3

Phone: (867) 877-5593

Email: Shannon.Luchka@alsglobal.com

Please email confirmation of receipt to:

Shannon.Luchka@alsglobal.com

Shipped By: _____ Date Shipped: _____
Received By: Lauren Schurup Date Received: 10/3/12 @ 0935
Verified By: _____ Date Verified: _____
Temperature: _____

Sample Integrity Issues: _____



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: ALS Edmonton

Workorder No: 1209255

Project Manager: ARW

Initials: LAS Date: 9/18/12

1. Does this project require any special handling in addition to standard ALS procedures?		YES	<u>NO</u>
2. Are custody seals on shipping containers intact?	<u>NONE</u>	YES	NO
3. Are Custody seals on sample containers intact?	<u>NONE</u>	YES	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		<u>YES</u>	NO
5. Are the COC and bottle labels complete and legible?		<u>YES</u>	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		<u>YES</u>	NO
7. Were airbills / shipping documents present and/or removable?	DROP OFF	<u>YES</u>	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	N/A	<u>YES</u>	NO
9. Are all aqueous non-preserved samples pH 4-9?	<u>N/A</u>	YES	NO
10. Is there sufficient sample for the requested analyses?		YES	<u>NO</u>
11. Were all samples placed in the proper containers for the requested analyses?		<u>YES</u>	NO
12. Are all samples within holding times for the requested analyses?		<u>YES</u>	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		<u>YES</u>	NO
14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: ____ < green pea ____ > green pea	<u>N/A</u>	YES	NO
15. Do any water samples contain sediment? Amount Amount of sediment: ____ dusting ____ moderate ____ heavy	N/A	YES	<u>NO</u>
16. Were the samples shipped on ice?		YES	<u>NO</u>
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: #2 #4	<u>RAD ONLY</u>	YES	<u>NO</u>
Cooler #: <u>1</u>			
Temperature (°C): <u>AMB</u>			
No. of custody seals on cooler: <u>0</u>			
External µR/hr reading: <u>11</u>			
Background µR/hr reading: <u>11</u>			
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? <u>YES</u> / NO / NA (If no, see Form 008.)			

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

*10 1209255-1 (LVP-10 MONTHLY) arrived with 250mL sample?
 ↓ -2 (LVP-21 ↓) 500mL sample } *
 ↓ -3 (LVP-24 ↓) 500mL sample }

* requested Ra226 analysis, standard aliquot = 1000mL.

If applicable, was the client contacted? YES / NO / NA Contact: Shannon Akkerman Date/Time: 9/18/12

Project Manager Signature / Date: [Signature]



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: ALS Burnaby

Workorder No: 1209255

Project Manager: ARW

Initials: LAS Date: 10/3/12

1. Does this project require any special handling in addition to standard ALS procedures?		YES	<u>NO</u>
2. Are custody seals on shipping containers intact?	<u>NONE</u>	YES	NO
3. Are Custody seals on sample containers intact?	<u>NONE</u>	YES	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		<u>YES</u>	NO
5. Are the COC and bottle labels complete and legible?		<u>YES</u>	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		<u>YES</u>	NO
7. Were airbills / shipping documents present and/or removable?	DROP OFF	<u>YES</u>	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	N/A	<u>YES</u>	NO
9. Are all aqueous non-preserved samples pH 4-9?	<u>N/A</u>	YES	NO
10. Is there sufficient sample for the requested analyses?		<u>YES</u>	NO
11. Were all samples placed in the proper containers for the requested analyses?		<u>YES</u>	NO
12. Are all samples within holding times for the requested analyses?		<u>YES</u>	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		<u>YES</u>	NO
14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: ____ < green pea ____ > green pea	<u>N/A</u>	YES	NO
15. Do any water samples contain sediment? Amount Amount of sediment: ____ dusting ____ moderate ____ heavy	N/A	YES	<u>NO</u>
16. Were the samples shipped on ice?		<u>YES</u>	NO
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: <u>#2</u> #4	RAD ONLY	<u>YES</u>	NO
Cooler #: <u>1</u> Temperature (°C): <u>Las 10/3/12 - 5.2°C</u>			
No. of custody seals on cooler: <u>0</u>			
External µR/hr reading: <u>12</u>			
Background µR/hr reading: <u>11</u>			
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? <u>YES</u> / NO / NA (If no, see Form 008.)			

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

**additional sample material for september workorder*

If applicable, was the client contacted? YES / NO / NA Contact: _____ Date/Time: _____

Project Manager Signature / Date: [Signature] 10-4-12

From: (780) 413-5280
 Peter Olejniczak
 ALS Laboratory Group
 9938-67 AVE

Origin ID: YEGA

FedEx
 Express



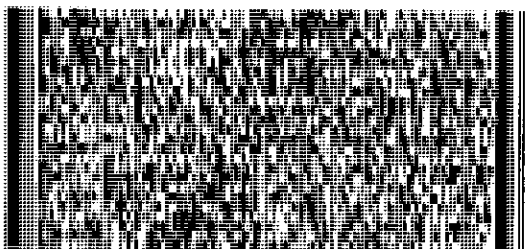
edmonton, AB T6E0P5
 CANADA

SHIP TO: (970) 490-1511

BILL SENDER

ALS Ft. Collins
ALS Laboratory Group
225 COMMERCE DR

FORT COLLINS, CO 80524
US



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CONSIGNEE COPY - PLEASE PLACE IN POUCH

Ship Date: 17SEP12
 Act/Wgt: 1.0 KG
 CAD: 100133238/INCA3300

12 09255

REF:
 DESC-1: water sample for research purposes only
 DESC-2:
 DESC-3:
 DESC-4:

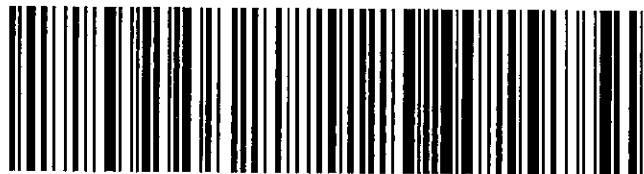
COUNTRY MFG: CA
 CARRIAGE VALUE: 1.00 CAD
 CUSTOMS VALUE: 1.00 CAD
 T/C: S 140079146 D/T: S 140079146
 SIGN: Peter Olejniczak
 EIN/VAT:
 PKG TYPE: CUSTOMER

11
 0-

TRK# 7989 8314 8441
 0430

A2
INTL PRIORITY
ISR
80524
CO-US
DEN

XH FTCA



515G1MD3A/AA44

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
/templates/components/dotcom_label_contents/TnCIntl/en/TC_intl.html loading...

1209255

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AGREEMENT TO TERMS: By giving us your shipment, you agree, regardless of whether you sign the front of this Air Waybill, for yourself and as agent for and on behalf of any other person having an interest in this shipment, to all terms on this NON-NEGOTIABLE Air Waybill, in any applicable tariff, and in our current Service Guide or Standard Conditions of Carriage, copies of which are available upon request. If there is a conflict between this Air Waybill and either the tariff, Service Guide or Standard Conditions then in effect, the tariff and the terms of any customer automation agreement between the shipper and Federal Express will control (the Service Guide or Standard Conditions have secondary priority). No one is authorized to alter or modify the terms of our agreement. This Air Waybill shall be binding on us when the shipment is accepted.

YOUR OBLIGATIONS: You warrant that each article in the shipment is properly described on this Air Waybill and is acceptable for transport by us, and that the shipment is properly marked, addressed (including postal codes) and packaged to ensure safe transportation with ordinary care in handling.

NOTE CONCERNING LIMITATIONS OF LIABILITY: Air Carriage Notice. If the carriage of your shipment by air involves an ultimate destination or stop in a country other than the country of departure, the Warsaw Convention, an international treaty relating to international carriage by air, may be applicable, which treaty would then govern and in most cases limit our liability for loss or delay of or damage to your shipment. In the U.S. the Warsaw Convention limits our liability to U.S. \$9.07 per pound (U.S. \$20.36 per kilogram). Unless you declare a higher value for carriage as described below. The interpretation of the Warsaw Convention liability limits may vary in other countries. There are no stopping places which are agreed at the time of tender of the shipment and we reserve the right to route shipments in any way we deem appropriate.

Road Transport Notice: Shipments transported partly or solely by road be it explicit agreement to do so or not, to, from a country which is party to the Convention on the Contract for the International Carriage of Goods by Road (the 'CMR') are subject to the terms and conditions of the CMR, notwithstanding any other provisions of this Agreement to the contrary. For these shipments transported solely by road, if a conflict arises between the provisions of the CMR and this Air Waybill the terms of the CMR shall prevail.

Limitation of Liability: If not governed by the Warsaw Convention or the CMR as described above, our maximum liability for loss, damage or delay is limited by this Air Waybill to U.S. \$100 per shipment or U.S. \$9.07 per pound (U.S. \$20.36 per kilo) (or equivalent local currency), whichever is greater, unless you declare a higher value for carriage as described below. FedEx does not provide cargo liability or all-risk insurance, but you may pay an additional charge to each additional U.S. \$100 (or equivalent local currency) of declared value for carriage. If a higher value for carriage is declared and the additional charge is paid, FedEx maximum liability will be the lesser of the declared value for carriage or your actual damages.

LIABILITIES NOT ASSUMED: IN ANY EVENT, WE WON'T BE LIABLE FOR ANY DAMAGES WHETHER DIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL, IN EXCESS OF THE DECLARED VALUE FOR CARRIAGE (INCLUDING BUT NOT LIMITED TO LOSS OF INCOME OR PROFITS) WHETHER OR NOT WE HAD ANY KNOWLEDGE THAT SUCH DAMAGES MIGHT BE INCURRED, UNLESS SUCH DAMAGES WERE CAUSED BY OUR OWN WILLFUL MISCONDUCT OR GROSS NEGLIGENCE.

We won't be liable for your actions or omissions, including but not limited to incorrect declaration of cargo, improper or insufficient packing, securing, marking or addressing of the shipment, or for the acts or omissions of this recipient or anyone else with an interest in the shipment. Also we won't be liable if you (or) the recipient violate any of the terms of our agreement. We won't be liable for loss of or damage to shipments of cash, currency or other prohibited items. We won't be liable for loss, damages or delay caused by events we cannot control, including but not limited to acts of God, perils of the air, weather conditions mechanical delays, acts of public enemies, war, strikes, civil commotions, or acts or omissions of public authorities (including customs and health officials) with actual or apparent authority.

NO WARRANTIES: We make no warranties, express or implied.

CLAIM FOR LOSS, DAMAGE FOR DELAY: ALL CLAIMS MUST BE NOTIFIED TO US WITHIN 15 DAYS AFTER DELIVERY OF THE SHIPMENT FAILING WHICH NO ACTION FOR DAMAGES MAY BE BROUGHT. All claims for loss, non-delivery or mis-delivery must be received by us within 90 days after the shipment is accepted by us. The right to damages against us shall be extinguished unless an action is brought within two years from the date of delivery of the shipment or from date on which the shipment should have been delivered. Within 30 days after notification to us (or) the claim, it must be documented by sending us all relevant information about it. We are not obligated to act on any claim until all transportation charges have been paid; the claim amount may not be deducted from those charges. If the recipient accepts the shipment without noting any damage on the delivery record, we will assume the shipment was delivered in good condition. In order for us to consider a claim for damages, the contents, original shipping cartons, and packing must be available to us for inspection.

RIGHT TO INSPECT: Your shipment may, at our option or at the request of governmental authorities, be opened and inspected by us or such authorities or us at any time.

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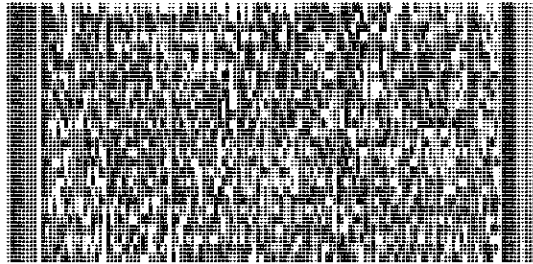
PLEASE FOLD THIS SHIPPING DOCUMENT IN HALF AND PLACE IT IN A WAYBILL POUCH AFFIXED TO YOUR SHIPMENT SO THAT THE BARCODE PORTION OF THE LABEL CAN BE READ AND SCANNED. ***WARNING: USE ONLY THE PRINTED ORIGINAL LABEL FOR SHIPPING. USING PHOTOCOPIES OF THIS LABEL FOR SHIPPING IS FRAUDULENT AND COULD RESULT IN ADDITIONAL BILLING CHARGES, ALONG WITH THE CANCELLATION OF YOUR FEDEX ACCOUNT NUMBER.

From: (604) 253-4188
JOANNAH JANSZ
ALS ENVIRONMENTAL
UNIT 100 8081 LOUGHEED HIGHWAY

BURNABY, BC V5B1Z9
CANADA

SHIP TO: (970) 490-1511 BILL SENDER
SAMPLE RECEIVING
ALS ENVIRONMENTAL
225 COMMERCE DRIVE

FORT COLLINS, CO 80524
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Origin ID: YBYA
FedEx
Express



J12131208180326

Ship Date: 02OCT12
ActWgt: 15.0 LB MAN
CAD: 0951421/JCAFE2605

REF: SUBLET

DESC-1: Environmental Water Samples in 1L plastic bottles for Ana
DESC-2:
DESC-3:
DESC-4:

COUNTRY MFG: CA
CARRIAGE VALUE: 0.00 CAD
CUSTOMS VALUE: 3.00 CAD
T/C: S ***** D/T: S *****
SIGN: JOANNAH JANSZ
EIN/VAT:
PKG TYPE: CUSTOMER

TRK# 5314 1688 8058
0430

XH FTCA



512C19CCB/GF60

A2
INTL PRIORITY
ISR
80524
CO-US
DEN

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Method Blank Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1209255

Client Name: ALS Environmental

ClientProject ID: L1208947

Lab ID: RE121004-1MB

Sample Matrix: WATER

Prep SOP: PAI 783 Rev 10

Date Collected: 04-Oct-12

Date Prepared: 04-Oct-12

Date Analyzed: 12-Oct-12

Prep Batch: RE121004-1

QCBatchID: RE121004-1-1

Run ID: RE121004-1A

Count Time: 25 minutes

Final Aliquot: 1190 ml

Result Units: BQ/l

File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	BDL	0.0037	0.00999	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	15150	13900	ug	91.7	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

M - Requested MDC not met.

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Data Package ID: RE1209255-1

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Laboratory Control Sample(s)

Lab Name: ALS Environmental -- FC

Work Order Number: 1209255

Client Name: ALS Environmental

ClientProject ID: L1208947

Lab ID: RE121004-1LCS

Sample Matrix: WATER

Prep SOP: PAI 783 Rev 10

Date Collected: 04-Oct-12

Date Prepared: 04-Oct-12

Date Analyzed: 12-Oct-12

Prep Batch: RE121004-1

QCBatchID: RE121004-1-1

Run ID: RE121004-1A

Count Time: 15 minutes

Final Aliquot: 1190 ml

Result Units: BQ/l

File Name: Manual Entry

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
13982-63-3	Ra-226	1.30 +/- 0.33	0.01	1.388	94.0	67 - 120	P

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	15150	13130	ug	86.6	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS Recovery within control limits.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

Data Package ID: RE1209255-1

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Laboratory Control Sample(s)

Lab Name: ALS Environmental -- FC

Work Order Number: 1209255

Client Name: ALS Environmental

ClientProject ID: L1208947

Lab ID: RE121004-1LCSD

Sample Matrix: WATER

Prep SOP: PAI 783 Rev 10

Date Collected: 04-Oct-12

Date Prepared: 04-Oct-12

Date Analyzed: 12-Oct-12

Prep Batch: RE121004-1

QCBatchID: RE121004-1-1

Run ID: RE121004-1A

Count Time: 15 minutes

Final Aliquot: 1190 ml

Result Units: BQ/l

File Name: Manual Entry

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
13982-63-3	Ra-226	1.54 +/- 0.39	0.02	1.388	111	67 - 120	P,M3

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	15150	6874	ug	45.4	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS Recovery within control limits.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

Data Package ID: RE1209255-1

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Duplicate Sample Results (DER)

Lab Name: ALS Environmental -- FC

Work Order Number: 1209255

Client Name: ALS Environmental

ClientProject ID: L1208947

Field ID:
Lab ID: RE121004-1LCSD

Sample Matrix: WATER

Prep SOP: PAI 783 Rev 10

Date Collected: 04-Oct-12

Date Prepared: 04-Oct-12

Date Analyzed: 12-Oct-12

Prep Batch: RE121004-1

QCBatchID: RE121004-1-1

Run ID: RE121004-1A

Count Time: 15 minutes

Final Aliquot: 1190 ml

Prep Basis: Unfiltered

Moisture(%): NA

Result Units: BQ/l

File Name: Manual Entry

CASNO	Analyte	Sample				Duplicate				DER	DER Lim
		Result +/-	2 s TPU	MDC	Flags	Result +/-	2 s TPU	MDC	Flags		
13982-63-3	Ra-226	1.30 +/-	0.33	0.01	P	1.54 +/-	0.39	0.02	P,M3	0.465	2.13

Comments:

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.

Y2 - Chemical Yield outside default limits.

W - DER is greater than Warning Limit of 1.42

D - DER is greater than Control Limit of 2.13

LT - Result is less than Request MDC, greater than sample specific MDC

M - Requested MDC not met.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS, Matrix Spike Recovery within control limits.

N - Matrix Spike Recovery outside control limits

Abbreviations:

TPU - Total Propagated Uncertainty

DER - Duplicate Error Ratio

BDL - Below Detection Limit

NR - Not Reported

Data Package ID: RE1209255-1

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1209255

Client Name: ALS Environmental

ClientProject ID: L1208947

Field ID:	LUP-10 MONTHLY
Lab ID:	1209255-1

Sample Matrix: WATER

Prep SOP: PAI 783 Rev 10

Date Collected: 10-Sep-12

Date Prepared: 04-Oct-12

Date Analyzed: 12-Oct-12

Prep Batch: RE121004-1

QCBatchID: RE121004-1-1

Run ID: RE121004-1A

Count Time: 25 minutes

Report Basis: Unfiltered

Final Aliquot: 1190 ml

Prep Basis: Unfiltered

Moisture(%): NA

Result Units: BQ/l

File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.0082 +/- 0.0052	0.0058	0.00999	LT

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	15150	13570	ug	89.5	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: RE1209255-1

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10 Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1209255
Client Name: ALS Environmental
ClientProject ID: L1208947

Field ID:	LUP-21 MONTHLY
Lab ID:	1209255-2

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 10
Date Collected: 10-Sep-12
Date Prepared: 04-Oct-12
Date Analyzed: 12-Oct-12

Prep Batch: RE121004-1
QCBatchID: RE121004-1-1
Run ID: RE121004-1A
Count Time: 25 minutes
Report Basis: Unfiltered

Final Aliquot: 1190 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: BQ/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.0093 +/- 0.0051	0.0038	0.00999	LT

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	15180	13550	ug	89.2	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: RE1209255-1

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1209255

Client Name: ALS Environmental

ClientProject ID: L1208947

Field ID:	LUP-24 MONTHLY
Lab ID:	1209255-3

Sample Matrix: WATER

Prep SOP: PAI 783 Rev 10

Date Collected: 10-Sep-12

Date Prepared: 04-Oct-12

Date Analyzed: 12-Oct-12

Prep Batch: RE121004-1

QCBatchID: RE121004-1-1

Run ID: RE121004-1A

Count Time: 25 minutes

Report Basis: Unfiltered

Final Aliquot: 1190 ml

Prep Basis: Unfiltered

Moisture(%): NA

Result Units: BQ/l

File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	BDL	0.0039	0.00999	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	15150	12130	ug	80.0	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: RE1209255-1



Report To			Report Format / Distribution			Service Requested: (Rush subject to availability)																
Company: Elgin Mining - Lupin Mine			Standard: ☒ Other (specify):			☒ Regular (Standard Turnaround Times))																
Contact: D. Vokry			Select: PDF ☒ Excel ☒ Digital Fax			Priority, Date Req'd: _____ (Surcharges apply)																
Address: 201-750 W. Pender St.			Email 1: dvokry@elginmining.com			Emergency (1 Business Day) - 100% Surcharge																
Vancouver, BC V6T 2T7			Email 2: alandrum@srk.com			For Emergency < 1 Day, ASAP or Weekend - Contact ALS																
Phone: 604-682-3366 Fax: 604-682-3563						Analysis Request																
Invoice To Same as Report? (circle) ☒ Yes or No (if No, provide details)			Client / Project Information			(Indicate Filtered or Preserved, F/P)																
Copy of Invoice with Report? (circle) ☒ Yes or No			Job #: Lupin																			
Company:			PO / AFE:																			
Contact:			LSD:																			
Address:			Quote #: Q35666																			
Phone:			ALS																			
Lab Work Order			Contact: J. Bethune			Sampler: L-Lordy																
Barcode:																						
L1208947-COFC																						
Sample #			Sample Identification (This description will appear on the report)		Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Pt, TSS, Alkalinity	HARDNESS	NH3	NH2	NH4	Hg (P)	CN (P)	T-Metals (P)	Zn (P)	Alkalinity	Number of Containers				
			Lup 10 Monthly		09/09/12	10:00	water	X	X	X	X	X	X	X	X	X	+	7				
			Lup-21 Monthly		10/09/12	10:30	water	X	X	X	X	X	X	X	X	X	+	7				
			Lup-24 Monthly		10/09/12	11:00	water	x	x	x	x	x	x	x	x	x	+	7				
			Lup-10 daily		08/09/12	10:30	water	X						X	X			3				
			Lup-10 daily		09/09/12	10:30	water	X						X	X			3				
			Lup-10 daily		11/09/12	4:00	water	X						X	X			3				
			Lup-10 daily		12/09/12	10:30	water	X						X	X			5				
			Lup-20-weekly		12/09/12	11:00	water	X	X		X		X	X		X		4				
			Lup-21-weekly		12/09/12	11:00	water	X	X		X		X	X		X		4				
			Lup-22-weekly		12/09/12	11:00	water	X	X		X		X	X		X		4				
			Lup-24-weekly		12/09/12	11:00	water	X	X		X		X	X		X		4				
			Lup-25-weekly		12/09/12	11:00	water	X	X		X		X	X		X		4				
Special Instructions / Regulations / Hazardous Details																						
CN past sept 10 th has NOT been preserved. Sept-8-9-daily Sept-11-daily Sept-10-Monthly Sept-12-Monthly																						
Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.																						
By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.																						
SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)					SHIPMENT VERIFICATION (lab use only)														
Released by:			Date:		Time:		Received by:		Date:		Time:		Temperature:		Verified by:		Date:		Time:		Observations: Yes / No ? If Yes add SIF	
							Brom		12/09/12		15:35		53-9cc									



LUPIN MINES INCORPORATED
ATTN: David Vokey
201-750 W Pender SE
Vancouver BC V6T 2T7

Date Received: 15-SEP-12
Report Date: 27-SEP-12 16:47 (MT)
Version: FINAL

Client Phone: 604-682-3366

Certificate of Analysis

Lab Work Order #: L1209832
Project P.O. #: NOT SUBMITTED
Job Reference: LUPIN
C of C Numbers: 09-010543
Legal Site Desc:

Shannon Akkerman
Senior Account Manager

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ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1209832-1	LUP-10-DAILY							
Sampled By:	L. Coedy on 13-SEP-12 @ 10:30							
Matrix:	Water							
Total Metals - CCME								
Mercury (Hg) - Total								
Mercury (Hg)-Total	<0.00010			0.00010	mg/L		26-SEP-12	R2442865
Total Metals in Water by ICPMS (Low)								
Aluminum (Al)-Total	0.037			0.010	mg/L		25-SEP-12	R2442131
Antimony (Sb)-Total	<0.00040			0.00040	mg/L		25-SEP-12	R2442131
Arsenic (As)-Total	0.00758			0.00040	mg/L		25-SEP-12	R2442131
Barium (Ba)-Total	0.0153			0.0030	mg/L		25-SEP-12	R2442131
Beryllium (Be)-Total	<0.0010			0.0010	mg/L		25-SEP-12	R2442131
Boron (B)-Total	0.065			0.050	mg/L		25-SEP-12	R2442131
Cadmium (Cd)-Total	0.000217			0.000050	mg/L		25-SEP-12	R2442131
Chromium (Cr)-Total	<0.0050			0.0050	mg/L		25-SEP-12	R2442131
Cobalt (Co)-Total	0.0320			0.0020	mg/L		25-SEP-12	R2442131
Copper (Cu)-Total	0.0031			0.0010	mg/L		25-SEP-12	R2442131
Lead (Pb)-Total	0.00011			0.00010	mg/L		25-SEP-12	R2442131
Lithium (Li)-Total	0.022			0.010	mg/L		25-SEP-12	R2442131
Molybdenum (Mo)-Total	<0.0050			0.0050	mg/L		25-SEP-12	R2442131
Nickel (Ni)-Total	0.0721			0.0020	mg/L		25-SEP-12	R2442131
Selenium (Se)-Total	<0.00040			0.00040	mg/L		25-SEP-12	R2442131
Silver (Ag)-Total	0.00010			0.00010	mg/L		25-SEP-12	R2442131
Thallium (Tl)-Total	<0.00010			0.00010	mg/L		25-SEP-12	R2442131
Tin (Sn)-Total	<0.050			0.050	mg/L		25-SEP-12	R2442131
Titanium (Ti)-Total	<0.0010			0.0010	mg/L		25-SEP-12	R2442131
Uranium (U)-Total	<0.00010			0.00010	mg/L		25-SEP-12	R2442131
Vanadium (V)-Total	<0.0010			0.0010	mg/L		25-SEP-12	R2442131
Zinc (Zn)-Total	0.232			0.0040	mg/L		25-SEP-12	R2442131
Total Metals in Water by ICPOES (Low)								
Calcium (Ca)-Total	61.0			0.50	mg/L		24-SEP-12	R2442013
Iron (Fe)-Total	0.134			0.010	mg/L		24-SEP-12	R2442013
Magnesium (Mg)-Total	6.40			0.10	mg/L		24-SEP-12	R2442013
Manganese (Mn)-Total	0.681			0.0020	mg/L		24-SEP-12	R2442013
Potassium (K)-Total	5.10			0.10	mg/L		24-SEP-12	R2442013
Sodium (Na)-Total	52.5			1.0	mg/L		24-SEP-12	R2442013
Miscellaneous Parameters								
Cyanide, Total	<0.0050			0.0050	mg/L		25-SEP-12	R2443890
Total Suspended Solids	<3.0			3.0	mg/L		18-SEP-12	R2438339
pH	6.81			0.10	pH		18-SEP-12	R2437788
L1209832-2	LUP-10-WEEKLY							
Sampled By:	L. Coedy on 14-SEP-12 @ 10:30							
Matrix:	Water							
Total Metals - CCME								
Mercury (Hg) - Total								
Mercury (Hg)-Total	<0.00010			0.00010	mg/L		26-SEP-12	R2442865
Total Metals in Water by ICPMS (Low)								
Aluminum (Al)-Total	0.029			0.010	mg/L		26-SEP-12	R2443888
Antimony (Sb)-Total	<0.00040			0.00040	mg/L		26-SEP-12	R2443888
Arsenic (As)-Total	0.00687			0.00040	mg/L		26-SEP-12	R2443888
Barium (Ba)-Total	0.0131			0.0030	mg/L		26-SEP-12	R2443888
Beryllium (Be)-Total	<0.0010			0.0010	mg/L		26-SEP-12	R2443888
Boron (B)-Total	0.064			0.050	mg/L		26-SEP-12	R2443888
Cadmium (Cd)-Total	0.000194			0.000050	mg/L		26-SEP-12	R2443888
Chromium (Cr)-Total	<0.0050			0.0050	mg/L		26-SEP-12	R2443888

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1209832-2	LUP-10-WEEKLY							
Sampled By:	L. Coedy on 14-SEP-12 @ 10:30							
Matrix:	Water							
Total Metals in Water by ICPMS (Low)								
Cobalt (Co)-Total	0.0279			0.0020	mg/L		26-SEP-12	R2443888
Copper (Cu)-Total	0.0023			0.0010	mg/L		26-SEP-12	R2443888
Lead (Pb)-Total	<0.00010			0.00010	mg/L		26-SEP-12	R2443888
Lithium (Li)-Total	0.024			0.010	mg/L		26-SEP-12	R2443888
Molybdenum (Mo)-Total	<0.0050			0.0050	mg/L		26-SEP-12	R2443888
Nickel (Ni)-Total	0.0645			0.0020	mg/L		26-SEP-12	R2443888
Selenium (Se)-Total	<0.00040			0.00040	mg/L		26-SEP-12	R2443888
Silver (Ag)-Total	<0.00010			0.00010	mg/L		26-SEP-12	R2443888
Thallium (Tl)-Total	<0.00010			0.00010	mg/L		26-SEP-12	R2443888
Tin (Sn)-Total	<0.050			0.050	mg/L		26-SEP-12	R2443888
Titanium (Ti)-Total	<0.0010			0.0010	mg/L		26-SEP-12	R2443888
Uranium (U)-Total	<0.00010			0.00010	mg/L		26-SEP-12	R2443888
Vanadium (V)-Total	<0.0010			0.0010	mg/L		26-SEP-12	R2443888
Zinc (Zn)-Total	0.217			0.0040	mg/L		26-SEP-12	R2443888
Total Metals in Water by ICPOES (Low)								
Calcium (Ca)-Total	60.7			0.50	mg/L		25-SEP-12	R2442971
Iron (Fe)-Total	0.131			0.010	mg/L		25-SEP-12	R2442971
Magnesium (Mg)-Total	6.16			0.10	mg/L		25-SEP-12	R2442971
Manganese (Mn)-Total	0.694			0.0020	mg/L		25-SEP-12	R2442971
Potassium (K)-Total	4.94			0.10	mg/L		25-SEP-12	R2442971
Sodium (Na)-Total	55.7			1.0	mg/L		25-SEP-12	R2442971
Miscellaneous Parameters								
Alkalinity, Total (as CaCO3)	<5.0			5.0	mg/L		18-SEP-12	R2437788
Ammonia, Total (as N)	0.066			0.050	mg/L		24-SEP-12	R2441768
Cyanide, Total	<0.0050			0.0050	mg/L		25-SEP-12	R2443890
Total Suspended Solids	<3.0			3.0	mg/L		18-SEP-12	R2438339
pH	6.63			0.10	pH		18-SEP-12	R2437788

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-TOT-ED	Water	Alkalinity, Total	APHA 2320 B-Auto-Pot. Titration
CN-T-CFA-VA	Water	Total Cyanide in water by CFA	ISO 14403:2002
This analysis is carried out using procedures adapted from ISO Method 14403:2002 "Determination of Total Cyanide using Flow Analysis (FIA and CFA)". Total or strong acid dissociable (SAD) cyanide is determined by in-line UV digestion along with sample distillation and final determination by colourimetric analysis. Method Limitation: This method is susceptible to interference from thiocyanate (SCN). If SCN is present in the sample, there could be a positive interference with this method, but it would be less than 1% and could be as low as zero.			
HG-T-CVAA-ED	Water	Mercury (Hg) - Total	EPA 245.7 / EPA 245.1
MET-T-L-ICP-ED	Water	Total Metals in Water by ICPOES (Low)	APHA 3120 B-ICP-OES
MET-T-L-MS-ED	Water	Total Metals in Water by ICPMS (Low)	SW 846 - 6020-ICPMS
NH3-CFA-ED	Water	Ammonia in Water by Colour	APHA 4500 NH3-NITROGEN (AMMONIA)
This analysis is carried out using procedures adapted from APHA Method 4500 NH3 "NITROGEN (AMMONIA)". Ammonia is determined using the automated phenate colourimetric method.			
PH-ED	Water	pH	APHA 4500 H-Electrode
All samples analyzed by this method for pH will have exceeded the 15 minute recommended hold time from time of sampling (field analysis is recommended for pH where highly accurate results are needed)			
SOLIDS-TOTSUS-ED	Water	Total Suspended Solids	APHA 2540 D-Gravimetric

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

09-010543

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg ww - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Quality Control Report

Workorder: L1209832

Report Date: 27-SEP-12

Page 1 of 8

Client: LUPIN MINES INCORPORATED
201-750 W Pender SE
Vancouver BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ALK-TOT-ED		Water						
Batch	R2437788							
WG1548166-12	DUP	L1210283-1						
Alkalinity, Total (as CaCO3)		275	273		mg/L	0.7	20	19-SEP-12
WG1548166-4	LCS							
Alkalinity, Total (as CaCO3)			102.8		%		85-115	18-SEP-12
WG1548166-1	MB							
Alkalinity, Total (as CaCO3)			<5.0		mg/L		5	18-SEP-12
CN-T-CFA-VA		Water						
Batch	R2443890							
WG1553349-17	DUP	L1209491-1						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	25-SEP-12
WG1553349-3	DUP	L1209566-11						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	25-SEP-12
WG1553349-7	DUP	L1210328-11						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	25-SEP-12
WG1553349-10	LCS							
Cyanide, Total			91.5		%		80-120	25-SEP-12
WG1553349-14	LCS							
Cyanide, Total			90.5		%		80-120	25-SEP-12
WG1553349-16	LCS							
Cyanide, Total			91.0		%		80-120	25-SEP-12
WG1553349-2	LCS							
Cyanide, Total			91.2		%		80-120	25-SEP-12
WG1553349-21	LCS							
Cyanide, Total			89.9		%		80-120	25-SEP-12
WG1553349-6	LCS							
Cyanide, Total			92.0		%		80-120	25-SEP-12
WG1553349-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	25-SEP-12
WG1553349-13	MB							
Cyanide, Total			<0.0050		mg/L		0.005	25-SEP-12
WG1553349-15	MB							
Cyanide, Total			<0.0050		mg/L		0.005	25-SEP-12
WG1553349-20	MB							
Cyanide, Total			<0.0050		mg/L		0.005	25-SEP-12
WG1553349-5	MB							
Cyanide, Total			<0.0050		mg/L		0.005	25-SEP-12
WG1553349-9	MB							
Cyanide, Total			<0.0050		mg/L		0.005	25-SEP-12



Quality Control Report

Workorder: L1209832

Report Date: 27-SEP-12

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Client: LUPIN MINES INCORPORATED
201-750 W Pender SE
Vancouver BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-CFA-VA		Water						
Batch	R2443890							
WG1553349-4 MS		L1209566-11						
Cyanide, Total			95.4		%		70-130	25-SEP-12
WG1553349-8 MS		L1210328-11						
Cyanide, Total			98.4		%		70-130	25-SEP-12
HG-T-CVAA-ED		Water						
Batch	R2442865							
WG1553267-4 DUP		L1209832-1						
Mercury (Hg)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	26-SEP-12
WG1553267-2 LCS								
Mercury (Hg)-Total			112.6		%		80-120	25-SEP-12
WG1553267-1 MB								
Mercury (Hg)-Total			<0.00010		mg/L		0.0001	25-SEP-12
WG1553267-5 MS		L1209832-1						
Mercury (Hg)-Total			83.9		%		70-130	26-SEP-12
MET-T-L-ICP-ED		Water						
Batch	R2442013							
WG1551924-3 DUP		L1209832-1						
Calcium (Ca)-Total		61.0	63.2		mg/L	3.5	20	24-SEP-12
Iron (Fe)-Total		0.134	0.143		mg/L	6.3	20	24-SEP-12
Magnesium (Mg)-Total		6.40	6.73		mg/L	5.1	20	24-SEP-12
Manganese (Mn)-Total		0.681	0.718		mg/L	5.2	20	24-SEP-12
Potassium (K)-Total		5.10	5.48		mg/L	7.2	20	24-SEP-12
Sodium (Na)-Total		52.5	56.0		mg/L	6.4	20	24-SEP-12
WG1551924-2 LCS								
Calcium (Ca)-Total			97.5		%		80-120	24-SEP-12
Iron (Fe)-Total			99.4		%		80-120	24-SEP-12
Magnesium (Mg)-Total			95.8		%		80-120	24-SEP-12
Manganese (Mn)-Total			97.4		%		80-120	24-SEP-12
Potassium (K)-Total			93.8		%		80-120	24-SEP-12
Sodium (Na)-Total			97.7		%		80-120	24-SEP-12
WG1551924-1 MB								
Calcium (Ca)-Total			<0.50		mg/L		0.5	24-SEP-12
Iron (Fe)-Total			<0.010		mg/L		0.01	24-SEP-12
Magnesium (Mg)-Total			<0.10		mg/L		0.1	24-SEP-12
Manganese (Mn)-Total			<0.0020		mg/L		0.002	24-SEP-12
Potassium (K)-Total			<0.10		mg/L		0.1	24-SEP-12



Quality Control Report

Workorder: L1209832

Report Date: 27-SEP-12

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Client: LUPIN MINES INCORPORATED
201-750 W Pender SE
Vancouver BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-ICP-ED		Water						
Batch	R2442013							
WG1551924-1 MB								
Sodium (Na)-Total			<1.0		mg/L		1	24-SEP-12
Batch	R2442971							
WG1553273-1 MB								
Calcium (Ca)-Total			<0.50		mg/L		0.5	25-SEP-12
Iron (Fe)-Total			<0.010		mg/L		0.01	25-SEP-12
Magnesium (Mg)-Total			<0.10		mg/L		0.1	25-SEP-12
Manganese (Mn)-Total			<0.0020		mg/L		0.002	25-SEP-12
Potassium (K)-Total			<0.10		mg/L		0.1	25-SEP-12
Sodium (Na)-Total			<1.0		mg/L		1	25-SEP-12
MET-T-L-MS-ED		Water						
Batch	R2442131							
WG1551924-3 DUP		L1209832-1						
Aluminum (Al)-Total		0.037	0.045		mg/L	19	20	25-SEP-12
Antimony (Sb)-Total		<0.00040	<0.00040	RPD-NA	mg/L	N/A	20	25-SEP-12
Arsenic (As)-Total		0.00758	0.00744		mg/L	1.8	20	25-SEP-12
Barium (Ba)-Total		0.0153	0.0148		mg/L	2.9	20	25-SEP-12
Beryllium (Be)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	25-SEP-12
Boron (B)-Total		0.065	0.0652		mg/L	0.1	20	25-SEP-12
Cadmium (Cd)-Total		0.000217	0.000208		mg/L	4.2	20	25-SEP-12
Chromium (Cr)-Total		<0.0050	<0.00080	RPD-NA	mg/L	N/A	20	25-SEP-12
Cobalt (Co)-Total		0.0320	0.0312		mg/L	2.5	20	25-SEP-12
Copper (Cu)-Total		0.0031	0.0030		mg/L	0.8	20	25-SEP-12
Lead (Pb)-Total		0.00011	<0.00010	RPD-NA	mg/L	N/A	20	25-SEP-12
Lithium (Li)-Total		0.022	0.0213		mg/L	4.7	20	25-SEP-12
Molybdenum (Mo)-Total		<0.0050	<0.00010	RPD-NA	mg/L	N/A	20	25-SEP-12
Nickel (Ni)-Total		0.0721	0.0697		mg/L	3.3	20	25-SEP-12
Selenium (Se)-Total		<0.00040	<0.00040	RPD-NA	mg/L	N/A	20	25-SEP-12
Silver (Ag)-Total		0.00010	<0.00010	RPD-NA	mg/L	N/A	20	25-SEP-12
Thallium (Tl)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	25-SEP-12
Tin (Sn)-Total		<0.050	<0.00040	RPD-NA	mg/L	N/A	20	25-SEP-12
Titanium (Ti)-Total		<0.0010	<0.00060	RPD-NA	mg/L	N/A	20	25-SEP-12
Uranium (U)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	25-SEP-12



Quality Control Report

Workorder: L1209832

Report Date: 27-SEP-12

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Client:

LUPIN MINES INCORPORATED

201-750 W Pender SE

Vancouver BC V6T 2T7

Contact:

David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-ED		Water						
Batch	R2442131							
WG1551924-3	DUP	L1209832-1						
Vanadium (V)-Total		<0.0010	<0.00050	RPD-NA	mg/L	N/A	20	25-SEP-12
Zinc (Zn)-Total		0.232	0.224		mg/L	3.7	20	25-SEP-12
WG1551924-2	LCS							
Aluminum (Al)-Total			107.9		%		80-120	24-SEP-12
Antimony (Sb)-Total			111.0		%		80-120	24-SEP-12
Arsenic (As)-Total			111.3		%		80-120	24-SEP-12
Barium (Ba)-Total			106.5		%		80-120	24-SEP-12
Beryllium (Be)-Total			104.3		%		80-120	24-SEP-12
Boron (B)-Total			99.9		%		80-120	24-SEP-12
Cadmium (Cd)-Total			104.7		%		80-120	24-SEP-12
Chromium (Cr)-Total			110.6		%		80-120	24-SEP-12
Cobalt (Co)-Total			106.1		%		80-120	24-SEP-12
Copper (Cu)-Total			105.3		%		80-120	24-SEP-12
Lead (Pb)-Total			106.8		%		80-120	24-SEP-12
Lithium (Li)-Total			102.0		%		80-120	24-SEP-12
Molybdenum (Mo)-Total			115.8		%		80-120	24-SEP-12
Nickel (Ni)-Total			110.2		%		80-120	24-SEP-12
Selenium (Se)-Total			112.5		%		80-120	24-SEP-12
Silver (Ag)-Total			96.3		%		80-120	24-SEP-12
Thallium (Tl)-Total			108.5		%		80-120	24-SEP-12
Tin (Sn)-Total			111.5		%		80-120	24-SEP-12
Titanium (Ti)-Total			100.6		%		80-120	24-SEP-12
Uranium (U)-Total			108.8		%		80-120	24-SEP-12
Vanadium (V)-Total			109.3		%		80-120	24-SEP-12
Zinc (Zn)-Total			102.6		%		80-120	24-SEP-12
WG1551924-1	MB							
Aluminum (Al)-Total			<0.010		mg/L		0.01	24-SEP-12
Antimony (Sb)-Total			<0.00040		mg/L		0.0004	24-SEP-12
Arsenic (As)-Total			<0.00040		mg/L		0.0004	24-SEP-12
Barium (Ba)-Total			<0.00020		mg/L		0.0002	24-SEP-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	24-SEP-12
Boron (B)-Total			<0.0040		mg/L		0.004	24-SEP-12
Cadmium (Cd)-Total			<0.000050		mg/L		0.00005	24-SEP-12
Chromium (Cr)-Total			<0.00080		mg/L		0.0008	24-SEP-12



Quality Control Report

Workorder: L1209832

Report Date: 27-SEP-12

Page 5 of 8

Client: LUPIN MINES INCORPORATED
201-750 W Pender SE
Vancouver BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-ED		Water						
Batch R2442131								
WG1551924-1 MB								
Cobalt (Co)-Total			<0.00020		mg/L		0.0002	24-SEP-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	24-SEP-12
Lead (Pb)-Total			<0.00010		mg/L		0.0001	24-SEP-12
Lithium (Li)-Total			<0.0060		mg/L		0.006	24-SEP-12
Molybdenum (Mo)-Total			<0.00010		mg/L		0.0001	24-SEP-12
Nickel (Ni)-Total			<0.00020		mg/L		0.0002	24-SEP-12
Selenium (Se)-Total			<0.00040		mg/L		0.0004	24-SEP-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	24-SEP-12
Thallium (Tl)-Total			<0.00010		mg/L		0.0001	24-SEP-12
Tin (Sn)-Total			<0.00040		mg/L		0.0004	24-SEP-12
Titanium (Ti)-Total			<0.00060		mg/L		0.0006	24-SEP-12
Uranium (U)-Total			<0.00010		mg/L		0.0001	24-SEP-12
Vanadium (V)-Total			<0.00050		mg/L		0.0005	24-SEP-12
Zinc (Zn)-Total			<0.0040		mg/L		0.004	24-SEP-12
Batch R2443888								
WG1553273-1 MB								
Aluminum (Al)-Total			<0.010		mg/L		0.01	26-SEP-12
Antimony (Sb)-Total			<0.00040		mg/L		0.0004	26-SEP-12
Arsenic (As)-Total			<0.00040		mg/L		0.0004	26-SEP-12
Barium (Ba)-Total			<0.00020		mg/L		0.0002	26-SEP-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	26-SEP-12
Boron (B)-Total			<0.0040		mg/L		0.004	26-SEP-12
Cadmium (Cd)-Total			<0.000050		mg/L		0.00005	26-SEP-12
Chromium (Cr)-Total			<0.00080		mg/L		0.0008	26-SEP-12
Cobalt (Co)-Total			<0.00020		mg/L		0.0002	26-SEP-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	26-SEP-12
Lead (Pb)-Total			<0.00010		mg/L		0.0001	26-SEP-12
Lithium (Li)-Total			<0.0060		mg/L		0.006	26-SEP-12
Molybdenum (Mo)-Total			<0.00010		mg/L		0.0001	26-SEP-12
Nickel (Ni)-Total			<0.00020		mg/L		0.0002	26-SEP-12
Selenium (Se)-Total			<0.00040		mg/L		0.0004	26-SEP-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	26-SEP-12
Thallium (Tl)-Total			<0.00010		mg/L		0.0001	26-SEP-12
Tin (Sn)-Total			<0.00040		mg/L		0.0004	26-SEP-12



Quality Control Report

Workorder: L1209832

Report Date: 27-SEP-12

Page 6 of 8

Client: LUPIN MINES INCORPORATED
201-750 W Pender SE
Vancouver BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-ED		Water						
Batch	R2443888							
WG1553273-1 MB								
Titanium (Ti)-Total			<0.00060		mg/L		0.0006	26-SEP-12
Uranium (U)-Total			<0.00010		mg/L		0.0001	26-SEP-12
Vanadium (V)-Total			<0.00050		mg/L		0.0005	26-SEP-12
Zinc (Zn)-Total			<0.0040		mg/L		0.004	26-SEP-12
NH3-CFA-ED		Water						
Batch	R2441768							
WG1552201-7 DUP		L1208242-4						
Ammonia, Total (as N)		<0.050	<0.050	RPD-NA	mg/L	N/A	20	24-SEP-12
WG1552201-9 DUP		L1213299-1						
Ammonia, Total (as N)		1.21	1.19		mg/L	1.9	20	24-SEP-12
WG1552201-2 LCS								
Ammonia, Total (as N)			94.3		%		85-115	24-SEP-12
WG1552201-1 MB								
Ammonia, Total (as N)			<0.050		mg/L		0.05	24-SEP-12
WG1552201-6 MS		L1211666-2						
Ammonia, Total (as N)			95.9		%		75-125	24-SEP-12
WG1552201-8 MS		L1212025-1						
Ammonia, Total (as N)			98.8		%		75-125	24-SEP-12
PH-ED		Water						
Batch	R2437788							
WG1548166-9 DUP		L1203443-3						
pH		8.50	8.51	J	pH	0.01	0.2	18-SEP-12
WG1548166-3 LCS								
pH			6.98		pH		6.9-7.1	18-SEP-12
SOLIDS-TOTSUS-ED		Water						
Batch	R2438339							
WG1548199-3 DUP		L1203441-3						
Total Suspended Solids		20.0	24.0		mg/L	18	20	18-SEP-12
WG1548199-4 DUP		L1209814-1						
Total Suspended Solids		<3.0	<3.0	RPD-NA	mg/L	N/A	20	18-SEP-12
WG1548199-5 DUP		L1210316-2						
Total Suspended Solids		<3.0	<3.0	RPD-NA	mg/L	N/A	20	18-SEP-12
WG1548199-2 LCS								
Total Suspended Solids			98.0		%		85-115	18-SEP-12
WG1548199-1 MB								
Total Suspended Solids			<3.0		mg/L		3	18-SEP-12

Quality Control Report

Workorder: L1209832

Report Date: 27-SEP-12

Client: LUPIN MINES INCORPORATED
201-750 W Pender SE
Vancouver BC V6T 2T7

Page 7 of 8

Contact: David Vokey

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L1209832

Report Date: 27-SEP-12

Client: LUPIN MINES INCORPORATED
201-750 W Pender SE
Vancouver BC V6T 2T7
Contact: David Vokey

Page 8 of 8

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
pH	1	13-SEP-12 10:30	18-SEP-12 18:24	0.25	128	hours	EHTR-FM
	2	14-SEP-12 10:30	18-SEP-12 18:30	0.25	104	hours	EHTR-FM

Legend & Qualifier Definitions:

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR: Exceeded ALS recommended hold time prior to sample receipt.
EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT: Exceeded ALS recommended hold time prior to analysis.
Rec. HT: ALS recommended hold time (see units).

Notes*:
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L1209832 were received on 15-SEP-12 10:53.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

[illegible]



LUPIN MINES INCORPORATED
ATTN: David Vokey
Suite 202, 5204 - 50th Avenue
Yellowknife NT X1A 1E2

Date Received: 17-SEP-12
Report Date: 03-OCT-12 09:28 (MT)
Version: FINAL

Client Phone: 867-873-8670

Certificate of Analysis

Lab Work Order #: L1210412
Project P.O. #: NOT SUBMITTED
Job Reference: LUPIN
C of C Numbers: 1
Legal Site Desc:

Maureen Olinek
Senior Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1210412-1 LAKE WATER Sampled By: L. Coedy on 17-SEP-12 @ 11:00 Matrix: Water Miscellaneous Parameters Special Request	See Attached					18-SEP-12	
L1210412-2 KITCHEN WATER Sampled By: L. Coedy on 17-SEP-12 @ 11:30 Matrix: Water Miscellaneous Parameters Special Request	See Attached					18-SEP-12	
L1210412-3 1300 WING Sampled By: L. Coedy on 17-SEP-12 @ 11:30 Matrix: Water Miscellaneous Parameters Special Request	See Attached					18-SEP-12	
L1210412-4 800 WING Sampled By: L. Coedy on 17-SEP-12 @ 11:30 Matrix: Water Miscellaneous Parameters Special Request	See Attached					18-SEP-12	
L1210412-5 600 WING Sampled By: L. Coedy on 17-SEP-12 @ 11:30 Matrix: Water Miscellaneous Parameters Special Request	See Attached					18-SEP-12	
L1210412-6 LUPIN-10-DAILY Sampled By: L. Coedy on 17-SEP-12 @ 09:30 Matrix: Water Miscellaneous Parameters Cyanide, Total Total Suspended Solids pH Total Metals in Water by CRC ICPMS Arsenic (As)-Total Copper (Cu)-Total Zinc (Zn)-Total	<0.0050 <3.0 6.73 0.00746 0.00235 0.236		0.0050 3.0 0.10 0.00010 0.00010 0.0030	mg/L mg/L pH mg/L mg/L mg/L		25-SEP-12 20-SEP-12 19-SEP-12 26-SEP-12 26-SEP-12 26-SEP-12	R2443890 R2440279 R2438683 R2443888 R2443888 R2443888
L1210412-7 LUPIN-10-DAILY Sampled By: L. Coedy on 16-SEP-12 @ 09:30 Matrix: Water Miscellaneous Parameters Cyanide, Total Total Suspended Solids pH Total Metals in Water by CRC ICPMS Arsenic (As)-Total Copper (Cu)-Total Zinc (Zn)-Total	<0.0050 <3.0 6.67 0.00743 0.00232 0.231		0.0050 3.0 0.10 0.00010 0.00010 0.0030	mg/L mg/L pH mg/L mg/L mg/L		25-SEP-12 20-SEP-12 19-SEP-12 26-SEP-12 26-SEP-12 26-SEP-12	R2443890 R2440279 R2438683 R2443888 R2443888 R2443888
L1210412-8 LUPIN-10-DAILY Sampled By: L. Coedy on 15-SEP-12 @ 09:30 Matrix: Water Miscellaneous Parameters Cyanide, Total	<0.0050		0.0050	mg/L		25-SEP-12	R2443890

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CN-T-CFA-VA	Water	Total Cyanide in water by CFA	ISO 14403:2002
This analysis is carried out using procedures adapted from ISO Method 14403:2002 "Determination of Total Cyanide using Flow Analysis (FIA and CFA)". Total or strong acid dissociable (SAD) cyanide is determined by in-line UV digestion along with sample distillation and final determination by colourimetric analysis. Method Limitation: This method is susceptible to interference from thiocyanate (SCN). If SCN is present in the sample, there could be a positive interference with this method, but it would be less than 1% and could be as low as zero.			
MET-T-CCMS-ED	Water	Total Metals in Water by CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A
PH-ED	Water	pH	APHA 4500 H-Electrode
All samples analyzed by this method for pH will have exceeded the 15 minute recommended hold time from time of sampling (field analysis is recommended for pH where highly accurate results are needed)			
SOLIDS-TOTSUS-ED	Water	Total Suspended Solids	APHA 2540 D-Gravimetric
SPECIAL REQUEST-TG	Misc.	Special Request Taiga Yellowknife	SEE SUBLET LAB RESULTS

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA
TG	TAIGA ENVIRONMENTAL LABORATORY (INAC)

Chain of Custody Numbers:

1

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg ww - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Quality Control Report

Workorder: L1210412

Report Date: 03-OCT-12

Page 2 of 4

Client: LUPIN MINES INCORPORATED
Suite 202, 5204 - 50th Avenue
Yellowknife NT X1A 1E2

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-ED		Water						
Batch	R2443888							
WG1553273-2	DUP	L1210412-6						
Arsenic (As)-Total		0.00746	0.00671		mg/L	11	20	26-SEP-12
Copper (Cu)-Total		0.00235	0.00213		mg/L	10	20	26-SEP-12
Zinc (Zn)-Total		0.236	0.212		mg/L	11	20	26-SEP-12
WG1553273-1	MB							
Arsenic (As)-Total			<0.00010		mg/L		0.0001	26-SEP-12
Copper (Cu)-Total			<0.00010		mg/L		0.0001	26-SEP-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	26-SEP-12
PH-ED		Water						
Batch	R2438683							
WG1549127-3	LCS							
pH			7.00		pH		6.9-7.1	19-SEP-12
SOLIDS-TOTSUS-ED		Water						
Batch	R2440279							
WG1550002-3	DUP	L1203442-8						
Total Suspended Solids		5.0	7.0	J	mg/L	2.0	6	20-SEP-12
WG1550002-4	DUP	L1210488-3						
Total Suspended Solids		4.0	4.0		mg/L	0.0	20	20-SEP-12
WG1550002-5	DUP	L1211059-1						
Total Suspended Solids		8.0	7.0		mg/L	13	20	20-SEP-12
WG1550002-2	LCS							
Total Suspended Solids			98.0		%		85-115	20-SEP-12
WG1550002-1	MB							
Total Suspended Solids			<3.0		mg/L		3	20-SEP-12

Quality Control Report

Workorder: L1210412

Report Date: 03-OCT-12

Client: LUPIN MINES INCORPORATED
Suite 202, 5204 - 50th Avenue
Yellowknife NT X1A 1E2

Page 3 of 4

Contact: David Vokey

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L1210412

Report Date: 03-OCT-12

Client: LUPIN MINES INCORPORATED
Suite 202, 5204 - 50th Avenue
Yellowknife NT X1A 1E2

Page 4 of 4

Contact: David Vokey

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
pH	6	17-SEP-12 09:30	19-SEP-12 23:42	0.25	62	hours	EHTR-FM
	7	16-SEP-12 09:30	19-SEP-12 23:46	0.25	86	hours	EHTR-FM
	8	15-SEP-12 09:30	19-SEP-12 23:49	0.25	110	hours	EHTR-FM

Legend & Qualifier Definitions:

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR: Exceeded ALS recommended hold time prior to sample receipt.
EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT: Exceeded ALS recommended hold time prior to analysis.
Rec. HT: ALS recommended hold time (see units).

Notes*:
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L1210412 were received on 17-SEP-12 17:12.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



Taiga Environmental Laboratory
4601-52nd Ave., Box 1500, Yellowknife, NT. X1A 2R3
Tel: (867)-669-2788 Fax: (867)-669-2718

Taiga Batch No.:
120850

- FINAL REPORT -

Prepared For: ALS Environmental

Address: P.O. Box 2801
Yellowknife, NT
X1A 2R1

Attn: Bruce Stuart

Facsimile:

Final report has been reviewed and approved by:

Helene Harper
Manager

NOTES:

- Test methods and data are validated by the laboratory's Quality Assurance Program. Taiga Environmental Laboratory is accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) as a testing laboratory for specific tests registered with CALA.
- Routine methods are based on recognized procedures from sources such as
 - o Standard Methods for the Examination of Water and Wastewater APHA AWWA WEF;
 - o Environment Canada
 - o USEPA
- Samples shall be kept for thirty (30) days after the final report is issued. All microbiological samples shall be disposed of immediately upon completion of analysis to minimize biohazardous risks to laboratory personnel. Please contact the laboratory if you have any special requirements.
- Final results are based on the specific tests at the time of analysis and do not represent the conditions during sampling.

ReportDate: Friday, September 28, 2012

Print Date: Friday, September 28, 2012



Taiga Environmental Laboratory
4601-52nd Ave., Box 1500, Yellowknife, NT. X1A 2R3
Tel: (867)-669-2788 Fax: (867)-669-2718

Taiga Batch No.:
120850

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **L1210412-1 Lake Water**

Taiga Sample ID: **001**

Client Project:

Sample Type: Water

Received Date: 18-Sep-12

Sampling Date: 17-Sep-12

Sampling Time: 11:00

Location:

Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Microbiology</u>						
Coliforms, Fecal	< 1	1	CFU/100mL	18-Sep-12	SM9222:D	
Coliforms, Total	12.2	1.0	MPN/100mL	18-Sep-12	SM9223:B	
Escherichia coli	< 1.0	1.0	MPN/100mL	18-Sep-12	SM9223:B	

ReportDate: Friday, September 28, 2012

Print Date: Friday, September 28, 2012



Taiga Environmental Laboratory
4601-52nd Ave., Box 1500, Yellowknife, NT. X1A 2R3
Tel: (867)-669-2788 Fax: (867)-669-2718

Taiga Batch No.:
120850

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **L1210412-2 Kitchen Water**

Taiga Sample ID: **002**

Client Project:

Sample Type: Water

Received Date: 18-Sep-12

Sampling Date: 17-Sep-12

Sampling Time: 11:30

Location:

Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
Microbiology						
Coliforms, Fecal	< 1	1	CFU/100mL	18-Sep-12	SM9222:D	
Coliforms, Total	< 1.0	1.0	MPN/100mL	18-Sep-12	SM9223:B	
Escherichia coli	< 1.0	1.0	MPN/100mL	18-Sep-12	SM9223:B	

ReportDate: Friday, September 28, 2012

Print Date: Friday, September 28, 2012



Taiga Environmental Laboratory
4601-52nd Ave., Box 1500, Yellowknife, NT. X1A 2R3
Tel: (867)-669-2788 Fax: (867)-669-2718

Taiga Batch No.:
120850

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **L1210412-3 1300 Wing**

Taiga Sample ID: **003**

Client Project:

Sample Type: Water

Received Date: 18-Sep-12

Sampling Date: 17-Sep-12

Sampling Time: 11:30

Location:

Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
Microbiology						
Coliforms, Fecal	< 1	1	CFU/100mL	18-Sep-12	SM9222:D	
Coliforms, Total	< 1.0	1.0	MPN/100mL	18-Sep-12	SM9223:B	
Escherichia coli	< 1.0	1.0	MPN/100mL	18-Sep-12	SM9223:B	

ReportDate: Friday, September 28, 2012

Print Date: Friday, September 28, 2012



Taiga Environmental Laboratory
4601-52nd Ave., Box 1500, Yellowknife, NT. X1A 2R3
Tel: (867)-669-2788 Fax: (867)-669-2718

Taiga Batch No.:
120850

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **L1210412-4 800 Wing**

Taiga Sample ID: **004**

Client Project:

Sample Type: Water

Received Date: 18-Sep-12

Sampling Date: 17-Sep-12

Sampling Time: 11:30

Location:

Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Microbiology</u>						
Coliforms, Fecal	< 1	1	CFU/100mL	18-Sep-12	SM9222:D	
Coliforms, Total	< 1.0	1.0	MPN/100mL	18-Sep-12	SM9223:B	
Escherichia coli	< 1.0	1.0	MPN/100mL	18-Sep-12	SM9223:B	

ReportDate: Friday, September 28, 2012

Print Date: Friday, September 28, 2012



Taiga Environmental Laboratory
4601-52nd Ave., Box 1500, Yellowknife, NT. X1A 2R3
Tel: (867)-669-2788 Fax: (867)-669-2718

Taiga Batch No.:
120850

- CERTIFICATE OF ANALYSIS -

Client Sample ID: L1210412-5 600 Wing

Taiga Sample ID: 005

Client Project:

Sample Type: Water

Received Date: 18-Sep-12

Sampling Date: 17-Sep-12

Sampling Time: 11:30

Location:

Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
Microbiology						
Coliforms, Fecal	< 1	1	CFU/100mL	18-Sep-12	SM9222:D	
Coliforms, Total	< 1.0	1.0	MPN/100mL	18-Sep-12	SM9223:B	
Escherichia coli	< 1.0	1.0	MPN/100mL	18-Sep-12	SM9223:B	

ReportDate: Friday, September 28, 2012

Print Date: Friday, September 28, 2012



Taiga Environmental Laboratory
4601-52nd Ave., Box 1500, Yellowknife, NT. X1A 2R3
Tel: (867)-669-2788 Fax: (867)-669-2718

Taiga Batch No.:
120850

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **L1210412-5 600 Wing**

Taiga Sample ID: **005**

*** Taiga analytical methods are based on the following standard analytical methods**

SM - Standard Methods for the Examination of Water and Wastewater

EPA - United States Environmental Protection Agency

ReportDate: Friday, September 28, 2012

Print Date: Friday, September 28, 2012

Page 7 of 7

Report To Company: Elgin Mining - Lupin Mine Contact: D. Vokey Address: 201 - 750 W. Pender St. Vancouver, BC V6T 2T7 Phone: 604-682-3366 Fax: 604-682-3363		Report Format / Distribution ☒ Standard ☐ Other ☒ PDF ☒ Excel ☐ Digital ☐ Fax Email 1: dvokey@elginmining.com Email 2: alaudrum@srk.com Email 3:		Service Requested (Rush for routine analysis subject to availability) ☒ Regular (Standard Turnaround Times - Business Days) ☐ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT ☐ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT ☐ Same Day or Weekend Emergency - Contact ALS to Confirm TAT																																																																																																																																																																																																																																																																																								
Invoice To Same as Report? ☒ Yes ☐ No Hardcopy of Invoice with Report? ☒ Yes ☐ No Company: Contact: Address: Phone: Fax:		Client / Project Information Job #: Lupin PO / AFE: LSD: Quote #: Q35666		Analysis Request Please indicate below Filtered, Preserved or both (F, P, F/P)																																																																																																																																																																																																																																																																																								
Lab Work Order # (lab use only) L1210412		ALS Contact: J. Bethune Sampler: L. Coedy		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="writing-mode: vertical-rl; transform: rotate(180deg);">T-Metals (As, Cu, Zn)</th> <th style="writing-mode: vertical-rl; transform: rotate(180deg);">pH, TSS</th> <th style="writing-mode: vertical-rl; transform: rotate(180deg);">CN</th> <th style="writing-mode: vertical-rl; transform: rotate(180deg);">Coliforms (Fecal Total E-coli)</th> <th colspan="10"></th> <th style="writing-mode: vertical-rl; transform: rotate(180deg);">Number of Containers</th> </tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td></tr> <tr><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td></tr> <tr><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td></tr> <tr><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td></tr> <tr><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td></tr> <tr><td></td><td></td><td></td><td>X</td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>3</td></tr> <tr><td></td><td></td><td></td><td>X</td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>3</td></tr> <tr><td></td><td></td><td></td><td>X</td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>3</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										T-Metals (As, Cu, Zn)	pH, TSS	CN	Coliforms (Fecal Total E-coli)											Number of Containers																				X												1				X												1				X												1				X												1				X												1				X	X	X										3				X	X	X										3				X	X	X										3																																																																																																																
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		Kitchen Water		17-09-12		11:30		Water								1																																																																																																																																																																																																																																																																												
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 L1210412-COFC

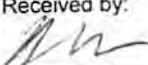
Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details

CN not preserved

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date (dd-mm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
				17 Sept	17:10	7 °C				



LUPIN MINES INCORPORATED
ATTN: David Vokey
201, 750W PENDER ST.
VANCOUVER BC V6T 2T7

Date Received: 21-SEP-12
Report Date: 04-OCT-12 16:43 (MT)
Version: FINAL

Client Phone: 604-682-3366

Certificate of Analysis

Lab Work Order #: L1213061
Project P.O. #: NOT SUBMITTED
Job Reference: LUPIN
C of C Numbers:
Legal Site Desc:

Shannon Akkerman
Senior Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213061-1	LUP-10-DAILY							
Sampled By:	L. Coedy on 18-SEP-12 @ 11:00							
Matrix:	Water							
Total Metals - CCME								
Mercury (Hg) - Total								
Mercury (Hg)-Total	<0.00010			0.00010	mg/L		03-OCT-12	R2448329
Total Metals in Water by ICPMS (Low)								
Aluminum (Al)-Total	0.027			0.010	mg/L		29-SEP-12	R2446805
Antimony (Sb)-Total	<0.00040			0.00040	mg/L		29-SEP-12	R2446805
Arsenic (As)-Total	0.00703			0.00040	mg/L		29-SEP-12	R2446805
Barium (Ba)-Total	0.0136			0.0030	mg/L		29-SEP-12	R2446805
Beryllium (Be)-Total	<0.0010			0.0010	mg/L		29-SEP-12	R2446805
Boron (B)-Total	0.057			0.050	mg/L		29-SEP-12	R2446805
Cadmium (Cd)-Total	0.000199			0.000050	mg/L		29-SEP-12	R2446805
Chromium (Cr)-Total	<0.0050			0.0050	mg/L		29-SEP-12	R2446805
Cobalt (Co)-Total	0.0287			0.0020	mg/L		29-SEP-12	R2446805
Copper (Cu)-Total	0.0021			0.0010	mg/L		29-SEP-12	R2446805
Lead (Pb)-Total	<0.00010			0.00010	mg/L		29-SEP-12	R2446805
Lithium (Li)-Total	0.020			0.010	mg/L		29-SEP-12	R2446805
Molybdenum (Mo)-Total	<0.0050			0.0050	mg/L		29-SEP-12	R2446805
Nickel (Ni)-Total	0.0663			0.0020	mg/L		29-SEP-12	R2446805
Selenium (Se)-Total	<0.00040			0.00040	mg/L		29-SEP-12	R2446805
Silver (Ag)-Total	<0.00010			0.00010	mg/L		29-SEP-12	R2446805
Thallium (Tl)-Total	<0.00010			0.00010	mg/L		29-SEP-12	R2446805
Tin (Sn)-Total	<0.050			0.050	mg/L		29-SEP-12	R2446805
Titanium (Ti)-Total	<0.0010			0.0010	mg/L		29-SEP-12	R2446805
Uranium (U)-Total	<0.00010			0.00010	mg/L		29-SEP-12	R2446805
Vanadium (V)-Total	<0.0010			0.0010	mg/L		29-SEP-12	R2446805
Zinc (Zn)-Total	0.218			0.0040	mg/L		29-SEP-12	R2446805
Total Metals in Water by ICPOES (Low)								
Calcium (Ca)-Total	59.5			0.50	mg/L		29-SEP-12	R2446106
Iron (Fe)-Total	0.133			0.010	mg/L		29-SEP-12	R2446106
Magnesium (Mg)-Total	6.32			0.10	mg/L		29-SEP-12	R2446106
Manganese (Mn)-Total	0.678			0.0020	mg/L		29-SEP-12	R2446106
Potassium (K)-Total	5.64			0.10	mg/L		29-SEP-12	R2446106
Sodium (Na)-Total	54.9			1.0	mg/L		29-SEP-12	R2446106
Miscellaneous Parameters								
Cyanide, Total	<0.0050			0.0050	mg/L		03-OCT-12	R2449354
Total Suspended Solids	<3.0			3.0	mg/L		26-SEP-12	R2444142
pH	6.72			0.10	pH		26-SEP-12	R2442702
L1213061-2	LUP-10-DAILY							
Sampled By:	L. Coedy on 19-SEP-12 @ 10:30							
Matrix:	Water							
Total Metals - CCME								
Mercury (Hg) - Total								
Mercury (Hg)-Total	<0.00010			0.00010	mg/L		03-OCT-12	R2448329
Total Metals in Water by ICPMS (Low)								
Aluminum (Al)-Total	0.031			0.010	mg/L		29-SEP-12	R2446805
Antimony (Sb)-Total	<0.00040			0.00040	mg/L		29-SEP-12	R2446805
Arsenic (As)-Total	0.0104			0.00040	mg/L		29-SEP-12	R2446805
Barium (Ba)-Total	0.0153			0.0030	mg/L		29-SEP-12	R2446805
Beryllium (Be)-Total	<0.0010			0.0010	mg/L		29-SEP-12	R2446805
Boron (B)-Total	0.064			0.050	mg/L		29-SEP-12	R2446805
Cadmium (Cd)-Total	0.000218			0.000050	mg/L		29-SEP-12	R2446805
Chromium (Cr)-Total	<0.0050			0.0050	mg/L		29-SEP-12	R2446805

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213061-2	LUP-10-DAILY							
Sampled By: L. Coedy on 19-SEP-12 @ 10:30								
Matrix: Water								
Total Metals in Water by ICPMS (Low)								
Cobalt (Co)-Total		0.0326		0.0020	mg/L		29-SEP-12	R2446805
Copper (Cu)-Total		0.0023		0.0010	mg/L		29-SEP-12	R2446805
Lead (Pb)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Lithium (Li)-Total		0.022		0.010	mg/L		29-SEP-12	R2446805
Molybdenum (Mo)-Total		<0.0050		0.0050	mg/L		29-SEP-12	R2446805
Nickel (Ni)-Total		0.0746		0.0020	mg/L		29-SEP-12	R2446805
Selenium (Se)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Silver (Ag)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Thallium (Tl)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Tin (Sn)-Total		<0.050		0.050	mg/L		29-SEP-12	R2446805
Titanium (Ti)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Uranium (U)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Vanadium (V)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Zinc (Zn)-Total		0.250		0.0040	mg/L		29-SEP-12	R2446805
Total Metals in Water by ICPOES (Low)								
Calcium (Ca)-Total		64.0		0.50	mg/L		29-SEP-12	R2446106
Iron (Fe)-Total		0.219		0.010	mg/L		29-SEP-12	R2446106
Magnesium (Mg)-Total		6.69		0.10	mg/L		29-SEP-12	R2446106
Manganese (Mn)-Total		0.719		0.0020	mg/L		29-SEP-12	R2446106
Potassium (K)-Total		5.71		0.10	mg/L		29-SEP-12	R2446106
Sodium (Na)-Total		59.3		1.0	mg/L		29-SEP-12	R2446106
Miscellaneous Parameters								
Cyanide, Total		<0.0050		0.0050	mg/L		03-OCT-12	R2449354
Total Suspended Solids		<3.0		3.0	mg/L		26-SEP-12	R2444142
pH		6.47		0.10	pH		26-SEP-12	R2442702
L1213061-3	LUP-10-DAILY							
Sampled By: L. Coedy on 20-SEP-12 @ 10:30								
Matrix: Water								
Total Metals - CCME								
Mercury (Hg) - Total								
Mercury (Hg)-Total		<0.00010		0.00010	mg/L		03-OCT-12	R2448329
Total Metals in Water by ICPMS (Low)								
Aluminum (Al)-Total		0.025		0.010	mg/L		29-SEP-12	R2446805
Antimony (Sb)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Arsenic (As)-Total		0.00900		0.00040	mg/L		29-SEP-12	R2446805
Barium (Ba)-Total		0.0123		0.0030	mg/L		29-SEP-12	R2446805
Beryllium (Be)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Boron (B)-Total		0.058		0.050	mg/L		29-SEP-12	R2446805
Cadmium (Cd)-Total		0.000178		0.000050	mg/L		29-SEP-12	R2446805
Chromium (Cr)-Total		<0.0050		0.0050	mg/L		29-SEP-12	R2446805
Cobalt (Co)-Total		0.0266		0.0020	mg/L		29-SEP-12	R2446805
Copper (Cu)-Total		0.0019		0.0010	mg/L		29-SEP-12	R2446805
Lead (Pb)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Lithium (Li)-Total		0.019		0.010	mg/L		29-SEP-12	R2446805
Molybdenum (Mo)-Total		<0.0050		0.0050	mg/L		29-SEP-12	R2446805
Nickel (Ni)-Total		0.0616		0.0020	mg/L		29-SEP-12	R2446805
Selenium (Se)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Silver (Ag)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Thallium (Tl)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Tin (Sn)-Total		<0.050		0.050	mg/L		29-SEP-12	R2446805
Titanium (Ti)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213061-3	LUP-10-DAILY							
Sampled By:	L. Coedy on 20-SEP-12 @ 10:30							
Matrix:	Water							
Total Metals in Water by ICPMS (Low)								
Uranium (U)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Vanadium (V)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Zinc (Zn)-Total		0.210		0.0040	mg/L		29-SEP-12	R2446805
Total Metals in Water by ICPOES (Low)								
Calcium (Ca)-Total		62.1		0.50	mg/L		29-SEP-12	R2446106
Iron (Fe)-Total		0.221		0.010	mg/L		29-SEP-12	R2446106
Magnesium (Mg)-Total		6.57		0.10	mg/L		29-SEP-12	R2446106
Manganese (Mn)-Total		0.698		0.0020	mg/L		29-SEP-12	R2446106
Potassium (K)-Total		5.19		0.10	mg/L		29-SEP-12	R2446106
Sodium (Na)-Total		52.9		1.0	mg/L		29-SEP-12	R2446106
Miscellaneous Parameters								
Cyanide, Total		<0.0050		0.0050	mg/L		03-OCT-12	R2449354
Total Suspended Solids		<3.0		3.0	mg/L		26-SEP-12	R2444142
pH		6.68		0.10	pH		26-SEP-12	R2442702
L1213061-4	LUP-20-WEEKLY							
Sampled By:	L. Coedy on 20-SEP-12 @ 10:30							
Matrix:	Water							
Hardness								
Dissolved Metals in Water by ICPOES								
Calcium (Ca)-Dissolved		55.2		0.50	mg/L		03-OCT-12	R2447875
Magnesium (Mg)-Dissolved		6.47		0.10	mg/L		03-OCT-12	R2447875
Hardness (from Dissolved Ca and Mg)								
Hardness (as CaCO3)		164		1.3	mg/L		03-OCT-12	
Total Metals - CCME								
Mercury (Hg) - Total								
Mercury (Hg)-Total		<0.00010		0.00010	mg/L		03-OCT-12	R2448329
Total Metals in Water by ICPMS (Low)								
Aluminum (Al)-Total		0.083		0.010	mg/L		29-SEP-12	R2446805
Antimony (Sb)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Arsenic (As)-Total		0.00150		0.00040	mg/L		29-SEP-12	R2446805
Barium (Ba)-Total		0.0291		0.0030	mg/L		29-SEP-12	R2446805
Beryllium (Be)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Boron (B)-Total		0.057		0.050	mg/L		29-SEP-12	R2446805
Cadmium (Cd)-Total		0.000238		0.000050	mg/L		29-SEP-12	R2446805
Chromium (Cr)-Total		<0.0050		0.0050	mg/L		29-SEP-12	R2446805
Cobalt (Co)-Total		0.0274		0.0020	mg/L		29-SEP-12	R2446805
Copper (Cu)-Total		0.0016		0.0010	mg/L		29-SEP-12	R2446805
Lead (Pb)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Lithium (Li)-Total		0.019		0.010	mg/L		29-SEP-12	R2446805
Molybdenum (Mo)-Total		<0.0050		0.0050	mg/L		29-SEP-12	R2446805
Nickel (Ni)-Total		0.0926		0.0020	mg/L		29-SEP-12	R2446805
Selenium (Se)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Silver (Ag)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Thallium (Tl)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Tin (Sn)-Total		<0.050		0.050	mg/L		29-SEP-12	R2446805
Titanium (Ti)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Uranium (U)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Vanadium (V)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Zinc (Zn)-Total		0.209		0.0040	mg/L		29-SEP-12	R2446805
Total Metals in Water by ICPOES (Low)								
Calcium (Ca)-Total		55.1		0.50	mg/L		29-SEP-12	R2446106

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213061-4	LUP-20-WEEKLY							
Sampled By:	L. Coedy on 20-SEP-12 @ 10:30							
Matrix:	Water							
Total Metals in Water by ICPOES (Low)								
Iron (Fe)-Total		0.061		0.010	mg/L		29-SEP-12	R2446106
Magnesium (Mg)-Total		7.06		0.10	mg/L		29-SEP-12	R2446106
Manganese (Mn)-Total		0.528		0.0020	mg/L		29-SEP-12	R2446106
Potassium (K)-Total		4.75		0.10	mg/L		29-SEP-12	R2446106
Sodium (Na)-Total		49.6		1.0	mg/L		29-SEP-12	R2446106
Miscellaneous Parameters								
Alkalinity, Total (as CaCO3)		<5.0		5.0	mg/L		26-SEP-12	R2442702
Ammonia, Total (as N)		<0.050		0.050	mg/L		02-OCT-12	R2447518
Cyanide, Total		<0.0050		0.0050	mg/L		03-OCT-12	R2449354
Total Suspended Solids		<3.0		3.0	mg/L		26-SEP-12	R2444142
pH		5.85		0.10	pH		26-SEP-12	R2442702
L1213061-5	LUP-21-WEEKLY							
Sampled By:	L. Coedy on 20-SEP-12 @ 11:00							
Matrix:	Water							
Hardness								
Dissolved Metals in Water by ICPOES								
Calcium (Ca)-Dissolved		1.65		0.50	mg/L		03-OCT-12	R2447875
Magnesium (Mg)-Dissolved		0.73		0.10	mg/L		03-OCT-12	R2447875
Hardness (from Dissolved Ca and Mg)								
Hardness (as CaCO3)		7.1		1.3	mg/L		03-OCT-12	
Total Metals - CCME								
Mercury (Hg) - Total								
Mercury (Hg)-Total		<0.00010		0.00010	mg/L		03-OCT-12	R2448329
Total Metals in Water by ICPMS (Low)								
Aluminum (Al)-Total		0.012		0.010	mg/L		29-SEP-12	R2446805
Antimony (Sb)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Arsenic (As)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Barium (Ba)-Total		<0.0030		0.0030	mg/L		29-SEP-12	R2446805
Beryllium (Be)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Boron (B)-Total		<0.050		0.050	mg/L		29-SEP-12	R2446805
Cadmium (Cd)-Total		<0.000050		0.000050	mg/L		29-SEP-12	R2446805
Chromium (Cr)-Total		<0.0050		0.0050	mg/L		29-SEP-12	R2446805
Cobalt (Co)-Total		<0.0020		0.0020	mg/L		29-SEP-12	R2446805
Copper (Cu)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Lead (Pb)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Lithium (Li)-Total		<0.010		0.010	mg/L		29-SEP-12	R2446805
Molybdenum (Mo)-Total		<0.0050		0.0050	mg/L		29-SEP-12	R2446805
Nickel (Ni)-Total		<0.0020		0.0020	mg/L		29-SEP-12	R2446805
Selenium (Se)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Silver (Ag)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Thallium (Tl)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Tin (Sn)-Total		<0.050		0.050	mg/L		29-SEP-12	R2446805
Titanium (Ti)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Uranium (U)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Vanadium (V)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Zinc (Zn)-Total		<0.0040		0.0040	mg/L		29-SEP-12	R2446805
Total Metals in Water by ICPOES (Low)								
Calcium (Ca)-Total		1.16		0.50	mg/L		29-SEP-12	R2446106
Iron (Fe)-Total		0.076		0.010	mg/L		29-SEP-12	R2446106
Magnesium (Mg)-Total		0.64		0.10	mg/L		29-SEP-12	R2446106
Manganese (Mn)-Total		0.0020		0.0020	mg/L		29-SEP-12	R2446106

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213061-5	LUP-21-WEEKLY							
Sampled By: L. Coedy on 20-SEP-12 @ 11:00								
Matrix: Water								
Total Metals in Water by ICPOES (Low)								
Potassium (K)-Total		0.30		0.10	mg/L		29-SEP-12	R2446106
Sodium (Na)-Total		<1.0		1.0	mg/L		29-SEP-12	R2446106
Miscellaneous Parameters								
Alkalinity, Total (as CaCO3)		<5.0		5.0	mg/L		26-SEP-12	R2442702
Ammonia, Total (as N)		<0.050		0.050	mg/L		02-OCT-12	R2447518
Cyanide, Total		<0.0050		0.0050	mg/L		03-OCT-12	R2449354
Total Suspended Solids		<3.0		3.0	mg/L		26-SEP-12	R2444142
pH		6.81		0.10	pH		26-SEP-12	R2442702
L1213061-6	LUP-22-WEEKLY							
Sampled By: L. Coedy on 20-SEP-12 @ 11:30								
Matrix: Water								
Hardness								
Dissolved Metals in Water by ICPOES								
Calcium (Ca)-Dissolved		19.6		0.50	mg/L		03-OCT-12	R2447875
Magnesium (Mg)-Dissolved		3.18		0.10	mg/L		03-OCT-12	R2447875
Hardness (from Dissolved Ca and Mg)								
Hardness (as CaCO3)		62.1		1.3	mg/L		03-OCT-12	
Total Metals - CCME								
Mercury (Hg) - Total								
Mercury (Hg)-Total		<0.00010		0.00010	mg/L		03-OCT-12	R2448329
Total Metals in Water by ICPMS (Low)								
Aluminum (Al)-Total		0.025		0.010	mg/L		29-SEP-12	R2446805
Antimony (Sb)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Arsenic (As)-Total		0.00066		0.00040	mg/L		29-SEP-12	R2446805
Barium (Ba)-Total		0.0179		0.0030	mg/L		29-SEP-12	R2446805
Beryllium (Be)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Boron (B)-Total		<0.050		0.050	mg/L		29-SEP-12	R2446805
Cadmium (Cd)-Total		0.000061		0.000050	mg/L		29-SEP-12	R2446805
Chromium (Cr)-Total		<0.0050		0.0050	mg/L		29-SEP-12	R2446805
Cobalt (Co)-Total		0.0036		0.0020	mg/L		29-SEP-12	R2446805
Copper (Cu)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Lead (Pb)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Lithium (Li)-Total		<0.010		0.010	mg/L		29-SEP-12	R2446805
Molybdenum (Mo)-Total		<0.0050		0.0050	mg/L		29-SEP-12	R2446805
Nickel (Ni)-Total		0.0269		0.0020	mg/L		29-SEP-12	R2446805
Selenium (Se)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Silver (Ag)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Thallium (Tl)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Tin (Sn)-Total		<0.050		0.050	mg/L		29-SEP-12	R2446805
Titanium (Ti)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Uranium (U)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Vanadium (V)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Zinc (Zn)-Total		0.0498		0.0040	mg/L		29-SEP-12	R2446805
Total Metals in Water by ICPOES (Low)								
Calcium (Ca)-Total		19.6		0.50	mg/L		29-SEP-12	R2446106
Iron (Fe)-Total		0.067		0.010	mg/L		29-SEP-12	R2446106
Magnesium (Mg)-Total		3.42		0.10	mg/L		29-SEP-12	R2446106
Manganese (Mn)-Total		0.0908		0.0020	mg/L		29-SEP-12	R2446106
Potassium (K)-Total		1.64		0.10	mg/L		29-SEP-12	R2446106
Sodium (Na)-Total		16.3		1.0	mg/L		29-SEP-12	R2446106
Miscellaneous Parameters								

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213061-7	LUP-24-WEEKLY							
Sampled By:	L. Coedy on 20-SEP-12 @ 11:30							
Matrix:	Water							
Total Suspended Solids		<3.0		3.0	mg/L		26-SEP-12	R2444142
pH		6.78		0.10	pH		26-SEP-12	R2442702
L1213061-8	LUP-25-WEEKLY							
Sampled By:	L. Coedy on 20-SEP-12 @ 11:30							
Matrix:	Water							
Hardness								
Dissolved Metals in Water by ICPOES								
Calcium (Ca)-Dissolved		1.03		0.50	mg/L		03-OCT-12	R2447875
Magnesium (Mg)-Dissolved		0.42		0.10	mg/L		03-OCT-12	R2447875
Hardness (from Dissolved Ca and Mg)								
Hardness (as CaCO3)		4.3		1.3	mg/L		03-OCT-12	
Total Metals - CCME								
Mercury (Hg) - Total								
Mercury (Hg)-Total		<0.00010		0.00010	mg/L		03-OCT-12	R2448329
Total Metals in Water by ICPMS (Low)								
Aluminum (Al)-Total		<0.010		0.010	mg/L		29-SEP-12	R2446805
Antimony (Sb)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Arsenic (As)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Barium (Ba)-Total		<0.0030		0.0030	mg/L		29-SEP-12	R2446805
Beryllium (Be)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Boron (B)-Total		<0.050		0.050	mg/L		29-SEP-12	R2446805
Cadmium (Cd)-Total		<0.000050		0.000050	mg/L		29-SEP-12	R2446805
Chromium (Cr)-Total		<0.0050		0.0050	mg/L		29-SEP-12	R2446805
Cobalt (Co)-Total		<0.0020		0.0020	mg/L		29-SEP-12	R2446805
Copper (Cu)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Lead (Pb)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Lithium (Li)-Total		<0.010		0.010	mg/L		29-SEP-12	R2446805
Molybdenum (Mo)-Total		<0.0050		0.0050	mg/L		29-SEP-12	R2446805
Nickel (Ni)-Total		<0.0020		0.0020	mg/L		29-SEP-12	R2446805
Selenium (Se)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Silver (Ag)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Thallium (Tl)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Tin (Sn)-Total		<0.050		0.050	mg/L		29-SEP-12	R2446805
Titanium (Ti)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Uranium (U)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Vanadium (V)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Zinc (Zn)-Total		<0.0040		0.0040	mg/L		29-SEP-12	R2446805
Total Metals in Water by ICPOES (Low)								
Calcium (Ca)-Total		0.98		0.50	mg/L		29-SEP-12	R2446106
Iron (Fe)-Total		0.016		0.010	mg/L		29-SEP-12	R2446106
Magnesium (Mg)-Total		0.45		0.10	mg/L		29-SEP-12	R2446106
Manganese (Mn)-Total		<0.0020		0.0020	mg/L		29-SEP-12	R2446106
Potassium (K)-Total		0.30		0.10	mg/L		29-SEP-12	R2446106
Sodium (Na)-Total		<1.0		1.0	mg/L		29-SEP-12	R2446106
Miscellaneous Parameters								
Alkalinity, Total (as CaCO3)		<5.0		5.0	mg/L		26-SEP-12	R2442702
Ammonia, Total (as N)		<0.050		0.050	mg/L		02-OCT-12	R2447518
Cyanide, Total		<0.0050		0.0050	mg/L		03-OCT-12	R2449354
Total Suspended Solids		<3.0		3.0	mg/L		26-SEP-12	R2444142
pH		6.77		0.10	pH		26-SEP-12	R2442702

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213061-9	LUP-10-WEEKLY							
Sampled By:	L. Coedy on 21-SEP-12 @ 09:30							
Matrix:	Water							
Hardness								
Dissolved Metals in Water by ICPOES								
Calcium (Ca)-Dissolved	59.7			0.50	mg/L		03-OCT-12	R2447875
Magnesium (Mg)-Dissolved	5.92			0.10	mg/L		03-OCT-12	R2447875
Hardness (from Dissolved Ca and Mg)								
Hardness (as CaCO3)	173			1.3	mg/L		03-OCT-12	
Total Metals - CCME								
Mercury (Hg) - Total								
Mercury (Hg)-Total	<0.00010			0.00010	mg/L		03-OCT-12	R2448329
Total Metals in Water by ICPMS (Low)								
Aluminum (Al)-Total	0.029			0.010	mg/L		29-SEP-12	R2446805
Antimony (Sb)-Total	<0.00040			0.00040	mg/L		29-SEP-12	R2446805
Arsenic (As)-Total	0.0102			0.00040	mg/L		29-SEP-12	R2446805
Barium (Ba)-Total	0.0148			0.0030	mg/L		29-SEP-12	R2446805
Beryllium (Be)-Total	<0.0010			0.0010	mg/L		29-SEP-12	R2446805
Boron (B)-Total	0.064			0.050	mg/L		29-SEP-12	R2446805
Cadmium (Cd)-Total	0.000209			0.000050	mg/L		29-SEP-12	R2446805
Chromium (Cr)-Total	<0.0050			0.0050	mg/L		29-SEP-12	R2446805
Cobalt (Co)-Total	0.0311			0.0020	mg/L		29-SEP-12	R2446805
Copper (Cu)-Total	0.0021			0.0010	mg/L		29-SEP-12	R2446805
Lead (Pb)-Total	<0.00010			0.00010	mg/L		29-SEP-12	R2446805
Lithium (Li)-Total	0.021			0.010	mg/L		29-SEP-12	R2446805
Molybdenum (Mo)-Total	<0.0050			0.0050	mg/L		29-SEP-12	R2446805
Nickel (Ni)-Total	0.0707			0.0020	mg/L		29-SEP-12	R2446805
Selenium (Se)-Total	<0.00040			0.00040	mg/L		29-SEP-12	R2446805
Silver (Ag)-Total	<0.00010			0.00010	mg/L		29-SEP-12	R2446805
Thallium (Tl)-Total	<0.00010			0.00010	mg/L		29-SEP-12	R2446805
Tin (Sn)-Total	<0.050			0.050	mg/L		29-SEP-12	R2446805
Titanium (Ti)-Total	<0.0010			0.0010	mg/L		29-SEP-12	R2446805
Uranium (U)-Total	<0.00010			0.00010	mg/L		29-SEP-12	R2446805
Vanadium (V)-Total	<0.0010			0.0010	mg/L		29-SEP-12	R2446805
Zinc (Zn)-Total	0.238			0.0040	mg/L		29-SEP-12	R2446805
Total Metals in Water by ICPOES (Low)								
Calcium (Ca)-Total	61.4			0.50	mg/L		29-SEP-12	R2446106
Iron (Fe)-Total	0.210			0.010	mg/L		29-SEP-12	R2446106
Magnesium (Mg)-Total	6.28			0.10	mg/L		29-SEP-12	R2446106
Manganese (Mn)-Total	0.678			0.0020	mg/L		29-SEP-12	R2446106
Potassium (K)-Total	5.05			0.10	mg/L		29-SEP-12	R2446106
Sodium (Na)-Total	55.3			1.0	mg/L		29-SEP-12	R2446106
Miscellaneous Parameters								
Alkalinity, Total (as CaCO3)	<5.0			5.0	mg/L		26-SEP-12	R2442702
Ammonia, Total (as N)	0.072			0.050	mg/L		02-OCT-12	R2447518
Cyanide, Total	<0.0050			0.0050	mg/L		03-OCT-12	R2449354
Total Suspended Solids	<3.0			3.0	mg/L		26-SEP-12	R2444142
pH	6.46			0.10	pH		26-SEP-12	R2442702

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Qualifiers for Individual Samples Listed:

Sample Number	Client ID	Qualifier	Description
L1213061-4	LUP-20-WEEKLY	SP	nutrients - Sample was Preserved at the laboratory
L1213061-5	LUP-21-WEEKLY	SP	nutrients - Sample was Preserved at the laboratory
L1213061-6	LUP-22-WEEKLY	SP	nutrients - Sample was Preserved at the laboratory
L1213061-7	LUP-24-WEEKLY	SP	nutrients - Sample was Preserved at the laboratory
L1213061-8	LUP-25-WEEKLY	SP	nutrients - Sample was Preserved at the laboratory
L1213061-9	LUP-10-WEEKLY	SP	nutrients - Sample was Preserved at the laboratory

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-TOT-ED	Water	Alkalinity, Total	APHA 2320 B-Auto-Pot. Titration
CN-T-CFA-VA	Water	Total Cyanide in water by CFA	ISO 14403:2002
This analysis is carried out using procedures adapted from ISO Method 14403:2002 "Determination of Total Cyanide using Flow Analysis (FIA and CFA)". Total or strong acid dissociable (SAD) cyanide is determined by in-line UV digestion along with sample distillation and final determination by colourimetric analysis. Method Limitation: This method is susceptible to interference from thiocyanate (SCN). If SCN is present in the sample, there could be a positive interference with this method, but it would be less than 1% and could be as low as zero.			
ETL-HARDNESS-DIS-ED	Water	Hardness (from Dissolved Ca and Mg)	APHA 2340 B-Calculation
HG-T-CVAA-ED	Water	Mercury (Hg) - Total	EPA 245.7 / EPA 245.1
MET-D-ICP-ED	Water	Dissolved Metals in Water by ICPOES	APHA 3120 B-ICP-OES
MET-T-L-ICP-ED	Water	Total Metals in Water by ICPOES (Low)	APHA 3120 B-ICP-OES
MET-T-L-MS-ED	Water	Total Metals in Water by ICPMS (Low)	SW 846 - 6020-ICPMS
NH3-CFA-ED	Water	Ammonia in Water by Colour	APHA 4500 NH3-NITROGEN (AMMONIA)
This analysis is carried out using procedures adapted from APHA Method 4500 NH3 "NITROGEN (AMMONIA)". Ammonia is determined using the automated phenate colourimetric method.			
PH-ED	Water	pH	APHA 4500 H-Electrode
All samples analyzed by this method for pH will have exceeded the 15 minute recommended hold time from time of sampling (field analysis is recommended for pH where highly accurate results are needed)			
SOLIDS-TOTSUS-ED	Water	Total Suspended Solids	APHA 2540 D-Gravimetric

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg ww - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Quality Control Report

Workorder: L1213061

Report Date: 04-OCT-12

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Client: LUPIN MINES INCORPORATED
201, 750W PENDER ST.
VANCOUVER BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ALK-TOT-ED		Water						
Batch	R2442702							
WG1552907-8	DUP	L1213712-1						
Alkalinity, Total (as CaCO3)		290	292		mg/L	0.7	20	25-SEP-12
WG1552907-4	LCS							
Alkalinity, Total (as CaCO3)			103.9		%		85-115	25-SEP-12
WG1552907-1	MB							
Alkalinity, Total (as CaCO3)			<5.0		mg/L		5	25-SEP-12
CN-T-CFA-VA		Water						
Batch	R2449354							
WG1559633-21	DUP	L1212885-3						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	03-OCT-12
WG1559633-25	DUP	L1212753-1						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	03-OCT-12
WG1559633-7	DUP	L1212848-19						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	03-OCT-12
WG1559633-10	LCS							
Cyanide, Total			91.7		%		80-120	03-OCT-12
WG1559633-16	LCS							
Cyanide, Total			95.0		%		80-120	03-OCT-12
WG1559633-2	LCS							
Cyanide, Total			93.0		%		80-120	03-OCT-12
WG1559633-20	LCS							
Cyanide, Total			95.2		%		80-120	03-OCT-12
WG1559633-24	LCS							
Cyanide, Total			96.6		%		80-120	03-OCT-12
WG1559633-28	LCS							
Cyanide, Total			90.4		%		80-120	03-OCT-12
WG1559633-6	LCS							
Cyanide, Total			94.3		%		80-120	03-OCT-12
WG1559633-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	03-OCT-12
WG1559633-15	MB							
Cyanide, Total			<0.0050		mg/L		0.005	03-OCT-12
WG1559633-19	MB							
Cyanide, Total			<0.0050		mg/L		0.005	03-OCT-12
WG1559633-23	MB							
Cyanide, Total			<0.0050		mg/L		0.005	03-OCT-12
WG1559633-27	MB							
Cyanide, Total			<0.0050		mg/L		0.005	03-OCT-12



Quality Control Report

Workorder: L1213061

Report Date: 04-OCT-12

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Client: LUPIN MINES INCORPORATED
201, 750W PENDER ST.
VANCOUVER BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-CFA-VA		Water						
Batch	R2449354							
WG1559633-5 MB								
Cyanide, Total			<0.0050		mg/L		0.005	03-OCT-12
WG1559633-9 MB								
Cyanide, Total			<0.0050		mg/L		0.005	03-OCT-12
WG1559633-22 MS		L1212885-3						
Cyanide, Total			93.3		%		70-130	03-OCT-12
WG1559633-26 MS		L1212753-1						
Cyanide, Total			96.4		%		70-130	03-OCT-12
WG1559633-8 MS		L1212848-19						
Cyanide, Total			98.7		%		70-130	03-OCT-12
HG-T-CVAA-ED		Water						
Batch	R2448329							
WG1559045-2 LCS								
Mercury (Hg)-Total			104.7		%		80-120	03-OCT-12
WG1559045-3 LCSD		WG1559045-2						
Mercury (Hg)-Total		104.7	102.0		%	2.7	20	03-OCT-12
WG1559045-1 MB								
Mercury (Hg)-Total			<0.00010		mg/L		0.0001	03-OCT-12
MET-D-ICP-ED		Water						
Batch	R2447875							
WG1558299-2 CRM		EU-H-4_OPTWATER						
Calcium (Ca)-Dissolved			100.1		%		80-120	02-OCT-12
Magnesium (Mg)-Dissolved			96.6		%		80-120	02-OCT-12
WG1558299-3 DUP		L1214582-2						
Calcium (Ca)-Dissolved		25.4	27.2		mg/L	2.9	20	02-OCT-12
Magnesium (Mg)-Dissolved		11.2	11.1		mg/L	2.9	20	02-OCT-12
WG1558299-4 DUP		L1216125-10						
Calcium (Ca)-Dissolved		239	216		mg/L	9.9	20	02-OCT-12
Magnesium (Mg)-Dissolved		59.1	52.8		mg/L	11	20	02-OCT-12
WG1558299-6 DUP		L1214402-1						
Calcium (Ca)-Dissolved		97.1	96.2		mg/L	0.9	20	02-OCT-12
Magnesium (Mg)-Dissolved		61.5	61.0		mg/L	0.8	20	02-OCT-12
WG1558299-7 DUP		L1215229-3						
Calcium (Ca)-Dissolved		73.4	70.4		mg/L	3.9	20	03-OCT-12
Magnesium (Mg)-Dissolved		21.2	18.8		mg/L	3.5	20	03-OCT-12
WG1558299-8 DUP		L1215265-18						
Calcium (Ca)-Dissolved		137	131		mg/L	4.3	20	03-OCT-12



Quality Control Report

Workorder: L1213061

Report Date: 04-OCT-12

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Client: LUPIN MINES INCORPORATED
201, 750W PENDER ST.
VANCOUVER BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-ICP-ED		Water						
Batch	R2447875							
WG1558299-8	DUP	L1215265-18						
Magnesium (Mg)-Dissolved		20.4	19.8		mg/L	3.2	20	03-OCT-12
WG1558299-1	MB							
Calcium (Ca)-Dissolved			<0.50		mg/L		0.5	02-OCT-12
Magnesium (Mg)-Dissolved			<0.10		mg/L		0.1	02-OCT-12
MET-T-L-ICP-ED		Water						
Batch	R2446106							
WG1556177-1	MB							
Calcium (Ca)-Total			<0.50		mg/L		0.5	29-SEP-12
Iron (Fe)-Total			<0.01		mg/L		0.01	29-SEP-12
Magnesium (Mg)-Total			<0.10		mg/L		0.1	29-SEP-12
Manganese (Mn)-Total			<0.0020		mg/L		0.002	29-SEP-12
Potassium (K)-Total			<0.1		mg/L		0.1	29-SEP-12
Sodium (Na)-Total			<1.0		mg/L		1	29-SEP-12
MET-T-L-MS-ED		Water						
Batch	R2446805							
WG1556177-2	DUP	L1211567-2						
Aluminum (Al)-Total		0.091	0.097		mg/L	6.6	20	29-SEP-12
Antimony (Sb)-Total		<0.00050	<0.00040	RPD-NA	mg/L	N/A	20	29-SEP-12
Arsenic (As)-Total		0.00056	0.00055		mg/L	2.4	20	29-SEP-12
Barium (Ba)-Total		0.0619	0.0626		mg/L	1.2	20	29-SEP-12
Beryllium (Be)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	29-SEP-12
Boron (B)-Total		<0.050	0.0210		mg/L	0.5	20	29-SEP-12
Cadmium (Cd)-Total		<0.00020	<0.000050	RPD-NA	mg/L	N/A	20	29-SEP-12
Chromium (Cr)-Total		<0.0050	<0.00080	RPD-NA	mg/L	N/A	20	29-SEP-12
Cobalt (Co)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	29-SEP-12
Copper (Cu)-Total		0.0019	0.0019		mg/L	0.6	20	29-SEP-12
Lead (Pb)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	29-SEP-12
Lithium (Li)-Total		0.0098	0.0096		mg/L	2.7	20	29-SEP-12
Molybdenum (Mo)-Total		0.00057	0.00056		mg/L	1.5	20	29-SEP-12
Nickel (Ni)-Total		0.00117	0.00120		mg/L	2.0	20	29-SEP-12
Selenium (Se)-Total		<0.0010	<0.00040	RPD-NA	mg/L	N/A	20	29-SEP-12
Silver (Ag)-Total		<0.0050	<0.00010	RPD-NA	mg/L	N/A	20	29-SEP-12
Thallium (Tl)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	29-SEP-12



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Client: LUPIN MINES INCORPORATED
201, 750W PENDER ST.
VANCOUVER BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-ED		Water						
Batch	R2446805							
WG1556177-2 DUP		L1211567-2						
Tin (Sn)-Total		<0.00040	<0.00040	RPD-NA	mg/L	N/A	20	29-SEP-12
Titanium (Ti)-Total		<0.00060	<0.00060	RPD-NA	mg/L	N/A	20	29-SEP-12
Uranium (U)-Total		<0.00050	<0.00010	RPD-NA	mg/L	N/A	20	29-SEP-12
Vanadium (V)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	29-SEP-12
Zinc (Zn)-Total		<0.050	0.0068		mg/L	1.2	20	29-SEP-12
WG1556177-1 MB								
Aluminum (Al)-Total			<0.010		mg/L		0.01	29-SEP-12
Antimony (Sb)-Total			<0.00040		mg/L		0.0004	29-SEP-12
Arsenic (As)-Total			<0.00040		mg/L		0.0004	29-SEP-12
Barium (Ba)-Total			<0.00020		mg/L		0.0002	29-SEP-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	29-SEP-12
Boron (B)-Total			<0.0040		mg/L		0.004	29-SEP-12
Cadmium (Cd)-Total			<0.000050		mg/L		0.00005	29-SEP-12
Chromium (Cr)-Total			<0.00080		mg/L		0.0008	29-SEP-12
Cobalt (Co)-Total			<0.00020		mg/L		0.0002	29-SEP-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	29-SEP-12
Lead (Pb)-Total			<0.00010		mg/L		0.0001	29-SEP-12
Lithium (Li)-Total			<0.0060		mg/L		0.006	29-SEP-12
Molybdenum (Mo)-Total			<0.00010		mg/L		0.0001	29-SEP-12
Nickel (Ni)-Total			<0.00020		mg/L		0.0002	29-SEP-12
Selenium (Se)-Total			<0.00040		mg/L		0.0004	29-SEP-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	29-SEP-12
Thallium (Tl)-Total			<0.00010		mg/L		0.0001	29-SEP-12
Tin (Sn)-Total			<0.00040		mg/L		0.0004	29-SEP-12
Titanium (Ti)-Total			<0.00060		mg/L		0.0006	29-SEP-12
Uranium (U)-Total			<0.00010		mg/L		0.0001	29-SEP-12
Vanadium (V)-Total			<0.00050		mg/L		0.0005	29-SEP-12
Zinc (Zn)-Total			<0.0040		mg/L		0.004	29-SEP-12
NH3-CFA-ED		Water						
Batch	R2447518							
WG1557890-12 DUP		L1216024-2						
Ammonia, Total (as N)		<0.050	<0.050	RPD-NA	mg/L	N/A	20	02-OCT-12
WG1557890-4 DUP		L1215449-21						
Ammonia, Total (as N)		<0.050	<0.050	RPD-NA	mg/L	N/A	20	02-OCT-12



Quality Control Report

Workorder: L1213061

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Client: LUPIN MINES INCORPORATED
201, 750W PENDER ST.
VANCOUVER BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-CFA-ED		Water						
Batch	R2447518							
WG1557890-5	DUP	L1215227-13						
Ammonia, Total (as N)		0.180	0.174		mg/L	3.3	20	02-OCT-12
WG1557890-9	DUP	L1217518-1						
Ammonia, Total (as N)		1.31	1.29		mg/L	1.1	20	02-OCT-12
WG1557890-2	LCS							
Ammonia, Total (as N)			95.3		%		85-115	02-OCT-12
WG1557890-1	MB							
Ammonia, Total (as N)			<0.050		mg/L		0.05	02-OCT-12
WG1557890-11	MS	L1215996-3						
Ammonia, Total (as N)			98.4		%		75-125	02-OCT-12
WG1557890-6	MS	L1213061-9						
Ammonia, Total (as N)			93.7		%		75-125	02-OCT-12
PH-ED		Water						
Batch	R2442702							
WG1552907-9	DUP	L1214105-1						
pH		8.34	8.41	J	pH	0.07	0.2	25-SEP-12
WG1552907-3	LCS							
pH			7.02		pH		6.9-7.1	25-SEP-12
SOLIDS-TOTSUS-ED		Water						
Batch	R2444142							
WG1553742-3	DUP	L1210502-5						
Total Suspended Solids		<3.0	<3.0	RPD-NA	mg/L	N/A	20	26-SEP-12
WG1553742-4	DUP	L1213226-4						
Total Suspended Solids		4.0	6.0	J	mg/L	2.0	6	26-SEP-12
WG1553742-5	DUP	L1213852-1						
Total Suspended Solids		23.0	23.0		mg/L	0.0	20	26-SEP-12
WG1553742-6	DUP	L1213968-1						
Total Suspended Solids		26.0	24.0		mg/L	8.0	20	26-SEP-12
WG1553742-2	LCS							
Total Suspended Solids			90.0		%		85-115	26-SEP-12
WG1553742-1	MB							
Total Suspended Solids			<3.0		mg/L		3	26-SEP-12

Quality Control Report

Workorder: L1213061

Report Date: 04-OCT-12

Client: LUPIN MINES INCORPORATED
201, 750W PENDER ST.
VANCOUVER BC V6T 2T7

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Contact: David Vokey

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L1213061

Report Date: 04-OCT-12

Client: LUPIN MINES INCORPORATED
201, 750W PENDER ST.
VANCOUVER BC V6T 2T7

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Contact: David Vokey

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Total Suspended Solids	1	18-SEP-12 11:00	26-SEP-12 00:00	7	8	days	EHT
pH	1	18-SEP-12 11:00	26-SEP-12 00:13	0.25	181	hours	EHTR-FM
	2	19-SEP-12 10:30	26-SEP-12 00:18	0.25	158	hours	EHTR-FM
	3	20-SEP-12 10:30	26-SEP-12 00:24	0.25	134	hours	EHTR-FM
	4	20-SEP-12 10:30	26-SEP-12 00:28	0.25	134	hours	EHTR-FM
	5	20-SEP-12 11:00	26-SEP-12 00:34	0.25	134	hours	EHTR-FM
	6	20-SEP-12 11:30	26-SEP-12 00:40	0.25	133	hours	EHTR-FM
	7	20-SEP-12 11:30	26-SEP-12 00:46	0.25	133	hours	EHTR-FM
	8	20-SEP-12 11:30	26-SEP-12 00:52	0.25	133	hours	EHTR-FM
	9	21-SEP-12 09:30	26-SEP-12 00:57	0.25	111	hours	EHTR-FM
Cyanides							
Total Cyanide in water by CFA	1	18-SEP-12 11:00	03-OCT-12 13:20	14	15	days	EHT

Legend & Qualifier Definitions:

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR: Exceeded ALS recommended hold time prior to sample receipt.
EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT: Exceeded ALS recommended hold time prior to analysis.
Rec. HT: ALS recommended hold time (see units).

Notes*:
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L1213061 were received on 21-SEP-12 16:33.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



LUPIN MINES INCORPORATED
ATTN: David Vokey
201, 750W PENDER ST.
VANCOUVER BC V6T 2T7

Date Received: 21-SEP-12
Report Date: 04-OCT-12 16:43 (MT)
Version: FINAL

Client Phone: 604-682-3366

Certificate of Analysis

Lab Work Order #: L1213061
Project P.O. #: NOT SUBMITTED
Job Reference: LUPIN
C of C Numbers:
Legal Site Desc:

Shannon Akkerman
Senior Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

Version: FINAL

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213061-1	LUP-10-DAILY							
Sampled By:	L. Coedy on 18-SEP-12 @ 11:00							
Matrix:	Water							
Total Metals - CCME								
Mercury (Hg) - Total								
Mercury (Hg)-Total		<0.00010		0.00010	mg/L		03-OCT-12	R2448329
Total Metals in Water by ICPMS (Low)								
Aluminum (Al)-Total		0.027		0.010	mg/L		29-SEP-12	R2446805
Antimony (Sb)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Arsenic (As)-Total		0.00703		0.00040	mg/L		29-SEP-12	R2446805
Barium (Ba)-Total		0.0136		0.0030	mg/L		29-SEP-12	R2446805
Beryllium (Be)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Boron (B)-Total		0.057		0.050	mg/L		29-SEP-12	R2446805
Cadmium (Cd)-Total		0.000199		0.000050	mg/L		29-SEP-12	R2446805
Chromium (Cr)-Total		<0.0050		0.0050	mg/L		29-SEP-12	R2446805
Cobalt (Co)-Total		0.0287		0.0020	mg/L		29-SEP-12	R2446805
Copper (Cu)-Total		0.0021		0.0010	mg/L		29-SEP-12	R2446805
Lead (Pb)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Lithium (Li)-Total		0.020		0.010	mg/L		29-SEP-12	R2446805
Molybdenum (Mo)-Total		<0.0050		0.0050	mg/L		29-SEP-12	R2446805
Nickel (Ni)-Total		0.0663		0.0020	mg/L		29-SEP-12	R2446805
Selenium (Se)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Silver (Ag)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Thallium (Tl)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Tin (Sn)-Total		<0.050		0.050	mg/L		29-SEP-12	R2446805
Titanium (Ti)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Uranium (U)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Vanadium (V)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Zinc (Zn)-Total		0.218		0.0040	mg/L		29-SEP-12	R2446805
Total Metals in Water by ICPOES (Low)								
Calcium (Ca)-Total		59.5		0.50	mg/L		29-SEP-12	R2446106
Iron (Fe)-Total		0.133		0.010	mg/L		29-SEP-12	R2446106
Magnesium (Mg)-Total		6.32		0.10	mg/L		29-SEP-12	R2446106
Manganese (Mn)-Total		0.678		0.0020	mg/L		29-SEP-12	R2446106
Potassium (K)-Total		5.64		0.10	mg/L		29-SEP-12	R2446106
Sodium (Na)-Total		54.9		1.0	mg/L		29-SEP-12	R2446106
Miscellaneous Parameters								
Cyanide, Total		<0.0050		0.0050	mg/L		03-OCT-12	R2449354
Total Suspended Solids		<3.0		3.0	mg/L		26-SEP-12	R2444142
pH		6.72		0.10	pH		26-SEP-12	R2442702
L1213061-2	LUP-10-DAILY							
Sampled By:	L. Coedy on 19-SEP-12 @ 10:30							
Matrix:	Water							
Total Metals - CCME								
Mercury (Hg) - Total								
Mercury (Hg)-Total		<0.00010		0.00010	mg/L		03-OCT-12	R2448329
Total Metals in Water by ICPMS (Low)								
Aluminum (Al)-Total		0.031		0.010	mg/L		29-SEP-12	R2446805
Antimony (Sb)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Arsenic (As)-Total		0.0104		0.00040	mg/L		29-SEP-12	R2446805
Barium (Ba)-Total		0.0153		0.0030	mg/L		29-SEP-12	R2446805
Beryllium (Be)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Boron (B)-Total		0.064		0.050	mg/L		29-SEP-12	R2446805
Cadmium (Cd)-Total		0.000218		0.000050	mg/L		29-SEP-12	R2446805
Chromium (Cr)-Total		<0.0050		0.0050	mg/L		29-SEP-12	R2446805

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213061-2 LUP-10-DAILY Sampled By: L. Coedy on 19-SEP-12 @ 10:30 Matrix: Water							
Total Metals in Water by ICPMS (Low)							
Cobalt (Co)-Total	0.0326		0.0020	mg/L		29-SEP-12	R2446805
Copper (Cu)-Total	0.0023		0.0010	mg/L		29-SEP-12	R2446805
Lead (Pb)-Total	<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Lithium (Li)-Total	0.022		0.010	mg/L		29-SEP-12	R2446805
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		29-SEP-12	R2446805
Nickel (Ni)-Total	0.0746		0.0020	mg/L		29-SEP-12	R2446805
Selenium (Se)-Total	<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Silver (Ag)-Total	<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Tin (Sn)-Total	<0.050		0.050	mg/L		29-SEP-12	R2446805
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Uranium (U)-Total	<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Vanadium (V)-Total	<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Zinc (Zn)-Total	0.250		0.0040	mg/L		29-SEP-12	R2446805
Total Metals in Water by ICPOES (Low)							
Calcium (Ca)-Total	64.0		0.50	mg/L		29-SEP-12	R2446106
Iron (Fe)-Total	0.219		0.010	mg/L		29-SEP-12	R2446106
Magnesium (Mg)-Total	6.69		0.10	mg/L		29-SEP-12	R2446106
Manganese (Mn)-Total	0.719		0.0020	mg/L		29-SEP-12	R2446106
Potassium (K)-Total	5.71		0.10	mg/L		29-SEP-12	R2446106
Sodium (Na)-Total	59.3		1.0	mg/L		29-SEP-12	R2446106
Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L		03-OCT-12	R2449354
Total Suspended Solids	<3.0		3.0	mg/L		26-SEP-12	R2444142
pH	6.47		0.10	pH		26-SEP-12	R2442702
L1213061-3 LUP-10-DAILY Sampled By: L. Coedy on 20-SEP-12 @ 10:30 Matrix: Water							
Total Metals - CCME							
Mercury (Hg) - Total							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		03-OCT-12	R2448329
Total Metals in Water by ICPMS (Low)							
Aluminum (Al)-Total	0.025		0.010	mg/L		29-SEP-12	R2446805
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Arsenic (As)-Total	0.00900		0.00040	mg/L		29-SEP-12	R2446805
Barium (Ba)-Total	0.0123		0.0030	mg/L		29-SEP-12	R2446805
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Boron (B)-Total	0.058		0.050	mg/L		29-SEP-12	R2446805
Cadmium (Cd)-Total	0.000178		0.000050	mg/L		29-SEP-12	R2446805
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		29-SEP-12	R2446805
Cobalt (Co)-Total	0.0266		0.0020	mg/L		29-SEP-12	R2446805
Copper (Cu)-Total	0.0019		0.0010	mg/L		29-SEP-12	R2446805
Lead (Pb)-Total	<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Lithium (Li)-Total	0.019		0.010	mg/L		29-SEP-12	R2446805
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		29-SEP-12	R2446805
Nickel (Ni)-Total	0.0616		0.0020	mg/L		29-SEP-12	R2446805
Selenium (Se)-Total	<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Silver (Ag)-Total	<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Tin (Sn)-Total	<0.050		0.050	mg/L		29-SEP-12	R2446805
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		29-SEP-12	R2446805

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213061-3	LUP-10-DAILY							
Sampled By:	L. Coedy on 20-SEP-12 @ 10:30							
Matrix:	Water							
Total Metals in Water by ICPMS (Low)								
Uranium (U)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Vanadium (V)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Zinc (Zn)-Total		0.210		0.0040	mg/L		29-SEP-12	R2446805
Total Metals in Water by ICPOES (Low)								
Calcium (Ca)-Total		62.1		0.50	mg/L		29-SEP-12	R2446106
Iron (Fe)-Total		0.221		0.010	mg/L		29-SEP-12	R2446106
Magnesium (Mg)-Total		6.57		0.10	mg/L		29-SEP-12	R2446106
Manganese (Mn)-Total		0.698		0.0020	mg/L		29-SEP-12	R2446106
Potassium (K)-Total		5.19		0.10	mg/L		29-SEP-12	R2446106
Sodium (Na)-Total		52.9		1.0	mg/L		29-SEP-12	R2446106
Miscellaneous Parameters								
Cyanide, Total		<0.0050		0.0050	mg/L		03-OCT-12	R2449354
Total Suspended Solids		<3.0		3.0	mg/L		26-SEP-12	R2444142
pH		6.68		0.10	pH		26-SEP-12	R2442702
L1213061-4	LUP-20-WEEKLY							
Sampled By:	L. Coedy on 20-SEP-12 @ 10:30							
Matrix:	Water							
Hardness								
Dissolved Metals in Water by ICPOES								
Calcium (Ca)-Dissolved		55.2		0.50	mg/L		03-OCT-12	R2447875
Magnesium (Mg)-Dissolved		6.47		0.10	mg/L		03-OCT-12	R2447875
Hardness (from Dissolved Ca and Mg)								
Hardness (as CaCO3)		164		1.3	mg/L		03-OCT-12	
Total Metals - CCME								
Mercury (Hg) - Total								
Mercury (Hg)-Total		<0.00010		0.00010	mg/L		03-OCT-12	R2448329
Total Metals in Water by ICPMS (Low)								
Aluminum (Al)-Total		0.083		0.010	mg/L		29-SEP-12	R2446805
Antimony (Sb)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Arsenic (As)-Total		0.00150		0.00040	mg/L		29-SEP-12	R2446805
Barium (Ba)-Total		0.0291		0.0030	mg/L		29-SEP-12	R2446805
Beryllium (Be)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Boron (B)-Total		0.057		0.050	mg/L		29-SEP-12	R2446805
Cadmium (Cd)-Total		0.000238		0.000050	mg/L		29-SEP-12	R2446805
Chromium (Cr)-Total		<0.0050		0.0050	mg/L		29-SEP-12	R2446805
Cobalt (Co)-Total		0.0274		0.0020	mg/L		29-SEP-12	R2446805
Copper (Cu)-Total		0.0016		0.0010	mg/L		29-SEP-12	R2446805
Lead (Pb)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Lithium (Li)-Total		0.019		0.010	mg/L		29-SEP-12	R2446805
Molybdenum (Mo)-Total		<0.0050		0.0050	mg/L		29-SEP-12	R2446805
Nickel (Ni)-Total		0.0926		0.0020	mg/L		29-SEP-12	R2446805
Selenium (Se)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Silver (Ag)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Thallium (Tl)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Tin (Sn)-Total		<0.050		0.050	mg/L		29-SEP-12	R2446805
Titanium (Ti)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Uranium (U)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Vanadium (V)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Zinc (Zn)-Total		0.209		0.0040	mg/L		29-SEP-12	R2446805
Total Metals in Water by ICPOES (Low)								
Calcium (Ca)-Total		55.1		0.50	mg/L		29-SEP-12	R2446106

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213061-4	LUP-20-WEEKLY							
Sampled By:	L. Coedy on 20-SEP-12 @ 10:30							
Matrix:	Water							
Total Metals in Water by ICPOES (Low)								
Iron (Fe)-Total		0.061		0.010	mg/L		29-SEP-12	R2446106
Magnesium (Mg)-Total		7.06		0.10	mg/L		29-SEP-12	R2446106
Manganese (Mn)-Total		0.528		0.0020	mg/L		29-SEP-12	R2446106
Potassium (K)-Total		4.75		0.10	mg/L		29-SEP-12	R2446106
Sodium (Na)-Total		49.6		1.0	mg/L		29-SEP-12	R2446106
Miscellaneous Parameters								
Alkalinity, Total (as CaCO3)		<5.0		5.0	mg/L		26-SEP-12	R2442702
Ammonia, Total (as N)		<0.050		0.050	mg/L		02-OCT-12	R2447518
Cyanide, Total		<0.0050		0.0050	mg/L		03-OCT-12	R2449354
Total Suspended Solids		<3.0		3.0	mg/L		26-SEP-12	R2444142
pH		5.85		0.10	pH		26-SEP-12	R2442702
L1213061-5	LUP-21-WEEKLY							
Sampled By:	L. Coedy on 20-SEP-12 @ 11:00							
Matrix:	Water							
Hardness								
Dissolved Metals in Water by ICPOES								
Calcium (Ca)-Dissolved		1.65		0.50	mg/L		03-OCT-12	R2447875
Magnesium (Mg)-Dissolved		0.73		0.10	mg/L		03-OCT-12	R2447875
Hardness (from Dissolved Ca and Mg)								
Hardness (as CaCO3)		7.1		1.3	mg/L		03-OCT-12	
Total Metals - CCME								
Mercury (Hg) - Total								
Mercury (Hg)-Total		<0.00010		0.00010	mg/L		03-OCT-12	R2448329
Total Metals in Water by ICPMS (Low)								
Aluminum (Al)-Total		0.012		0.010	mg/L		29-SEP-12	R2446805
Antimony (Sb)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Arsenic (As)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Barium (Ba)-Total		<0.0030		0.0030	mg/L		29-SEP-12	R2446805
Beryllium (Be)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Boron (B)-Total		<0.050		0.050	mg/L		29-SEP-12	R2446805
Cadmium (Cd)-Total		<0.000050		0.000050	mg/L		29-SEP-12	R2446805
Chromium (Cr)-Total		<0.0050		0.0050	mg/L		29-SEP-12	R2446805
Cobalt (Co)-Total		<0.0020		0.0020	mg/L		29-SEP-12	R2446805
Copper (Cu)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Lead (Pb)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Lithium (Li)-Total		<0.010		0.010	mg/L		29-SEP-12	R2446805
Molybdenum (Mo)-Total		<0.0050		0.0050	mg/L		29-SEP-12	R2446805
Nickel (Ni)-Total		<0.0020		0.0020	mg/L		29-SEP-12	R2446805
Selenium (Se)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Silver (Ag)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Thallium (Tl)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Tin (Sn)-Total		<0.050		0.050	mg/L		29-SEP-12	R2446805
Titanium (Ti)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Uranium (U)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Vanadium (V)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Zinc (Zn)-Total		<0.0040		0.0040	mg/L		29-SEP-12	R2446805
Total Metals in Water by ICPOES (Low)								
Calcium (Ca)-Total		1.16		0.50	mg/L		29-SEP-12	R2446106
Iron (Fe)-Total		0.076		0.010	mg/L		29-SEP-12	R2446106
Magnesium (Mg)-Total		0.64		0.10	mg/L		29-SEP-12	R2446106
Manganese (Mn)-Total		0.0020		0.0020	mg/L		29-SEP-12	R2446106

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213061-5 LUP-21-WEEKLY Sampled By: L. Coedy on 20-SEP-12 @ 11:00 Matrix: Water Total Metals in Water by ICPOES (Low) Potassium (K)-Total0.300.10mg/L29-SEP-12R2446106 Sodium (Na)-Total<1.01.0mg/L29-SEP-12R2446106 Miscellaneous Parameters Alkalinity, Total (as CaCO3)<5.05.0mg/L26-SEP-12R2442702 Ammonia, Total (as N)<0.0500.050mg/L02-OCT-12R2447518 Cyanide, Total<0.00500.0050mg/L03-OCT-12R2449354 Total Suspended Solids<3.03.0mg/L26-SEP-12R2444142 pH6.810.10pH26-SEP-12R2442702							
L1213061-6 LUP-22-WEEKLY Sampled By: L. Coedy on 20-SEP-12 @ 11:30 Matrix: Water Hardness Dissolved Metals in Water by ICPOES Calcium (Ca)-Dissolved19.60.50mg/L03-OCT-12R2447875 Magnesium (Mg)-Dissolved3.180.10mg/L03-OCT-12R2447875 Hardness (from Dissolved Ca and Mg) Hardness (as CaCO3)62.11.3mg/L03-OCT-12 Total Metals - CCME Mercury (Hg) - Total Mercury (Hg)-Total<0.000100.00010mg/L03-OCT-12R2448329 Total Metals in Water by ICPMS (Low) Aluminum (Al)-Total0.0250.010mg/L29-SEP-12R2446805 Antimony (Sb)-Total<0.000400.00040mg/L29-SEP-12R2446805 Arsenic (As)-Total0.000660.00040mg/L29-SEP-12R2446805 Barium (Ba)-Total0.01790.0030mg/L29-SEP-12R2446805 Beryllium (Be)-Total<0.00100.0010mg/L29-SEP-12R2446805 Boron (B)-Total<0.0500.050mg/L29-SEP-12R2446805 Cadmium (Cd)-Total0.0000610.000050mg/L29-SEP-12R2446805 Chromium (Cr)-Total<0.00500.0050mg/L29-SEP-12R2446805 Cobalt (Co)-Total0.00360.0020mg/L29-SEP-12R2446805 Copper (Cu)-Total<0.00100.0010mg/L29-SEP-12R2446805 Lead (Pb)-Total<0.000100.00010mg/L29-SEP-12R2446805 Lithium (Li)-Total<0.0100.010mg/L29-SEP-12R2446805 Molybdenum (Mo)-Total<0.00500.0050mg/L29-SEP-12R2446805 Nickel (Ni)-Total0.02690.0020mg/L29-SEP-12R2446805 Selenium (Se)-Total<0.000400.00040mg/L29-SEP-12R2446805 Silver (Ag)-Total<0.000100.00010mg/L29-SEP-12R2446805 Thallium (Tl)-Total<0.000100.00010mg/L29-SEP-12R2446805 Tin (Sn)-Total<0.0500.050mg/L29-SEP-12R2446805 Titanium (Ti)-Total<0.00100.0010mg/L29-SEP-12R2446805 Uranium (U)-Total<0.000100.00010mg/L29-SEP-12R2446805 Vanadium (V)-Total<0.00100.0010mg/L29-SEP-12R2446805 Zinc (Zn)-Total0.04980.0040mg/L29-SEP-12R2446805 Total Metals in Water by ICPOES (Low) Calcium (Ca)-Total19.60.50mg/L29-SEP-12R2446106 Iron (Fe)-Total0.0670.010mg/L29-SEP-12R2446106 Magnesium (Mg)-Total3.420.10mg/L29-SEP-12R2446106 Manganese (Mn)-Total0.09080.0020mg/L29-SEP-12R2446106 Potassium (K)-Total1.640.10mg/L29-SEP-12R2446106 Sodium (Na)-Total16.31.0mg/L29-SEP-12R2446106 Miscellaneous Parameters							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213061-6	LUP-22-WEEKLY							
Sampled By: L. Coedy on 20-SEP-12 @ 11:30								
Matrix: Water								
Alkalinity, Total (as CaCO3)		<5.0		5.0	mg/L		26-SEP-12	R2442702
Ammonia, Total (as N)		<0.050		0.050	mg/L		02-OCT-12	R2447518
Cyanide, Total		<0.0050		0.0050	mg/L		03-OCT-12	R2449354
Total Suspended Solids		<3.0		3.0	mg/L		26-SEP-12	R2444142
pH		6.55		0.10	pH		26-SEP-12	R2442702
L1213061-7	LUP-24-WEEKLY							
Sampled By: L. Coedy on 20-SEP-12 @ 11:30								
Matrix: Water								
Hardness								
Dissolved Metals in Water by ICPOES								
Calcium (Ca)-Dissolved		1.04		0.50	mg/L		03-OCT-12	R2447875
Magnesium (Mg)-Dissolved		0.41		0.10	mg/L		03-OCT-12	R2447875
Hardness (from Dissolved Ca and Mg)								
Hardness (as CaCO3)		4.3		1.3	mg/L		03-OCT-12	
Total Metals - CCME								
Mercury (Hg) - Total								
Mercury (Hg)-Total		<0.00010		0.00010	mg/L		03-OCT-12	R2448329
Total Metals in Water by ICPMS (Low)								
Aluminum (Al)-Total		0.012		0.010	mg/L		29-SEP-12	R2446805
Antimony (Sb)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Arsenic (As)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Barium (Ba)-Total		<0.0030		0.0030	mg/L		29-SEP-12	R2446805
Beryllium (Be)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Boron (B)-Total		<0.050		0.050	mg/L		29-SEP-12	R2446805
Cadmium (Cd)-Total		<0.000050		0.000050	mg/L		29-SEP-12	R2446805
Chromium (Cr)-Total		<0.0050		0.0050	mg/L		29-SEP-12	R2446805
Cobalt (Co)-Total		<0.0020		0.0020	mg/L		29-SEP-12	R2446805
Copper (Cu)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Lead (Pb)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Lithium (Li)-Total		<0.010		0.010	mg/L		29-SEP-12	R2446805
Molybdenum (Mo)-Total		<0.0050		0.0050	mg/L		29-SEP-12	R2446805
Nickel (Ni)-Total		<0.0020		0.0020	mg/L		29-SEP-12	R2446805
Selenium (Se)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Silver (Ag)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Thallium (Tl)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Tin (Sn)-Total		<0.050		0.050	mg/L		29-SEP-12	R2446805
Titanium (Ti)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Uranium (U)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Vanadium (V)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Zinc (Zn)-Total		<0.0040		0.0040	mg/L		29-SEP-12	R2446805
Total Metals in Water by ICPOES (Low)								
Calcium (Ca)-Total		1.02		0.50	mg/L		29-SEP-12	R2446106
Iron (Fe)-Total		0.024		0.010	mg/L		29-SEP-12	R2446106
Magnesium (Mg)-Total		0.49		0.10	mg/L		29-SEP-12	R2446106
Manganese (Mn)-Total		<0.0020		0.0020	mg/L		29-SEP-12	R2446106
Potassium (K)-Total		0.43		0.10	mg/L		29-SEP-12	R2446106
Sodium (Na)-Total		<1.0		1.0	mg/L		29-SEP-12	R2446106
Miscellaneous Parameters								
Alkalinity, Total (as CaCO3)		<5.0		5.0	mg/L		26-SEP-12	R2442702
Ammonia, Total (as N)		<0.050		0.050	mg/L		02-OCT-12	R2447518
Cyanide, Total		<0.0050		0.0050	mg/L		03-OCT-12	R2449354

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1213061-9 LUP-10-WEEKLY								
Sampled By: L. Coedy on 21-SEP-12 @ 09:30								
Matrix: Water								
Hardness								
Dissolved Metals in Water by ICPOES								
Calcium (Ca)-Dissolved		59.7		0.50	mg/L		03-OCT-12	R2447875
Magnesium (Mg)-Dissolved		5.92		0.10	mg/L		03-OCT-12	R2447875
Hardness (from Dissolved Ca and Mg)								
Hardness (as CaCO3)		173		1.3	mg/L		03-OCT-12	
Total Metals - CCME								
Mercury (Hg) - Total								
Mercury (Hg)-Total		<0.00010		0.00010	mg/L		03-OCT-12	R2448329
Total Metals in Water by ICPMS (Low)								
Aluminum (Al)-Total		0.029		0.010	mg/L		29-SEP-12	R2446805
Antimony (Sb)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Arsenic (As)-Total		0.0102		0.00040	mg/L		29-SEP-12	R2446805
Barium (Ba)-Total		0.0148		0.0030	mg/L		29-SEP-12	R2446805
Beryllium (Be)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Boron (B)-Total		0.064		0.050	mg/L		29-SEP-12	R2446805
Cadmium (Cd)-Total		0.000209		0.000050	mg/L		29-SEP-12	R2446805
Chromium (Cr)-Total		<0.0050		0.0050	mg/L		29-SEP-12	R2446805
Cobalt (Co)-Total		0.0311		0.0020	mg/L		29-SEP-12	R2446805
Copper (Cu)-Total		0.0021		0.0010	mg/L		29-SEP-12	R2446805
Lead (Pb)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Lithium (Li)-Total		0.021		0.010	mg/L		29-SEP-12	R2446805
Molybdenum (Mo)-Total		<0.0050		0.0050	mg/L		29-SEP-12	R2446805
Nickel (Ni)-Total		0.0707		0.0020	mg/L		29-SEP-12	R2446805
Selenium (Se)-Total		<0.00040		0.00040	mg/L		29-SEP-12	R2446805
Silver (Ag)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Thallium (Tl)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Tin (Sn)-Total		<0.050		0.050	mg/L		29-SEP-12	R2446805
Titanium (Ti)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Uranium (U)-Total		<0.00010		0.00010	mg/L		29-SEP-12	R2446805
Vanadium (V)-Total		<0.0010		0.0010	mg/L		29-SEP-12	R2446805
Zinc (Zn)-Total		0.238		0.0040	mg/L		29-SEP-12	R2446805
Total Metals in Water by ICPOES (Low)								
Calcium (Ca)-Total		61.4		0.50	mg/L		29-SEP-12	R2446106
Iron (Fe)-Total		0.210		0.010	mg/L		29-SEP-12	R2446106
Magnesium (Mg)-Total		6.28		0.10	mg/L		29-SEP-12	R2446106
Manganese (Mn)-Total		0.678		0.0020	mg/L		29-SEP-12	R2446106
Potassium (K)-Total		5.05		0.10	mg/L		29-SEP-12	R2446106
Sodium (Na)-Total		55.3		1.0	mg/L		29-SEP-12	R2446106
Miscellaneous Parameters								
Alkalinity, Total (as CaCO3)		<5.0		5.0	mg/L		26-SEP-12	R2442702
Ammonia, Total (as N)		0.072		0.050	mg/L		02-OCT-12	R2447518
Cyanide, Total		<0.0050		0.0050	mg/L		03-OCT-12	R2449354
Total Suspended Solids		<3.0		3.0	mg/L		26-SEP-12	R2444142
pH		6.46		0.10	pH		26-SEP-12	R2442702

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Qualifiers for Individual Samples Listed:

Sample Number	Client ID	Qualifier	Description
L1213061-4	LUP-20-WEEKLY	SP	nutrients - Sample was Preserved at the laboratory
L1213061-5	LUP-21-WEEKLY	SP	nutrients - Sample was Preserved at the laboratory
L1213061-6	LUP-22-WEEKLY	SP	nutrients - Sample was Preserved at the laboratory
L1213061-7	LUP-24-WEEKLY	SP	nutrients - Sample was Preserved at the laboratory
L1213061-8	LUP-25-WEEKLY	SP	nutrients - Sample was Preserved at the laboratory
L1213061-9	LUP-10-WEEKLY	SP	nutrients - Sample was Preserved at the laboratory

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-TOT-ED	Water	Alkalinity, Total	APHA 2320 B-Auto-Pot. Titration
CN-T-CFA-VA	Water	Total Cyanide in water by CFA	ISO 14403:2002
This analysis is carried out using procedures adapted from ISO Method 14403:2002 "Determination of Total Cyanide using Flow Analysis (FIA and CFA)". Total or strong acid dissociable (SAD) cyanide is determined by in-line UV digestion along with sample distillation and final determination by colourimetric analysis. Method Limitation: This method is susceptible to interference from thiocyanate (SCN). If SCN is present in the sample, there could be a positive interference with this method, but it would be less than 1% and could be as low as zero.			
ETL-HARDNESS-DIS-ED	Water	Hardness (from Dissolved Ca and Mg)	APHA 2340 B-Calculation
HG-T-CVAA-ED	Water	Mercury (Hg) - Total	EPA 245.7 / EPA 245.1
MET-D-ICP-ED	Water	Dissolved Metals in Water by ICPOES	APHA 3120 B-ICP-OES
MET-T-L-ICP-ED	Water	Total Metals in Water by ICPOES (Low)	APHA 3120 B-ICP-OES
MET-T-L-MS-ED	Water	Total Metals in Water by ICPMS (Low)	SW 846 - 6020-ICPMS
NH3-CFA-ED	Water	Ammonia in Water by Colour	APHA 4500 NH3-NITROGEN (AMMONIA)
This analysis is carried out using procedures adapted from APHA Method 4500 NH3 "NITROGEN (AMMONIA)". Ammonia is determined using the automated phenate colourimetric method.			
PH-ED	Water	pH	APHA 4500 H-Electrode
All samples analyzed by this method for pH will have exceeded the 15 minute recommended hold time from time of sampling (field analysis is recommended for pH where highly accurate results are needed)			
SOLIDS-TOTSUS-ED	Water	Total Suspended Solids	APHA 2540 D-Gravimetric

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Quality Control Report

Workorder: L1213061

Report Date: 04-OCT-12

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Client: LUPIN MINES INCORPORATED
201, 750W PENDER ST.
VANCOUVER BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ALK-TOT-ED		Water						
Batch	R2442702							
WG1552907-8	DUP	L1213712-1						
Alkalinity, Total (as CaCO3)		290	292		mg/L	0.7	20	25-SEP-12
WG1552907-4	LCS							
Alkalinity, Total (as CaCO3)			103.9		%		85-115	25-SEP-12
WG1552907-1	MB							
Alkalinity, Total (as CaCO3)			<5.0		mg/L		5	25-SEP-12
CN-T-CFA-VA		Water						
Batch	R2449354							
WG1559633-21	DUP	L1212885-3						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	03-OCT-12
WG1559633-25	DUP	L1212753-1						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	03-OCT-12
WG1559633-7	DUP	L1212848-19						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	03-OCT-12
WG1559633-10	LCS							
Cyanide, Total			91.7		%		80-120	03-OCT-12
WG1559633-16	LCS							
Cyanide, Total			95.0		%		80-120	03-OCT-12
WG1559633-2	LCS							
Cyanide, Total			93.0		%		80-120	03-OCT-12
WG1559633-20	LCS							
Cyanide, Total			95.2		%		80-120	03-OCT-12
WG1559633-24	LCS							
Cyanide, Total			96.6		%		80-120	03-OCT-12
WG1559633-28	LCS							
Cyanide, Total			90.4		%		80-120	03-OCT-12
WG1559633-6	LCS							
Cyanide, Total			94.3		%		80-120	03-OCT-12
WG1559633-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	03-OCT-12
WG1559633-15	MB							
Cyanide, Total			<0.0050		mg/L		0.005	03-OCT-12
WG1559633-19	MB							
Cyanide, Total			<0.0050		mg/L		0.005	03-OCT-12
WG1559633-23	MB							
Cyanide, Total			<0.0050		mg/L		0.005	03-OCT-12
WG1559633-27	MB							
Cyanide, Total			<0.0050		mg/L		0.005	03-OCT-12



Quality Control Report

Workorder: L1213061

Report Date: 04-OCT-12

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Client: LUPIN MINES INCORPORATED
201, 750W PENDER ST.
VANCOUVER BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-CFA-VA		Water						
Batch	R2449354							
WG1559633-5 MB								
Cyanide, Total			<0.0050		mg/L		0.005	03-OCT-12
WG1559633-9 MB								
Cyanide, Total			<0.0050		mg/L		0.005	03-OCT-12
WG1559633-22 MS		L1212885-3						
Cyanide, Total			93.3		%		70-130	03-OCT-12
WG1559633-26 MS		L1212753-1						
Cyanide, Total			96.4		%		70-130	03-OCT-12
WG1559633-8 MS		L1212848-19						
Cyanide, Total			98.7		%		70-130	03-OCT-12
HG-T-CVAA-ED		Water						
Batch	R2448329							
WG1559045-2 LCS								
Mercury (Hg)-Total			104.7		%		80-120	03-OCT-12
WG1559045-3 LCSD		WG1559045-2						
Mercury (Hg)-Total		104.7	102.0		%	2.7	20	03-OCT-12
WG1559045-1 MB								
Mercury (Hg)-Total			<0.00010		mg/L		0.0001	03-OCT-12
MET-D-ICP-ED		Water						
Batch	R2447875							
WG1558299-2 CRM		EU-H-4_OPTWATER						
Calcium (Ca)-Dissolved			100.1		%		80-120	02-OCT-12
Magnesium (Mg)-Dissolved			96.6		%		80-120	02-OCT-12
WG1558299-3 DUP		L1214582-2						
Calcium (Ca)-Dissolved		25.4	27.2		mg/L	2.9	20	02-OCT-12
Magnesium (Mg)-Dissolved		11.2	11.1		mg/L	2.9	20	02-OCT-12
WG1558299-4 DUP		L1216125-10						
Calcium (Ca)-Dissolved		239	216		mg/L	9.9	20	02-OCT-12
Magnesium (Mg)-Dissolved		59.1	52.8		mg/L	11	20	02-OCT-12
WG1558299-6 DUP		L1214402-1						
Calcium (Ca)-Dissolved		97.1	96.2		mg/L	0.9	20	02-OCT-12
Magnesium (Mg)-Dissolved		61.5	61.0		mg/L	0.8	20	02-OCT-12
WG1558299-7 DUP		L1215229-3						
Calcium (Ca)-Dissolved		73.4	70.4		mg/L	3.9	20	03-OCT-12
Magnesium (Mg)-Dissolved		21.2	18.8		mg/L	3.5	20	03-OCT-12
WG1558299-8 DUP		L1215265-18						
Calcium (Ca)-Dissolved		137	131		mg/L	4.3	20	03-OCT-12



Quality Control Report

Workorder: L1213061

Report Date: 04-OCT-12

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Client: LUPIN MINES INCORPORATED
201, 750W PENDER ST.
VANCOUVER BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-ICP-ED		Water						
Batch	R2447875							
WG1558299-8	DUP	L1215265-18						
Magnesium (Mg)-Dissolved		20.4	19.8		mg/L	3.2	20	03-OCT-12
WG1558299-1	MB							
Calcium (Ca)-Dissolved			<0.50		mg/L		0.5	02-OCT-12
Magnesium (Mg)-Dissolved			<0.10		mg/L		0.1	02-OCT-12
MET-T-L-ICP-ED		Water						
Batch	R2446106							
WG1556177-1	MB							
Calcium (Ca)-Total			<0.50		mg/L		0.5	29-SEP-12
Iron (Fe)-Total			<0.01		mg/L		0.01	29-SEP-12
Magnesium (Mg)-Total			<0.10		mg/L		0.1	29-SEP-12
Manganese (Mn)-Total			<0.0020		mg/L		0.002	29-SEP-12
Potassium (K)-Total			<0.1		mg/L		0.1	29-SEP-12
Sodium (Na)-Total			<1.0		mg/L		1	29-SEP-12
MET-T-L-MS-ED		Water						
Batch	R2446805							
WG1556177-2	DUP	L1211567-2						
Aluminum (Al)-Total		0.091	0.097		mg/L	6.6	20	29-SEP-12
Antimony (Sb)-Total		<0.00050	<0.00040	RPD-NA	mg/L	N/A	20	29-SEP-12
Arsenic (As)-Total		0.00056	0.00055		mg/L	2.4	20	29-SEP-12
Barium (Ba)-Total		0.0619	0.0626		mg/L	1.2	20	29-SEP-12
Beryllium (Be)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	29-SEP-12
Boron (B)-Total		<0.050	0.0210		mg/L	0.5	20	29-SEP-12
Cadmium (Cd)-Total		<0.00020	<0.000050	RPD-NA	mg/L	N/A	20	29-SEP-12
Chromium (Cr)-Total		<0.0050	<0.00080	RPD-NA	mg/L	N/A	20	29-SEP-12
Cobalt (Co)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	29-SEP-12
Copper (Cu)-Total		0.0019	0.0019		mg/L	0.6	20	29-SEP-12
Lead (Pb)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	29-SEP-12
Lithium (Li)-Total		0.0098	0.0096		mg/L	2.7	20	29-SEP-12
Molybdenum (Mo)-Total		0.00057	0.00056		mg/L	1.5	20	29-SEP-12
Nickel (Ni)-Total		0.00117	0.00120		mg/L	2.0	20	29-SEP-12
Selenium (Se)-Total		<0.0010	<0.00040	RPD-NA	mg/L	N/A	20	29-SEP-12
Silver (Ag)-Total		<0.0050	<0.00010	RPD-NA	mg/L	N/A	20	29-SEP-12
Thallium (Tl)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	29-SEP-12



Quality Control Report

Workorder: L1213061

Report Date: 04-OCT-12

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Client: LUPIN MINES INCORPORATED
201, 750W PENDER ST.
VANCOUVER BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-ED		Water						
Batch	R2446805							
WG1556177-2 DUP		L1211567-2						
Tin (Sn)-Total		<0.00040	<0.00040	RPD-NA	mg/L	N/A	20	29-SEP-12
Titanium (Ti)-Total		<0.00060	<0.00060	RPD-NA	mg/L	N/A	20	29-SEP-12
Uranium (U)-Total		<0.00050	<0.00010	RPD-NA	mg/L	N/A	20	29-SEP-12
Vanadium (V)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	29-SEP-12
Zinc (Zn)-Total		<0.050	0.0068		mg/L	1.2	20	29-SEP-12
WG1556177-1 MB								
Aluminum (Al)-Total			<0.010		mg/L		0.01	29-SEP-12
Antimony (Sb)-Total			<0.00040		mg/L		0.0004	29-SEP-12
Arsenic (As)-Total			<0.00040		mg/L		0.0004	29-SEP-12
Barium (Ba)-Total			<0.00020		mg/L		0.0002	29-SEP-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	29-SEP-12
Boron (B)-Total			<0.0040		mg/L		0.004	29-SEP-12
Cadmium (Cd)-Total			<0.000050		mg/L		0.00005	29-SEP-12
Chromium (Cr)-Total			<0.00080		mg/L		0.0008	29-SEP-12
Cobalt (Co)-Total			<0.00020		mg/L		0.0002	29-SEP-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	29-SEP-12
Lead (Pb)-Total			<0.00010		mg/L		0.0001	29-SEP-12
Lithium (Li)-Total			<0.0060		mg/L		0.006	29-SEP-12
Molybdenum (Mo)-Total			<0.00010		mg/L		0.0001	29-SEP-12
Nickel (Ni)-Total			<0.00020		mg/L		0.0002	29-SEP-12
Selenium (Se)-Total			<0.00040		mg/L		0.0004	29-SEP-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	29-SEP-12
Thallium (Tl)-Total			<0.00010		mg/L		0.0001	29-SEP-12
Tin (Sn)-Total			<0.00040		mg/L		0.0004	29-SEP-12
Titanium (Ti)-Total			<0.00060		mg/L		0.0006	29-SEP-12
Uranium (U)-Total			<0.00010		mg/L		0.0001	29-SEP-12
Vanadium (V)-Total			<0.00050		mg/L		0.0005	29-SEP-12
Zinc (Zn)-Total			<0.0040		mg/L		0.004	29-SEP-12
NH3-CFA-ED		Water						
Batch	R2447518							
WG1557890-12 DUP		L1216024-2						
Ammonia, Total (as N)		<0.050	<0.050	RPD-NA	mg/L	N/A	20	02-OCT-12
WG1557890-4 DUP		L1215449-21						
Ammonia, Total (as N)		<0.050	<0.050	RPD-NA	mg/L	N/A	20	02-OCT-12



Quality Control Report

Workorder: L1213061

Report Date: 04-OCT-12

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Client: LUPIN MINES INCORPORATED
201, 750W PENDER ST.
VANCOUVER BC V6T 2T7

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-CFA-ED		Water						
Batch	R2447518							
WG1557890-5	DUP	L1215227-13						
Ammonia, Total (as N)		0.180	0.174		mg/L	3.3	20	02-OCT-12
WG1557890-9	DUP	L1217518-1						
Ammonia, Total (as N)		1.31	1.29		mg/L	1.1	20	02-OCT-12
WG1557890-2	LCS							
Ammonia, Total (as N)			95.3		%		85-115	02-OCT-12
WG1557890-1	MB							
Ammonia, Total (as N)			<0.050		mg/L		0.05	02-OCT-12
WG1557890-11	MS	L1215996-3						
Ammonia, Total (as N)			98.4		%		75-125	02-OCT-12
WG1557890-6	MS	L1213061-9						
Ammonia, Total (as N)			93.7		%		75-125	02-OCT-12
PH-ED		Water						
Batch	R2442702							
WG1552907-9	DUP	L1214105-1						
pH		8.34	8.41	J	pH	0.07	0.2	25-SEP-12
WG1552907-3	LCS							
pH			7.02		pH		6.9-7.1	25-SEP-12
SOLIDS-TOTSUS-ED		Water						
Batch	R2444142							
WG1553742-3	DUP	L1210502-5						
Total Suspended Solids		<3.0	<3.0	RPD-NA	mg/L	N/A	20	26-SEP-12
WG1553742-4	DUP	L1213226-4						
Total Suspended Solids		4.0	6.0	J	mg/L	2.0	6	26-SEP-12
WG1553742-5	DUP	L1213852-1						
Total Suspended Solids		23.0	23.0		mg/L	0.0	20	26-SEP-12
WG1553742-6	DUP	L1213968-1						
Total Suspended Solids		26.0	24.0		mg/L	8.0	20	26-SEP-12
WG1553742-2	LCS							
Total Suspended Solids			90.0		%		85-115	26-SEP-12
WG1553742-1	MB							
Total Suspended Solids			<3.0		mg/L		3	26-SEP-12

Quality Control Report

Workorder: L1213061

Report Date: 04-OCT-12

Client: LUPIN MINES INCORPORATED
201, 750W PENDER ST.
VANCOUVER BC V6T 2T7

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Contact: David Vokey

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L1213061

Report Date: 04-OCT-12

Client: LUPIN MINES INCORPORATED
201, 750W PENDER ST.
VANCOUVER BC V6T 2T7

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Contact: David Vokey

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Total Suspended Solids	1	18-SEP-12 11:00	26-SEP-12 00:00	7	8	days	EHT
pH	1	18-SEP-12 11:00	26-SEP-12 00:13	0.25	181	hours	EHTR-FM
	2	19-SEP-12 10:30	26-SEP-12 00:18	0.25	158	hours	EHTR-FM
	3	20-SEP-12 10:30	26-SEP-12 00:24	0.25	134	hours	EHTR-FM
	4	20-SEP-12 10:30	26-SEP-12 00:28	0.25	134	hours	EHTR-FM
	5	20-SEP-12 11:00	26-SEP-12 00:34	0.25	134	hours	EHTR-FM
	6	20-SEP-12 11:30	26-SEP-12 00:40	0.25	133	hours	EHTR-FM
	7	20-SEP-12 11:30	26-SEP-12 00:46	0.25	133	hours	EHTR-FM
	8	20-SEP-12 11:30	26-SEP-12 00:52	0.25	133	hours	EHTR-FM
	9	21-SEP-12 09:30	26-SEP-12 00:57	0.25	111	hours	EHTR-FM
Cyanides							
Total Cyanide in water by CFA	1	18-SEP-12 11:00	03-OCT-12 13:20	14	15	days	EHT

Legend & Qualifier Definitions:

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR: Exceeded ALS recommended hold time prior to sample receipt.
EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT: Exceeded ALS recommended hold time prior to analysis.
Rec. HT: ALS recommended hold time (see units).

Notes*:
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L1213061 were received on 21-SEP-12 16:33.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



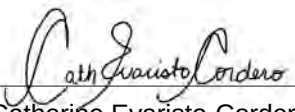
LUPIN MINES INCORPORATED
ATTN: David Vokey
Suite 202, 5204 - 50th Avenue
Yellowknife NT X1A 1E2

Date Received: 28-SEP-12
Report Date: 18-OCT-12 12:07 (MT)
Version: FINAL

Client Phone: 867-873-8670

Certificate of Analysis

Lab Work Order #: L1216778
Project P.O. #: NOT SUBMITTED
Job Reference:
C of C Numbers: 08-011445
Legal Site Desc:


Catherine Evaristo-Cordero
Senior Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 75 Con Road, PO. Box 2801, Yellowknife, NT, X1A 2R2 Canada | Phone: +1 867 873 5593 | Fax: +1 867 920 4238
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1216778-1	LUP-10-DAILY							
Sampled By: L. Coedy on 22-SEP-12 @ 10:00								
Matrix: Water								
Total Metals - CCME								
Mercury (Hg) - Total								
Mercury (Hg)-Total		<0.00010		0.00010	mg/L		17-OCT-12	R2456862
Total Metals in Water by ICPMS (Low)								
Aluminum (Al)-Total		0.031		0.010	mg/L		11-OCT-12	R2454000
Antimony (Sb)-Total		<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Arsenic (As)-Total		0.00875		0.00040	mg/L		11-OCT-12	R2454000
Barium (Ba)-Total		0.0147		0.0030	mg/L		11-OCT-12	R2454000
Beryllium (Be)-Total		<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Boron (B)-Total		0.073		0.050	mg/L		11-OCT-12	R2454000
Cadmium (Cd)-Total		0.000258		0.000050	mg/L		11-OCT-12	R2454000
Chromium (Cr)-Total		<0.0050		0.0050	mg/L		11-OCT-12	R2454000
Cobalt (Co)-Total		0.0310		0.0020	mg/L		11-OCT-12	R2454000
Copper (Cu)-Total		0.0021		0.0010	mg/L		11-OCT-12	R2454000
Lead (Pb)-Total		<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Lithium (Li)-Total		0.025		0.010	mg/L		11-OCT-12	R2454000
Molybdenum (Mo)-Total		<0.0050		0.0050	mg/L		11-OCT-12	R2454000
Nickel (Ni)-Total		0.0719		0.0020	mg/L		11-OCT-12	R2454000
Selenium (Se)-Total		<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Silver (Ag)-Total		<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Thallium (Tl)-Total		<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Tin (Sn)-Total		<0.050		0.050	mg/L		11-OCT-12	R2454000
Titanium (Ti)-Total		<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Uranium (U)-Total		<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Vanadium (V)-Total		<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Zinc (Zn)-Total		0.231		0.0040	mg/L		11-OCT-12	R2454000
Total Metals in Water by ICPOES (Low)								
Calcium (Ca)-Total		58.7		0.50	mg/L		11-OCT-12	R2453386
Iron (Fe)-Total		0.155		0.010	mg/L		11-OCT-12	R2453386
Magnesium (Mg)-Total		5.63		0.10	mg/L		11-OCT-12	R2453386
Manganese (Mn)-Total		0.597		0.0020	mg/L		11-OCT-12	R2453386
Potassium (K)-Total		3.93		0.10	mg/L		11-OCT-12	R2453386
Sodium (Na)-Total		43.4		1.0	mg/L		11-OCT-12	R2453386
Miscellaneous Parameters								
Cyanide, Total		<0.0050		0.0050	mg/L		04-OCT-12	R2450410
Total Suspended Solids		<3.0		3.0	mg/L		02-OCT-12	R2448059
pH		7.05		0.10	pH		02-OCT-12	R2447570
L1216778-2	LUP-10-DAILY							
Sampled By: L. Coedy on 23-SEP-12 @ 10:00								
Matrix: Water								
Total Metals - CCME								
Mercury (Hg) - Total								
Mercury (Hg)-Total		<0.00010		0.00010	mg/L		17-OCT-12	R2456862
Total Metals in Water by ICPMS (Low)								
Aluminum (Al)-Total		0.027		0.010	mg/L		11-OCT-12	R2454000
Antimony (Sb)-Total		<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Arsenic (As)-Total		0.00836		0.00040	mg/L		11-OCT-12	R2454000
Barium (Ba)-Total		0.0141		0.0030	mg/L		11-OCT-12	R2454000
Beryllium (Be)-Total		<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Boron (B)-Total		0.072		0.050	mg/L		11-OCT-12	R2454000
Cadmium (Cd)-Total		0.000261		0.000050	mg/L		11-OCT-12	R2454000
Chromium (Cr)-Total		<0.0050		0.0050	mg/L		11-OCT-12	R2454000

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1216778-2 LUP-10-DAILY							
Sampled By: L. Coedy on 23-SEP-12 @ 10:00							
Matrix: Water							
Total Metals in Water by ICPMS (Low)							
Cobalt (Co)-Total	0.0314		0.0020	mg/L		11-OCT-12	R2454000
Copper (Cu)-Total	0.0021		0.0010	mg/L		11-OCT-12	R2454000
Lead (Pb)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Lithium (Li)-Total	0.024		0.010	mg/L		11-OCT-12	R2454000
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		11-OCT-12	R2454000
Nickel (Ni)-Total	0.0739		0.0020	mg/L		11-OCT-12	R2454000
Selenium (Se)-Total	<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Silver (Ag)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Tin (Sn)-Total	<0.050		0.050	mg/L		11-OCT-12	R2454000
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Uranium (U)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Vanadium (V)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Zinc (Zn)-Total	0.237		0.0040	mg/L		11-OCT-12	R2454000
Total Metals in Water by ICPOES (Low)							
Calcium (Ca)-Total	57.5		0.50	mg/L		11-OCT-12	R2453386
Iron (Fe)-Total	0.159		0.010	mg/L		11-OCT-12	R2453386
Magnesium (Mg)-Total	5.65		0.10	mg/L		11-OCT-12	R2453386
Manganese (Mn)-Total	0.604		0.0020	mg/L		11-OCT-12	R2453386
Potassium (K)-Total	3.91		0.10	mg/L		11-OCT-12	R2453386
Sodium (Na)-Total	45.4		1.0	mg/L		11-OCT-12	R2453386
Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L		05-OCT-12	R2451169
Total Suspended Solids	<3.0		3.0	mg/L		02-OCT-12	R2448059
pH	6.46		0.10	pH		02-OCT-12	R2447570
L1216778-3 LUP-10-DAILY							
Sampled By: L. Coedy on 24-SEP-12 @ 10:00							
Matrix: Water							
Total Metals - CCME							
Mercury (Hg) - Total							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		17-OCT-12	R2456862
Total Metals in Water by ICPMS (Low)							
Aluminum (Al)-Total	0.023		0.010	mg/L		11-OCT-12	R2454000
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Arsenic (As)-Total	0.00841		0.00040	mg/L		11-OCT-12	R2454000
Barium (Ba)-Total	0.0145		0.0030	mg/L		11-OCT-12	R2454000
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Boron (B)-Total	0.072		0.050	mg/L		11-OCT-12	R2454000
Cadmium (Cd)-Total	0.000282		0.000050	mg/L		11-OCT-12	R2454000
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		11-OCT-12	R2454000
Cobalt (Co)-Total	0.0316		0.0020	mg/L		11-OCT-12	R2454000
Copper (Cu)-Total	0.0021		0.0010	mg/L		11-OCT-12	R2454000
Lead (Pb)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Lithium (Li)-Total	0.025		0.010	mg/L		11-OCT-12	R2454000
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		11-OCT-12	R2454000
Nickel (Ni)-Total	0.0738		0.0020	mg/L		11-OCT-12	R2454000
Selenium (Se)-Total	<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Silver (Ag)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Tin (Sn)-Total	<0.050		0.050	mg/L		11-OCT-12	R2454000
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1216778-3 LUP-10-DAILY Sampled By: L. Coedy on 24-SEP-12 @ 10:00 Matrix: Water							
Total Metals in Water by ICPMS (Low)							
Uranium (U)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Vanadium (V)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Zinc (Zn)-Total	0.244		0.0040	mg/L		11-OCT-12	R2454000
Total Metals in Water by ICPOES (Low)							
Calcium (Ca)-Total	59.3		0.50	mg/L		11-OCT-12	R2453386
Iron (Fe)-Total	0.171		0.010	mg/L		11-OCT-12	R2453386
Magnesium (Mg)-Total	5.78		0.10	mg/L		11-OCT-12	R2453386
Manganese (Mn)-Total	0.621		0.0020	mg/L		11-OCT-12	R2453386
Potassium (K)-Total	3.97		0.10	mg/L		11-OCT-12	R2453386
Sodium (Na)-Total	46.3		1.0	mg/L		11-OCT-12	R2453386
Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L		09-OCT-12	R2452365
Total Suspended Solids	<3.0		3.0	mg/L		02-OCT-12	R2448059
pH	6.33		0.10	pH		02-OCT-12	R2447570
L1216778-4 LUP-10-DAILY Sampled By: L. Coedy on 25-SEP-12 @ 09:30 Matrix: Water							
Total Metals - CCME							
Mercury (Hg) - Total							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		17-OCT-12	R2456862
Total Metals in Water by ICPMS (Low)							
Aluminum (Al)-Total	0.023		0.010	mg/L		11-OCT-12	R2454000
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Arsenic (As)-Total	0.00882		0.00040	mg/L		11-OCT-12	R2454000
Barium (Ba)-Total	0.0136		0.0030	mg/L		11-OCT-12	R2454000
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Boron (B)-Total	0.064		0.050	mg/L		11-OCT-12	R2454000
Cadmium (Cd)-Total	0.000230		0.000050	mg/L		11-OCT-12	R2454000
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		11-OCT-12	R2454000
Cobalt (Co)-Total	0.0303		0.0020	mg/L		11-OCT-12	R2454000
Copper (Cu)-Total	0.0020		0.0010	mg/L		11-OCT-12	R2454000
Lead (Pb)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Lithium (Li)-Total	0.024		0.010	mg/L		11-OCT-12	R2454000
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		11-OCT-12	R2454000
Nickel (Ni)-Total	0.0696		0.0020	mg/L		11-OCT-12	R2454000
Selenium (Se)-Total	<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Silver (Ag)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Tin (Sn)-Total	<0.050		0.050	mg/L		11-OCT-12	R2454000
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Uranium (U)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Vanadium (V)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Zinc (Zn)-Total	0.231		0.0040	mg/L		11-OCT-12	R2454000
Total Metals in Water by ICPOES (Low)							
Calcium (Ca)-Total	59.7		0.50	mg/L		11-OCT-12	R2453386
Iron (Fe)-Total	0.193		0.010	mg/L		11-OCT-12	R2453386
Magnesium (Mg)-Total	5.84		0.10	mg/L		11-OCT-12	R2453386
Manganese (Mn)-Total	0.626		0.0020	mg/L		11-OCT-12	R2453386
Potassium (K)-Total	4.07		0.10	mg/L		11-OCT-12	R2453386
Sodium (Na)-Total	45.8		1.0	mg/L		11-OCT-12	R2453386
Miscellaneous Parameters							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1216778-4 LUP-10-DAILY Sampled By: L. Coedy on 25-SEP-12 @ 09:30 Matrix: Water							
Cyanide, Total	<0.0050		0.0050	mg/L		10-OCT-12	R2453323
Total Suspended Solids	<3.0		3.0	mg/L		02-OCT-12	R2448059
pH	6.29		0.10	pH		02-OCT-12	R2447570
L1216778-5 LUP-10-DAILY Sampled By: L. Coedy on 26-SEP-12 @ 10:00 Matrix: Water							
Total Metals - CCME							
Mercury (Hg) - Total							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		17-OCT-12	R2456862
Total Metals in Water by ICPMS (Low)							
Aluminum (Al)-Total	0.027		0.010	mg/L		11-OCT-12	R2454000
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Arsenic (As)-Total	0.00944		0.00040	mg/L		11-OCT-12	R2454000
Barium (Ba)-Total	0.0135		0.0030	mg/L		11-OCT-12	R2454000
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Boron (B)-Total	0.065		0.050	mg/L		11-OCT-12	R2454000
Cadmium (Cd)-Total	0.000222		0.000050	mg/L		11-OCT-12	R2454000
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		11-OCT-12	R2454000
Cobalt (Co)-Total	0.0299		0.0020	mg/L		11-OCT-12	R2454000
Copper (Cu)-Total	0.0020		0.0010	mg/L		11-OCT-12	R2454000
Lead (Pb)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Lithium (Li)-Total	0.023		0.010	mg/L		11-OCT-12	R2454000
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		11-OCT-12	R2454000
Nickel (Ni)-Total	0.0690		0.0020	mg/L		11-OCT-12	R2454000
Selenium (Se)-Total	<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Silver (Ag)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Tin (Sn)-Total	<0.050		0.050	mg/L		11-OCT-12	R2454000
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Uranium (U)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Vanadium (V)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Zinc (Zn)-Total	0.228		0.0040	mg/L		11-OCT-12	R2454000
Total Metals in Water by ICPOES (Low)							
Calcium (Ca)-Total	60.6		0.50	mg/L		11-OCT-12	R2453386
Iron (Fe)-Total	0.214		0.010	mg/L		11-OCT-12	R2453386
Magnesium (Mg)-Total	5.89		0.10	mg/L		11-OCT-12	R2453386
Manganese (Mn)-Total	0.629		0.0020	mg/L		11-OCT-12	R2453386
Potassium (K)-Total	3.99		0.10	mg/L		11-OCT-12	R2453386
Sodium (Na)-Total	46.6		1.0	mg/L		11-OCT-12	R2453386
Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L		10-OCT-12	R2453323
Total Suspended Solids	<3.0		3.0	mg/L		02-OCT-12	R2448059
pH	6.25		0.10	pH		02-OCT-12	R2447570
L1216778-6 LUP-10-WEEKLY Sampled By: L. Coedy on 27-SEP-12 @ 10:00 Matrix: Water							
Total Metals - CCME							
Mercury (Hg) - Total							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		17-OCT-12	R2456862
Total Metals in Water by ICPMS (Low)							
Aluminum (Al)-Total	0.029		0.010	mg/L		11-OCT-12	R2454000

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1216778-6 LUP-10-WEEKLY Sampled By: L. Coedy on 27-SEP-12 @ 10:00 Matrix: Water							
Total Metals in Water by ICPMS (Low)							
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Arsenic (As)-Total	0.00988		0.00040	mg/L		11-OCT-12	R2454000
Barium (Ba)-Total	0.0135		0.0030	mg/L		11-OCT-12	R2454000
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Boron (B)-Total	0.067		0.050	mg/L		11-OCT-12	R2454000
Cadmium (Cd)-Total	0.000252		0.000050	mg/L		11-OCT-12	R2454000
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		11-OCT-12	R2454000
Cobalt (Co)-Total	0.0307		0.0020	mg/L		11-OCT-12	R2454000
Copper (Cu)-Total	0.0021		0.0010	mg/L		11-OCT-12	R2454000
Lead (Pb)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Lithium (Li)-Total	0.023		0.010	mg/L		11-OCT-12	R2454000
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		11-OCT-12	R2454000
Nickel (Ni)-Total	0.0715		0.0020	mg/L		11-OCT-12	R2454000
Selenium (Se)-Total	<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Silver (Ag)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Tin (Sn)-Total	<0.050		0.050	mg/L		11-OCT-12	R2454000
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Uranium (U)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Vanadium (V)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Zinc (Zn)-Total	0.237		0.0040	mg/L		11-OCT-12	R2454000
Total Metals in Water by ICPOES (Low)							
Calcium (Ca)-Total	59.8		0.50	mg/L		11-OCT-12	R2453386
Iron (Fe)-Total	0.232		0.010	mg/L		11-OCT-12	R2453386
Magnesium (Mg)-Total	6.03		0.10	mg/L		11-OCT-12	R2453386
Manganese (Mn)-Total	0.645		0.0020	mg/L		11-OCT-12	R2453386
Potassium (K)-Total	4.09		0.10	mg/L		11-OCT-12	R2453386
Sodium (Na)-Total	46.8		1.0	mg/L		11-OCT-12	R2453386
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	<5.0		5.0	mg/L		02-OCT-12	R2447570
Ammonia, Total (as N)	0.457		0.050	mg/L		10-OCT-12	R2452396
Hardness (as CaCO3)	174			mg/L		12-OCT-12	
Cyanide, Total	<0.0050		0.0050	mg/L		10-OCT-12	R2453323
Total Suspended Solids	<3.0		3.0	mg/L		02-OCT-12	R2448059
pH	6.21		0.10	pH		02-OCT-12	R2447570
L1216778-7 LUP-20-WEEKLY Sampled By: L. Coedy on 27-SEP-12 @ 10:00 Matrix: Water							
Total Metals - CCME							
Mercury (Hg) - Total							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		17-OCT-12	R2456862
Total Metals in Water by ICPMS (Low)							
Aluminum (Al)-Total	0.075		0.010	mg/L		11-OCT-12	R2454000
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Arsenic (As)-Total	0.00123		0.00040	mg/L		11-OCT-12	R2454000
Barium (Ba)-Total	0.0238		0.0030	mg/L		11-OCT-12	R2454000
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Boron (B)-Total	0.063		0.050	mg/L		11-OCT-12	R2454000
Cadmium (Cd)-Total	0.000252		0.000050	mg/L		11-OCT-12	R2454000
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		11-OCT-12	R2454000
Cobalt (Co)-Total	0.0253		0.0020	mg/L		11-OCT-12	R2454000

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1216778-7 LUP-20-WEEKLY							
Sampled By: L. Coedy on 27-SEP-12 @ 10:00							
Matrix: Water							
Total Metals in Water by ICPMS (Low)							
Copper (Cu)-Total	0.0017		0.0010	mg/L		11-OCT-12	R2454000
Lead (Pb)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Lithium (Li)-Total	0.022		0.010	mg/L		11-OCT-12	R2454000
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		11-OCT-12	R2454000
Nickel (Ni)-Total	0.0902		0.0020	mg/L		11-OCT-12	R2454000
Selenium (Se)-Total	<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Silver (Ag)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Tin (Sn)-Total	<0.050		0.050	mg/L		11-OCT-12	R2454000
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Uranium (U)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Vanadium (V)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Zinc (Zn)-Total	0.222		0.0040	mg/L		11-OCT-12	R2454000
Total Metals in Water by ICPOES (Low)							
Calcium (Ca)-Total	56.8		0.50	mg/L		11-OCT-12	R2453386
Iron (Fe)-Total	0.042		0.010	mg/L		11-OCT-12	R2453386
Magnesium (Mg)-Total	6.33		0.10	mg/L		11-OCT-12	R2453386
Manganese (Mn)-Total	0.486		0.0020	mg/L		11-OCT-12	R2453386
Potassium (K)-Total	3.87		0.10	mg/L		11-OCT-12	R2453386
Sodium (Na)-Total	42.2		1.0	mg/L		11-OCT-12	R2453386
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	<5.0		5.0	mg/L		02-OCT-12	R2447570
Ammonia, Total (as N)	<0.050		0.050	mg/L		10-OCT-12	R2452396
Hardness (as CaCO3)	168			mg/L		12-OCT-12	
Cyanide, Total	<0.0050		0.0050	mg/L		10-OCT-12	R2453323
Total Suspended Solids	<3.0		3.0	mg/L		02-OCT-12	R2448059
pH	5.79		0.10	pH		02-OCT-12	R2447570
L1216778-8 LUP-21-WEEKLY							
Sampled By: L. Coedy on 27-SEP-12 @ 10:00							
Matrix: Water							
Total Metals - CCME							
Mercury (Hg) - Total							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		17-OCT-12	R2456862
Total Metals in Water by ICPMS (Low)							
Aluminum (Al)-Total	<0.010		0.010	mg/L		11-OCT-12	R2454000
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Arsenic (As)-Total	<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Barium (Ba)-Total	<0.0030		0.0030	mg/L		11-OCT-12	R2454000
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Boron (B)-Total	<0.050		0.050	mg/L		11-OCT-12	R2454000
Cadmium (Cd)-Total	<0.000050		0.000050	mg/L		11-OCT-12	R2454000
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		11-OCT-12	R2454000
Cobalt (Co)-Total	<0.0020		0.0020	mg/L		11-OCT-12	R2454000
Copper (Cu)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Lead (Pb)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Lithium (Li)-Total	<0.010		0.010	mg/L		11-OCT-12	R2454000
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		11-OCT-12	R2454000
Nickel (Ni)-Total	<0.0020		0.0020	mg/L		11-OCT-12	R2454000
Selenium (Se)-Total	<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Silver (Ag)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1216778-8 LUP-21-WEEKLY Sampled By: L. Coedy on 27-SEP-12 @ 10:00 Matrix: Water							
Total Metals in Water by ICPMS (Low)							
Tin (Sn)-Total	<0.050		0.050	mg/L		11-OCT-12	R2454000
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Uranium (U)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Vanadium (V)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Zinc (Zn)-Total	<0.0040		0.0040	mg/L		11-OCT-12	R2454000
Total Metals in Water by ICPOES (Low)							
Calcium (Ca)-Total	1.29		0.50	mg/L		11-OCT-12	R2453386
Iron (Fe)-Total	0.045		0.010	mg/L		11-OCT-12	R2453386
Magnesium (Mg)-Total	0.59		0.10	mg/L		11-OCT-12	R2453386
Manganese (Mn)-Total	0.0040		0.0020	mg/L		11-OCT-12	R2453386
Potassium (K)-Total	0.41		0.10	mg/L		11-OCT-12	R2453386
Sodium (Na)-Total	1.1		1.0	mg/L		11-OCT-12	R2453386
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	<5.0		5.0	mg/L		02-OCT-12	R2447570
Ammonia, Total (as N)	<0.050		0.050	mg/L		10-OCT-12	R2452396
Hardness (as CaCO3)	5.7			mg/L		12-OCT-12	
Cyanide, Total	<0.0050		0.0050	mg/L		10-OCT-12	R2453323
Total Suspended Solids	<3.0		3.0	mg/L		02-OCT-12	R2448059
pH	6.63		0.10	pH		02-OCT-12	R2447570
L1216778-9 LUP-22-WEEKLY Sampled By: L. Coedy on 27-SEP-12 @ 10:00 Matrix: Water							
Total Metals - CCME							
Mercury (Hg) - Total							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		17-OCT-12	R2456862
Total Metals in Water by ICPMS (Low)							
Aluminum (Al)-Total	0.017		0.010	mg/L		11-OCT-12	R2454000
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Arsenic (As)-Total	0.00066		0.00040	mg/L		11-OCT-12	R2454000
Barium (Ba)-Total	0.0191		0.0030	mg/L		11-OCT-12	R2454000
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Boron (B)-Total	<0.050		0.050	mg/L		11-OCT-12	R2454000
Cadmium (Cd)-Total	0.000089		0.000050	mg/L		11-OCT-12	R2454000
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		11-OCT-12	R2454000
Cobalt (Co)-Total	0.0047		0.0020	mg/L		11-OCT-12	R2454000
Copper (Cu)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Lead (Pb)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Lithium (Li)-Total	<0.010		0.010	mg/L		11-OCT-12	R2454000
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		11-OCT-12	R2454000
Nickel (Ni)-Total	0.0343		0.0020	mg/L		11-OCT-12	R2454000
Selenium (Se)-Total	<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Silver (Ag)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Tin (Sn)-Total	<0.050		0.050	mg/L		11-OCT-12	R2454000
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Uranium (U)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Vanadium (V)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Zinc (Zn)-Total	0.0721		0.0040	mg/L		11-OCT-12	R2454000
Total Metals in Water by ICPOES (Low)							
Calcium (Ca)-Total	25.2		0.50	mg/L		11-OCT-12	R2453386
Iron (Fe)-Total	0.030		0.010	mg/L		11-OCT-12	R2453386

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1216778-9	LUP-22-WEEKLY							
Sampled By: L. Coedy on 27-SEP-12 @ 10:00								
Matrix: Water								
Total Metals in Water by ICPOES (Low)								
Magnesium (Mg)-Total		3.35		0.10	mg/L		11-OCT-12	R2453386
Manganese (Mn)-Total		0.113		0.0020	mg/L		11-OCT-12	R2453386
Potassium (K)-Total		1.89		0.10	mg/L		11-OCT-12	R2453386
Sodium (Na)-Total		18.6		1.0	mg/L		11-OCT-12	R2453386
Miscellaneous Parameters								
Alkalinity, Total (as CaCO3)		<5.0		5.0	mg/L		02-OCT-12	R2447570
Ammonia, Total (as N)		<0.050		0.050	mg/L		10-OCT-12	R2452396
Hardness (as CaCO3)		76.8			mg/L		12-OCT-12	
Cyanide, Total		<0.0050		0.0050	mg/L		10-OCT-12	R2453323
Total Suspended Solids		<3.0		3.0	mg/L		02-OCT-12	R2448059
pH		6.25		0.10	pH		02-OCT-12	R2447570
L1216778-10	LUP-24-WEEKLY							
Sampled By: L. Coedy on 27-SEP-12 @ 10:30								
Matrix: Water								
Total Metals - CCME								
Mercury (Hg) - Total								
Mercury (Hg)-Total		<0.00010		0.00010	mg/L		17-OCT-12	R2456862
Total Metals in Water by ICPMS (Low)								
Aluminum (Al)-Total		<0.010		0.010	mg/L		11-OCT-12	R2454000
Antimony (Sb)-Total		<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Arsenic (As)-Total		<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Barium (Ba)-Total		0.0043		0.0030	mg/L		11-OCT-12	R2454000
Beryllium (Be)-Total		<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Boron (B)-Total		<0.050		0.050	mg/L		11-OCT-12	R2454000
Cadmium (Cd)-Total		<0.000050		0.000050	mg/L		11-OCT-12	R2454000
Chromium (Cr)-Total		<0.0050		0.0050	mg/L		11-OCT-12	R2454000
Cobalt (Co)-Total		<0.0020		0.0020	mg/L		11-OCT-12	R2454000
Copper (Cu)-Total		<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Lead (Pb)-Total		<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Lithium (Li)-Total		<0.010		0.010	mg/L		11-OCT-12	R2454000
Molybdenum (Mo)-Total		<0.0050		0.0050	mg/L		11-OCT-12	R2454000
Nickel (Ni)-Total		0.0040		0.0020	mg/L		11-OCT-12	R2454000
Selenium (Se)-Total		<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Silver (Ag)-Total		<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Thallium (Tl)-Total		<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Tin (Sn)-Total		<0.050		0.050	mg/L		11-OCT-12	R2454000
Titanium (Ti)-Total		<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Uranium (U)-Total		<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Vanadium (V)-Total		<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Zinc (Zn)-Total		0.0064		0.0040	mg/L		11-OCT-12	R2454000
Total Metals in Water by ICPOES (Low)								
Calcium (Ca)-Total		3.41		0.50	mg/L		11-OCT-12	R2453386
Iron (Fe)-Total		<0.010		0.010	mg/L		11-OCT-12	R2453386
Magnesium (Mg)-Total		0.74		0.10	mg/L		11-OCT-12	R2453386
Manganese (Mn)-Total		0.0088		0.0020	mg/L		11-OCT-12	R2453386
Potassium (K)-Total		0.58		0.10	mg/L		11-OCT-12	R2453386
Sodium (Na)-Total		2.7		1.0	mg/L		11-OCT-12	R2453386
Miscellaneous Parameters								
Alkalinity, Total (as CaCO3)		<5.0		5.0	mg/L		02-OCT-12	R2447570
Ammonia, Total (as N)		<0.050		0.050	mg/L		10-OCT-12	R2452396

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1216778-10	LUP-24-WEEKLY							
Sampled By: L. Coedy on 27-SEP-12 @ 10:30								
Matrix: Water								
Hardness (as CaCO3)		11.5			mg/L		12-OCT-12	
Cyanide, Total		<0.0050		0.0050	mg/L		10-OCT-12	R2453323
Total Suspended Solids		<3.0		3.0	mg/L		02-OCT-12	R2448059
pH		6.57		0.10	pH		02-OCT-12	R2447570
L1216778-11	LUP-25-WEEKLY							
Sampled By: L. Coedy on 27-SEP-12 @ 10:30								
Matrix: Water								
Total Metals - CCME								
Mercury (Hg) - Total								
Mercury (Hg)-Total		<0.00010		0.00010	mg/L		17-OCT-12	R2456862
Total Metals in Water by ICPMS (Low)								
Aluminum (Al)-Total		<0.010		0.010	mg/L		11-OCT-12	R2454000
Antimony (Sb)-Total		<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Arsenic (As)-Total		<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Barium (Ba)-Total		<0.0030		0.0030	mg/L		11-OCT-12	R2454000
Beryllium (Be)-Total		<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Boron (B)-Total		<0.050		0.050	mg/L		11-OCT-12	R2454000
Cadmium (Cd)-Total		<0.000050		0.000050	mg/L		11-OCT-12	R2454000
Chromium (Cr)-Total		<0.0050		0.0050	mg/L		11-OCT-12	R2454000
Cobalt (Co)-Total		<0.0020		0.0020	mg/L		11-OCT-12	R2454000
Copper (Cu)-Total		<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Lead (Pb)-Total		<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Lithium (Li)-Total		<0.010		0.010	mg/L		11-OCT-12	R2454000
Molybdenum (Mo)-Total		<0.0050		0.0050	mg/L		11-OCT-12	R2454000
Nickel (Ni)-Total		<0.0020		0.0020	mg/L		11-OCT-12	R2454000
Selenium (Se)-Total		<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Silver (Ag)-Total		<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Thallium (Tl)-Total		<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Tin (Sn)-Total		<0.050		0.050	mg/L		11-OCT-12	R2454000
Titanium (Ti)-Total		<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Uranium (U)-Total		<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Vanadium (V)-Total		<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Zinc (Zn)-Total		<0.0040		0.0040	mg/L		11-OCT-12	R2454000
Total Metals in Water by ICPOES (Low)								
Calcium (Ca)-Total		1.25		0.50	mg/L		11-OCT-12	R2453386
Iron (Fe)-Total		<0.010		0.010	mg/L		11-OCT-12	R2453386
Magnesium (Mg)-Total		0.43		0.10	mg/L		11-OCT-12	R2453386
Manganese (Mn)-Total		0.0031		0.0020	mg/L		11-OCT-12	R2453386
Potassium (K)-Total		0.42		0.10	mg/L		11-OCT-12	R2453386
Sodium (Na)-Total		<1.0		1.0	mg/L		11-OCT-12	R2453386
Miscellaneous Parameters								
Alkalinity, Total (as CaCO3)		<5.0		5.0	mg/L		02-OCT-12	R2447570
Ammonia, Total (as N)		<0.050		0.050	mg/L		10-OCT-12	R2452396
Hardness (as CaCO3)		4.9			mg/L		12-OCT-12	
Cyanide, Total		<0.0050		0.0050	mg/L		10-OCT-12	R2453323
Total Suspended Solids		<3.0		3.0	mg/L		02-OCT-12	R2448059
pH		6.60		0.10	pH		02-OCT-12	R2447570
L1216778-12	LUP-10-DAILY							
Sampled By: L. Coedy on 28-SEP-12 @ 08:30								
Matrix: Water								
Total Metals - CCME								

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1216778-12 LUP-10-DAILY							
Sampled By: L. Coedy on 28-SEP-12 @ 08:30							
Matrix: Water							
Mercury (Hg) - Total							
Mercury (Hg)-Total	<0.00010		0.00010	mg/L		17-OCT-12	R2456862
Total Metals in Water by ICPMS (Low)							
Aluminum (Al)-Total	0.033		0.010	mg/L		11-OCT-12	R2454000
Antimony (Sb)-Total	<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Arsenic (As)-Total	0.0107		0.00040	mg/L		11-OCT-12	R2454000
Barium (Ba)-Total	0.0143		0.0030	mg/L		11-OCT-12	R2454000
Beryllium (Be)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Boron (B)-Total	0.061		0.050	mg/L		11-OCT-12	R2454000
Cadmium (Cd)-Total	0.000221		0.000050	mg/L		11-OCT-12	R2454000
Chromium (Cr)-Total	<0.0050		0.0050	mg/L		11-OCT-12	R2454000
Cobalt (Co)-Total	0.0322		0.0020	mg/L		11-OCT-12	R2454000
Copper (Cu)-Total	0.0022		0.0010	mg/L		11-OCT-12	R2454000
Lead (Pb)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Lithium (Li)-Total	0.024		0.010	mg/L		11-OCT-12	R2454000
Molybdenum (Mo)-Total	<0.0050		0.0050	mg/L		11-OCT-12	R2454000
Nickel (Ni)-Total	0.0757		0.0020	mg/L		11-OCT-12	R2454000
Selenium (Se)-Total	<0.00040		0.00040	mg/L		11-OCT-12	R2454000
Silver (Ag)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Thallium (Tl)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Tin (Sn)-Total	<0.050		0.050	mg/L		11-OCT-12	R2454000
Titanium (Ti)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Uranium (U)-Total	<0.00010		0.00010	mg/L		11-OCT-12	R2454000
Vanadium (V)-Total	<0.0010		0.0010	mg/L		11-OCT-12	R2454000
Zinc (Zn)-Total	0.248		0.0040	mg/L		11-OCT-12	R2454000
Total Metals in Water by ICPOES (Low)							
Calcium (Ca)-Total	59.9		0.50	mg/L		11-OCT-12	R2453386
Iron (Fe)-Total	0.263		0.010	mg/L		11-OCT-12	R2453386
Magnesium (Mg)-Total	5.84		0.10	mg/L		11-OCT-12	R2453386
Manganese (Mn)-Total	0.695		0.0020	mg/L		11-OCT-12	R2453386
Potassium (K)-Total	4.70		0.10	mg/L		11-OCT-12	R2453386
Sodium (Na)-Total	46.2		1.0	mg/L		11-OCT-12	R2453386
Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L		10-OCT-12	R2453323
Total Suspended Solids	<3.0		3.0	mg/L		02-OCT-12	R2448059
pH	6.14		0.10	pH		02-OCT-12	R2447570

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-TOT-ED	Water	Alkalinity, Total	APHA 2320 B-Auto-Pot. Titration
CN-T-CFA-VA	Water	Total Cyanide in water by CFA	ISO 14403:2002
This analysis is carried out using procedures adapted from ISO Method 14403:2002 "Determination of Total Cyanide using Flow Analysis (FIA and CFA)". Total or strong acid dissociable (SAD) cyanide is determined by in-line UV digestion along with sample distillation and final determination by colourimetric analysis. Method Limitation: This method is susceptible to interference from thiocyanate (SCN). If SCN is present in the sample, there could be a positive interference with this method, but it would be less than 1% and could be as low as zero.			
ETL-HARDNESS-TOT-ED	Water	Hardness (from Total Ca and Mg)	APHA 2340 B-Calculation
HG-T-CVAA-ED	Water	Mercury (Hg) - Total	EPA 245.7 / EPA 245.1
MET-T-L-ICP-ED	Water	Total Metals in Water by ICPOES (Low)	APHA 3120 B-ICP-OES
MET-T-L-MS-ED	Water	Total Metals in Water by ICPMS (Low)	SW 846 - 6020-ICPMS
NH3-CFA-ED	Water	Ammonia in Water by Colour	APHA 4500 NH3-NITROGEN (AMMONIA)
This analysis is carried out using procedures adapted from APHA Method 4500 NH3 "NITROGEN (AMMONIA)". Ammonia is determined using the automated phenate colourimetric method.			
PH-ED	Water	pH	APHA 4500 H-Electrode
All samples analyzed by this method for pH will have exceeded the 15 minute recommended hold time from time of sampling (field analysis is recommended for pH where highly accurate results are needed)			
SOLIDS-TOTSUS-ED	Water	Total Suspended Solids	APHA 2540 D-Gravimetric

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

08-011445

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Quality Control Report

Workorder: L1216778

Report Date: 18-OCT-12

Page 2 of 7

Client: LUPIN MINES INCORPORATED
Suite 202, 5204 - 50th Avenue
Yellowknife NT X1A 1E2

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-CFA-VA		Water						
Batch	R2451169							
WG1561486-1	MB		<0.0050		mg/L		0.005	05-OCT-12
Cyanide, Total								
WG1561486-11	MB							
Cyanide, Total								
WG1561486-3	MB							
Cyanide, Total			<0.0050		mg/L		0.005	05-OCT-12
WG1561486-7	MB	L1214975-6	<0.0050		mg/L		0.005	05-OCT-12
Cyanide, Total								
WG1561486-10	MS							
Cyanide, Total								
WG1561486-10	MS		96.0		%		70-130	05-OCT-12
Batch	R2452365							
WG1562687-2	LCS		87.5		%		80-120	09-OCT-12
Cyanide, Total								
WG1562687-4	LCS							
Cyanide, Total								
WG1562687-8	LCS		88.0		%		80-120	09-OCT-12
Cyanide, Total			87.4		%		80-120	09-OCT-12
WG1562687-1	MB		<0.0050		mg/L		0.005	09-OCT-12
Cyanide, Total								
WG1562687-3	MB							
Cyanide, Total								
WG1562687-7	MB		<0.0050		mg/L		0.005	09-OCT-12
Cyanide, Total								
Batch	R2453323							
WG1563401-15	DUP	L1217334-8	<0.0050	RPD-NA	mg/L	N/A	20	10-OCT-12
Cyanide, Total								
WG1563401-19	DUP	L1215280-5						
Cyanide, Total								
WG1563401-23	DUP	L1217327-1	<0.0050	RPD-NA	mg/L	N/A	20	10-OCT-12
Cyanide, Total								
WG1563401-25	DUP	L1217111-2						
Cyanide, Total								
WG1563401-7	DUP	L1216895-11	<0.0050	RPD-NA	mg/L	N/A	20	10-OCT-12
Cyanide, Total								
WG1563401-10	LCS							
Cyanide, Total								
WG1563401-14	LCS		92.0		%		80-120	10-OCT-12
Cyanide, Total			93.0		%		80-120	10-OCT-12



Quality Control Report

Workorder: L1216778

Report Date: 18-OCT-12

Page 4 of 7

Client: LUPIN MINES INCORPORATED
Suite 202, 5204 - 50th Avenue
Yellowknife NT X1A 1E2

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-T-CVAA-ED		Water						
Batch	R2456862							
WG1567817-10 DUP		L1216778-8						
Mercury (Hg)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	17-OCT-12
WG1567817-12 DUP		L1216778-9						
Mercury (Hg)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	17-OCT-12
WG1567817-8 DUP		L1216778-7						
Mercury (Hg)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	17-OCT-12
WG1567817-2 LCS			86.5		%		80-120	17-OCT-12
WG1567817-3 LCSD		WG1567817-2	86.5	83.5	%	3.6	20	17-OCT-12
WG1567817-1 MB			<0.00010		mg/L		0.0001	17-OCT-12
WG1567817-11 MS		L1216778-8	87.9		%		70-130	17-OCT-12
WG1567817-13 MS		L1216778-9	89.3		%		70-130	17-OCT-12
WG1567817-9 MS		L1216778-7	91.1		%		70-130	17-OCT-12
MET-T-L-ICP-ED		Water						
Batch	R2453386							
WG1563170-1 MB			<0.50		mg/L		0.5	11-OCT-12
Calcium (Ca)-Total			<0.010		mg/L		0.01	11-OCT-12
Iron (Fe)-Total			<0.10		mg/L		0.1	11-OCT-12
Magnesium (Mg)-Total			<0.002		mg/L		0.002	11-OCT-12
Manganese (Mn)-Total			<0.1		mg/L		0.1	11-OCT-12
Potassium (K)-Total			<1		mg/L		1	11-OCT-12
Sodium (Na)-Total								
NH3-CFA-ED		Water						
Batch	R2452396							
WG1562996-3 DUP		L1218854-6						
Ammonia, Total (as N)		0.076	<0.050	RPD-NA	mg/L	N/A	20	10-OCT-12
WG1562996-5 DUP		L1220259-3						
Ammonia, Total (as N)		<0.050	<0.050	RPD-NA	mg/L	N/A	20	10-OCT-12
WG1562996-7 DUP		L1216778-11						
Ammonia, Total (as N)		<0.050	<0.050	RPD-NA	mg/L	N/A	20	10-OCT-12
WG1562996-8 DUP		L1221134-1						
Ammonia, Total (as N)		1.30	1.29		mg/L	1.3	20	10-OCT-12



Quality Control Report

Workorder: L1216778

Report Date: 18-OCT-12

Page 5 of 7

Client: LUPIN MINES INCORPORATED
Suite 202, 5204 - 50th Avenue
Yellowknife NT X1A 1E2

Contact: David Vokey

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-CFA-ED		Water						
Batch	R2452396							
WG1562996-2	LCS							
Ammonia, Total (as N)			93.7		%		85-115	10-OCT-12
WG1562996-1	MB							
Ammonia, Total (as N)			<0.050		mg/L		0.05	10-OCT-12
WG1562996-4	MS	L1219108-14						
Ammonia, Total (as N)			95.8		%		75-125	10-OCT-12
WG1562996-6	MS	L1219686-2						
Ammonia, Total (as N)			90.3		%		75-125	10-OCT-12
PH-ED		Water						
Batch	R2447570							
WG1557861-6	DUP	L1217690-1						
pH		8.37	8.37	J	pH	0.00	0.2	02-OCT-12
WG1557861-8	DUP	L1217686-1						
pH		8.36	8.42	J	pH	0.06	0.2	02-OCT-12
WG1557861-3	LCS							
pH			6.99		pH		6.9-7.1	02-OCT-12
SOLIDS-TOTSUS-ED		Water						
Batch	R2448059							
WG1558112-3	DUP	L1216855-1						
Total Suspended Solids		<3.0	<3.0	RPD-NA	mg/L	N/A	20	02-OCT-12
WG1558112-4	DUP	L1217079-1						
Total Suspended Solids		43.0	48.0		mg/L	11	20	02-OCT-12
WG1558112-2	LCS							
Total Suspended Solids			104.0		%		85-115	02-OCT-12
WG1558112-1	MB							
Total Suspended Solids			<3.0		mg/L		3	02-OCT-12

Quality Control Report

Workorder: L1216778

Report Date: 18-OCT-12

Client: LUPIN MINES INCORPORATED
Suite 202, 5204 - 50th Avenue
Yellowknife NT X1A 1E2

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Contact: David Vokey

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L1216778

Report Date: 18-OCT-12

Client: LUPIN MINES INCORPORATED
Suite 202, 5204 - 50th Avenue
Yellowknife NT X1A 1E2

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Contact: David Vokey

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Total Suspended Solids	1	22-SEP-12 10:00	02-OCT-12 00:00	7	10	days	EHTL
	2	23-SEP-12 10:00	02-OCT-12 00:00	7	9	days	EHT
	3	24-SEP-12 10:00	02-OCT-12 00:00	7	8	days	EHT
pH	1	22-SEP-12 10:00	02-OCT-12 15:10	0.25	245	hours	EHTR-FM
	2	23-SEP-12 10:00	02-OCT-12 16:26	0.25	222	hours	EHTR-FM
	3	24-SEP-12 10:00	02-OCT-12 16:31	0.25	198	hours	EHTR-FM
	4	25-SEP-12 09:30	02-OCT-12 16:36	0.25	175	hours	EHTR-FM
	5	26-SEP-12 10:00	02-OCT-12 16:41	0.25	151	hours	EHTR-FM
	6	27-SEP-12 10:00	02-OCT-12 16:46	0.25	127	hours	EHTR-FM
	7	27-SEP-12 10:00	02-OCT-12 16:50	0.25	127	hours	EHTR-FM
	8	27-SEP-12 10:00	02-OCT-12 16:57	0.25	127	hours	EHTR-FM
	9	27-SEP-12 10:00	02-OCT-12 17:02	0.25	127	hours	EHTR-FM
	10	27-SEP-12 10:30	02-OCT-12 17:08	0.25	127	hours	EHTR-FM
	11	27-SEP-12 10:30	02-OCT-12 17:13	0.25	127	hours	EHTR-FM
	12	28-SEP-12 08:30	02-OCT-12 17:18	0.25	105	hours	EHTR-FM
Cyanides							
Total Cyanide in water by CFA	3	24-SEP-12 10:00	09-OCT-12 10:33	14	15	days	EHT
	4	25-SEP-12 09:30	10-OCT-12 11:59	14	15	days	EHT

Legend & Qualifier Definitions:

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR: Exceeded ALS recommended hold time prior to sample receipt.
EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT: Exceeded ALS recommended hold time prior to analysis.
Rec. HT: ALS recommended hold time (see units).

Notes*:
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L1216778 were received on 28-SEP-12 15:30.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



L1216778-COFC

Chain of Custody / Analytical Request Form

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

COC # _____

Page 1 of 1

Report To					Report Format / Distribution					Service Requested (Rush for routine analysis subject to availability)																																																															
Company: Elgin Mining - Lupin Mine					☒ Standard ☐ Other					☒ Regular (Standard Turnaround Times - Business Days)																																																															
Contact: D. Vokey					☒ PDF ☒ Excel ☐ Digital ☐ Fax					☐ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT																																																															
Address: 201 - 750 W. Pender St.					Email 1: dvokey@elginmining.com					☐ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT																																																															
Vancouver, BC V6T 2T7					Email 2: alaudrum@srk.com					☐ Same Day or Weekend Emergency - Contact ALS to Confirm TAT																																																															
Phone: 604-682-3366 Fax: 604-682-3363					Email 3: jbartlett@elginmining.com																																																																				
Invoice To Same as Report? ☒ Yes ☐ No					Client / Project Information					Analysis Request																																																															
Hardcopy of Invoice with Report? ☒ Yes ☐ No					Job #: Lupin					Please indicate below Filtered, Preserved or both (F, P, F/P)																																																															
Company:					PO / AFE:					<table border="1"><thead><tr><th>TSS, pH</th><th>T-Metal</th><th>T-Cyanide</th><th>NH4</th><th>T-Hardness</th><th>Alkalinity</th><th colspan="4">Number of Containers</th></tr></thead><tbody><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></tbody></table>												TSS, pH	T-Metal	T-Cyanide	NH4	T-Hardness	Alkalinity	Number of Containers																																													
TSS, pH	T-Metal	T-Cyanide	NH4	T-Hardness	Alkalinity	Number of Containers																																																																			
Contact:					LSD:																																																																				
Address:																																																																									
Phone: Fax:					Quote #: Q35666																																																																				
Lab Work Order # (lab use only) L1216778					ALS Contact: J. Bethune					Sampler: L. Coedy																																																															
Sample #	Sample Identification (This description will appear on the report)			Date (dd-mm-yy)	Time (hh:mm)	Sample Type	TSS, pH	T-Metal	T-Cyanide	NH4	T-Hardness	Alkalinity	Number of Containers																																																												
	Lup-10-Daily			22-Sep-12	10:00	Water	X	X	X						3																																																										
	Lup-10-Daily			23-Sep-12	10:00	Water	X	X	X						3																																																										
	Lup-10-Daily			24-Sep-12	10:00	Water	X	X	X						3																																																										
	Lup-10-Daily			25-Sep-12	9:30	Water	X	X	X						3																																																										
	Lup-10-Daily			26-Sep-12	10:00	Water	X	X	X						3																																																										
	Lup-10-Weekly			27-Sep-12	10:00	Water	X	X	X	X	X	X			4																																																										
	Lup-20-Weekly			27-Sep-12	10:00	Water	X	X	X	X	X	X			4																																																										
	Lup-21-Weekly			27-Sep-12	10:00	Water	X	X	X	X	X	X			4																																																										
	Lup-22-Weekly			27-Sep-12	10:00	Water	X	X	X	X	X	X			4																																																										
	Lup-24-Weekly			27-Sep-12	10:30	Water	X	X	X	X	X	X			4																																																										
	Lup-25-Weekly			27-Sep-12	10:30	Water	X	X	X	X	X	X			4																																																										
	Lup-10-Daily			28-Sep-12	8:30	Water	X	X	X						3																																																										
Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details																																																																									
CN is not preserved past Sept-26. So all weekly samples and Lup-10-Daily Sept-28-12 are not preserved.																																																																									
Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.																																																																									
By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided on a separate Excel tab.																																																																									
Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.																																																																									
SHIPMENT RELEASE (client use)					SHIPMENT RECEPTION (lab use only)					SHIPMENT VERIFICATION (lab use only)																																																															
Released by:	Date (dd-mm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF																																																															
				28 Sep 12	1500	6 °C																																																																			