



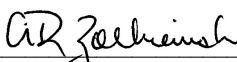
LUPIN MINES INCORPORATED
ATTN: Karyn Lewis
76 Richmond Street East
Suite 330
Toronto ON M5C 1P1

Date Received: 10-JUL-15
Report Date: 20-JUL-15 15:05 (MT)
Version: FINAL

Client Phone: 778-386-7340

Certificate of Analysis

Lab Work Order #: L1640708
Project P.O. #: NOT SUBMITTED
Job Reference: LUPIN MINE
C of C Numbers:
Legal Site Desc:


Rick Zolkiewski
General Manager

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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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1640708-1 LUP-14-150709							
Sampled By: MB on 09-JUL-15 @ 17:53							
Matrix: WATER							
Total Alkalinity by Titration							
Alkalinity Species by Titration							
Alkalinity, Total (as CaCO3)	14.9		1.0	mg/L		12-JUL-15	R3224221
Miscellaneous Parameters							
Ammonia, Total (as N)	<0.0050		0.0050	mg/L		13-JUL-15	R3224834
Biochemical Oxygen Demand	2.0		2.0	mg/L		10-JUL-15	R3229110
Orthophosphate-Dissolved (as P)	<0.0010		0.0010	mg/L		13-JUL-15	R3224868
Fecal Coliforms	<1		1	CFU/100mL		10-JUL-15	R3224508
Hardness (as CaCO3)	72.5		0.50			10-JUL-15	
Nitrate (as N)	<0.0050		0.0050	mg/L		12-JUL-15	R3224573
Nitrite (as N)	<0.0010		0.0010	mg/L		12-JUL-15	R3224573
Sulfate (SO4)	50.6		0.30	mg/L		12-JUL-15	R3224573
Total Kjeldahl Nitrogen	0.579		0.050	mg/L	15-JUL-15	16-JUL-15	R3227128
Total Dissolved Solids	128		20	mg/L		13-JUL-15	R3225157
Mercury (Hg)-Total	<0.0000050		0.0000050	mg/L		13-JUL-15	R3224752
Phosphorus (P)-Total	0.0255		0.0020	mg/L		13-JUL-15	R3224916
Total Suspended Solids	6.7		3.0	mg/L		13-JUL-15	R3224903
pH	7.20		0.10	pH		12-JUL-15	R3224221
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	0.114		0.0030	mg/L		13-JUL-15	R3224949
Antimony (Sb)-Total	<0.00010		0.00010	mg/L		13-JUL-15	R3224949
Arsenic (As)-Total	0.0207		0.00010	mg/L		13-JUL-15	R3224949
Barium (Ba)-Total	0.0137		0.000050	mg/L		13-JUL-15	R3224949
Beryllium (Be)-Total	<0.00010		0.00010	mg/L		13-JUL-15	R3224949
Bismuth (Bi)-Total	<0.000050		0.000050	mg/L		13-JUL-15	R3224949
Boron (B)-Total	0.034		0.010	mg/L		13-JUL-15	R3224949
Cadmium (Cd)-Total	<0.0000050		0.0000050	mg/L		13-JUL-15	R3224949
Calcium (Ca)-Total	20.8		0.050	mg/L		13-JUL-15	R3224949
Cesium (Cs)-Total	0.000341		0.000010	mg/L		13-JUL-15	R3224949
Chromium (Cr)-Total	0.00043		0.00010	mg/L		13-JUL-15	R3224949
Cobalt (Co)-Total	0.00033		0.00010	mg/L		13-JUL-15	R3224949
Copper (Cu)-Total	0.00083		0.00050	mg/L		13-JUL-15	R3224949
Iron (Fe)-Total	0.502		0.010	mg/L		13-JUL-15	R3224949
Lead (Pb)-Total	0.000204		0.000050	mg/L		13-JUL-15	R3224949
Lithium (Li)-Total	0.0177		0.0010	mg/L		13-JUL-15	R3224949
Magnesium (Mg)-Total	4.98		0.0050	mg/L		13-JUL-15	R3224949
Manganese (Mn)-Total	0.0202		0.00010	mg/L		13-JUL-15	R3224949
Molybdenum (Mo)-Total	0.000106		0.000050	mg/L		13-JUL-15	R3224949
Nickel (Ni)-Total	0.00448		0.00050	mg/L		13-JUL-15	R3224949
Phosphorus (P)-Total	<0.050		0.050	mg/L		13-JUL-15	R3224949
Potassium (K)-Total	2.58		0.050	mg/L		13-JUL-15	R3224949
Rubidium (Rb)-Total	0.00571		0.00020	mg/L		13-JUL-15	R3224949
Selenium (Se)-Total	<0.000050		0.000050	mg/L		13-JUL-15	R3224949
Silicon (Si)-Total	0.196		0.050	mg/L		13-JUL-15	R3224949
Silver (Ag)-Total	<0.000010		0.000010	mg/L		13-JUL-15	R3224949
Sodium (Na)-Total	13.2		0.050	mg/L		13-JUL-15	R3224949
Strontium (Sr)-Total	0.172		0.00020	mg/L		13-JUL-15	R3224949
Sulfur (S)-Total	17.8		0.50	mg/L		13-JUL-15	R3224949
Tellurium (Te)-Total	<0.00020		0.00020	mg/L		13-JUL-15	R3224949
Thallium (Tl)-Total	<0.000010		0.000010	mg/L		13-JUL-15	R3224949
Thorium (Th)-Total	<0.00010		0.00010	mg/L		13-JUL-15	R3224949

* 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
L1640708-1	LUP-14-150709							
Sampled By: MB on 09-JUL-15 @ 17:53								
Matrix: WATER								
Total Metals in Water by CRC ICPMS								
Tin (Sn)-Total		<0.00010		0.00010	mg/L		13-JUL-15	R3224949
Titanium (Ti)-Total		0.00736		0.00030	mg/L		13-JUL-15	R3224949
Tungsten (W)-Total		0.00016		0.00010	mg/L		13-JUL-15	R3224949
Uranium (U)-Total		0.000022		0.000010	mg/L		13-JUL-15	R3224949
Vanadium (V)-Total		<0.00050		0.00050	mg/L		13-JUL-15	R3224949
Zinc (Zn)-Total		<0.0030		0.0030	mg/L		13-JUL-15	R3224949
Zirconium (Zr)-Total		<0.00030		0.00030	mg/L		13-JUL-15	R3224949
NO2, NO3, NO2+NO3								
Nitrite & Nitrate in Water (Calculation)								
Nitrate and Nitrite (as N)		<0.0051		0.0051	mg/L		13-JUL-15	
L1640708-2	DUP-14-150709							
Sampled By: MB on 09-JUL-15 @ 17:53								
Matrix: WATER								
Miscellaneous Parameters								
Biochemical Oxygen Demand		3.0		2.0	mg/L		10-JUL-15	R3229110
Total Kjeldahl Nitrogen		0.410		0.050	mg/L	15-JUL-15	16-JUL-15	R3227128
Phosphorus (P)-Total		0.0225		0.0020	mg/L		13-JUL-15	R3224916
L1640708-3	LUP-BLANK-150709							
Sampled By: MB on 09-JUL-15 @ 18:00								
Matrix: WATER								
Total Alkalinity by Titration								
Alkalinity Species by Titration								
Alkalinity, Total (as CaCO3)		<1.0		1.0	mg/L		12-JUL-15	R3224221
Miscellaneous Parameters								
Ammonia, Total (as N)		<0.0050		0.0050	mg/L		13-JUL-15	R3224834
Orthophosphate-Dissolved (as P)		<0.0010		0.0010	mg/L		13-JUL-15	R3224868
Hardness (as CaCO3)		<0.50		0.50	mg/L		14-JUL-15	
Nitrate (as N)		<0.0050		0.0050	mg/L		12-JUL-15	R3224573
Nitrite (as N)		<0.0010		0.0010	mg/L		12-JUL-15	R3224573
Sulfate (SO4)		<0.30		0.30	mg/L		12-JUL-15	R3224573
Total Dissolved Solids		<10		10	mg/L		13-JUL-15	R3225157
Total Suspended Solids		<3.0		3.0	mg/L		13-JUL-15	R3224903
pH		5.62		0.10	pH		12-JUL-15	R3224221
Total Metals in Water by CRC ICPMS								
Aluminum (Al)-Total		<0.0030		0.0030	mg/L		13-JUL-15	R3224949
Antimony (Sb)-Total		<0.00010		0.00010	mg/L		13-JUL-15	R3224949
Arsenic (As)-Total		<0.00010		0.00010	mg/L		13-JUL-15	R3224949
Barium (Ba)-Total		<0.000050		0.000050	mg/L		13-JUL-15	R3224949
Beryllium (Be)-Total		<0.00010		0.00010	mg/L		13-JUL-15	R3224949
Bismuth (Bi)-Total		<0.000050		0.000050	mg/L		13-JUL-15	R3224949
Boron (B)-Total		<0.010		0.010	mg/L		13-JUL-15	R3224949
Cadmium (Cd)-Total		<0.0000050		0.0000050	mg/L		13-JUL-15	R3224949
Calcium (Ca)-Total		0.064		0.050	mg/L		13-JUL-15	R3225450
Cesium (Cs)-Total		<0.000010		0.000010	mg/L		13-JUL-15	R3224949
Chromium (Cr)-Total		<0.00010		0.00010	mg/L		13-JUL-15	R3224949
Cobalt (Co)-Total		<0.00010		0.00010	mg/L		13-JUL-15	R3224949
Copper (Cu)-Total		<0.00050		0.00050	mg/L		13-JUL-15	R3224949
Iron (Fe)-Total		<0.010		0.010	mg/L		13-JUL-15	R3224949
Lead (Pb)-Total		<0.000050		0.000050	mg/L		13-JUL-15	R3224949
Lithium (Li)-Total		<0.0010		0.0010	mg/L		13-JUL-15	R3224949

* 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
L1640708-3	LUP-BLANK-150709							
Sampled By:	MB on 09-JUL-15 @ 18:00							
Matrix:	WATER							
Total Metals in Water by CRC ICPMS								
Magnesium (Mg)-Total		<0.0050		0.0050	mg/L		13-JUL-15	R3224949
Manganese (Mn)-Total		<0.00010		0.00010	mg/L		13-JUL-15	R3224949
Molybdenum (Mo)-Total		<0.000050		0.000050	mg/L		13-JUL-15	R3224949
Nickel (Ni)-Total		<0.00050		0.00050	mg/L		13-JUL-15	R3224949
Phosphorus (P)-Total		<0.050		0.050	mg/L		13-JUL-15	R3224949
Potassium (K)-Total		<0.050		0.050	mg/L		13-JUL-15	R3224949
Rubidium (Rb)-Total		<0.00020		0.00020	mg/L		13-JUL-15	R3224949
Selenium (Se)-Total		<0.000050		0.000050	mg/L		13-JUL-15	R3224949
Silicon (Si)-Total		<0.050		0.050	mg/L		13-JUL-15	R3224949
Silver (Ag)-Total		<0.000010		0.000010	mg/L		13-JUL-15	R3224949
Sodium (Na)-Total		<0.050		0.050	mg/L		13-JUL-15	R3224949
Strontium (Sr)-Total		<0.00020		0.00020	mg/L		13-JUL-15	R3224949
Sulfur (S)-Total		<0.50		0.50	mg/L		13-JUL-15	R3224949
Tellurium (Te)-Total		<0.00020		0.00020	mg/L		13-JUL-15	R3224949
Thallium (Tl)-Total		<0.000010		0.000010	mg/L		13-JUL-15	R3224949
Thorium (Th)-Total		<0.00010		0.00010	mg/L		13-JUL-15	R3224949
Tin (Sn)-Total		<0.00010		0.00010	mg/L		13-JUL-15	R3224949
Titanium (Ti)-Total		<0.00030		0.00030	mg/L		13-JUL-15	R3224949
Tungsten (W)-Total		<0.00010		0.00010	mg/L		13-JUL-15	R3224949
Uranium (U)-Total		<0.000010		0.000010	mg/L		13-JUL-15	R3224949
Vanadium (V)-Total		<0.00050		0.00050	mg/L		13-JUL-15	R3224949
Zinc (Zn)-Total		<0.0030		0.0030	mg/L		13-JUL-15	R3224949
Zirconium (Zr)-Total		<0.00030		0.00030	mg/L		13-JUL-15	R3224949
NO2, NO3, NO2+NO3								
Nitrite & Nitrate in Water (Calculation)								
Nitrate and Nitrite (as N)		<0.0051		0.0051	mg/L		13-JUL-15	

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-TITR-VA	Water	Alkalinity Species by Titration	APHA 2320 Alkalinity
This analysis is carried out using procedures adapted from APHA Method 2320 "Alkalinity". Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.			
ANIONS-N+N-CALC-VA	Water	Nitrite & Nitrate in Water (Calculation)	EPA 300.0
Nitrate and Nitrite (as N) is a calculated parameter. Nitrate and Nitrite (as N) = Nitrite (as N) + Nitrate (as N).			
BOD5-TG	Water	Biochemical Oxygen Demand- 5 day (TAIGA)	SM5210B
FC-MF-YL	Water	Fecal Coliform	APHA 9222D
HARDNESS-CALC-VA	Water	Hardness	APHA 2340B
Hardness (also known as Total Hardness) is calculated from the sum of Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.			
HG-T-CVAA-VA	Water	Total Mercury in Water by CVAAS or CVAFS	EPA 1631E (mod)
Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS or CVAFS.			
MET-T-CCMS-VA	Water	Total Metals in Water by CRC ICPMS	EPA 200.2/6020A (mod)
Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.			
Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.			
NH3-F-VA	Water	Ammonia in Water by Fluorescence	APHA 4500 NH3-NITROGEN (AMMONIA)
This analysis is carried out, on sulfuric acid preserved samples, using procedures modified from J. Environ. Monit., 2005, 7, 37 - 42, The Royal Society of Chemistry, "Flow-injection analysis with fluorescence detection for the determination of trace levels of ammonium in seawater", Roslyn J. Waston et al.			
NH3-F-VA	Water	Ammonia in Water by Fluorescence	J. ENVIRON. MONIT., 2005, 7, 37-42, RSC
This analysis is carried out, on sulfuric acid preserved samples, using procedures modified from J. Environ. Monit., 2005, 7, 37 - 42, The Royal Society of Chemistry, "Flow-injection analysis with fluorescence detection for the determination of trace levels of ammonium in seawater", Roslyn J. Waston et al.			
NO2-L-IC-N-VA	Water	Nitrite in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
NO3-L-IC-N-VA	Water	Nitrate in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
P-T-PRES-COL-VA	Water	Total P in Water by Colour	APHA 4500-P Phosphorus
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorus is determined colourimetrically after persulphate digestion of the sample.			
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.			
PO4-DO-COL-VA	Water	Diss. Orthophosphate in Water by Colour	APHA 4500-P Phosphorus
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Dissolved Orthophosphate is determined colourimetrically on a sample that has been lab or field filtered through a 0.45 micron membrane filter.			
SO4-IC-N-VA	Water	Sulfate in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
TDS-VA	Water	Total Dissolved Solids by Gravimetric	APHA 2540 C - GRAVIMETRIC
This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total Dissolved Solids (TDS) are determined by filtering a sample through a glass fibre filter, TDS is determined by evaporating the filtrate to dryness at 180 degrees celsius.			
TKN-F-VA	Water	TKN in Water by Fluorescence	APHA 4500-NORG D.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
This analysis is carried out using procedures adapted from APHA Method 4500-Norg D. "Block Digestion and Flow Injection Analysis". Total Kjeldahl Nitrogen is determined using block digestion followed by Flow-injection analysis with fluorescence detection.			
TSS-VA	Water	Total Suspended Solids by Gravimetric	APHA 2540 D - GRAVIMETRIC
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
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA
TG	TAIGA ENVIRONMENTAL LABORATORY (INAC)
YL	ALS ENVIRONMENTAL -YELLOWKNIFE, NORTHWEST TERRITORIES 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: L1640708

Report Date: 20-JUL-15

Page 1 of 14

Client: LUPIN MINES INCORPORATED
76 Richmond Street East Suite 330
Toronto ON M5C 1P1

Contact: Karyn Lewis

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ALK-TITR-VA		Water						
Batch	R3224221							
WG2127087-10 CRM		VA-ALK-TITR-CONTROL						
Alkalinity, Total (as CaCO ₃)			103.4		%		85-115	12-JUL-15
WG2127087-11 CRM		VA-ALK-TITR-CONTROL						
Alkalinity, Total (as CaCO ₃)			104.2		%		85-115	12-JUL-15
WG2127087-12 CRM		VA-ALK-TITR-CONTROL						
Alkalinity, Total (as CaCO ₃)			105.0		%		85-115	12-JUL-15
WG2127087-13 CRM		VA-ALK-TITR-CONTROL						
Alkalinity, Total (as CaCO ₃)			105.4		%		85-115	12-JUL-15
WG2127087-14 CRM		VA-ALK-TITR-CONTROL						
Alkalinity, Total (as CaCO ₃)			107.4		%		85-115	12-JUL-15
WG2127087-15 CRM		VA-ALK-TITR-CONTROL						
Alkalinity, Total (as CaCO ₃)			107.6		%		85-115	12-JUL-15
WG2127087-9 CRM		VA-ALK-TITR-CONTROL						
Alkalinity, Total (as CaCO ₃)			107.2		%		85-115	12-JUL-15
WG2127087-33 DUP		L1640898-1						
Alkalinity, Total (as CaCO ₃)		111	111		mg/L	0.1	20	12-JUL-15
WG2127087-34 DUP		L1638948-31						
Alkalinity, Total (as CaCO ₃)		108	111		mg/L	2.9	20	12-JUL-15
WG2127087-35 DUP		L1639302-1						
Alkalinity, Total (as CaCO ₃)		49.7	49.3		mg/L	0.8	20	12-JUL-15
WG2127087-36 DUP		L1640371-1						
Alkalinity, Total (as CaCO ₃)		183	181		mg/L	1.1	20	12-JUL-15
WG2127087-37 DUP		L1640747-8						
Alkalinity, Total (as CaCO ₃)		246	253		mg/L	2.5	20	12-JUL-15
WG2127087-38 DUP		L1640770-8						
Alkalinity, Total (as CaCO ₃)		165	163		mg/L	1.1	20	12-JUL-15
WG2127087-39 DUP		L1640829-3						
Alkalinity, Total (as CaCO ₃)		207	205		mg/L	0.8	20	12-JUL-15
WG2127087-1 MB								
Alkalinity, Total (as CaCO ₃)			<1.0		mg/L		1	12-JUL-15
WG2127087-2 MB								
Alkalinity, Total (as CaCO ₃)			<1.0		mg/L		1	12-JUL-15
WG2127087-3 MB								
Alkalinity, Total (as CaCO ₃)			<1.0		mg/L		1	12-JUL-15
WG2127087-4 MB								
Alkalinity, Total (as CaCO ₃)			<1.0		mg/L		1	12-JUL-15
WG2127087-5 MB								
Alkalinity, Total (as CaCO ₃)			<1.0		mg/L		1	12-JUL-15



Quality Control Report

Workorder: L1640708

Report Date: 20-JUL-15

Page 2 of 14

Client: LUPIN MINES INCORPORATED
76 Richmond Street East Suite 330
Toronto ON M5C 1P1

Contact: Karyn Lewis

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed	
ALK-TITR-VA		Water							
Batch	R3224221								
WG2127087-6	MB								
Alkalinity, Total (as CaCO3)			<1.0		mg/L		1	12-JUL-15	
WG2127087-7	MB								
Alkalinity, Total (as CaCO3)			<1.0		mg/L		1	12-JUL-15	
WG2127087-8	MB								
Alkalinity, Total (as CaCO3)			1.0		mg/L		1	12-JUL-15	
FC-MF-YL		Water							
Batch	R3224508								
WG2127580-1	MB								
Fecal Coliforms			<1		CFU/100mL		1	10-JUL-15	
HG-T-CVAA-VA		Water							
Batch	R3224752								
WG2127734-3	DUP	L1640898-1							
Mercury (Hg)-Total			<0.0000050	<0.000005C	RPD-NA	mg/L	N/A	20	13-JUL-15
WG2127734-5	DUP	L1640952-1							
Mercury (Hg)-Total			<0.0000050	<0.000005C	RPD-NA	mg/L	N/A	20	13-JUL-15
WG2127734-7	DUP	L1640708-1							
Mercury (Hg)-Total			<0.0000050	<0.000005C	RPD-NA	mg/L	N/A	20	13-JUL-15
WG2127734-9	DUP	L1640820-2							
Mercury (Hg)-Total			<0.0000050	<0.000005C	RPD-NA	mg/L	N/A	20	13-JUL-15
WG2127734-2	LCS								
Mercury (Hg)-Total			94.9		%		80-120	13-JUL-15	
WG2127734-1	MB								
Mercury (Hg)-Total			<0.0000050		mg/L		0.000005	13-JUL-15	
WG2127734-4	MS	L1640944-1							
Mercury (Hg)-Total			92.1		%		70-130	13-JUL-15	
WG2127734-6	MS	L1640952-13							
Mercury (Hg)-Total			96.1		%		70-130	13-JUL-15	
WG2127734-8	MS	L1640850-1							
Mercury (Hg)-Total			98.8		%		70-130	13-JUL-15	
MET-T-CCMS-VA		Water							
Batch	R3225450								
WG2127539-4	LCS								
Aluminum (Al)-Total			94.7		%		80-120	13-JUL-15	
Antimony (Sb)-Total			100.5		%		80-120	13-JUL-15	
Arsenic (As)-Total			98.2		%		80-120	13-JUL-15	



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Contact:

Karyn Lewis

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-VA		Water						
Batch	R3225450							
WG2127539-4	LCS							
Barium (Ba)-Total			102.4		%		80-120	13-JUL-15
Beryllium (Be)-Total			99.6		%		80-120	13-JUL-15
Bismuth (Bi)-Total			97.4		%		80-120	13-JUL-15
Boron (B)-Total			97.7		%		80-120	13-JUL-15
Cadmium (Cd)-Total			96.6		%		80-120	13-JUL-15
Calcium (Ca)-Total			96.2		%		80-120	13-JUL-15
Cesium (Cs)-Total			100.7		%		80-120	13-JUL-15
Chromium (Cr)-Total			95.4		%		80-120	13-JUL-15
Cobalt (Co)-Total			98.8		%		80-120	13-JUL-15
Copper (Cu)-Total			95.2		%		80-120	13-JUL-15
Iron (Fe)-Total			101.4		%		80-120	13-JUL-15
Lead (Pb)-Total			100.4		%		80-120	13-JUL-15
Lithium (Li)-Total			101.8		%		80-120	13-JUL-15
Magnesium (Mg)-Total			96.1		%		80-120	13-JUL-15
Manganese (Mn)-Total			99.0		%		80-120	13-JUL-15
Molybdenum (Mo)-Total			97.5		%		80-120	13-JUL-15
Nickel (Ni)-Total			96.7		%		80-120	13-JUL-15
Phosphorus (P)-Total			105.8		%		80-120	13-JUL-15
Potassium (K)-Total			104.4		%		80-120	13-JUL-15
Rubidium (Rb)-Total			95.3		%		80-120	13-JUL-15
Selenium (Se)-Total			94.9		%		80-120	13-JUL-15
Silicon (Si)-Total			114.4		%		80-120	13-JUL-15
Silver (Ag)-Total			98.3		%		80-120	13-JUL-15
Sodium (Na)-Total			101.4		%		80-120	13-JUL-15
Strontium (Sr)-Total			99.4		%		80-120	13-JUL-15
Sulfur (S)-Total			97.9		%		80-120	13-JUL-15
Tellurium (Te)-Total			100.2		%		80-120	13-JUL-15
Thallium (Tl)-Total			97.0		%		80-120	13-JUL-15
Thorium (Th)-Total			100.6		%		80-120	13-JUL-15
Tin (Sn)-Total			99.6		%		80-120	13-JUL-15
Titanium (Ti)-Total			93.8		%		80-120	13-JUL-15
Tungsten (W)-Total			101.8		%		80-120	13-JUL-15
Uranium (U)-Total			101.6		%		80-120	13-JUL-15



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Toronto ON M5C 1P1

Contact: Karyn Lewis

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-VA		Water						
Batch	R3225450							
WG2127539-4	LCS							
Vanadium (V)-Total			97.9		%		80-120	13-JUL-15
Zinc (Zn)-Total			95.2		%		80-120	13-JUL-15
Zirconium (Zr)-Total			96.8		%		80-120	13-JUL-15
WG2127539-1	MB							
Aluminum (Al)-Total			<0.0030		mg/L		0.003	13-JUL-15
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	13-JUL-15
Arsenic (As)-Total			<0.00010		mg/L		0.0001	13-JUL-15
Barium (Ba)-Total			<0.000050		mg/L		0.00005	13-JUL-15
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	13-JUL-15
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	13-JUL-15
Boron (B)-Total			<0.010		mg/L		0.01	13-JUL-15
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	13-JUL-15
Calcium (Ca)-Total			<0.050		mg/L		0.05	13-JUL-15
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	13-JUL-15
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	13-JUL-15
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	13-JUL-15
Copper (Cu)-Total			<0.00050		mg/L		0.0005	13-JUL-15
Iron (Fe)-Total			<0.010		mg/L		0.01	13-JUL-15
Lead (Pb)-Total			<0.000050		mg/L		0.00005	13-JUL-15
Lithium (Li)-Total			<0.0010		mg/L		0.001	13-JUL-15
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	13-JUL-15
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	13-JUL-15
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	13-JUL-15
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	13-JUL-15
Phosphorus (P)-Total			<0.050		mg/L		0.05	13-JUL-15
Potassium (K)-Total			<0.050		mg/L		0.05	13-JUL-15
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	13-JUL-15
Selenium (Se)-Total			<0.000050		mg/L		0.00005	13-JUL-15
Silicon (Si)-Total			<0.050		mg/L		0.05	13-JUL-15
Silver (Ag)-Total			<0.000010		mg/L		0.00001	13-JUL-15
Sodium (Na)-Total			<0.050		mg/L		0.05	13-JUL-15
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	13-JUL-15
Sulfur (S)-Total			<0.50		mg/L		0.5	13-JUL-15
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	13-JUL-15



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Contact: Karyn Lewis

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-VA		Water						
Batch	R3225450							
WG2127539-1 MB								
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	13-JUL-15
Thorium (Th)-Total			<0.00010		mg/L		0.0001	13-JUL-15
Tin (Sn)-Total			<0.00010		mg/L		0.0001	13-JUL-15
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	13-JUL-15
Tungsten (W)-Total			<0.00010		mg/L		0.0001	13-JUL-15
Uranium (U)-Total			<0.000010		mg/L		0.00001	13-JUL-15
Vanadium (V)-Total			<0.00050		mg/L		0.0005	13-JUL-15
Zinc (Zn)-Total			<0.0030		mg/L		0.003	13-JUL-15
Zirconium (Zr)-Total			<0.00030		mg/L		0.0003	13-JUL-15
Batch	R3225678							
WG2127539-3 MS		L1639301-1						
Aluminum (Al)-Total			98.2		%		70-130	14-JUL-15
Antimony (Sb)-Total			103.6		%		70-130	14-JUL-15
Arsenic (As)-Total			100.9		%		70-130	14-JUL-15
Barium (Ba)-Total			N/A	MS-B	%		-	14-JUL-15
Beryllium (Be)-Total			102.0		%		70-130	14-JUL-15
Bismuth (Bi)-Total			86.8		%		70-130	14-JUL-15
Boron (B)-Total			104.1		%		70-130	14-JUL-15
Cadmium (Cd)-Total			95.9		%		70-130	14-JUL-15
Calcium (Ca)-Total			N/A	MS-B	%		-	14-JUL-15
Cesium (Cs)-Total			101.2		%		70-130	14-JUL-15
Chromium (Cr)-Total			96.9		%		70-130	14-JUL-15
Cobalt (Co)-Total			93.7		%		70-130	14-JUL-15
Copper (Cu)-Total			91.0		%		70-130	14-JUL-15
Iron (Fe)-Total			94.7		%		70-130	14-JUL-15
Lead (Pb)-Total			91.1		%		70-130	14-JUL-15
Lithium (Li)-Total			101.7		%		70-130	14-JUL-15
Magnesium (Mg)-Total			N/A	MS-B	%		-	14-JUL-15
Manganese (Mn)-Total			N/A	MS-B	%		-	14-JUL-15
Molybdenum (Mo)-Total			99.0		%		70-130	14-JUL-15
Nickel (Ni)-Total			89.3		%		70-130	14-JUL-15
Phosphorus (P)-Total			108.5		%		70-130	14-JUL-15
Potassium (K)-Total			N/A	MS-B	%		-	14-JUL-15
Rubidium (Rb)-Total			98.0		%		70-130	14-JUL-15

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed	
MET-T-CCMS-VA		Water							
Batch	R3225678								
WG2127539-3	MS	L1639301-1							
Selenium (Se)-Total			98.5		%		70-130	14-JUL-15	
Silicon (Si)-Total			N/A	MS-B	%		-	14-JUL-15	
Silver (Ag)-Total			102.2		%		70-130	14-JUL-15	
Sodium (Na)-Total			N/A	MS-B	%		-	14-JUL-15	
Strontium (Sr)-Total			N/A	MS-B	%		-	14-JUL-15	
Sulfur (S)-Total			N/A	MS-B	%		-	14-JUL-15	
Tellurium (Te)-Total			102.4		%		70-130	14-JUL-15	
Thallium (Tl)-Total			92.9		%		70-130	14-JUL-15	
Thorium (Th)-Total			92.1		%		70-130	14-JUL-15	
Tin (Sn)-Total			102.6		%		70-130	14-JUL-15	
Titanium (Ti)-Total			100.1		%		70-130	14-JUL-15	
Tungsten (W)-Total			97.8		%		70-130	14-JUL-15	
Uranium (U)-Total			89.3		%		70-130	14-JUL-15	
Vanadium (V)-Total			100.4		%		70-130	14-JUL-15	
Zinc (Zn)-Total			93.2		%		70-130	14-JUL-15	
Zirconium (Zr)-Total			100.3		%		70-130	14-JUL-15	
NH3-F-VA		Water							
Batch	R3224834								
WG2126932-10	CRM	VA-NH3-F							
Ammonia, Total (as N)			98.1		%		85-115	13-JUL-15	
WG2126932-2	CRM	VA-NH3-F							
Ammonia, Total (as N)			99.8		%		85-115	13-JUL-15	
WG2126932-4	CRM	VA-NH3-F							
Ammonia, Total (as N)			100.5		%		85-115	13-JUL-15	
WG2126932-6	CRM	VA-NH3-F							
Ammonia, Total (as N)			98.2		%		85-115	13-JUL-15	
WG2126932-8	CRM	VA-NH3-F							
Ammonia, Total (as N)			98.0		%		85-115	13-JUL-15	
WG2126932-11	DUP	L1639820-1							
Ammonia, Total (as N)			<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	13-JUL-15
WG2126932-13	DUP	L1639820-14							
Ammonia, Total (as N)			<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	13-JUL-15
WG2126932-15	DUP	L1639932-13							
Ammonia, Total (as N)			<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	13-JUL-15
WG2126932-1	MB								

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-F-VA		Water						
Batch	R3224834							
WG2126932-1 MB								
Ammonia, Total (as N)			<0.0050		mg/L		0.005	13-JUL-15
WG2126932-3 MB								
Ammonia, Total (as N)			<0.0050		mg/L		0.005	13-JUL-15
WG2126932-5 MB								
Ammonia, Total (as N)			<0.0050		mg/L		0.005	13-JUL-15
WG2126932-7 MB								
Ammonia, Total (as N)			<0.0050		mg/L		0.005	13-JUL-15
WG2126932-9 MB								
Ammonia, Total (as N)			<0.0050		mg/L		0.005	13-JUL-15
WG2126932-12 MS		L1639820-1						
Ammonia, Total (as N)			99.9		%		75-125	13-JUL-15
WG2126932-14 MS		L1639820-14						
Ammonia, Total (as N)			99.1		%		75-125	13-JUL-15
WG2126932-16 MS		L1639932-13						
Ammonia, Total (as N)			97.2		%		75-125	13-JUL-15
NO2-L-IC-N-VA		Water						
Batch	R3224573							
WG2127116-10 DUP		L1640435-2						
Nitrite (as N)		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	12-JUL-15
WG2127116-3 DUP		L1639845-16						
Nitrite (as N)		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	12-JUL-15
WG2127116-6 DUP		L1640073-1						
Nitrite (as N)		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	12-JUL-15
WG2127116-13 LCS								
Nitrite (as N)			98.7		%		90-110	12-JUL-15
WG2127116-2 LCS								
Nitrite (as N)			99.3		%		90-110	12-JUL-15
WG2127116-1 MB								
Nitrite (as N)			<0.0010		mg/L		0.001	12-JUL-15
WG2127116-11 MB								
Nitrite (as N)			<0.0010		mg/L		0.001	12-JUL-15
WG2127116-4 MB								
Nitrite (as N)			<0.0010		mg/L		0.001	12-JUL-15
WG2127116-7 MB								
Nitrite (as N)			<0.0010		mg/L		0.001	12-JUL-15
WG2127116-9 MB								
Nitrite (as N)			<0.0010		mg/L		0.001	12-JUL-15

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Contact: Karyn Lewis

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO2-L-IC-N-VA		Water						
Batch	R3224573							
WG2127116-12	MS	L1640435-1						
Nitrite (as N)			99.5		%		75-125	12-JUL-15
WG2127116-5	MS	L1639845-7						
Nitrite (as N)			98.9		%		75-125	12-JUL-15
WG2127116-8	MS	L1639845-17						
Nitrite (as N)			100.0		%		75-125	12-JUL-15
NO3-L-IC-N-VA		Water						
Batch	R3224573							
WG2127116-10	DUP	L1640435-2						
Nitrate (as N)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	12-JUL-15
WG2127116-3	DUP	L1639845-16						
Nitrate (as N)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	12-JUL-15
WG2127116-13	LCS							
Nitrate (as N)			99.1		%		90-110	12-JUL-15
WG2127116-2	LCS							
Nitrate (as N)			99.3		%		90-110	12-JUL-15
WG2127116-1	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	12-JUL-15
WG2127116-11	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	12-JUL-15
WG2127116-4	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	12-JUL-15
WG2127116-7	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	12-JUL-15
WG2127116-9	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	12-JUL-15
WG2127116-12	MS	L1640435-1						
Nitrate (as N)			100.8		%		75-125	12-JUL-15
WG2127116-5	MS	L1639845-7						
Nitrate (as N)			99.4		%		75-125	12-JUL-15
WG2127116-8	MS	L1639845-17						
Nitrate (as N)			100.3		%		75-125	12-JUL-15
P-T-PRES-COL-VA		Water						
Batch	R3224916							
WG2127251-2	CRM	VA-ERA-PO4						
Phosphorus (P)-Total			110.9		%		80-120	13-JUL-15
WG2127251-3	DUP	L1640778-3						
Phosphorus (P)-Total		0.0028	0.0021	J	mg/L	0.0007	0.004	13-JUL-15



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Contact: Karyn Lewis

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
P-T-PRES-COL-VA		Water						
Batch	R3224916							
WG2127251-7	DUP	L1640812-3						
Phosphorus (P)-Total		5.18	5.05		mg/L	2.4	20	13-JUL-15
WG2127251-1	MB							
Phosphorus (P)-Total			<0.0020		mg/L		0.002	13-JUL-15
WG2127251-5	MB							
Phosphorus (P)-Total			<0.0020		mg/L		0.002	13-JUL-15
WG2127251-4	MS	L1640778-4						
Phosphorus (P)-Total			83.7		%		70-130	13-JUL-15
PH-PCT-VA		Water						
Batch	R3224221							
WG2127087-25	CRM	VA-PH7-BUF						
pH			7.01		pH		6.9-7.1	12-JUL-15
WG2127087-26	CRM	VA-PH7-BUF						
pH			7.02		pH		6.9-7.1	12-JUL-15
WG2127087-27	CRM	VA-PH7-BUF						
pH			7.02		pH		6.9-7.1	12-JUL-15
WG2127087-28	CRM	VA-PH7-BUF						
pH			7.01		pH		6.9-7.1	12-JUL-15
WG2127087-29	CRM	VA-PH7-BUF						
pH			7.01		pH		6.9-7.1	12-JUL-15
WG2127087-30	CRM	VA-PH7-BUF						
pH			7.02		pH		6.9-7.1	12-JUL-15
WG2127087-31	CRM	VA-PH7-BUF						
pH			7.02		pH		6.9-7.1	12-JUL-15
WG2127087-32	CRM	VA-PH7-BUF						
pH			7.01		pH		6.9-7.1	12-JUL-15
WG2127087-33	DUP	L1640898-1						
pH		8.19	8.19	J	pH	0.00	0.3	12-JUL-15
WG2127087-34	DUP	L1638948-31						
pH		7.18	7.20	J	pH	0.02	0.3	12-JUL-15
WG2127087-35	DUP	L1639302-1						
pH		7.87	7.87	J	pH	0.00	0.3	12-JUL-15
WG2127087-36	DUP	L1640371-1						
pH		8.21	8.22	J	pH	0.01	0.3	12-JUL-15
WG2127087-37	DUP	L1640747-8						
pH		8.45	8.44	J	pH	0.01	0.3	12-JUL-15
WG2127087-38	DUP	L1640770-8						
pH		8.38	8.39	J	pH	0.01	0.3	12-JUL-15

Quality Control Report

Workorder: L1640708

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Client: LUPIN MINES INCORPORATED
76 Richmond Street East Suite 330
Toronto ON M5C 1P1

Contact: Karyn Lewis

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH-PCT-VA		Water						
Batch	R3224221							
WG2127087-39	DUP	L1640829-3						
pH		8.17	8.16	J	pH	0.01	0.3	12-JUL-15
PO4-DO-COL-VA		Water						
Batch	R3224868							
WG2127715-2	CRM	VA-OPO4-CONTROL						
Orthophosphate-Dissolved (as P)			94.9		%		80-120	13-JUL-15
WG2127715-3	DUP	L1640708-1						
Orthophosphate-Dissolved (as P)		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	13-JUL-15
WG2127715-1	MB				mg/L		0.001	13-JUL-15
Orthophosphate-Dissolved (as P)			<0.0010		mg/L			13-JUL-15
WG2127715-4	MS	L1640708-3						
Orthophosphate-Dissolved (as P)			92.8		%		70-130	13-JUL-15
SO4-IC-N-VA		Water						
Batch	R3224573							
WG2127116-10	DUP	L1640435-2						
Sulfate (SO4)		<0.30	<0.30	RPD-NA	mg/L	N/A	20	12-JUL-15
WG2127116-3	DUP	L1639845-16						
Sulfate (SO4)		<0.30	<0.30	RPD-NA	mg/L	N/A	20	12-JUL-15
WG2127116-6	DUP	L1640073-1						
Sulfate (SO4)		7.69	7.70		mg/L	0.1	20	12-JUL-15
WG2127116-13	LCS				%		90-110	12-JUL-15
Sulfate (SO4)			100.5		%			12-JUL-15
WG2127116-2	LCS				%		90-110	12-JUL-15
Sulfate (SO4)			100.2		%			12-JUL-15
WG2127116-1	MB				mg/L		0.3	12-JUL-15
Sulfate (SO4)			<0.30		mg/L			12-JUL-15
WG2127116-11	MB				mg/L		0.3	12-JUL-15
Sulfate (SO4)			<0.30		mg/L			12-JUL-15
WG2127116-4	MB				mg/L		0.3	12-JUL-15
Sulfate (SO4)			<0.30		mg/L			12-JUL-15
WG2127116-7	MB				mg/L		0.3	12-JUL-15
Sulfate (SO4)			<0.30		mg/L			12-JUL-15
WG2127116-9	MB				mg/L		0.3	12-JUL-15
Sulfate (SO4)			<0.30		mg/L			12-JUL-15
WG2127116-12	MS	L1640435-1						
Sulfate (SO4)			101.8		%		75-125	12-JUL-15
WG2127116-5	MS	L1639845-7						

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Client: LUPIN MINES INCORPORATED
76 Richmond Street East Suite 330
Toronto ON M5C 1P1

Contact: Karyn Lewis

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SO4-IC-N-VA		Water						
Batch	R3224573							
WG2127116-5 MS		L1639845-7						
Sulfate (SO4)			93.9		%		75-125	12-JUL-15
WG2127116-8 MS		L1639845-17						
Sulfate (SO4)			101.9		%		75-125	12-JUL-15
TDS-VA		Water						
Batch	R3225157							
WG2127522-4 DUP		L1640708-1						
Total Dissolved Solids		128	139		mg/L	8.3	20	13-JUL-15
WG2127522-2 LCS								
Total Dissolved Solids			101.6		%		85-115	13-JUL-15
WG2127522-1 MB								
Total Dissolved Solids			<10		mg/L		10	13-JUL-15
TKN-F-VA		Water						
Batch	R3227128							
WG2129490-3 DUP		L1642387-3						
Total Kjeldahl Nitrogen		N/A	0.165		mg/L	2.7	20	16-JUL-15
WG2129490-7 DUP		L1642428-3						
Total Kjeldahl Nitrogen		N/A	0.150		mg/L	3.6	20	16-JUL-15
WG2129490-2 LCS								
Total Kjeldahl Nitrogen			108.6		%		75-125	16-JUL-15
WG2129490-6 LCS								
Total Kjeldahl Nitrogen			104.9		%		75-125	16-JUL-15
WG2129490-1 MB								
Total Kjeldahl Nitrogen			0.057	B	mg/L		0.05	16-JUL-15
WG2129490-5 MB								
Total Kjeldahl Nitrogen			0.057	B	mg/L		0.05	16-JUL-15
WG2129490-4 MS		L1642409-1						
Total Kjeldahl Nitrogen			102.2		%		70-130	16-JUL-15
WG2129490-8 MS		L1642428-4						
Total Kjeldahl Nitrogen			98.4		%		70-130	16-JUL-15
TSS-VA		Water						
Batch	R3224903							
WG2127521-3 DUP		L1640708-1						
Total Suspended Solids		6.7	6.9		mg/L	3.9	20	13-JUL-15
WG2127521-2 LCS								
Total Suspended Solids			103.9		%		85-115	13-JUL-15
WG2127521-1 MB								



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Client: LUPIN MINES INCORPORATED
76 Richmond Street East Suite 330
Toronto ON M5C 1P1

Contact: Karyn Lewis

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TSS-VA	Water							
Batch	R3224903							
WG2127521-1 MB								
Total Suspended Solids			<3.0		mg/L		3	13-JUL-15

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Client: LUPIN MINES INCORPORATED
76 Richmond Street East Suite 330
Toronto ON M5C 1P1

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Contact: Karyn Lewis

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
B	Method Blank exceeds ALS DQO. All associated sample results are at least 5 times greater than blank levels and are considered reliable.
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L1640708

Report Date: 20-JUL-15

Client: LUPIN MINES INCORPORATED
76 Richmond Street East Suite 330
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Contact: Karyn Lewis

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
pH by Meter (Automated)	1	09-JUL-15 17:53	12-JUL-15 15:34	0.25	70	hours	EHTR-FM
	3	09-JUL-15 18:00	12-JUL-15 15:34	0.25	70	hours	EHTR-FM
Anions and Nutrients							
Diss. Orthophosphate in Water by Colour	1	09-JUL-15 17:53	13-JUL-15 14:30	3	4	days	EHT
	3	09-JUL-15 18:00	13-JUL-15 14:30	3	4	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 L1640708 were received on 10-JUL-15 14:30.

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.



Taiga Environmental Laboratory
4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9
Tel: (867)-765-6645 Fax: (867)-873-2652

Taiga Batch No.:
150509

- FINAL REPORT -

Prepared For: ALS Environmental

Address: 314 Old Airport Road
Unit 116
Yellowknife, NT
X1A 2R1

Attn: Rick Zolkiewski

Facsimile:

Final report has been reviewed and approved by:

Glen Hudy
Quality Assurance Officer

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) to ISO/IEC 17025 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: Sunday, July 19, 2015

Print Date: *Monday, July 20, 2015*

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Taiga Environmental Laboratory

4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9

Tel: (867)-765-6645 Fax: (867)-873-2652

Taiga Batch No.:
150509

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **L1640708-1 LUP-14-150709**

Taiga Sample ID: **001**

Client Project:

Sample Type: Water

Received Date: 10-Jul-15

Sampling Date: 09-Jul-15

Sampling Time:

Location:

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Inorganics - Nutrients</u>						
Biochemical Oxygen Demand	2	2	mg/L	10-Jul-15	SM5210:B	

ReportDate: Sunday, July 19, 2015

Print Date: **Monday, July 20, 2015**

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Taiga Environmental Laboratory
4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9
Tel: (867)-765-6645 Fax: (867)-873-2652

Taiga Batch No.:
150509

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **L1640708-2 DUP-14-150709**

Taiga Sample ID: **002**

Client Project:

Sample Type: Water

Received Date: 10-Jul-15

Sampling Date: 09-Jul-15

Sampling Time:

Location:

Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Inorganics - Nutrients</u>						
Biochemical Oxygen Demand	3	2	mg/L	10-Jul-15	SM5210:B	

ReportDate: Sunday, July 19, 2015

Print Date: **Monday, July 20, 2015**

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Taiga Environmental Laboratory
4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9
Tel: (867)-765-6645 Fax: (867)-873-2652

Taiga Batch No.:
150509

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **L1640708-2 DUP-14-150709**

Taiga Sample ID: **002**

*** 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

Comments **L1640708**

ReportDate: Sunday, July 19, 2015

Print Date: **Monday, July 20, 2015**

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L1640708-CQFC

Special Instructions / Regulation with water or land use (CCME- Freshwater Aquatic Life/BC CSR-Commercial/AB Tier 1-Natural/ETC) / Hazardous ...

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: <i>Uthman</i>	Date: <i>10-07-15</i>	Time: <i>1430-</i>	Received by: <i>LC</i>	Date: <i>July 10/15</i>	Time: <i>1430</i>	Temperature: <i>Max 13.9°C</i>	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF

GENERAL TERMS AND CONDITIONS:

These terms and conditions are incorporated in and form part of the Agreement between ALS Laboratory Group – Environmental Division ("ALS") and the party named in the Offer (the "Client").

1. Definitions. Capitalized Terms not defined in these Terms and Conditions have the definitions set out in the other Agreement documents.
2. The Services. ALS will provide the Services to the Client as described in the Offer and in any change of custody form provided with any sample.
3. Prices. ALS may review and change all prices, fees, surcharges or other charges set out in the Agreement if there are changes to ALS's cost beyond ALS's control, including changes in legislative requirements, Client variations of sample numbers and Client requests for changes to standard reporting requirements. Notwithstanding Condition 3, all quotations are reviewed and updated on a yearly basis.
4. Payment Terms. The Client shall pay ALS within 30 days of the invoice date OAC. ALS may, for reasonable business reasons, require the Client to arrange for payment in advance.
5. Quotation Numbers. The Client shall provide the quotation number to ALS (where applicable) to ensure correct pricing.
6. Taxes. Applicable taxes are not included in prices, surcharges and additional fees and will be added at the time of invoicing.
7. Quality Control. ALS has an extensive QA/QC program and all analytical data reported is analyzed using approved, referenced procedures followed by checks and reviews of senior managers and quality assurance personnel.
8. No Guarantee of Results. Results are obtained from chemical measurements. The Client is responsible for informing itself on the limitation of the results and acknowledges that the results are not guaranteed.
9. Standard of Care. ALS will use reasonable care and diligence as required by the laws of the province or territory where the sample is tested.
10. Storage. Where possible, ALS will store samples for 30 days from the date a final report is issued to the Client, after which ALS may discard the sample.
11. Holds. If the Client requests a sample be placed on hold, ALS will store the sample for 60 days for the quoted price, after which ALS will invoice the Client and discard the sample.
12. Archives. If the Client requests a sample be archived, ALS will store the sample for 6 months for the quoted price, after which ALS will invoice the Client and discard the sample.
13. Handling Protocol. Legal sample handling protocol must be arranged before samples are collected. ALS may charge a 20% surcharge on the list price plus the hourly technologist or chemist rates for legal sample protocol. Samples processed under legal protocol are stored indefinitely (storage charges may apply).
14. Samples. The quality, condition, content and source of samples stored and tested are not known to ALS except as declared and described on the chain of custody form completed and submitted by the Client and accompanying the sample.
15. Risk of Loss. ALS will use reasonable care to protect samples during storage, however all samples are stored at the Client's risk and the Client is responsible for obtaining appropriate insurance, if desired. The Client acknowledges that during the performance of the Services samples may be altered, lost, damaged or destroyed and the Client releases ALS from any claim the Client may have for any loss or damage to the sample.
16. Environmental. The Client must comply with all applicable environment legislation, including labeling all hazardous samples to comply with WHMIS and TDG regulations, and must provide appropriate material safety data sheets that include the nature of the hazard and a contact name and phone number to call for information. The Client will indemnify ALS for all loss or damages, including any fine or cost of complying with an order of any government authority, resulting from the Client's breach of this paragraph.
17. Hazardous Materials Disposal. ALS may return, at the Client's cost, hazardous material to the Client for disposal.
18. Hazardous Materials Surcharge. ALS may apply an additional surcharge for handling of hazardous samples or samples with Naturally Occurring Radioactive Materials (NORM), H2S, CN, etc.
19. Sample Containers. ALS may ship sample containers to the Client's location by the most cost effective means using ALS preferred courier suppliers, within the specified project timeline.
20. Additional Charges. ALS may charge the Client (a) its cost for emergency bottle shipments and shipments to and from a remote site, and (b) where pick up and delivery services are provided, subject in each instance to a minimum charge of \$25.00.
21. Large Bottle Orders. The Client shall provide ALS with 24 hours notice for large bottle orders.
22. Re-Tests. ALS reserves the right to re-test any samples that remains in its possession. Re-tests requested by the Client may be charged.
23. Waiver. The Client is responsible for making any assessment regarding the suitability of the Services and the intended results for the Client's purposes and waives any claims against ALS it may have as a result of the interpretation of the results. The Client shall indemnify ALS for all claims made by any third party against ALS in respect of all losses however arising from the performance of the Services or the use of any report provided in the performance of the Services.
24. Limitation of Liability. In no event shall ALS be liable for any consequential, indirect, incidental, special, exemplary or punitive damages, whether foreseeable or unforeseeable, (including claims for loss of profits or revenue or losses caused by stoppage of other work or impairment of other assets) incurred by the Client arising out of breach or failure of express or implied warranty, breach of contract, breach of warranty, misrepresentation, negligence, strict liability in tort or otherwise. In any event, the liability of ALS to the Client shall be limited to the cost of testing the sample as requested in the chain of custody form under which the sample was originally deposited. For the purposes of this paragraph and paragraphs 8, 15, 16, 23 and 25, as the applicable, "ALS" includes without limitations its directors, officers, employees and affiliates and the "Client" includes without limitation any third party that may have a claim against ALS through the Client.
25. Notice of Liability. Notwithstanding paragraph 24, ALS shall not be liable to the Client unless the Client provides notice in writing to ALS of such loss or damage, together with full particulars thereof, within 30 days of the Client's receipt of the report of the analysis of the sample giving rise to such liability. The provisions of this paragraph allocate the risk under the Agreement between the Client and ALS, and the fees to be paid by the Client to ALS reflect this allocation of risks and the limitations of liability in this Agreement.
26. Entire Agreement. The Agreement is the entire agreement between the parties and supercedes and takes precedence over any terms and conditions contained in any documentation provided by the Client. ALS's execution of any subsequent documentation from the Client only acknowledges receipt and not acceptance of any terms or conditions therein. If there is a conflict between these terms and conditions and any other Agreement document, these terms and conditions prevail.

GENF 19.00 Terms