REPORT N^{O} 151-08638-00_RPT-02_R2

RESOURCE ESTIMATION UPDATE AND TECHNICAL REPORT

PAK LITHIUM PROJECT
RED LAKE MINING DISTRICT, ONTARIO

MAY 2016

WSP

RESOURCE ESTIMATION UPDATE AND TECHNICAL REPORT

PAK LITHIUM PROJECT

Red Lake Mining District, Ontario

Houston Lake Mining Inc.

Project no: 151-08683-00_RPT-02_R2

Issue Date: May 10, 2016
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REVISION HISTORY

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2	May 10, 2016	Todd McCracken	Issued to Client

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ABBREVIATIONS

UNITS OF MEASURE

above mean sea level	amsl
acre	ac
ampere	A
annum (year)	a
billion	B
billion tonnes	Bt
billion years ago	Ga
British thermal unit	BTU
Centimetre	cm
cubic centimetre	cm^3
cubic feet per minute	cfm
cubic feet per second	ft^3/s
cubic foot	ft^3
cubic inch	in
cubic metre	m^3
cubic yard	yd^3
Coefficients of Variation	Cvs
day	d
days per week	d/wk
days per year (annum)	d/a
dead weight tonnes	DWT
decibel adjusted	Ba
decibel	dB
degree	°
degrees Celsius	°C
diameter	ø
dollar (American)	US$
dollar (Canadian)	CDN$
dry metric ton	dmt
foot	ft
gallon	gal
gallons per minute	gpm
Gigajoule	GJ
Gigapascal	GPA
Gigawatt	GW
Gram	g
grams per litre	g/L
grams per tonne	g/t
greater than	>
hectare (10,000 m^2)	ha
hertz	Hz
horsepower	hp
hour	h
hours per day	h/d
hours per week	h/wk
hours per year	h/a
inch	in
kilo (thousand)	k
kilogram	kg
kilograms per cubic metre	kg/m^3
kilograms per hour	kg/h
kilograms per square metre	kg/m^2
kilometre	km
kilometre	km
kilometres per hour	km/h
kilopascal	kPa
kiloton	kt
kilovolt	kV
kilovolt-ampere	kVa
kilowatt	kW
kilowatt hour	kWh
kilowatt hours per tonne	kWh/t
kilowatt hours per year	kWh/a
less than	<
litre	L
litres per minute	L/m
megabytes per second	Mb/s
megapascal	Mpa
megavolt-ampere	Mva
megawatt	MW
metre	m
metres above sea level	masl
metres Baltic sea level	mbsl
metres per minute	m/min
metres per second	m/s
microns	µm
milligram	mg
milligrams per litre	mg/L
millilitre	mL
millimetre	mm
million	M
million bank cubic metres	Mbm^3
million bank cubic metres per annum	Mbm^3/a
million tonnes	Mt
minute (plane angle)	'
minute (time)	min
month	mo
ounce	oz
pascal	Pa
centipoise	mPa·s
parts per million	ppm
parts per billion	ppb
percent	%
pound(s)	lb

pounds per square inch .... psi
revolutions per minute ....rpm
second (plane angle) .... "
second (time) .... s
short ton (2,000 lb) .... st
short tons per day .... st/d
short tons per year .... st/y
specific gravity ....SG
square centimetre .... cm^2
square foot .... ft^2
square inch .... in^2
square kilometre km2
square metre... m^2
three-dimensional..3D
tonne (1,000 kg) (metric ton)............................. t
tonnes per day .... t/d
tonnes per hour .... t/h
tonnes per year .... t/a
tonnes seconds per hour metre cubed .... ts/hm^3
volt.. V
week .... wk
weight/weight .... w/w
wet metric ton ....wmt

ACRONYMS

CIM ....Canadian Institute of Mining, Metallurgy and Petroleum
CIZ ....Central Intermediate Zone
DSO .... Direct Shipping Ore
DTM .... Digital Terrain Model
GPS ....Global Positioning Satellites
GSC ....Geological Survey of Canada
HLM ....Houston Lake Mining
ID^2 .... Inverse Distance Squared
ISO ....International Standards Organization
LCT ....Lithium Cesium Tantalum
LIZ ....Lower Intermediate Zone
LRC ....Lithium Rubidium Cesium
MMI .... Mobile Metal Ion
MNDM .... Ministry of Northern Development and Mines
NI .... National Instrument
NN .... Nearest Neighbour
NSR ....Net Smelter Royalty
OGS .... Ontario Geological Survey
P. Geo. .... Professional Geoscientist
PFS .... Pre-Feasibility Study
the Property .... PAK Rare Metals Property
QA / QC .... Quality Assurance / Quality Control
QP .... Qualified Person
REE .... Rare Earth Elements
SG .... Specific Gravity
SQUI .... Spodumene + Quartz Intergrowth
TDC .... Top Dead Centre
UIZ .... Upper Intermediate Zone
VLF .... Very Low Frequency
WSP .... WSP Canada Inc.

1 SUMMARY

The PAK Lithium Property (the Property) is located approximately 175 km north of Red Lake, in northwestern Ontario.

Houston Lake Mining Inc. (TSX.V: HLM) owns the 100% rights to the Property claims. HLM's land holdings in the area comprise 417 contiguous unsurveyed claim units for a total of 6,672 hectares. Two separate royalty agreements are in place for specific claim units and are subject to buyout clauses.

There has been no commercial production and little exploration prior to HLM's involvement on the Property.

WSP Canada Inc. (WSP) was commissioned by HLM in August 2015 to complete an update to the resource estimation on the Property based on additional diamond drilling and a bulk sample. WSP prepared this report in accordance with National Instrument 43-101 (NI 43-101) Standards of Disclosure for Mineral Projects.

1.1 GEOLOGY

The Property area is situated along the boundary between the Berens River and Sachigo Subprovinces (Card and Ciesielski, 1986 and Card, 1990) of the Archean Superior Province of the Canadian Shield.

The Property is underlain by the northwestern extension of the North Spirit Lake greenstone belt. The greenstone belt within the Property boundary is bounded to the north by biotitic tonalities and granites of the Whiteloon Lake Batholith (Sachigo Subprovince), and to the south by gneissic granodiorites and granites of the Bear Head Lake Batholith (Berens River Subprovince).

The three main lithological domains on the Property are: metasedimentary units composed of pelitic sediments, iron formation and conglomerate to the north; mafic metavolcanic and related metasedimentary rocks to the south; and the Pakeagama Lake peraluminous granite and mica pluton emplaced along the unconformable contact between metasedimentary and metavolcanics metasedimentary rocks.

The Pakeagama Lake granitic pegmatite is a highly evolved, zoned, complex-type, petalite-subtype Lithium Cesium Tantalum (LCT) pegmatite with highly anomalous values of lithium, cesium, tantalum, and rubidium.

The Pakeagama Lake pegmatite is the second largest complex-type petalite subtype pegmatite dyke in Ontario (Breaks et al, 1999).

Peter Vanstone, P. Geo., former chief geologist at the Tanco Mine, consolidated the pegmatite zones using commonly accepted pegmatite nomenclature and Tanco zone mineralogical criteria. The three main pegmatite zones identified in this work are (from northwest to southwest and perpendicular to the strike of the pegmatite) the Central Intermediate Zone (CIZ – tantalum, rubidium, and cesium enriched), Upper Intermediate Zone (UIZ - lithium and rubidium enriched), and the Lower Intermediate Zone (LIZ – lithium and rubidium enriched). There is also a Wall Zone and Border Zone but their extent is limited.

The Property deposit model is a highly evolved, granitic, rare-element lithium cesium- tantalum bearing (LCT), complex Type – Spodumene or Petalite Subtype pegmatite similar to the Tanco pegmatite in the Bird River belt in southeastern Manitoba, which is the best known and a world-class example of this type of deposit model.

1.2 CHANNEL SAMPLING AND DIAMOND DRILLING

A total of 29 channels totaling 218 metres were cut and samples collected between 2001 and 2015. A total of 24 NQ diamond drillholes totaling 4,693 metres were completed between 2013 and in 2015. A series of percussion holes were drilled for the bulk sample. Sample collection, sample preparation, and sample analysis were completed to industry standards.

A Quality Assurance / Quality Control (QA/QC) program was in place for the diamond drilling programs and the channel programs after 2011. The 2001 channel program did not include standards and relied on the Analytical Laboratory's internal QA/QC program.

1.3 RESOURCE ESTIMATION

The geological dataset generated by HLM, consisting of data derived from diamond drilling and surface channel sampling, has been deemed suitable to support geological interpretation and resource estimate.

The estimation of the three domains was completed using capped and composited sample data on a 2.5 m x 2.5 m x 2.5 m block. The estimation was completed using Inverse Distance Squared (ID^2) with Nearest Neighbour (NN) as a validation purposes.

The PAK mineral resource was developed on three domains at a Li_2O equivalent cut-off grade of 0.4% and contains a Measured and Indicated Resource of approximately 7.9 Mt with an average grade of 1.58% Li_2O, 104 ppm Ta_2O_5, 0.04% Cs_2O, and 0.31% Rb_2O. There is an additional Inferred Resource of approximately 0.3 Mt with an average grade of 1.20% Li_2O, 103 ppm Ta_2O_5, 0.06% Cs_2O, and 0.36% Rb_2O (Table 1.1). The effective date of the resource is March 4, 2016.

Table 1.1 PAK Lake Resource Summary

Cut-off	Resource Category	Commodity	Geologic Zone	Tonnes (t)	Li_2O (%)	Ta_2O_5 (ppm)	Cs_2O (%)	Rb_2O (%)	Contained Li_2O (t)	Contained Ta_2O_5 (t)	Li_2O EQ (%)
0.4% Li_2Oeq	Measured	Lithium	Upper Intermediate Zone (UIZ)	333,500	3.94	58	0.03	0.12	13,136	19	4.02
		Lithium	Lower Intermediate Zone (LIZ)	683,100	1.87	90	0.03	0.29	12,797	62	2.00
		Lithium	Total Lithium Zone	1,016,600	2.55	80	0.03	0.23	25,933	81	2.67
		Tantalum / Rubidium	Central Intermediate Zone (CIZ)	-	-	-	-	-	-	-	-
		Lithium / Tantalum / Rubidium	Bulk Pegmatite	1,016,600	2.55	80	0.03	0.23	25,933	81	2.67
0.4% Li_2Oeq	Indicated	Lithium	Upper Intermediate Zone (UIZ)	304,600	3.19	69	0.04	0.23	9,720	21	3.29
		Lithium	Lower Intermediate Zone (LIZ)	5,526,200	1.61	109	0.04	0.29	88,699	601	1.76
		Lithium	Total Lithium Zone	5,830,800	1.69	107	0.04	0.28	98,419	622	1.84
		Tantalum / Rubidium	Central Intermediate Zone (CIZ)	1,039,700	0.78	114	0.07	0.57	n/a	119	n/a
		Lithium / Tantalum / Rubidium	Bulk Pegmatite	6,870,500	1.43	108	0.04	0.33	98,419	740	1.59
0.4% Li_2Oeq	Measured +Indicated	Lithium	Upper Intermediate Zone (UIZ)	638,100	3.58	63	0.04	0.17	22,856	40	3.67
		Lithium	Lower Intermediate Zone (LIZ)	6,209,300	1.63	107	0.04	0.29	101,496	662	1.79
		Lithium	Total Lithium Zone	6,847,400	1.82	103	0.04	0.28	124,352	703	1.96
		Tantalum / Rubidium	Central Intermediate Zone (CIZ)	1,039,700	0.78	114	0.07	0.57	n/a	119	n/a
		Lithium / Tantalum / Rubidium	Bulk Pegmatite	7,887,100	1.58	104	0.04	0.31	124,352	821	1.73
0.4% Li_2Oeq	Inferred	Lithium	Upper Intermediate Zone (UIZ)	1,800	2.61	67	0.06	0.18	47	0	2.70
		Lithium	Lower Intermediate Zone (LIZ)	226,880	1.54	98	0.05	0.30	3,505	22	1.69
		Lithium	Total Lithium Zone	228,700	1.55	98	0.05	0.30	3,552	22	1.69
		Tantalum /Rubidium	Central Intermediate Zone (CIZ)	66,900	0.81	119	0.07	0.54	n/a	8	n/a
		Lithium / Tantalum / Rubidium	Bulk Pegmatite	295,600	1.20	103	0.06	0.36	3,552	30	1.35

1.4 RECOMMENDATIONS

It is WSP's opinion that HLM is ready to commence a Pre-Feasibility Study (PFS) to assess the viability of producing lithium, tantalum, and mica product concentrates. There is sufficient resource in the measured and indicated categories to warrant the study. Two separate programs are proposed. The successful completion of Phase 1 will have an impact on how Phase 2 is conducted.

1.4.1 PHASE 1

Phase 1 is to initiate a PFS to determine the economic viability of producing lithium, tantalum, and muscovite product concentrates. Phase 1 will involve additional work designed to expand and infill the current resource on the Property. This would include diamond drill testing below the current resource on the north-west extent with a target of additional tonnage that would be amenable to open pit mining methods. Other work in Phase 1 includes the continuation of baseline environmental work, the completion of metallurgical testing, and a geotechnical review of the core for support of the PFS based on producing lithium, tantalum, and muscovite mica product concentrates.

A budget of $850,000 is estimated to be required to complete the Phase 1 program, which would include the PFS, diamond drilling, and continued environmental monitoring.

1.4.2 PHASE 2

Phase 2 is designed to further delineate and test the resource based on results and recommendations from the PFS. Work should include step-out diamond drilling of the deposit and a larger advanced exploration bulk sample of the UIZ for industrial testing purposes of the UIZ as a direct shipping ore (DSO) for the ceramic-thermal glass and the frits and glaze industries.

The budget for Phase 2 is estimated to be $1,500,000, which includes portion of the advanced exploration sample plus additional diamond drilling, and ongoing metallurgical and environmental work.

2 INTRODUCTION

The Property is a lithium-tantalum-bearing pegmatite system located approximately 175 km north of Red Lake, in northwestern Ontario. The claims are currently owned 100% by HLM.

No exploration work had been conducted on the Property prior to HLM's acquisition of the Property in 1999. All previous work in the region was government-funded mapping projects.

To date, HLM has delineated three mineralized domains within the PAK pegmatite on the Property through the compilation of mapping, channel sampling, and diamond drill data.

The objectives of this report are to:

- Prepare a technical report on the PAK Property in accordance with NI 43-101 summarizing land tenures, exploration history, and drilling;
- Update the mineral resource;
- Provide recommendations and budget for additional work.

This report has been prepared in accordance with NI 43-101, Form 43-101F1 and Companion Policy 43-101CP.

All work is completed using the metric system and all values are in Canadian dollars unless otherwise stated.

All data reviewed for the report was provided by HLM in digital format, with access to paper reports and logs when requested. The work completed by HLM encompasses surface exploration, including mapping, sampling, trenching, and geological/structural modeling. HLM has completed four rounds of diamond drilling on the Property.

Historical work conducted in the region has been compiled by HLM and was available for review.

The author of this report and qualified person (QP), Mr. Todd McCracken, P.Geo. is a professional geologist with 24 years of experience in exploration and operations, including several years working in intrusive hosted deposits. Mr. McCracken visited the Property between October 1 and 2, 2013 and again between July 14 and 15, 2015. Mr. McCracken visited the core farm located at 2736 Belisle Drive in Val Caron, Ontario on June 7, 2014 and again on June 20, 2015 to review the core with Mr. Garth Drever, P. Geo., Vice President Exploration for HLM, and Mr. Peter Vanstone, P. Geo. and independent QP to HLM.

WSP considers the site visit current, per NI 43-101CP, Section 6.2, on the basis that the work completed on the Property has been reviewed by the QP and all practices and procedures documented were reviewed.

3 RELIANCE ON OTHER EXPERTS

WSP has reviewed and analyzed data and reports provided by HLM, together with publicly available data, drawing its own conclusions augmented by direct field examination.

This report includes technical information, which required subsequent calculations to derive subtotals, totals, and weighted averages. Such calculations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, the QP does not consider them to be material.

The QP who prepared this report relied on information provided by experts who are not QPs. The QP believes that it is reasonable to rely on these experts, based on the assumption that the experts have the necessary education, professional designations, and relevant experience on matters relevant to the technical report.

→ Todd McCracken, P.Geo., relied upon Trevor Walker, President of HLM for information pertaining to mineral claims as disclosed in Section 4.0. The information pertaining to mineral claims was confirmed by the Ontario Ministry of Northern Development and Mines CLAIMaps website (www.mndm.gov.on.ca).

4 PROPERTY DESCRIPTION AND LOCATION

4.1 LOCATION

The Property is located 175 km north of Red Lake, Ontario in the Red Lake Mining Division and is on Crown Land (Figure 4.1). The centre of the Project is located on National Topographic System map sheet reference is 53C/11 at approximately 52°36'N latitude and 93°23'W longitude near Pakeagama Lake.

4.1 MINERAL DISPOSITION

The Property is composed of 33 claims (436 contiguous un-surveyed claim units) for a total of 6,976 hectares (17,238 acres) as can be seen in Table 4.1 and on Figure 4.2. All mining claims are currently in good standing.

The Property is presently owned 100% by HLM. In late March of 1999, HLM entered into an option agreement to earn a 100% interest from John Gregory Brady. Upon complying with the terms of the agreement, HLM exercised their option and acquired a 100% interest in the claim.

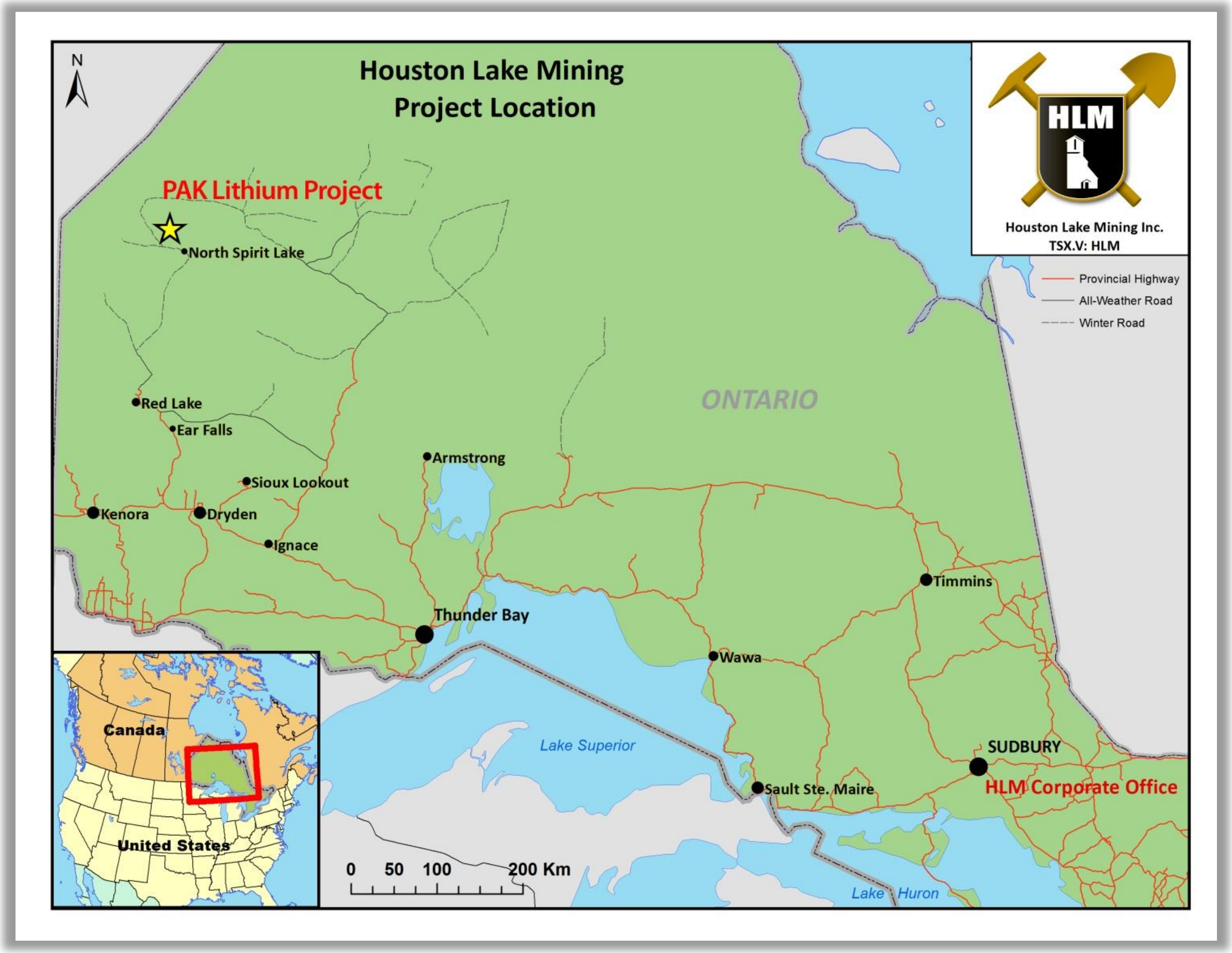
On December 8, 2010, HLM entered into a 6-year agreement with two private individuals, Michael Desmeules (50%) and Karin Smith (50%) to acquire 100% of three mining claims (each 16 unit claims) collectively called the Pakeagama South-East. In 2015, HLM completed the earn-in by issuing a total of 500,000 common shares and payment of $110,000.

Fourteen additional claims were staked in 2014 to the northwest and southeast, and in 2015 two more claims were staked to the west to make up the current land tenure.

4.2 TENURE RIGHTS

Surface rights to Property currently remain with the Crown. The Ontario Mining Act (2010) grants access to a mineral claim without having the surface rights.

Figure 4.1 Location Map



4.3 ROYALTIES AND RELATED INFORMATION

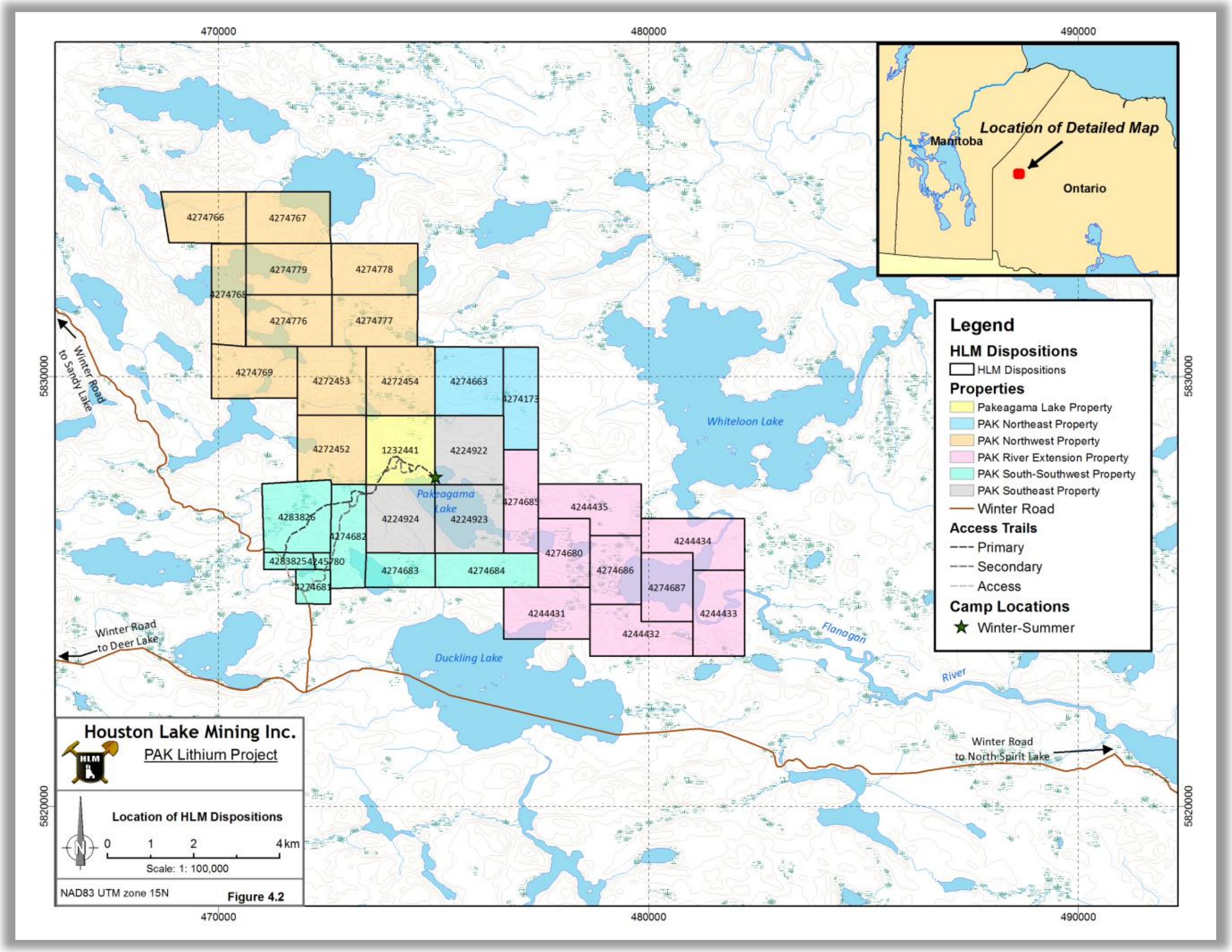
The terms of the royalty require payment of a 2.5% NSR for the original claim 1232441. HLM has a provision to reduce the royalty to 1.5% at a cost of $1,000,000. A similar royalty agreement is in place for claims 4224922, 4224923, and 4224924 with a 2.5% NSR and the ability to reduce the royalty to 1.0% for $1,500,000.

Table 4.1 Summary of Mineral Disposition

Property Name	Mining Claim (KRL)	Units	Date Recorded	Next Due Date	Recorded Owner	Area (Ha)
Pakeagama Lake	1232441	16	1998/07/30	2018/07/30	HLM (100%)	256
	sub-total	16				256
PAK Southeast	4224922	16	2009/08/12	2016/08/12	HLM (100%)	256
	4224923	16	2009/08/12	2016/08/12	HLM (100%)	256
	4224924	16	2009/08/12	2016/08/12	HLM (100%)	256
	sub-total	48				768
PAK Northeast	4274173	12	2013/03/19	2017/03/19	HLM (100%)	192
	4274663	16	2013/03/19	2017/03/19	HLM (100%)	256
	sub-total	28				448
PAK Northwest	4272452	16	2012/09/25	2016/09/25	HLM (100%)	256
	4272453	16	2012/09/25	2016/09/25	HLM (100%)	256
	4272454	16	2012/09/25	2016/09/25	HLM (100%)	256
	4274766	15	2014/07/10	2016/07/10	HLM (100%)	240
	4274767	15	2014/07/10	2016/07/10	HLM (100%)	240
	4274768	12	2014/07/10	2016/07/10	HLM (100%)	192
	4274769	15	2014/07/10	2016/07/10	HLM (100%)	240
	4274776	15	2014/07/10	2016/07/10	HLM (100%)	240
	4274777	15	2014/07/10	2016/07/10	HLM (100%)	240
	4274778	15	2014/07/10	2016/07/10	HLM (100%)	240
	4274779	15	2014/07/10	2016/07/10	HLM (100%)	240
	sub-total	165				2,640
PAK River Extension	4244431	15	2014/03/11	2017/03/11	HLM (100%)	240
	4244432	15	2014/03/11	2017/03/11	HLM (100%)	240
	4244433	15	2014/03/11	2017/03/11	HLM (100%)	240
	4244434	15	2014/03/11	2017/03/11	HLM (100%)	240
	4244435	15	2014/03/11	2017/03/11	HLM (100%)	240
	4274680	12	2013/03/19	2017/03/19	HLM (100%)	192
	4274685	12	2013/02/21	2017/02/21	HLM (100%)	192
	4274686	12	2013/03/19	20176/03/19	HLM (100%)	192
	4274687	12	2013/03/19	2017/03/19	HLM (100%)	192
	sub-total	123				1,968

Property Name	Mining Claim (KRL)	Units	Date Recorded	Next Due Date	Recorded Owner	Area (Ha)
PAK South-Southwest	4245780	1	2014/03/11	2017/03/11	HLM (100%)	16
	4274681	4	2013/02/21	2017/02/21	HLM (100%)	64
	4274682	12	2013/02/21	2017/02/21	HLM (100%)	192
	4274683	8	2013/02/21	2017/02/21	HLM (100%)	128
	4274684	12	2013/02/21	2017/02/21	HLM (100%)	192
	4283825	16	2015/06/10	2017/06/10	HLM (100%)	256
	4283826	3	2015/06/10	2017/06/10	HLM (100%)	48
	sub-total	56				896
Grand Total		**436**				**6,976**

Figure 4.2 Claim Map



4.4 ENVIRONMENTAL LIABILITIES

No industrial activities such as mineral processing have been conducted on the Property.

Disturbance on the Property has been limited to drill trails, drill pad set ups and a bulk sample.

WSP did not observe or is not aware of any environmental liabilities on the Property.

4.5 PERMITS

All permits required to conduct exploration on the Property are current.

4.6 OTHER RELEVANT FACTORS

The PAK Lithium Project is not currently subject to any formal First Nation agreements. The development of the Project will incorporate hiring practices for the employment of North Spirit Lake and Deer Lake people and services.

The Pakeagama Lake pegmatite is currently delineated on the Pakeagama Lake Property which lies directly within the trapline area designated as RL 122. The trapping area is currently held by a resident of Deer Lake. The PAK River Extension Property to the southeast is within the trapline designated as RL 121, which is currently held by a resident of North Spirit Lake.

In 2013 Phase II of the Ontario Mining Act modernization was implemented whereby Aboriginal notification and consultation is mandated prior to exploration plans and permits for mineral exploration is granted by the government.

HLM submitted for an exploration permit for the Project by which the Ministry of Northern Development and Mines (MNDM) have identified the Aboriginal communities of Deer Lake First Nation and North Spirit Lake First Nation to be notified about HLM's planned activities. A copy of the exploration permit proposal was sent to the above-noted Aboriginal communities on December 2, 2013, advising them that their comments, with respect to potential adverse effects of the proposed activities on their Aboriginal and treaty rights be provided.

During the 2014 drilling program, representatives from the North Spirit Lake band council visited the Property, updated on the progress to date and were provided with a tour of the pegmatite area and the operating diamond drill.

On July 14, 2015, representatives from North Spirit Lake visited the Property and were provided a tour of the drill camp and outcrop area including the site where the bulk sample was extracted.

In December 2015, both Deer Lake and North Spirit Lake Councils were provided with a draft proposal for an exploration agreement with HLM.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

5.1 ACCESS

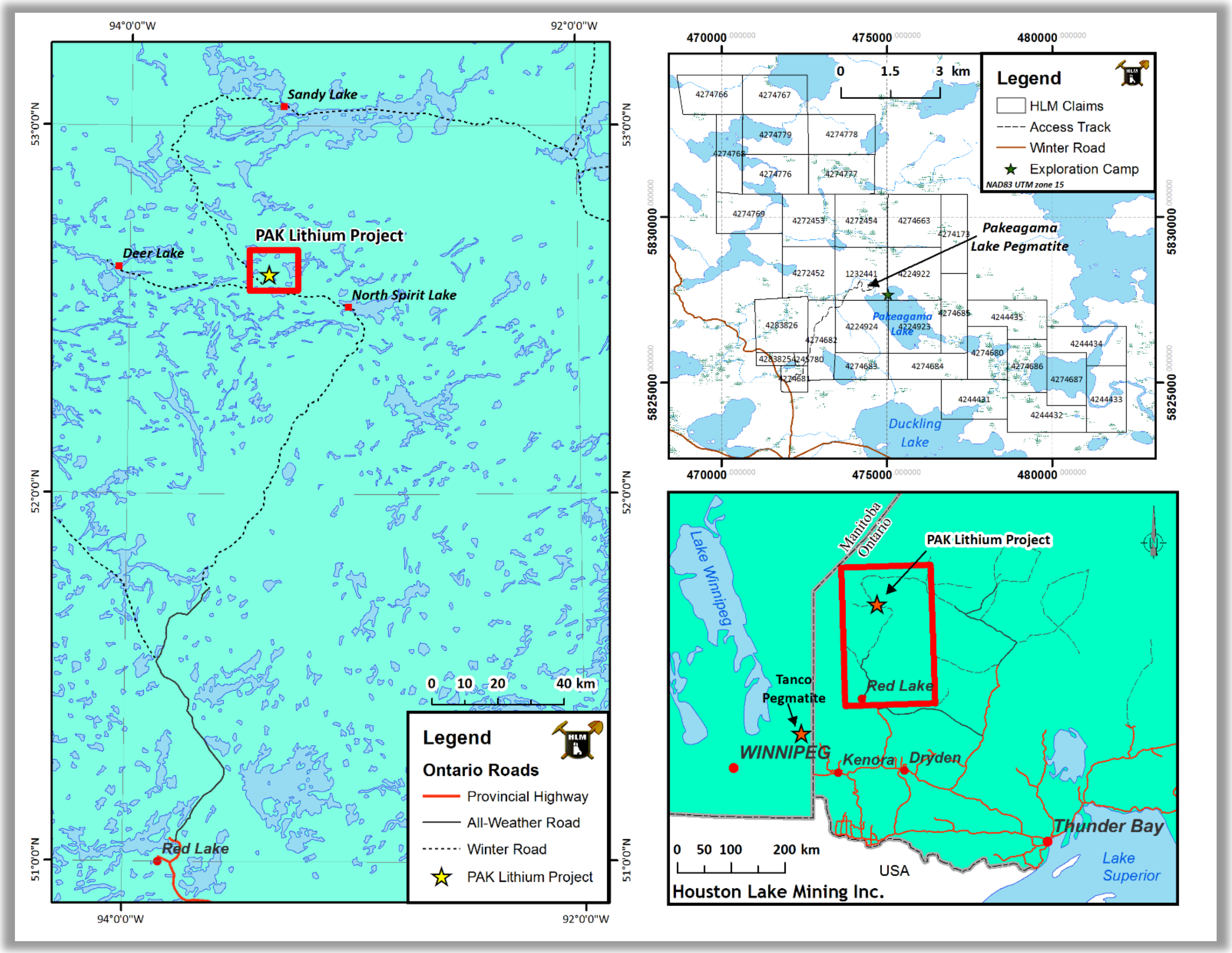
Access to the Property is available year-round by chartered ski or float equipped aircraft from Red Lake, Ontario (175 km) to the south of Pakeagama Lake.

The project is located in a relatively isolated area of northwestern Ontario where infrastructure is absent except for a winter road, which services the communities of Deer Lake, Sandy Lake, and North Spirit Lake. The winter road is located adjacent to the west side of the claim group (Figure 5.1) and vehicle access can be gained to the Property from this winter road in February and March.

Bearskin Airlines and Wasaya Air service the nearby communities of Deer Lake, North Spirit Lake, and Sandy Lake with daily flights year-round.

Access to the Property is available year-round if required.

Figure 5.1 Property Access



5.2 CLIMATE

Four climate data stations operated by Environment Canada are located at Island Lake in Manitoba, and Red Lake, Pickle Lake and Big Trout Lake in Ontario. The average mean annual temperature is -0.9°C. The average daily temperature in summer is from 8.9°C to 19.2°C while in winter the average range is from - 20.3°C to -11.6°C. Average yearly precipitation for the area is 655 mm (www.climate.weather.gc.ca).

5.3 INFRASTRUCTURE

Water sufficient for mining operations is present within the Property. Surface rights sufficient for a mining operation can be readily obtained, and the necessary area for mining and processing infrastructure exists.

Currently no electric power is available on the Property, nor does a power line come within close proximity of the Property.

There is no immediate skilled labour force close to the Property. The location of the Property within northwestern Ontario and proximity to the Red Lake mining camp and Manitoba ensures that skilled mining personnel can be found.

5.4 SITE TOPOGRAPHY, ELEVATION, AND VEGETATION

The Property is located in an area of variable topographic relief, with a series of ridges with the extensive development of cliff faces parallel the general regional strike of the geology surrounded by low lying areas covered by swamps, lakes, and rivers. The mean elevation on the Property is approximately 320 masl.

The Property lies at the northern boundary of the Lac Seul Upland eco-region and the southern boundary of the Hayes River Upland eco-region of the Boreal Shield. The region is classified as having a sub-humid mid-boreal eco-climate (Ecological Stratification Working Group, 1998).

The dominant vegetation is coniferous forest. Higher elevations are covered by stands of jack pine up to 6 m high while swampy areas are dominated by black spruce. Upland areas are covered with discontinuous deposits of acidic sandy tills while thin lacustrine clay deposits tend to cap the tills in low-lying areas. The resulting deadfall from a 1995 forest fire inhibits easy foot travel. Another forest fire burned a portion of the Pakeagama Lake project area in 2008, including the area around the pegmatite.

6 HISTORY

A. P. Low of the Geological Survey of Canada (GSC) completed the first geological reconnaissance mapping of the region in 1886. Additional geological surveys were carried out by G. V. Douglas (1925) and M. E. Hurst (1928) of the Ontario Department of Mines.

Most of the exploration activity in the region has been centred on the Favourable and Setting Net Lakes area located 25 to 40 km to the northwest of the Property. While prospecting, K. C. Murray identified gold in the Favourable Lake area in 1927. The gold property was developed as the Berens River Mine and produced 4,451 kg Au, 160,926 kg Ag, 2,770 t Pb, and 815,147 kg Zn from 508,665 tons of ore between 1939 and 1948 (Stone, 1998). Subsequent exploration by Golsil Mines Limited, Zahavy Mines Limited, Getty Mines Limited, and Noramco Mines Ltd. was carried out until the early 1990s.

Geological mapping of portions of the region was carried out by Ayres (1970, 1972a). He noted spodumene in a pegmatite dyke and holmquistite within granitic rocks near Setting Net Lake (25 km WNW of Pakeagama Lake). A grab sample from the pegmatite dyke contained 0.52% Li (Ayres, 1972b).

An airborne reconnaissance gamma-ray spectrometer survey was flown over the Pakeagama Lake area in 1977 as part of a regional coverage program by the Ontario Geological Survey (OGS) and the GSC in 1979. The survey was flown at a 120 m terrain clearance with 5 km line spacing and a 2.2 km station interval. No significant radiometric anomalies were detected in the immediate vicinity of Pakeagama Lake.

6.1 ONTARIO GEOLOGICAL SURVEY PROGRAMS

Geological mapping of the region was completed by D. Stone of the OGS in 1990 (Stone et al., 1993; Stone, 1998). Tourmaline-rich samples from the vicinity of Pakeagama Lake returned anomalous levels of Li, Cs, Ta, and Be during this work. Five rare metal mineral occurrences were detected over a 35 km trend along the Bear Head Lake Fault Zone, however, the Pakeagama Lake pegmatite occurrence became the main focus of detailed work.

In 1998 and 1999, Dr. F. Breaks and Dr. A. Tindle of the OGS, studied the Pakeagama pegmatite. Approximately 2,186 analyses had been conducted to establish that the Pakeagama rare metals pegmatite is potentially a world-class pegmatite suggesting the presence of a Tanco type mineralizing system. At the time, the Pakeagama pegmatite was thought to vary in width from 30 to 125 m with a strike length of at least 260 m (open in both directions) that may extend another 300 m to an aplite dyke showing on the shores of Pakeagama Lake. “The detailed documentation of a variety of tantalum-rich minerals coupled with the presence of pollucite (main cesium ore mineral) renders the Pakeagama Lake pegmatite and adjoining area one of the best exploration targets for tantalum and cesium in Northwestern Ontario” (Breaks, 1999).

6.2 HISTORIC EXPLORATION

There has been little exploration by publicly traded or private companies prior to HLM’s involvement.

Table 6.1 summarizes the work that has been completed on the Property. The information has been gathered from various assessment reports.

Table 6.1 Property Summary

Year	Company	Activity	Highlights
1886	GCS	First recorded Work	First Reconnaissance work.
1926	ODM	Reconnaissance Survey	Reconnaissance scale mapping.
1929	ODM	Geological Mapping	Reconnaissance scale mapping; gold identified in Favourable Lake area.
1937	ODM	Geological Mapping	Gold property developed as Berens River Mine.
1970-1972	ODM	Geological Mapping	Identified spodumene near Net-Setting Lake.
1977	OGS-GSC	Airborne Radiometrics	Regional survey; 5 km line spacing at 2.2 km stations. No significant anomalies identified in the Pakeagama Lake area.
1977-1988	OGS	Geological Mapping	Systematic mapping of the region.
1990-1993	OGS	Geological Mapping	Identified anomalous Li, Cs, Ta, and Be in tourmaline-rich samples at Pakeagama Lake and discovered 5 rare metal occurrences over 35 km along the Bear Head Fault Zone.
1998-1999	OGS	Geological Mapping - Channel Sampling	Completed detailed mapping and geochemistry (grab and channel samples) to establish Pakeagama Lake Pegmatite as world-class with Tanco-type mineralization. Significant mineralized zones were identified (285 ppm Ta_2O_5, 0.59% Rb_2O, 967 ppm Cs_2O, and 1.15% Li_2O over 11.0 m).
1999	HLM	Geological Mapping and Sampling	Confirmed work completed by the OGS.
2001	HLM	Ground Geophysics	26-km magnetic and VLF survey; the survey was unsuccessful in delineating the pegmatite zone, however, defined the contacts between metasedimentary and granitic rock that contains the pegmatites in overburden covered areas.
2001	EFR	Geological Mapping and Sampling	Mapped and sampled the area immediately to the northwest of the pegmatite. No anomalies noted.
2001	HLM	Geological Sampling (Channel Sampling)	Identified and confirmed high-grade lithium in the "Core Zone" of 4.5% Li_2O over 13.9 m.
2008	HLM	Line Cutting - Soil Sampling	Re-established the grid for mapping the pegmatite and surrounding area. An Enzyme Leach survey was completed showing an apparent continuity of the anomalous zones away from the pegmatite to the southeast and east. This is most apparent with Cs, V, Ta, Li, Ga, and Nb.
2010	HLM	Acquisition of Claims by option agreement	Three claims secured the land holdings immediately to the south and east of the pegmatite covering most of Pakeagama Lake.

Year	Company	Activity	Highlights
2011	HLM	MMI soil sample survey	The regional survey was somewhat successful in delineating elevated cesium, lithium, and rubidium MMI concentrations both to the northwest and southeast directions coincident with the assumed orientation of the Pakeagama Lake pegmatite.
2012	HLM	Channel Sampling; Staking	Historical and 2 new channels were sampled across portions of the pegmatite verifying historical grades by using certified standards. Increased land tenure to the southeast along the pluton.
2013	HLM	Phase I Diamond Drilling; Staking	Completed the first diamond drilling on the Property totaling 955 m in 6 holes. Intersected 154 m wide pegmatite zone grading 1.22% Li_20, 111 ppm Ta_2O_5, and 0.41% Rb_2O and a high-grade Lithium zone of 18 m grading 4.22% Li_2O. Continued staking along the pluton.
2013	HLM	Spodumene Study	Completed an electron microprobe study confirming low-inherent iron content of the spodumene at the Pakeagama Lake Pegmatite.
2014	HLM	Phase II Diamond Drilling; Staking	Completed 1,489 m in 9 holes which confirmed continuity of the high-grade UIZ and extended the strike length and depth extent of the mineralized pegmatite zones. Continued staking to the southeast.
2014	HLM	Channel Sampling; Staking	Completed the twinning of outstanding historical channels and cut two new channels confirming the grades and width of the UIZ at surface. Staked to the northwest.
2015	HLM	Phase III Diamond Drilling	Completed 1,641m in 8 holes which confirmed continuity of the grades and extended the strike length and depth extent of the mineralized pegmatite zones.
2015	HLM	Bulk Sample of UIZ	In late February and early March a drill-blast program of 67 holes was completed with an approximately 300-tonne sample extracted and hauled to Red Lake for crushing and transported to SGS in Lakefield, ON for final processing as a direct shipping ore product (DSO) for an industrial test in Europe.
2015	HLM	Initiated Baseline Sampling, Staking	Established water sampling and monitoring stations within the PAK project area to be sampled three times annually (Spring freshet, late Summer, and Winter). Also initiated flora and fauna study including species lists. Staked two additional claims along the access trail to the winter road.
2015	HLM	Phase IV Diamond Drilling	Completed 608 m in 2 holes which tested the eastern extension of the pegmatite. As predicted, the pegmatite body is continuous and plunging to the east at roughly 45 degrees.
2015	HLM	Channel Sampling	Stripped overburden and extended surface exposures of the high-grade UIZ to the WNW and completed 70 m of new channel cuts in 8 separate channels.

EFR - Emerald Fields Resources
GSC - Geological Survey of Canada
HLM - Houston Lake Mining
ODM - Ontario Department of Mines
OGS - Ontario Geological Survey

7 GEOLOGICAL SETTING AND MINERALIZATION

7.1 REGIONAL GEOLOGY

The Project area is situated along the boundary between the Berens River and Sachigo Subprovinces (Card and Ciesielski, 1986 and Card, 1990) of the Archean Superior Province of the Canadian Shield (Figure 7.1). These subprovinces comprise a series of relatively isolated volcano-sedimentary (greenstone) belts surrounded by extensive granitic and gneissic suites of rock. The subprovinces are separated by the Bear Head Lake Fault Zone (Figure 7.2).

Figure 7.1 Archean Sub Provinces

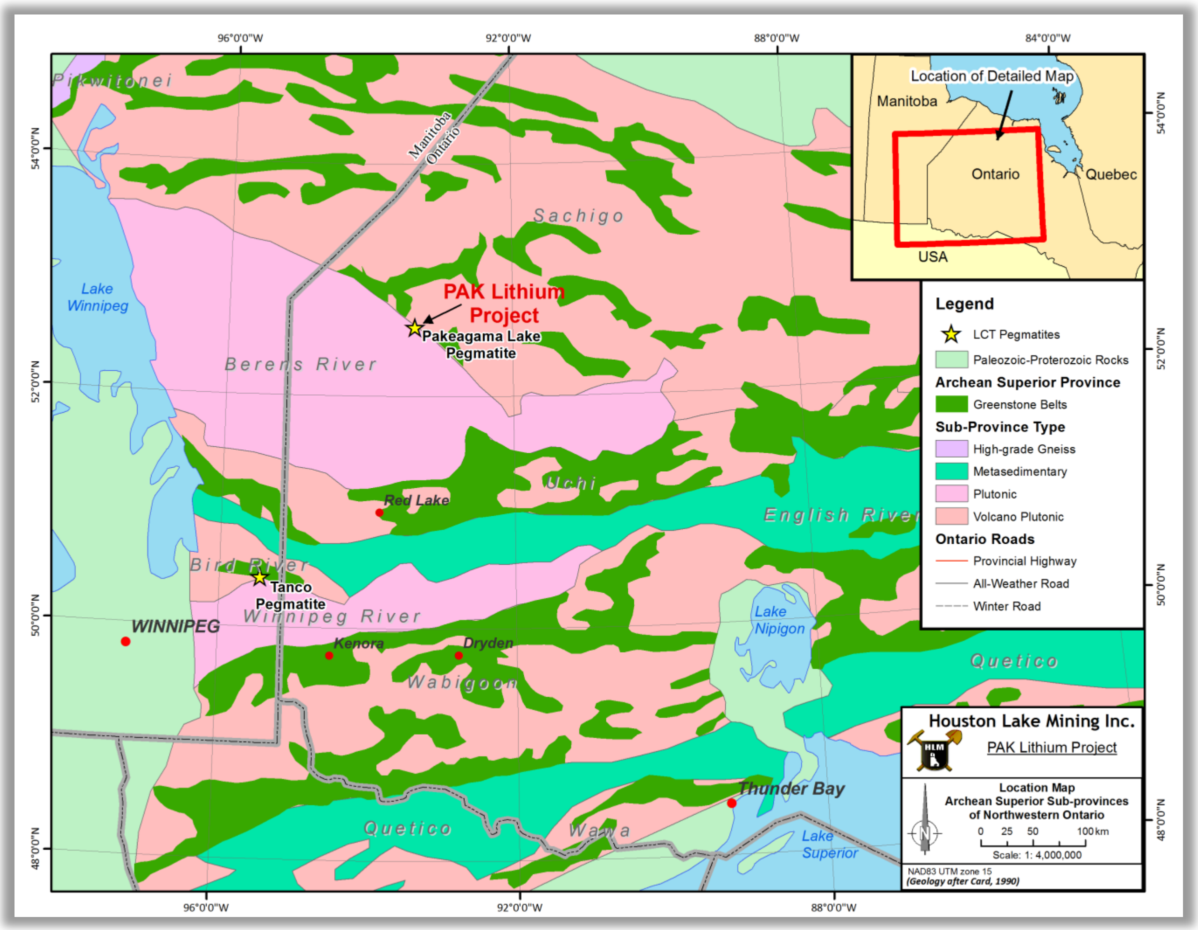
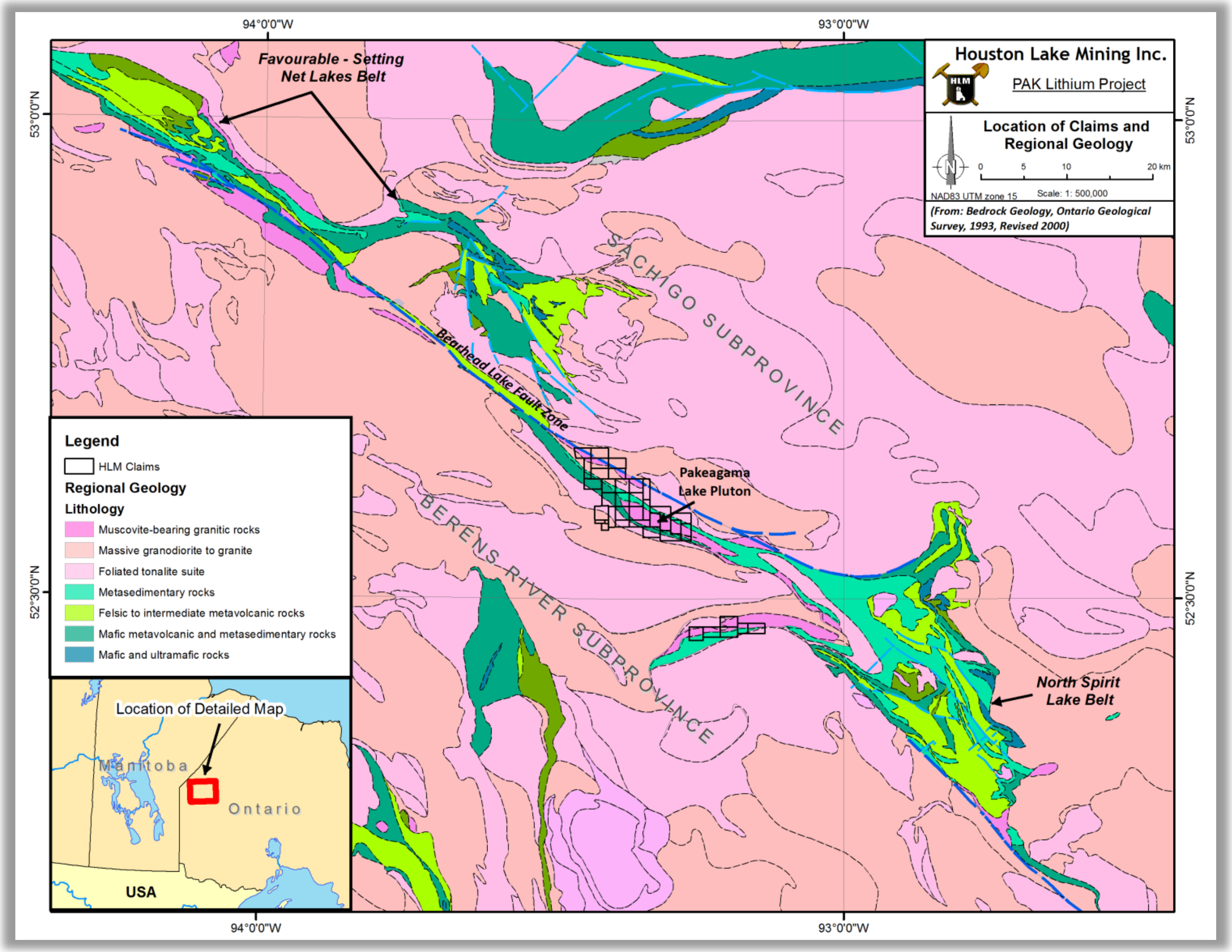


Figure 7.2 Regional Geology



Two of the greenstone belts that are located along the Bear Head Lake Fault Zone are the Favourable-Setting Net Lakes and the North Spirit Lake greenstone belts located to the northwest and southeast of the Property, respectively. The belts are connected through the Pakeagama Lake area by the Bear Head Lake Fault system. The main assemblages of volcanic and sedimentary rocks that are identified in each belt are, in part, correlated between the two belts (Stone et al, 1993). The assemblages of the Favourable Lake and North Spirit Lake greenstone belts have been metamorphosed under greenschist facies conditions, however an increase to amphibolite facies occurs in proximity to the Bear Head Lake Fault Zone. Amphibolite facies is the predominant metamorphic grade in the Project area outside of the greenstone belts.

The Bear Head Lake Fault is the dominant structural feature in the region and has been traced for over 140 km from NW-SE. The fault is composed of a several hundred metres thick zone of mylonite. The presence of cataclastites, tension gashes infilled by vuggy quartz-epidote-adularia, and potassic alteration indicate that brittle deformation has been superimposed on the mylonites. A dextral transcurrent dislocation of the Bear Head Lake Fault has been interpreted from microstructures (Germundson, 2008). The regional gneissosity trends NW-SE and generally are steeply dipping inward towards the core of the volcano-sedimentary assemblage in the vicinity of Pakeagama Lake. The Bear Head Lake Fault Zone appears to be the locus for a peraluminous suite of granitic plutons. Five major plutons consisting of two-mica granites (fertile granites) are documented over the 140 km strike length of the fault. Fertile granites are interpreted to be the parental rocks that give rise to rare metal pegmatites.

7.2 PROJECT GEOLOGY

The Property is underlain by the northwestern extension of the North Spirit Lake greenstone belt. The greenstone rocks are approximately 2 km wide in the vicinity of the Property (Figure 7.3).

The greenstone belt within the Property boundary is bounded to the north by biotitic tonalities and granites of the Whiteloon Lake Batholith (Sachigo Subprovince) and to the south by gneissic granodiorites and granites of the Bear Head Lake Batholith (Berens River Subprovince of the Superior Province).

There are three main lithological domains. To the northeast, rocks with metasedimentary origins are composed of pelitic sediments, iron formation and conglomerate. The southwest region is comprised dominantly of mafic metavolcanic and related metasedimentary rocks. The elongate, 2.5 by 15 km, Pakeagama Lake peraluminous granite and mica pluton trending northwest-southeast was emplaced along the unconformable contact between metasedimentary and metavolcanic-metasedimentary rocks.

The Pakeagama Lake granitic pegmatite is a highly evolved, zoned, complex-type, petalite-subtype LCT pegmatite with highly anomalous values of lithium, cesium, tantalum and rubidium (Breaks et al., 1999). The pegmatite body outcrops near the northwestern margins of the Pakeagama Lake pluton (Figure 7.3). On surface, a metasedimentary sequence with banded iron formation forms an apparent northern boundary to the pegmatite. Muscovite and tourmaline-bearing pegmatites and aplites occur up to 1 km from the main pegmatite mass (Breaks et al, 1999). The Pakeagama Lake pegmatite is the second largest complex-type petalite subtype pegmatite in Ontario (Breaks et al, 1999).

The relatively fresh-appearing pegmatite has irregular, steeply dipping contacts with the weakly foliated garnet-muscovite-biotite granite host rock. A 130°strike is inferred from the coincidence of the exposed 260 m strike length, the weak foliation in the host granite and the general trend of the Bear Head Lake Fault. The pegmatite is open along strike in both directions.

The exposed outcrop area was mapped initially by Dr. F. Breaks in 1999 and at least 5 separate zoned phases were identified (Breaks et al 1999). More recently P. Vanstone, former chief geologist at Tanco, was contracted by HLM and consolidated the pegmatite zones using commonly accepted pegmatite nomenclature and Tanco zone mineralogical criteria. (Figure 7.4). The three main pegmatite zones identified in this work are (from northwest to southwest and perpendicular to the strike of the pegmatite) the Central Intermediate Zone (CIZ – tantalum, rubidium, and cesium enriched), Upper Intermediate Zone (UIZ - lithium and rubidium enriched), and the Lower Intermediate Zone (LIZ – lithium and rubidium enriched). A lower and upper wall zone has also been described but not included as a separate mapped unit.

Figure 7.3 Property Geology

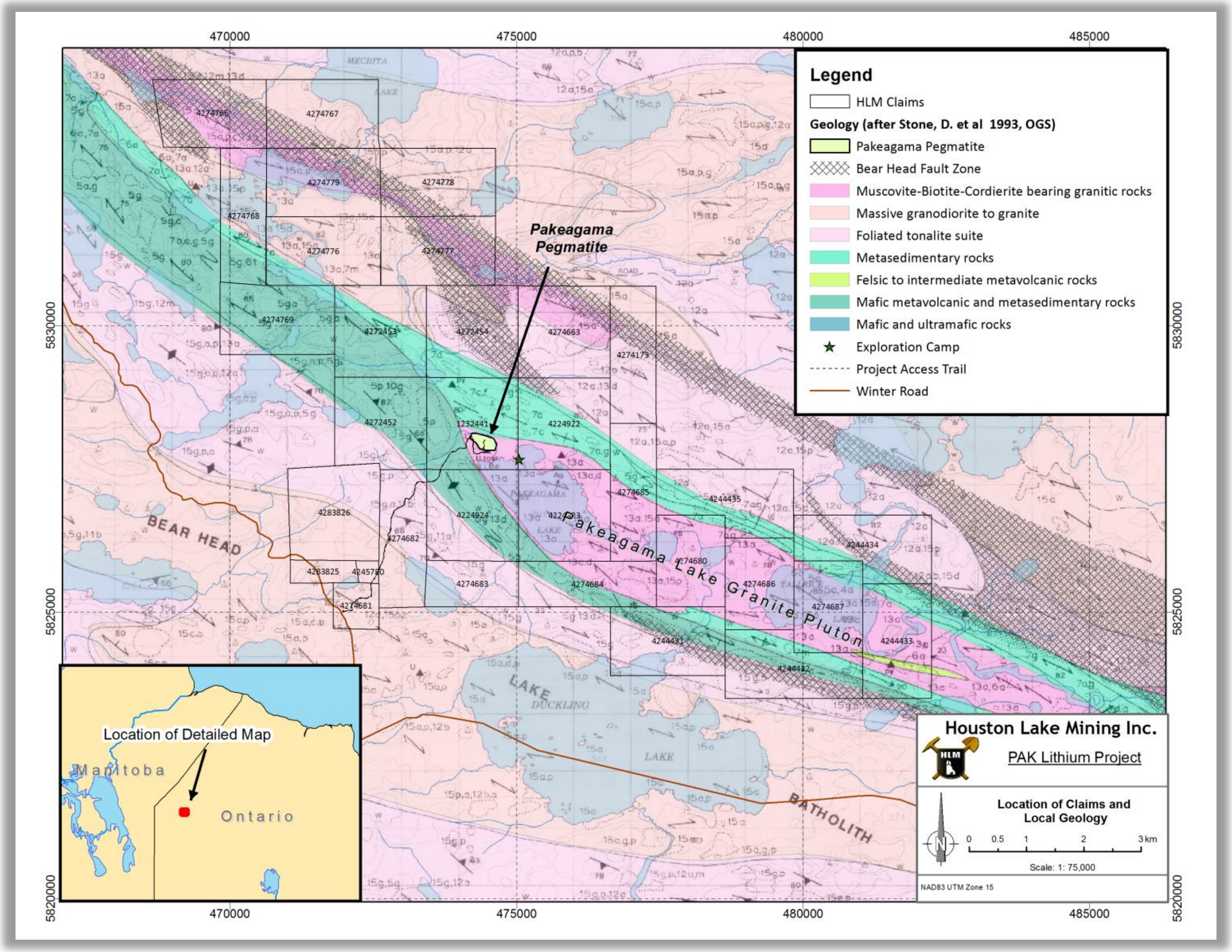
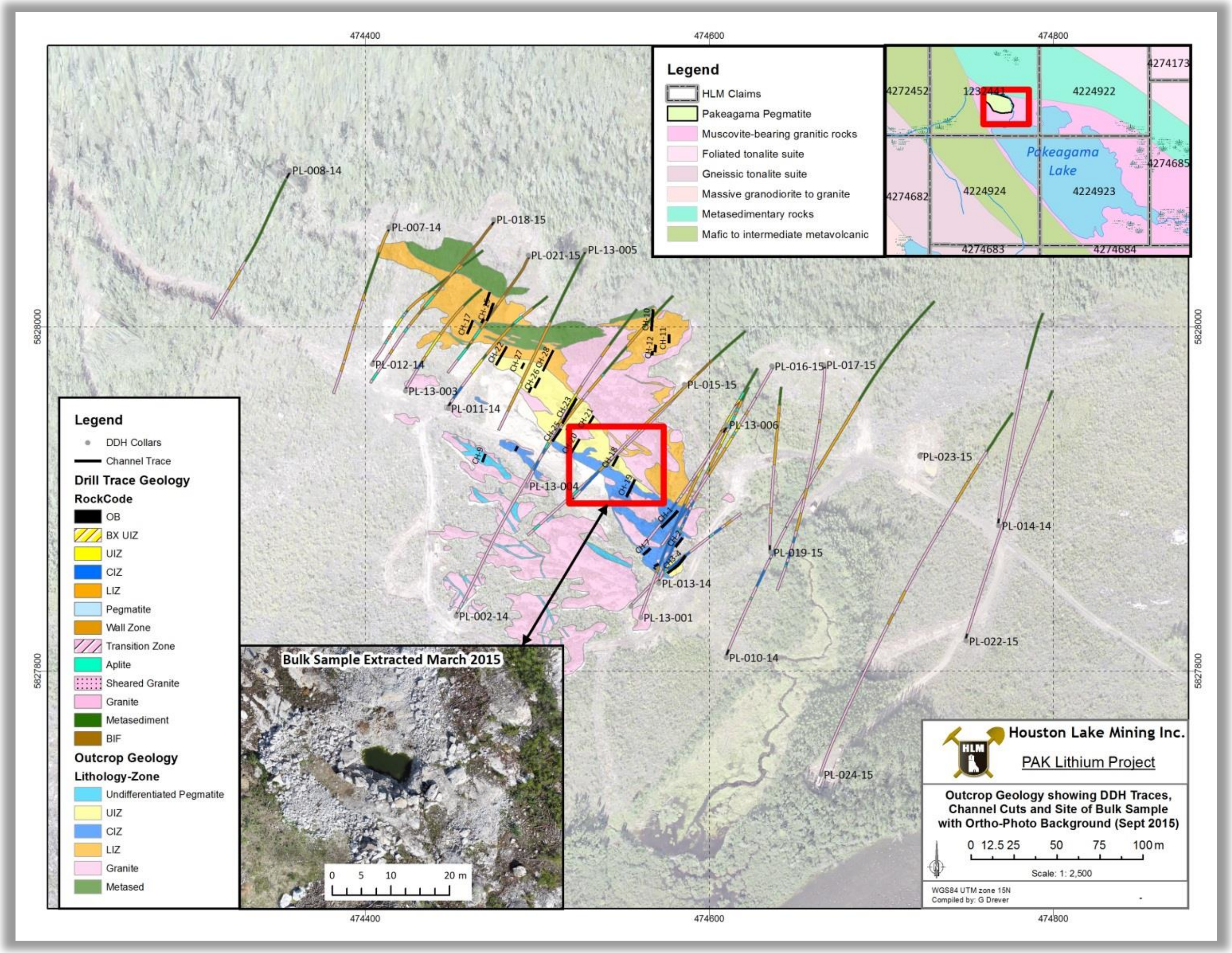


Figure 7.4 Detailed Property Geology



7.3 MINERALIZATION

7.3.1 UPPER INTERMEDIATE ZONE (UIZ)

The Upper Intermediate Zone ("UIZ") represents the lithium zone within the pegmatite and is dominated by "SQUI" (Spodumene + Quartz Intergrowth), a term used to describe an isochemical reversion resulting in the replacement of primary petalite by oriented spodumene + quartz intergrowth (London, 1984), with lesser grey K-feldspar and primary white spodumene in quartz (Figure 7.5). Phosphate minerals such as montebrasite (Breaks et al., 1999) and apatite, and lithian mica are common accessory minerals.

7.3.2 CENTRAL INTERMEDIATE ZONE (CIZ)

The Central Intermediate Zone ("CIZ") is located in structurally higher portions of the pegmatite and represents the tantalum and rubidium zone of the pegmatite. The CIZ is in contact with both the Upper Intermediate Zone (UIZ) and Upper Wall Zone, and persists to the southeast edge of the outcrop where it is believed the pegmatite continues under the till cover. To the southeast, the CIZ is intersected by channels CH-1 and CH-7 where it consists of similarly sized fragments of randomly oriented coarse K-feldspar + mica + quartz. Micas appear to alter primary K-feldspar. Blue apatite prisms up to 1 cm wide and several cm's long accompany the mica-rich zones. In the adjoining area to the northeast of CH-7, the K-feldspars are more or less completely replaced with lithian mica + quartz. In this area veinlets and patches of lepidolite are common. Channel 1 (CH-1) contains the highest tantalum grades found to date in the exposed pegmatite, which persist in the subsurface in drill holes PL13-001 and -006, in addition to high rubidium and elevated cesium grades. To the northwest, channels CH-8 and CH19 intersect the central portion of the exposed CIZ where it consists of predominantly grey K-feldspar with minor lithian mica + quartz alteration. Drill holes PL13-004 and -003 confirm the extension of the CIZ into the subsurface in this area, where it features notable cm-scale blebs of the rare cesium mineral pollucite, and high Ta and Rb grades. Figure 7.6 shows an outcrop and photomicrograph of the CIZ.

7.3.3 LOWER INTERMEDIATE ZONE (LIZ)

The Lower Intermediate Zone (LIZ) comprises the bulk of the exposed pegmatite and is considered an intermediate stage zone with significant lithium, tantalum and rubidium. The zone comprises predominantly K-feldspar, Na-feldspar, SQUI and lithian muscovite (Figure 7.7). Pollucite also occurs in an intersection of LIZ in drill hole PL13-005. The zone has undergone both ductile and brittle deformation at the apparently structurally lowest portions of the pegmatite. Ductile deformation is manifested as a banded appearance on surface, where seams of oriented mica provide a planar fabric.

Figure 7.5 UIZ

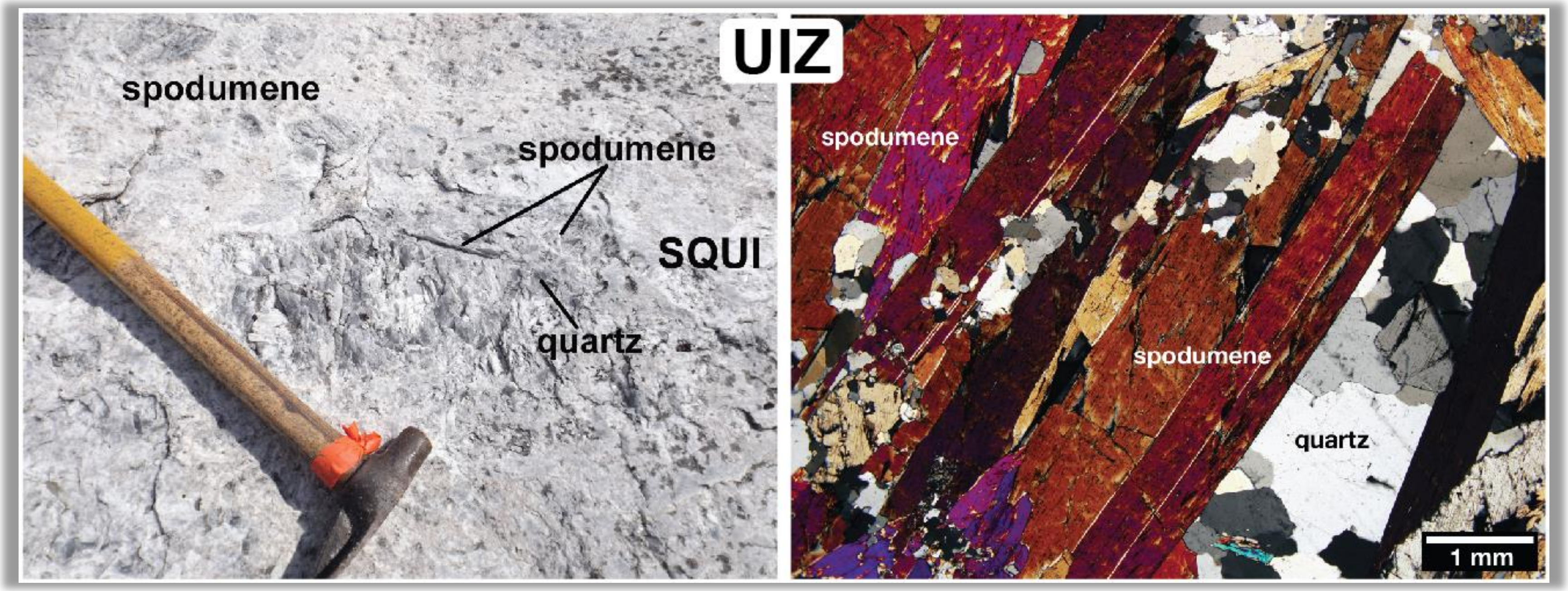


Figure 7.6 CIZ

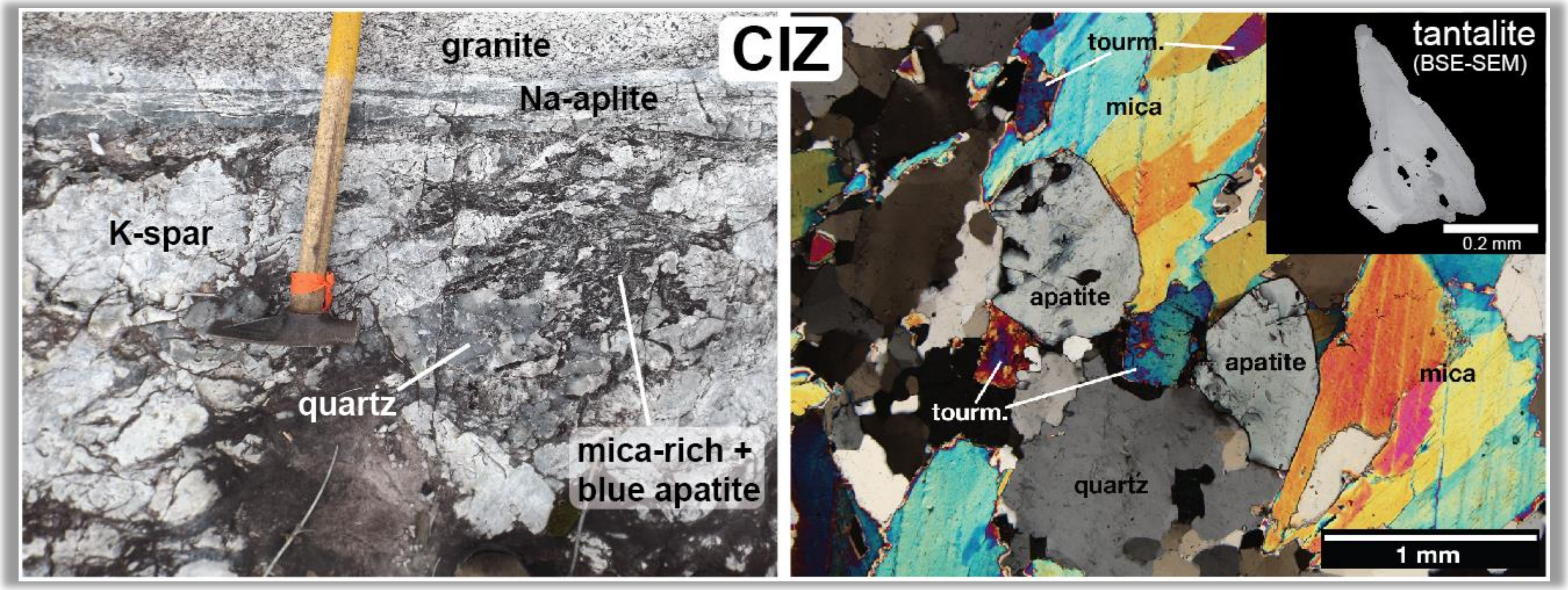
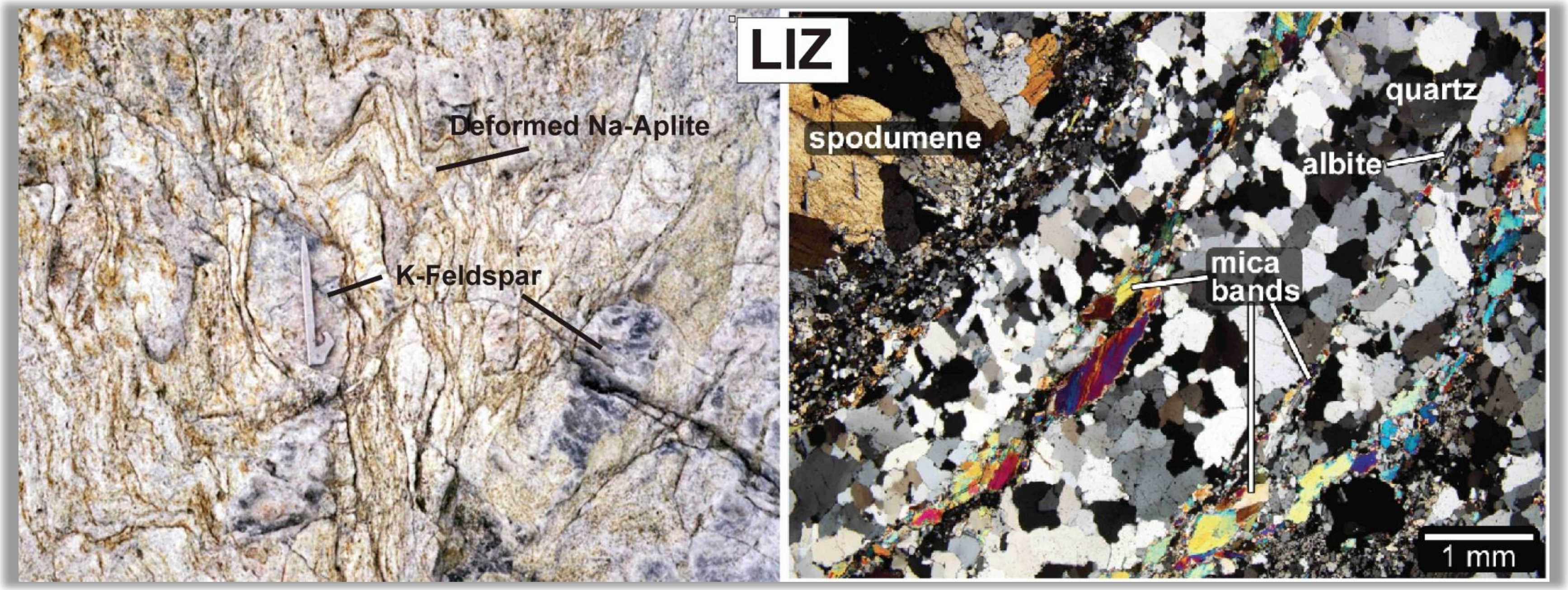


Figure 7.7 LIZ



7.3.4 WALL ZONES

The Wall Zones (upper and lower) of complex LCT type pegmatites are generally characterized by the occurrence of brick-red K-feldspar (perthite) and simple mineralogy (Černý, 2005, Černý and Vanstone 1996). The zone mineralogy is simple, but the brick-red colouration of the K-feldspar is more common in the portion of the pegmatite in close proximity to the metasediments. The same colouration does generally not occur where the pegmatite is in contact with the granite. In this latter case, the sections of Wall Zone display a light to medium grey K-feldspar. It is assumed lower inherent iron levels of the Pakeagama Lake granite, unlike the metasediments, were not sufficient to generate the K-feldspar colour change in the adjoining pegmatite.

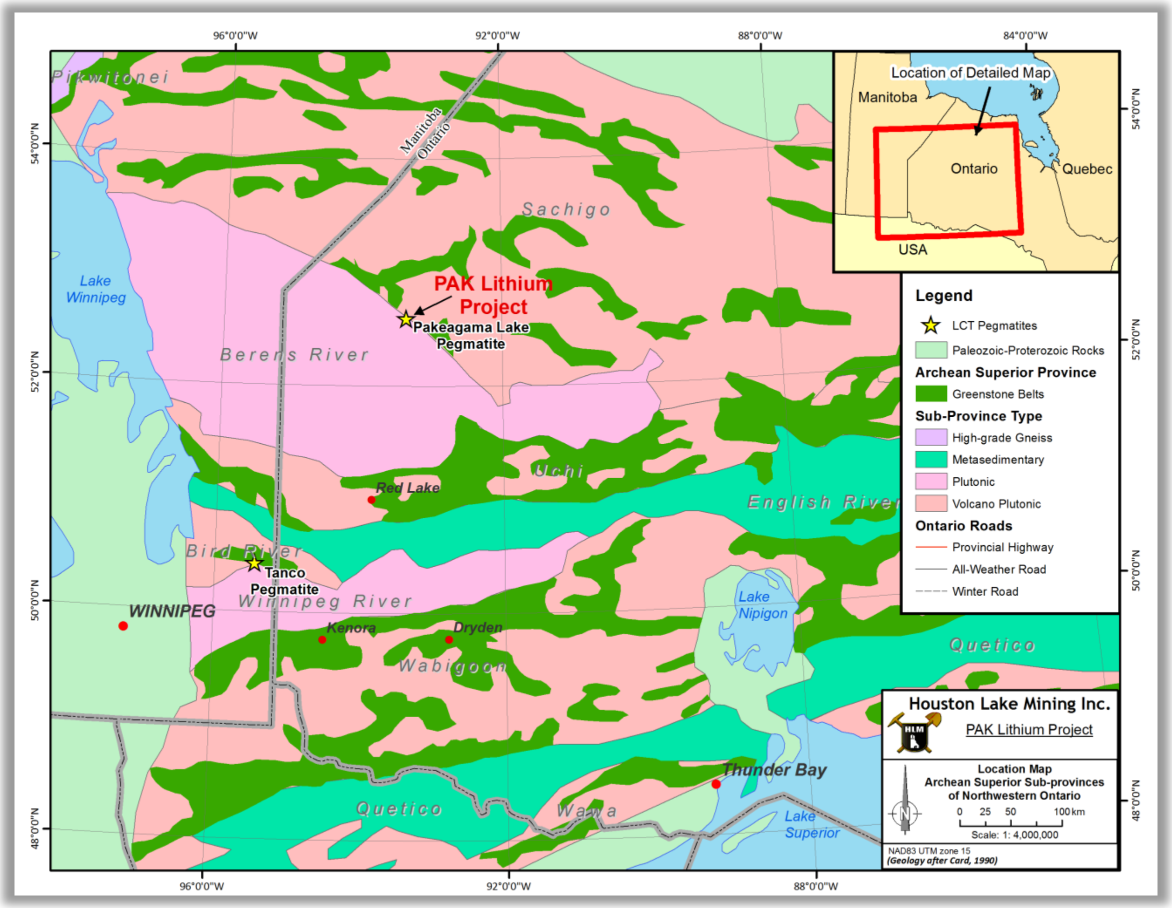
The Upper Wall Zone found in the southwest portion of the pegmatite exposure, is in contact with the lithium rich UIZ and is composed of quartz with lesser pale-red coloured K-feldspar, minor phosphates and accessory beryl and lithian mica. The exposure of this zone is limited.

The Lower Wall Zone is mineralogically similar to the Upper Wall Zone. A common feature of the footwall Wall Zone in the more complex LCT-type pegmatites is the presence of bands of sodic aplite (“footwall aplite”). These sodic bands are generally not common in the Upper Wall Zone. The Pakeagama Lake pegmatite is somewhat more complex as bands of what appears to be pre-existing banded sodic aplites are found throughout the pegmatite. The contact with the LIZ is gradational and is defined by the general absence of SQUI within the wall zones and the change in colour of the K-feldspars from pale-red to the light grey commonly found throughout the pegmatite. Like the LIZ, this zone has undergone deformation.

8 DEPOSIT TYPES

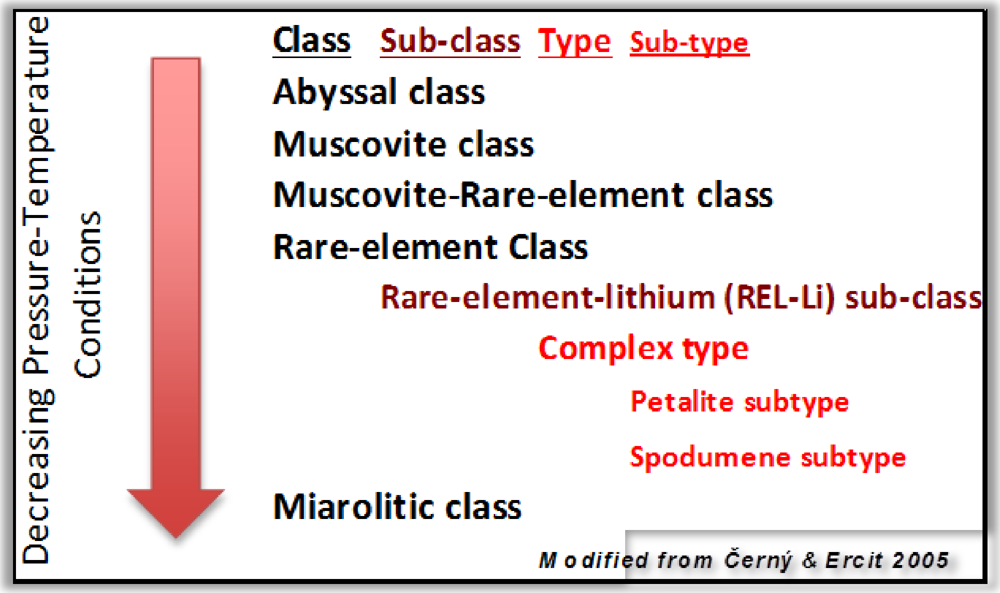
HLM's target or deposit model is the highly evolved, granitic, rare-element lithium-cesium-tantalum bearing (LCT) complex type, petalite subtype pegmatite. The Tanco pegmatite situated in the Bird River belt in southeastern Manitoba, is the best known and a world-class example of this type of deposit model. Figure 8.1 shows the location of the Tanco pegmatite relative to the geological subprovinces of the western Superior Craton and Pakeagama Lake.

Figure 8.1 Tanco Pegmatite and PAK Pegmatite Location



Granitic pegmatites are relatively common and widespread, and have been divided into five classes based on the pressure-temperature conditions that characterize their host rock suites (Černý and Ercit, 2005). Criteria, including mineral assemblages, geochemical signature and conditions of consolidation or combinations thereof, are used to further divide the classes into sub-classes, types, and subtypes (Figure 8.2).

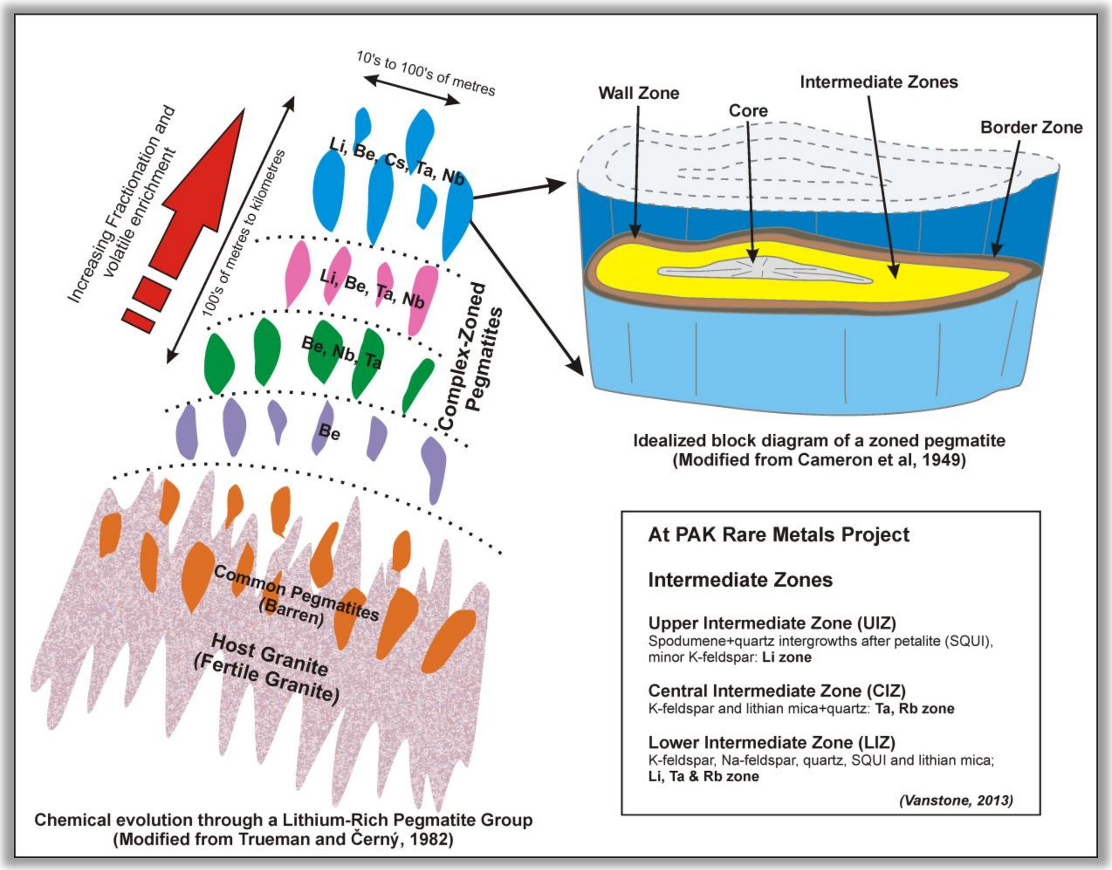
Figure 8.2 Division of Rare Metal Pegmatites



Of the five classes, the rare-element class is the group with the most attractive economic potential and can represent economic sources of tantalum, ceramic grade spodumene, rubidium, and the main cesium ore mineral, pollucite. The lithium rich, rare-element pegmatites are not common and comprise <0.1% of the total known pegmatites (Kesler, et al, 2012).

The rare-element class of granitic pegmatites is generated by the differentiation of fertile, S-type granitic plutons. This differentiation process of the parental granite is accompanied by the progressive accumulation of lithophile rare-elements as well as elements such as thallium, tantalum, hafnium, gallium, germanium, boron, fluorine, and phosphorus (Černý and Ercit, 2005). The pegmatite field results when the lithophile rare-element enriched residual melt is expelled from the fertile granite and assuming suitable channels exist migrates outward and upward away from the granite. A field can be comprised of many pegmatites over a distance of a few kilometres from the source granite. The field itself shows an increasing fractionation moving away from the source granite. Figure 8.3 illustrates this process.

Figure 8.3 Deposit Model



The internal structure of pegmatites varies from simple or un-zoned to complexly zoned. Zonation, or the lack thereof, provides the starting point for the pegmatite internal anatomy which is largely what distinguishes pegmatites from other ordinary plutonic igneous rocks and is manifested by variations in the spatial distribution of grain size, mineral assemblage, crystal habit, and / or rock fabric.

Pegmatites crystalizing from very highly fractionated melts have the most evolved internal structure. These highly fractionated pegmatitic melts are enriched in fluxes such as H, B, P and F, in addition to water, lithium, rubidium, cesium, tantalum, and beryllium which make the melts less viscous than a granitic melt and thus able to migrate farther from the source pluton (London, 2008, p. 259).

The complex-type, petalite and spodumene subtype pegmatites are the products of the most highly fractionated melts and as such, are the most complexly zoned with up to eleven different zones characterized by variable textures and mineral modes (Černý, 1991; Černý, 2005). As an example, the Tanco pegmatite has nine zones and its most notable geochemical anomalies being its high tantalum content along with high cesium and phosphorus contents, the latter two being the hallmark of a pelitic metasedimentary source (London, 2008 p. 109).

The economic concentrations of the lithophile rare-elements will occur in pegmatites crystalizing from the most highly evolved melts. Some of the lithophile rare-elements may occur in separate zones, which may allow for selective exploitation. Economic tantalum mineralization can be complex and the host mineralogy for rubidium can be different in different zones, but pollucite is the main cesium mineral and according to Kesler et al (2012) spodumene is the most economically important lithium mineral.

Figure 8.3 shows the internal zonation of a pegmatite from the outer border zone to the central core zone. The intermediate zones at the Pakeagama pegmatite appears to be similar to Tanco with respect to mineralogy and concentrations of Li, Ta, Cs, and Rb (Vanstone, 2013).

9 EXPLORATION

Eight new channels (Channel 22 to 29) totaling 69.8 m were completed in the summer of 2015. (Figure 9.1). A total of 73 samples were collected.

Sampling was completed by HLM personnel along with personnel from Haveman Brothers of Kakabeka Falls, Ontario.

The channels were oriented perpendicular to the strike of the pegmatite's internal mineralogical zones and were cut continuously across the zones. The length of a channel was determined by the width of the pegmatite zone being sampled. The original cuts completed in 2001 consisted of a series of offset channels to achieve a full section across a zone.

The channels were wet-cut approximately 3.5 to 4 cm wide and 9 to 10 cm deep with a motorized circular diamond saw. Sample lengths were typically one metre or less, depending on zone mineralogy and boundaries. After cutting, the channels were washed to mitigate cross-contamination by the cuttings. The samples were then removed using a hammer and chisel. The samples were laid out in order next to the channel and were geologically described, washed, assigned a sample number, and then bagged. The sample number was also etched on a metal tag that was secured to the outcrop at the beginning of each sample cut. The start of each channel was assigned a GPS coordinate and the cut channel assigned a bearing.

Each sample bag was sealed using a plastic zip tie. The poly bags were then placed into rice bags, which were then labeled and closed off with zip ties. HLM personnel transported the bags of samples to Val Caron where sample blanks and standards were inserted into the sample stream. All samples were then shipped to Actlabs or AGAT laboratories in Sudbury, Ontario.

Table 9.1 summarizes the location of the 2015 channels, and Table 9.2 summarizes the results for the 2015 channel program.

Table 9.1 2015 Channel Location Summary

Channel No.	Easting	Northing	Elevation (masl)	Azimuth	Length (m)	No. of Samples
CH-22	474476	5827978	324	30	13	13
CH-23	474523	5827959	324	207	17	17
CH-24	474518	5827942	324	203	2	2
CH-25	474514	5827941	322	215	9	10
CH-26	474498	5827965	324	29	7	7
CH-27	474491	5827976	323	26	4	4
CH-28	474503	5827974	323	27	13.8	16
CH-29	474497	5827966	323	206	4	4

Table 9.2 2015 Channel Results Summary

Channel ID	From (m)	To (m)	Length (m)	Li_2O (%)	Cs_2O (%)	Ta_2O_5 (ppm)	Nb_2O_5 (ppm)	SnO_2 (ppm)	Rb_2O (%)	Zone Sampled
Channel 22	0	13	13	3.21	0.062	111	43	51	0.19	UIZ/LIZ
including	0	6.2	6.2	4.21	0.023	51	28	39	0.07	UIZ
including	6.2	13	6.8	2.29	0.098	166	57	62	0.30	LIZ
Channel 23	0	17	17	4.71	0.017	49	13	33	0.05	UIZ
Channel 24	0	2	2	4.20	0.036	111	77	52	0.16	UIZ
Channel 25	0	9	9	3.91	0.057	86	47	74	0.27	UIZ
Channel 26	0	7	7	4.69	0.018	51	13	30	0.02	UIZ
Channel 27	0	4	4	4.59	0.035	67	22	23	0.05	UIZ
Channel 28	0	13.8	13.8	2.49	0.036	108	56	131	0.32	LIZ/UIZ
including	0	11	11	2.29	0.040	114	59	68	0.34	LIZ
including	11	13.4	2.4	3.59	0.020	71	40	63	0.23	UIZ
Channel 29	0	4	4	3.35	0.026	52	36	86	0.11	UIZ/WZ
including	1	4	3	4.40	0.024	54	36	100	0.08	UIZ

10 DRILLING

Four phases of drilling have been completed on the Property since 2013. Table 10.1 provides the collar information for all four phases of the drilling program. Figure 10.1 illustrates the location of the drill collars.

10.1 2013 DRILL CAMPAIGN

During the period February 19 to March 3, 2013, HLM completed a 6-hole diamond drill program, totaling 955 m, as a follow-up to the high-grade mineralization defined in the UIZ, LIZ, and CIZ zones during the 2012 Channel Sample Program. The objectives of the drill program were to determine the orientation, thickness, and zonation of the pegmatite and to refine the mineralogical characterization of these zones by better establishing the Li, Ta, Rb, and Cs potential.

Haveman Brothers of Kakabeka Falls, Ontario was contracted to provide camp logistics for the drill program. A 10-person winter camp was established next to the winter road 25 km northwest of the North Spirit Lake community. Element Drilling Ltd. of Gimli, Manitoba was awarded the diamond drilling contract. Drilling was completed using a skid mounted Boyles 37 drill using NQ (47.6 mm) rods for all holes. A D6 Caterpillar moved the drill from camp to the first drill site and between holes. Drill core was geologically logged and tagged for sampling in the Core Logging Facility at the campsite.

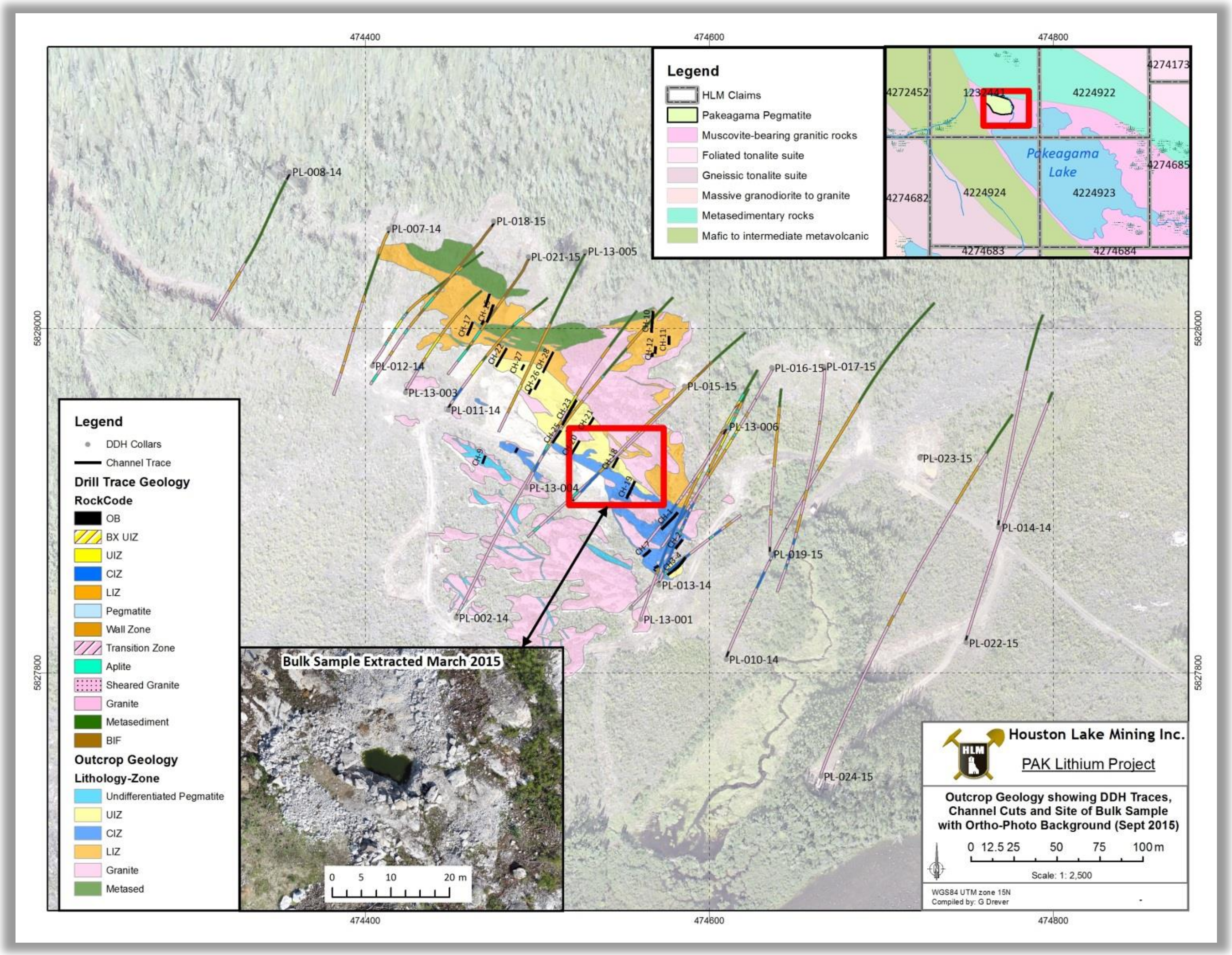
Under HLM's QA/QC procedures, the diamond drill contract specified NQ-sized drill core providing a 47.6 mm diameter sample. The drill holes were oriented perpendicular to the strike of the pegmatite and drilled continuously across it.

Full disclosure of the results from the 2013 drill campaign was provided in the previous technical report (McCracken, 2014).

Table 10.1 Drill Collars

Phase	DDHNo	Date Drilled		UTM Zone 15N (NAD83)			Collar Orientation		Metres Drilled	
		Start_Date	End_Date	Easting	Northing	(masl)	Azimuth	Dip	Start	End
Phase I	PL-13-001	20/02/2013	03/03/2013	474,558	5,827,832	319.5	20	-45	0	213.3
	PL-13-002	22/02/2013	24/02/2013	474,451	5,827,832	323.2	30	-45	0	191
	PL-13-003	24/02/2013	25/02/2013	474,421	5,827,963	327.6	30	-45	0	104
	PL-13-004	25/02/2013	27/02/2013	474,492	5,827,908	325.9	30	-45	0	167
	PL-13-005	27/02/2013	28/02/2013	474,526	5,828,046	320.8	210	-45	0	161
	PL-13-006	01/03/2013	02/03/2013	474,608	5,827,944	316.6	210	-45	0	119
									Total metres drilled	**955.3**
Phase II	PL-002-14	11/02/2014	14/02/2014	474,451	5,827,832	323.2	30	-45	191	305
	PL-007-14	14/02/2014	18/02/2014	474,415	5,828,062	320.3	210	-45	0	140
	PL-008-14	18/02/2014	20/02/2014	474,355	5,828,089	320.9	210	-45	0	133.6
	PL-009-14	20/02/2014	23/02/2014	474,555	5,827,838	319.5	45	-45	0	116
	PL-010-14	23/02/2014	28/02/2014	474,609	5,827,807	315.5	20	-45	0	326
	PL-011-14	28/02/2014	02/03/2014	474,451	5,827,959	327.0	30	-45	0	119
	PL-012-14	02/03/2014	04/03/2014	474,403	5,827,979	327.0	30	-45	0	128
	PL-013-14	04/03/2014	08/03/2014	474,571	5,827,851	317.0	20	-60	0	233
	PL-014-14	08/03/2014	11/03/2014	474,768	5,827,885	320.8	7.5	-45	0	179
									Total metres drilled	**1488.6**
Phase III	PL-015-15	18-02-2015	22-02-2015	474,586	5,827,967	316.1	220	-45	0	178.7
	PL-016-15	22-02-2015	24-02-2015	474,637	5,827,977	314.5	210	-60	0	247.5
	PL-017-15	24-02-2015	28-02-2015	474,667	5,827,978	317.5	180	-60	0	267
	PL-018-15	28-02-2015	02-03-2015	474,475	5,828,063	318.6	210	-45	0	171
	PL-019-15	02-03-2015	04-03-2015	474,636	5,827,869	313.2	0	-60	0	195
	PL-020-15	04-03-2015	05-03-2015	474,520	5,827,899	322.1	44	-45	0	198
	PL-021-15	06-03-2015	07-03-2015	474,495	5,828,042	319.3	210	-60	0	163.5
	PL-022-15	07-03-2015	10-03-2015	474,750	5,827,818	315.4	15	-45	0	220.5
									Total metres drilled	**1641.2**
Phase IV	PL-023-15	28-08-2015	03-09-2015	474,723	5,827,925	316.8	0	-90	0	250
	PL-024-15	03-09-2015	09-09-2015	474,665	5,827,740	314.4	20	-48	0	358
									Total metres drilled	**608**
									Grand Total	**4693.1**

Figure 10.1 Diamond Drill Collar Locations



10.1.1 SURVEYING

10.1.1.1 COLLAR SURVEY

Diamond drillhole collar locations were physically marked and flagged prior to drilling. HLM geologists using hand-held Garmin GPS units would locate and mark the site based on coordinates predetermined from the detailed geological GIS compilation. Drill collar azimuth was determined by Silva compass and verified by line of sight (outcrop feature, channel cut, etc.).

HLM personnel verified the position and orientation of the drill once set-up was completed and prior to commencement of drilling.

Casing was left in all holes and an aluminum cap was screwed in place with the drillhole identification engraved on the top of each cap.

In August 2013, HLM contracted Consbec Inc. to complete GPS surveying of all collars (sub-centimeter accuracy) using a LEICA CS15 field controller and GS15 Smart Antenna (base-station) system. Survey points where measured at the top-dead-centre (TDC) of the cap and TDC of the casing at the casing-surface interface.

10.1.1.2 DOWNHOLE SURVEY

Downhole orientation surveys measured using a Reflex EZ-Shot® single-shot electronic instrument supplied and operated by Element Drilling personnel.

The first reading was taken at least 6 m past the end of the casing and then at an interval of 50 m until the end of the hole. Readings were recorded by the driller and included the depth, azimuth (magnetic north), inclination, magnetic tool face angle, magnetic field strength, and temperature.

10.1.2 CORE LOGGING PROCEDURE

The following is a summary of the HLM logging procedure.

- → Sample security and chain of custody started with the removal of core from the core tube and boxing of drill core at the drill site.
- → The boxed core remained under the custody of the drill contractor until it was transported from the drill to the secure on-site Core Shack facility by either the drill contractor or one of the HLM's designated personnel.
- → At the on-site Core Shack, core boxes were opened and inspected to ensure correct boxing and labeling of the core by the drill contractor, photographed and then re-closed.
- → The core was stored securely until moved into the Val Caron Core Shack for processing.
- → Groups of boxes were photographed with proper markings and compared to the photos taken on site.
- → The company geologists logged the core, and then marked and tagged it for sampling and splitting.
- → Minimum sample unit was 0.3 m; maximum sample length was 1.7 m. Variations from a standard length of 1.0 m were often necessary to accommodate variations in pegmatite zonation and lithology.
- → Each core sample was assigned a tag with a unique identifying number.

10.1.3 SAMPLING APPROACH

The following is a summary of the HLM sampling procedure.

- The core was then re-closed on site and shipped to the company's off-site core splitting facility in Val Caron, Ontario.
- Sample lengths were typically one metre, but would vary somewhat depending on zone mineralogy and boundaries.
- Core marked for splitting was sawn using a diamond core saw with a mounted jig to assure the core was cut lengthwise into equal halves.
- Half of the cut core was placed in clean individual plastic bags with the appropriate sample tag.
- QA/QC samples were inserted into the sample stream at prescribed intervals. Full description of the QA/QC program is provided in Section 11.0.
- The samples were then placed in rice bags for shipment to an analytical laboratory for quantitative analysis of select elements.
- The remaining half of the core was retained and incorporated into HLM's secure, off-site core library.

10.2 2014 DRILL CAMPAIGN

The 2014 drilling campaign was completed between February 6 and March 14, 2014. A total of eight new holes and one deepened hole were drilled totaling 1,488.6 m. All holes were inclined at -45 degrees dip with the exception of one hole at -60 degrees. Only two holes were drilled from the NNE. All others were drilled from the SSW. All holes intersected and traversed the entire width of the pegmatite with the exception of the final hole, PL-014-14 which only intersected granite and metasediments. Hole PL-13-002, which in 2013 was terminated at 191 m in pegmatite, was re-entered and deepened and ended in metasediments at 305 m.

Both camp and diamond drilling equipment was contracted to Element Drilling Ltd. of Gimli, Manitoba. Drilling was completed using a Boyles 37A diamond drill. Holes were drilled using NQ drill rods. Garth Drever, Steve Beyer, and Trevor Walker were all involved for HLM in supervision of the drilling and geological logging of the drill core.

The nomenclature of the drill holes was changed since 2013. "PL "still refers to Pakeagama Lake followed by three digits representing the sequence of the holes drill, followed by the two-digit year so PL-009-14 is the ninth hole drilled on the Pakeagama Lake project which was drilled in 2014.

The location of the 2014 drill collars are displayed on Figure 10.1. Table 10.2 summarizes the results of the 2014 drill campaign.

Table 10.2 2014 Drill Summary

DDH PL-002-14 (PL-13-002)	In Phase I (PL-13-002 (from 0 to 191m)) the objective was to test Cs potential under pollucite-bearing aplite dyke at surface. In Phase II (PL-14-002 (from 191m to 304m) the intent was to complete the cross-section of the pegmatite.							
Zone	**Width (m)**	**Li_2O (%)**	**Cs_2O (%)**	**Ta_2O_5 (ppm)**	**Nb_2O_5 (ppm)**	**SnO_2 (ppm)**	**Rb_2O (%)**	**Geology**
Pegmatite/Aplite Dyke near surface (Tantalum enriched)								
5.00 - 17.50 m	12.50	0.10	0.025	132	59	32	0.06	Pegmatite
Lithium, Rubidium and Tantalum enriched zones								
174.00 - 226.00 m	52.00	1.10	0.039	101	69	126	0.29	LIZ/Aplite/Granite
253.40 - 273.00 m	19.60	1.92	0.012	94	68	75	0.31	LIZ/Aplite

DDH PL-007-14	Designed to test continuity of pegmatite along strike (approximately 56 m WNW of DDH PL-13-003) and collared from NNE							
Zone	**Width (m)**	**Li_2O (%)**	**Cs_2O (%)**	**Ta_2O_5 (ppm)**	**Nb_2O_5 (ppm)**	**SnO_2 (ppm)**	**Rb_2O (%)**	**Geology**
Pegmatites including metasediment and granite sheets/rafts								
3.60 - 22.60	19.00	1.07	0.010	105	64	427	0.24	Pegmatite/Aplite/LIZ
3.60 - 14.00	10.40	1.80	0.014	92	72	77	0.33	LIZ/Aplite
Lithium plus Tantalum and Rubidium enriched zones								
70.85 - 87.90 m	17.05	1.44	0.021	115	97	72	0.14	Aplite/LIZ/UIZ
including 82.00 - 87.00 m	5.00	2.48	0.030	75	61	104	0.22	LIZ/UIZ
99.00 - 120.25 m	21.25	0.53	0.040	188	132	589	0.20	Aplite/LIZ/Granite/UIZ
including 99.00 - 112.65 m	13.65	0.76	0.050	250	187	899	0.25	Aplite/LIZ/UIZ/Granite

DDH PL-008-14	Designed to test continuity of pegmatite along strike (approximately 67 m WNW of DDH PL-007-14) and collared from NNE							
Zone	**Width (m)**	**Li_2O (%)**	**Cs_2O (%)**	**Ta_2O_5 (ppm)**	**Nb_2O_5 (ppm)**	**SnO_2 (ppm)**	**Rb_2O (%)**	**Geology**
Total Pegmatite								
89.00 - 107.00 m	18.00	0.66	0.130	271	126	149	0.19	Aplite/LIZ
including 89.50 - 106.00 m	16.50	0.68	0.133	286	130	159	0.19	Aplite/LIZ
Tantalum, Lithium and Cesium enriched zone								
89.50 - 92.00 m	2.50	1.94	0.640	829	87	156	0.28	Aplite/LIZ

DDH PL-009-14	Designed to test to the SSE (obliquely) of PL-001-13 to determine if the pegmatite exists beyond the visible surface exposure.							
Zone	**Width (m)**	**Li_2O (%)**	**Cs_2O (%)**	**Ta_2O_5 (ppm)**	**Nb_2O_5 (ppm)**	**SnO_2 (ppm)**	**Rb_2O (%)**	**Geology**
Rubidium, Tantalum and Cesium enriched zones								
38.50 - 64.60 m	26.10	0.81	0.100	108	40	242	0.78	CIZ
including 42.30 - 54.65 m	12.35	0.85	0.110	84	28	318	1.00	CIZ
Rubidium enriched zone								
89.25 - 96.50 m	7.25	0.62	0.100	53	29	52	0.95	CIZ
Lithium enriched zone								
100.35 - 106.50 m	6.15	1.77	0.060	131	69	94	0.37	LIZ

DDH PL-010-14	Designed to test continuity of zoned pegmatite zones along strike (approximately 56 m ESE of DDH PL-13-001 and PL-009-14 where only overburden is observed on surface							
Zone	**Width (m)**	**Li_2O (%)**	**Cs_2O (%)**	**Ta_2O_5 (ppm)**	**Nb_2O_5 (ppm)**	**SnO_2 (ppm)**	**Rb_2O (%)**	**Geology**
Rubidium, Tantalum and Lithium enriched zones								
62.30 - 76.60 m	14.30	n/a	0.100	94	38	37	0.95	CIZ
87.00 - 94.95 m	7.95	1.03	0.060	54	45	72	0.47	LIZ
Lithium, Rubidium and Tantalum enriched zones								
168.30 - 229.00 m	60.70	2.01	0.040	108	65	139	0.38	LIZ/WZ
including 171.00 - 193.00 m	22.00	2.46	0.050	62	37	82	0.43	LIZ
including 193.00 - 227.00 m	34.00	1.82	0.054	146	87	182	0.35	LIZ/WZ

DDH PL-011-14	Designed to test continuity of pegmatite zonation beneath the enriched UIZ/CIZ surface zones near (approx. 25m ESE) DDH PL-003-13							
Zone	**Width (m)**	**Li_2O (%)**	**Cs_2O (%)**	**Ta_2O_5 (ppm)**	**Nb_2O_5 (ppm)**	**SnO_2 (ppm)**	**Rb_2O (%)**	**Geology**
Total Pegmatite								
9.10 -104.75 m	95.65	1.68	0.024	85	59	162	0.24	WZ/CIZ/UIZ/LIZ
Tantalum, Rubidium and Cesium enriched zones								
including 9.10 - 20.70 m	11.60	n/a	0.068	132	69	83	0.37	WZ/CIZ
including 9.85 - 14.00 m	4.15	n/a	0.077	188	123	113	0.38	WZ/CIZ
Lithium enriched pegmatite								
including 13.00 - 104.75 m	91.75	1.69	0.021	80	53	156	0.22	LIZ + UIZ
including 35.00 - 47.80 m	12.80	4.01	0.031	48	33	40	0.10	UIZ
including 54.00 - 104.75 m	50.75	1.73	0.023	114	84	274	0.33	LIZ

DDH PL-012-14	Designed to test continuity of pegmatite zonation beneath the enriched UIZ/CIZ surface zones near (approx. 25m WNW) DDH PL-003-13							
Zone	**Width (m)**	**Li_2O (%)**	**Cs_2O (%)**	**Ta_2O_5 (ppm)**	**Nb_2O_5 (ppm)**	**SnO_2 (ppm)**	**Rb_2O (%)**	**Geology**
Total Pegmatite								
19.50 - 74.40 m	54.90	1.42	0.030	96	76	87	0.24	Aplite/WZ/LIZ/UIZ
Tantalum, Rubidium and Cesium enriched zones								
including 19.50 - 36.45 m	16.95	1.31	0.036	130	78	146	0.23	WZ/LIZ
Lithium enriched pegmatite								
including 35.50 - 44.00 m	8.50	3.69	0.039	90	54	44	0.24	UIZ/Aplite
Also 102.00 - 107.20 m	5.20	2.16	0.012	107	80	50	0.27	Aplite/LIZ

DDH PL-013-14	Designed to test continuity of zoned pegmatite beneath the enriched UIZ/CIZ zones on surface near channel cuts 1 to 7 and approximately 60m under DDH PL-001-13.							
Zone	**Width (m)**	**Li_2O (%)**	**Cs_2O (%)**	**Ta_2O_5 (ppm)**	**Nb_2O_5 (ppm)**	**SnO_2 (ppm)**	**Rb_2O (%)**	**Geology**
Total Pegmatite								
15.00 - 217.45 m	202.45	1.16	0.054	75	48	103	0.38	WZ/CIZ/UIZ/LIZ/Aplite
Tantalum, Rubidium and Cesium enriched zones								
15.00 - 111.80 m	96.80	n/a	0.073	94	50	138	0.52	WZ/CIZ/Aplite
including 15.00 - 50.25	35.25	n/a	0.109	111	47	209	0.77	WZ/CIZ
Lithium enriched pegmatite								
133.20 - 217.45 m	84.25	2.09	0.040	70	55	86	0.31	LIZ/UIZ/Aplite
including 133.20 - 182.00 m	48.80	2.75	0.047	62	44	60	0.33	LIZ/UIZ
including 164.00 - 182.00 m	18.00	3.11	0.049	61	36	84	0.37	UIZ

10.2.1 SURVEYING

10.2.1.1 COLLAR SURVEY

Diamond drillhole collar locations were physically marked and flagged prior to drilling. HLM geologists using hand-held Garmin GPS units would locate and mark the site based on coordinates pre-determined from the detailed geological GIS compilation. Drill collar azimuth was determined by Silva compass and verified by line of sight (outcrop feature, channel cut, etc.).

HLM personnel verified the position and orientation of the drill once set-up was completed and prior to commencement of drilling.

Casing was left in all holes and an aluminum cap was screwed in place with the drillhole identification engraved on the top of each cap.

Coordinates for collars of all holes drilled in 2014 were measured using a Garmin Rino 610 GPS (averaging function). Elevations were estimated based on proximity to existing surveyed collars and channel samples. The collar coordinates have an accuracy of approximately 2 m.

10.2.1.2 DOWNHOLE SURVEY

Downhole orientation surveys were measured using a Reflex EZ-Shot® single-shot electronic instrument supplied and operated by Element Drilling personnel. Part way through the 2014 program, the single-shot instrument was replaced with a Reflex EZ-Shot® multi-shot instrument.

For holes measured with the single-shot, the first reading was taken at least six metres past the end of the casing and then at an interval of 50 m until the end of the hole. Readings were recorded by the driller and included the depth, azimuth (magnetic north), inclination, magnetic tool face angle, magnetic field strength, and temperature. For holes measured with the multi-shot instrument, the survey was completed when pulling rods out of the hole with readings taken at six-metre intervals.

10.2.2 CORE LOGGING PROCEDURE

The following is a summary of the HLM logging procedure.

- Sample security and chain of custody started with the removal of core from the core tube and boxing of drill core at the drill site.
- The boxed core remained under the custody of the drill contractor until it was transported from the drill to the secure on-site Core Shack facility by either the drill contractor or one of the HLM's designated personnel.
- At the on-site Core Shack, core boxes were opened and inspected to ensure correct boxing and labeling of the core by the drill contractor.
- The drill core was geologically logged, photographed and then marked and tagged for sampling and splitting.
- Each core sample was assigned a tag with a unique identifying number. Sample lengths were typically one metre, but could be less depending on zone mineralogy and boundaries.
- The core was stored securely until moved into the Core Shack for processing.

10.2.3 SAMPLING APPROACH

The following is a summary of the HLM sampling procedure.

- The core was then re-closed on site and shipped to the company's off-site core splitting facility in Val Caron, Ontario.
- Sample lengths were typically one metre, but would vary somewhat depending on zone mineralogy and boundaries.
- Core marked for splitting was sawn using a diamond core saw with a mounted jig to assure the core was cut lengthwise into equal halves.
- Half of the cut core was placed in clean individual plastic bags with the appropriate sample tag.
- QA/QC samples were inserted into the sample stream at prescribed intervals. Full description of the QA/QC program is provided in Section 11.0.
- The samples were then placed in rice bags for shipment to ACME Laboratories' facility in Val d'Or, Quebec for sample preparation prior to completing multi-element analysis at ACME in Vancouver, BC.
- The remaining half of the core was retained and incorporated into HLM's secure, off-site core library.

10.3 2015 DRILL CAMPAIGN

The 2015 drilling campaign was completed in two phases. Phase III began on February 17, 2015 and ended on March 10, 2015. A total of eight holes were drilled totaling 1,641.2 m in Phase III. The Phase IV program began on August 20, 2015 and ended on September 19, 2015. A total of two holes were drilled totaling 608 m in Phase IV.

Both camp and diamond drilling equipment was contracted to Chenier Drilling Ltd of Val Caron. Drilling was completed using a Hydracore 2000 diamond drill. Holes were drilled using NQ drill rods. Garth Drever of HLM supervised the drilling and geological logging of the drill core.

The location of the 2015 drill collars are displayed on Figure 10.1. Table 10.3 summarizes the results of the 2015 drill campaigns.

Table 10.3 2015 Drill Results

DDH PL-015-15

From the NNE targeting 60m vertically below channels 18 and 19 and to test the depth extent of the granite/LIZ to the NE of channels 18 and 19. The hole is above DDH-020-15.

Zone	Width (m)	Li_2O (%)	Cs_2O (%)	Ta_2O_5 (ppm)	Nb_2O_5 (ppm)	SnO_2 (ppm)	Rb_2O (%)	Geology
Lithium enriched zone								
47.40 - 50.00 m	2.60	3.86	0.011	86	27	35	0.05	UIZ
Lithium plus Tantalum and Rubidium enriched zone								
68.75 - 73.05 m	4.30	1.28	0.040	185	59	58	0.22	UIZ/LIZ
Rubidium and Tantalum enriched zone								
82.60 - 110.30 m	27.70	0.59	0.062	168	93	316	0.49	CIZ
122.90 - 129.70 m	6.80	0.37	0.051	197	40	108	0.23	Aplite

DDH PL-016-15

Designed to test from the NNE, the thickness of granite beneath hole PL-13-006 and to define the northern boundary of the metasediments intersected at depth in holes PL-13-001 and PL-013-14

Zone	Width (m)	Li_2O (%)	Cs_2O (%)	Ta_2O_5 (ppm)	Nb_2O_5 (ppm)	SnO_2 (ppm)	Rb_2O (%)	Geology
Lithium plus Tantalum and Rubidium enriched zones								
77.45 - 147.85 m	70.40	2.64	0.040	90	39	63	0.28	UIZ/LIZ
including 89.00 - 94.00 m	5.00	0.36	0.025	247	65	115	0.15	Aplite
Including 96.00 - 111.45 m	15.45	3.68	0.041	79	30	73	0.23	UIZ
Rubidium, Tantalum and Tin enriched zone								
178.20 - 188.00 m	9.80	0.36	0.036	180	164	442	0.24	Aplite/Altered granite
Including 182.85 - 188.00 m	5.15	0.51	0.052	293	265	787	0.31	Transition Zone
195.35 - 229.00 m	33.65	0.49	0.048	157	85	328	0.29	CIZ/Altered Granite
Including 195.35 - 212.00 m	16.65	0.47	0.048	180	119	383	0.27	CIZ
Including 195.35 - 200.00 m	4.65	0.46	0.050	244	164	524	0.28	CIZ

DDH PL-017-15

Designed to test from the NNE, the upward extension of the LIZ intersected in hole PL-010-14.

Zone	Width (m)	Li_2O (%)	Cs_2O (%)	Ta_2O_5 (ppm)	Nb_2O_5 (ppm)	SnO_2 (ppm)	Rb_2O (%)	Geology
Lithium plus Tantalum and Rubidium enriched zones								
63.00 - 66.80 m	3.80	1.94	0.034	161	62	230	0.46	LIZ
144.75 - 159.00 m	14.25	2.17	0.034	58	28	63	0.12	LIZ/Altered Granite
Including 144.75 - 156.00 m	11.25	2.66	0.041	72	33	77	0.13	LIZ
173.30 - 194.60 m	21.30	1.60	0.095	97	28	79	0.41	LIZ
Including 173.30 - 188.60 m	15.30	2.12	0.096	102	29	85	0.30	LIZ
Rubidium plus Tantalum and Tin enriched zone								
202.10 - 238.70 m	36.60	0.51	0.060	88	40	123	0.21	WZ/Granite/Aplite
Including 233.65 - 238.70 m	5.05	0.63	0.051	203	88	364	0.30	WZ/Aplite

DDH PL-018-15

Designed to test from the NNE, the continuity of the LIZ above hole PL-13-003 and the UIZ 50m below. (Scissored PL-012-14; DDH-03 is 25-30m away to the ESE)

Zone	Width (m)	Li_2O (%)	Cs_2O (%)	Ta_2O_5 (ppm)	Nb_2O_5 (ppm)	SnO_2 (ppm)	Rb_2O (%)	Geology
Lithium plus Tantalum and Rubidium enriched zones								
46.60 - 60.20 m	13.60	1.60	0.014	107	65	70	0.29	LIZ
77.60 - 93.40 m	15.80	0.54	0.022	162	88	85	0.26	Aplite/LIZ
100.55 - 122.00 m	21.45	0.75	0.025	80	57	115	0.21	Aplite/LIZ
Rubidium plus Tantalum and Tin enriched zone								
137.65 - 143.85 m	6.20	0.34	0.056	136	89	339	0.27	WZ/CIZ
160.75 - 168.15 m	7.40	0.22	0.027	144	98	196	0.11	Aplite

DDH PL-019-15

Designed to test from the south, the upward extension of the LIZ intersected in hole PL-010-14 from the south.

Zone	Width (m)	Li_2O (%)	Cs_2O (%)	Ta_2O_5 (ppm)	Nb_2O_5 (ppm)	SnO_2 (ppm)	Rb_2O (%)	Geology
Lithium plus Tantalum, Tin and Rubidium enriched zones								
45.90 - 52.35 m	6.45	1.99	0.044	204	88	514	0.30	LIZ
103.15 - 173.70 m	70.55	2.25	0.035	77	54	131	0.33	LIZ
Including 123.00 - 134.00 m	11.00	3.03	0.043	58	40	89	0.31	LIZ/UIZ
Including 153.00 - 170.00 m	17.00	2.47	0.017	73	57	94	0.25	LIZ

DDH PL-020-15	Targeting from the SSW, 30m vertically below channel 18 and to test the depth extent of the granite/LIZ to the NE of channels 18 and 19.							
Zone	**Width (m)**	**Li_2O (%)**	**Cs_2O (%)**	**Ta_2O_5 (ppm)**	**Nb_2O_5 (ppm)**	**SnO_2 (ppm)**	**Rb_2O (%)**	**Geology**
Rubidium plus Tantalum, Cesium and Lithium enriched zones								
11.60 - 44.20 m	32.60	1.35	0.079	75	30	118	0.58	CIZ/LIZ/UIZ
Including 11.60 - 36.00 m	24.40	0.60	0.083	70	25	114	0.69	WZ/CIZ/LIZ
Including 36.00 - 44.20 m	8.20	3.59	0.067	91	43	132	0.24	UIZ
Lithium plus Tantalum and Rubidium enriched zones								
79.50 - 145.55 m	66.05	2.02	0.045	103	61	121	0.30	LIZ/UIZ
Including 80.05 - 85.90 m	5.85	4.15	0.050	48	21	65	0.10	UIZ

DDH PL-021-15	Designed to test from the NNE, the continuity of the LIZ above hole PL-011-14 and the UIZ below.							
Zone	**Width (m)**	**Li_2O (%)**	**Cs_2O (%)**	**Ta_2O_5 (ppm)**	**Nb_2O_5 (ppm)**	**SnO_2 (ppm)**	**Rb_2O (%)**	**Geology**
Lithium plus Tantalum and Rubidium enriched zones								
53.60 - 68.75 m	15.15	1.20	0.017	107	61	101	0.32	LIZ
86.20 - 121.20 m	35.00	1.24	0.024	94	78	100	0.26	LIZ/Aplite
128.90 - 149.00 m	20.10	0.97	0.040	129	79	92	0.15	Aplite
Including 131.00 - 146.00 m	15.00	1.20	0.024	150	97	81	0.13	Aplite

DDH PL-023-15	The vertical hole was designed to test the hypothesis that the main pegmatite body is plunging to the east under holes PL-014-14 and PL-022-15. The collar was placed in line with the main trend from scissored holes PL-017-15 and PL-019-15 and the tourmaline veinlets/fractures in PL-022-15							
Zone	**Width (m)**	**Li_2O (%)**	**Cs_2O (%)**	**Ta_2O_5 (ppm)**	**Nb_2O_5 (ppm)**	**SnO_2 (ppm)**	**Rb_2O (%)**	**Geology**
Rubidium plus Tantalum, Tin and Lithium enriched zones								
103.25 - 116.80 m	13.55	1.14	0.037	171	81	264	0.24	WZ/LIZ/CIZ
Including 103.80 - 109.25 m	5.45	1.14	0.028	233	94	150	0.21	WZ/CIZ
Including 111.80 - 116.80 m	5.00	1.47	0.030	167	93	499	0.26	WZ/CIZ
Lithium plus Rubidium enriched zones								
154.55 - 250.00 m	95.45	1.98	0.030	93	68	136	0.25	LIZ/UIZ/Aplite
Including 197.00 - 209.00 m	12.00	3.07	0.032	36	35	59	0.30	UIZ/LIZ
Including 157.00 - 180.00 m	23.00	2.94	0.031	79	54	106	0.23	UIZ/LIZ

DDH PL-024-15	After successfully intersecting pegmatite in hole PL-023-15, this hole was designed to step back and test the width and attitude of the pegmatite zone on both the footwall (metasediment side) and hangingwall (granit side).							
Zone	**Width (m)**	**Li_2O (%)**	**Cs_2O (%)**	**Ta_2O_5 (ppm)**	**Nb_2O_5 (ppm)**	**SnO_2 (ppm)**	**Rb_2O (%)**	**Geology**
Rubidium plus Cesium and Lithium enriched zones								
143.00 - 176.15 m	33.15	0.77	0.049	79	59	65	0.54	WZ/Granite/LIZ
Including 143.00 - 153.15 m	10.15	0.32	0.081	103	62	94	1.00	WZ
Including 159.45 - 176.15 m	16.70	1.22	0.036	72	56	59	0.39	LIZ/Granite
Lithium plus Rubidium, Tantalum and Cesium enriched zone								
264.00 - 304.00 m	40.00	2.59	0.041	87	71	84	0.34	LIZ/UIZ
Including 265.90 - 289.00 m	23.10	3.33	0.046	76	53	72	0.36	UIZ/LIZ
Including 265.90 - 275.00 m	9.10	3.65	0.037	58	43	39	0.30	UIZ/LIZ

10.3.1 SURVEYING

10.3.1.1 COLLAR SURVEY

Diamond drillhole collar locations were physically marked and flagged prior to drilling. HLM geologists using hand-held Garmin GPS units would locate and mark the site based on coordinates pre-determined from the detailed geological GIS compilation. Drill collar azimuth was determined by Silva compass and verified by line of sight (outcrop feature, channel cut, etc.).

HLM personnel verified the position and orientation of the drill once set-up was completed and prior to commencement of drilling.

Casing was left in all holes and an aluminum cap was screwed in place with the drillhole identification engraved on the top of each cap.

Two surveyors were flown from Red Lake to the drill camp at Pakeagama Lake while Phase IV drilling was in progress. They utilized a Total Station GPS system with the Precise Point Positioning (PPP) Service to establish sub-cm accuracy for survey points. In addition to the claim survey, they surveyed all diamond drillhole collars and new channels plus several of the 2012 and 2014 channels in order to re-align the survey points completed in 2013. The coordinates were measured from the TDC of the casing-ground surface contact.

10.3.1.2 DOWNHOLE SURVEY

Down-hole orientation surveys were completed on all holes using the Ranger Discovery Multi-shot instrument with reading taken every 6 m during Phase III, and every 15 m during Phase IV.

The instrument and the operation were provided by Chenier Drilling. Depth, azimuth (magnetic north), inclination, temperature, and magnetic field strength were recorded digitally at each station.

10.3.2 CORE LOGGING PROCEDURE

The following is a summary of the HLM logging procedure.

- → Sample security and chain of custody started with the removal of core from the core tube and boxing of drill core at the drill site.
- → The boxed core remained under the custody of the drill contractor until it was transported from the drill to the secure on-site Core Shack facility by either the drill contractor or one of the HLM's designated personnel.
- → At the on-site Core Shack, core boxes were opened and inspected to ensure correct boxing and labeling of the core by the drill contractor.
- → The drill core was geologically logged, photographed and then marked and tagged for sampling and splitting.
- → Each core sample was assigned a tag with a unique identifying number. Sample lengths were typically one metre, but could be less depending on zone mineralogy and boundaries.
- → The core was stored securely until moved into the Core Shack for processing.

10.3.3 SAMPLING APPROACH

The following is a summary of the HLM sampling procedure.

- The core was then re-closed on site and shipped to the company's off-site core splitting facility in Val Caron, Ontario during Phase III. During Phase IV, the drill core was cut and samples stored on site in a locked sea-container until ready to be shipped to the laboratory.
- Sample lengths were typically one metre, but would vary somewhat depending on zone mineralogy and contacts.
- Core marked for splitting was sawn using a diamond core saw with a mounted jig to assure the core was cut lengthwise into equal halves.
- Half of the cut core was placed in clean individual plastic bags with the appropriate sample tag.
- QA/QC samples were inserted into the sample stream at prescribed intervals. Full description of the QA/QC program is provided in Section 11.0.
- The samples were then placed in rice bags for shipment to Actlab Laboratories' facility (Phase III) in Sudbury, Ontario or AGAT Laboratories' Facility (Phase IV) for sample preparation prior to completing multi-element analysis at Actlabs in Ancaster, Ontario (Phase III) or AGAT in Mississauga, Ontario (Phase IV).
- The remaining half of the core was retained and incorporated into HLM's secure, off-site core library.

10.4 QP'S OPINION

It is WSP's opinion that the drilling and logging procedures put in place by HLM meet acceptable industry standards and that the information can be used for geological and resource modeling

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

11.1 2013 SAMPLE PREPARATION

All channel samples were shipped to Thunder Bay, Ontario. In Thunder Bay, sample blanks and standards were inserted into the sample stream by HLM personnel and then delivered to the Actlabs facility in Thunder Bay for analysis. Actlabs is an ISO (ISO/IEC) 17025 accredited facility and includes CAN-P-1579 (Mineral Analysis).

All diamond drill core samples were shipped from HLM's Val Caron site to ACME Labs in Vancouver, BC. The Vancouver facility for ACME is an ISO 9001:2008 certified.

Table 11.1 summarizes the steps completed in the sample preparation of the channel and diamond drill core samples. At no time was an employee of HLM involved with the preparation of the samples.

Table 11.1 2013 Sample Preparation Procedure - ACME

Sample Preparation	ACME Channel Samples	ACME Drill Core Samples
Receiving	Samples were received, sorted in order, dried	Samples were received, sorted in order, dried
Crushing and pulverizing	Crush remainder of sample to >90% -2mm, pulverize (hardened steel) 250 g to >95% 105 µm.	Crush remainder of sample to >80% -2mm, pulverize (ceramic) 250 g to >85% 75 µm
Cleaning equipment	Cleaner sand was used between each sample.	Cleaner sand was used between each sample
Sample Prep Code	RX1-Terminator	R200-250

11.2 2014 SAMPLE PREPARATION

All 2014 samples were shipped from HLM's Val Caron site to ACME Labs in Val d'Or, Quebec for preparation. The sample pulps were then sent to ACME's Vancouver facility for Analysis. Table 11.2 summarizes the steps completed in the sample preparation of the channel and diamond drill core samples. At no time was an employee of HLM involved with the preparation of the samples.

Table 11.2 2014 Sample Preparation Procedure - ACME

Sample Preparation	ACME 2014 Drill Core and Channel Samples	Code
Receiving	Samples were received, sorted in order, dried and stage-crushed to 1/2".	CRUPR
Riffle split	Riffle split 1 kg and save.	SPTRF
Crushing and pulverizing	Crush remainder of sample to >80% -2mm, pulverize (ceramic) 250 g to >85% 75 µm.	PLU-CB
Cleaning equipment	Extra wash with glass between each sample in pulverizer.	PULSW

11.3 2015 SAMPLE PREPARATION

All samples from the 2015 winter Phase III drill program and production hole samples for the bulk sampling test were shipped from HLM's Val Caron site to Activation Laboratories (Actlabs) facility in Sudbury and Thunder Bay, respectively, for preparation. The sample pulps were then sent to Actlab's Ancaster, Ontario facility for analysis. Samples from the summer Phase IV drill program and the channel sampling were delivered to the AGAT facility in Thunder Bay, Ontario. The sample pulps were then sent to AGAT's facility in Mississauga, Ontario. Table 11.3 summarizes the steps completed in the sample preparation of the diamond drill core samples. At no time was an employee of HLM involved with the preparation of the samples.

Table 11.3 Sample Preparation Procedure – Actlabs and AGAT

Process	Actlabs 2015 Winter Program	AGAT 2015 Summer Program
Receiving	Samples were received, sorted in order, dried and crushed to -3 mesh (1/4 inch) and if greater than 2 kg, a 1kg sample is riffle split and saved.	Samples were received, sorted in order, dried
Crushing and pulverizing	The remainder of the sample is crushed to 80% -10 mesh (2 mm), riffle split and pulverize (mild steel) a 250 g sample to 95% -200 mesh (75µm).	Samples are crushed to 75% -10 mesh (2 mm) and split to 250g. Samples are pulverized to 85% -200 mesh (75µm). After drying sample are shaken on an 80 mesh sieve with the plus fraction stored and the minus fraction sent to the laboratory for analysis.
Cleaning equipment	Actlabs uses white lightning SiO_2 under saturated (no free quartz) material as a cleaner sand between every pulverized sample	All equipment is cleaned using quartz and air from a compressed air source

11.4 2013 ANALYTICAL PROCEDURE

All samples were assayed by an ISO accredited laboratory. Sample blanks along with tantalum, lithium, rubidium and cesium certified reference material were routinely inserted into the sample stream in accordance with industry recommended practices. Field duplicate samples were also taken in accordance with industry recommended practices.

Table 11.4 summarizes the analytical methods used on the channel and diamond drill core samples. The detection limit for the four elements are summarized in Table 11.5

At no time was an employee of HLM involved in the analytical process.

Table 11.4 2013 Analytical Methodology

Analytical Method	Actlabs Channel Samples	ACME Drill Core Samples
ICP-ES with $LiBO_2$ / $Li_2B_4O_7$ flux	**Code 8**: Al_2O_3, Be, C, CaO, Fe_2O_3, K_2O, LOI, MgO, MnO, Na_2O, P_2O_5, S, Sc, SiO_2, TiO_2, V, Y, Zr	**4A**: Al_2O_3, C, CaO, Cr_2O_3, Fe_2O_3, K_2O, MgO, MnO, Na_2O, P_2O_5, S, Sc, SiO_2, TiO_2, LOI
ICP-MS with $LiBO_2$ / $Li_2B_4O_7$ flux	**Code 8**: Ag, As, Ba, Bi, Ce, Co, Cr, **Cs**, Cu, Dy, Er, Eu, Ga, Gd, Ge, Hf, Ho, In, La, Lu, Mo, Nb, Nd, Ni, Pb, Pr, **Rb**, Sb, Sm, Sn, **Ta**, Tb, Th, Tl, Tm, U, Yb, W, Zn	**4B**: Ba, Be, Co, Ce, Cs, Dy, Eu, Er, Ga, Gd, Hf, Ho, La, Lu, Nb, Nd, Pr, Rb, Sm, Sn, Sr, Ta, Tb, Th, Tl, Tm, U, V, W, Y, Yb, Zn, Zr
ICP-ES with Na_2O_2 fusion	**Code 8:** Al, As, Be, Ca, Co, Cr, Cu, Fe, K, **Li**, Mg, MgO, Mn, Ni, Pb, S, Si, Ti, W, Zn	**7PF**: B and **Li**
ICP-MS with Na_2O_2 fusion	**Code 8**: Cs (>1000 ppm) (Code -8)	
XRF with $LiBO_2$ fusion		**8X: Cs, Rb,** and **Ta**

Note: Elements used in resource calculation in **bold**

Table 11.5 Analytical Detection Limits

	Channel Sampling		Diamond Drill Core	
Element	**Detection Limit**	**Analytical Method**	**Detection Limit**	**Analytical Method**
Cs	0.5 ppm	ICP-MS	0.01%	XRF
Rb	2.0 ppm	ICP-MS	0.01%	XRF
Ta	0.1 ppm	ICP-MS	10.0 ppm	XRF
Li	0.00%	ICP-OES	0.01%	ICP-MS

11.5 2014 ANALYTICAL PROCEDURE

The ACME Vancouver Facility is an ISO 9001:2008 certified. Sample blanks along with tantalum, lithium, rubidium, and cesium certified reference material were routinely inserted into the sample stream in accordance with industry recommended practices. Field duplicate samples were also taken in accordance with industry recommended practices.

Table 11.6 summarizes the analytical methods used on the channel and diamond drill core samples. The detection limit for the four elements is summarized in Table 11.7. At no time was an employee of HLM involved in the analytical process.

Table 11.6 2014 Analytical Methodology - ACME

Analytical Method	ACME: 2014 Drill Core and Channel Samples	Code
ICP Finish; Lithium metaborate / tetraborate fusion	Standard suite Major Oxides plus Refractory and REE: Al_2O_3, C, CaO, Cr_2O_3, Fe_2O_3, K_2O, MgO, MnO, Na_2O, P_2O_5, S, Sc, SiO_2, TiO_2, LOI, Ba, Be, Co, Ce, Cs, Dy, Eu, Er, Ga, Gd, Hf, Ho, La, Lu Nb, Nd, Pr, Rb, Sm, Sn, Sr, Ta, Tb, Th, Tl, Tm, U, V, W, Y, Yb, Zn, Zr	LF200
ICPES Finish; Peroxide Fusion	Ore grade **Li** and B	PF370
XRF Finish; Lithium Metaborate/ Tetraborate Fusion	**Cs**, **Rb** and **Ta**	LF700
Fusion; Specific Ion Electrode	F	GC840

Note: Elements used in resource calculation in **bold.**

Table 11.7 2014 Analytical Detection Limits - ACME

Element	Detection Limit	Analytical Method
Cs	0.01%	XRF
Rb	0.01%	XRF
Ta	10.0 ppm	XRF
Li	0.01%	ICP-MS

11.6 2015 ANALYTICAL PROCEDURE

Both the Actlabs and AGAT Facilities are ISO 9001:2008 certified. Sample blanks along with tantalum, lithium, rubidium, and cesium certified reference material were routinely inserted into the sample stream in accordance with industry recommended practices. Field duplicate samples were also taken in accordance with industry recommended practices.

Table 11.8 summarizes the analytical methods used on the channel and diamond drill core samples. The detection limit for the four elements is summarized in Table 11.9. At no time was an employee of HLM involved in the analytical process.

Table 11.8 2015 Analytical Methodology – Actlabs and AGAT

Analytical Method	Actlabs: 2015 Winter Drill Core and Production Drill Samples	Code
ICP Finish; Lithium metaborate / tetraborate fusion	Standard suite Major Oxides plus Refractory and REE: Al_2O_3, CaO, Fe_2O_3, K_2O, MgO, MnO, Na_2O, P_2O_5, SiO_2, TiO_2, LOI, Ag, As, Ba, Be, Bi, Ce, Co, Cr, Cs, Cu, Dy, Er, Eu, Ga, Gd, Hf, Ho, In, La, Lu, Mo, Nb, Nd, Ni, Pb, Pr, Rb, Sb, Sc, Sm, Sn, Sr, Ta, Tb, Th, Tl, Tm, U, V, W, Y, Yb, Zn, Zr	8 REE
ICP Finish; Peroxide Fusion	Ore grade Li	8 Peroxide-Li
Fusion; Specific Ion Electrode	F	8-F
Analytical Method	**AGAT2015 Drill Core and Channel Samples**	**Code**
ICP-OES/ICP-MS Finish; Sodium Peroxide fusion	Cs, Fe, K, Li, Nb, Rb, Sn and Ta	201-378
ICP-OES Finish; Lithium Borate Fusion	Na2O and P2O5	201-076
Fusion; Specific Ion Electrode	F	201-044
LECO	Total C and Total S	201-043

Table 11.9 2015 Analytical Detection Limits - Actlabs and AGAT

Element	Actlabs Detection Limits and Finish	AGAT Detection Limits and Finish
Cs	0.5 ppm by ICP-MS	0.1 ppm by ICP-MS
Rb	2 ppm by ICP-MS	0.2 ppm by ICP-MS
Ta	0.1 ppm by ICP-MS	0.5 ppm by ICP-MS
Li	0.001% by ICP-OES	10 ppm by ICP-OES

11.7 2014 QUALITY ASSURANCE / QUALITY CONTROL (QA/QC)

The 2013 drill data and all the historic channel samples were reviewed in the previous technical report and deemed acceptable.

The 2014 QA/QC data set is comprised of, 90 sample blanks, 70 duplicates, and 122 standards.

11.7.1.1 BLANKS

For both the channel sampling and diamond drill programs, blank samples were inserted into the sample stream at an approximate interval of every 14 to 22 samples.

Lump carbonate purchased from Canadian Tire Corp. was used as a blank. A failure of a blank is deemed to be 3 times the detection limit. Figures 11.1 to 11.4 display the results of the blank analysis.

The results are in the acceptable range. Blank # 74 shows an issue has taken place with failure for lithium, tantalum and rubidium and elevated cesium. There also appears to be a carry over on to Blank #75. This should be investigated with the laboratory.

Figure 11.1 2014 Cesium Blank Chart

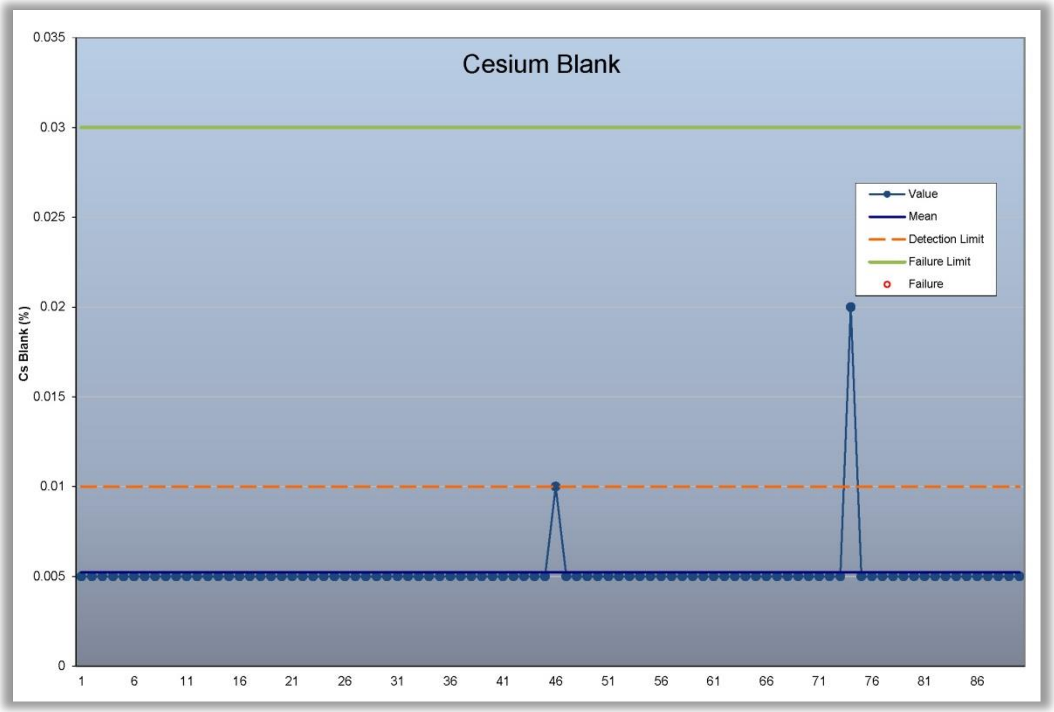


Figure 11.2 2014 Rubidium Blank Chart

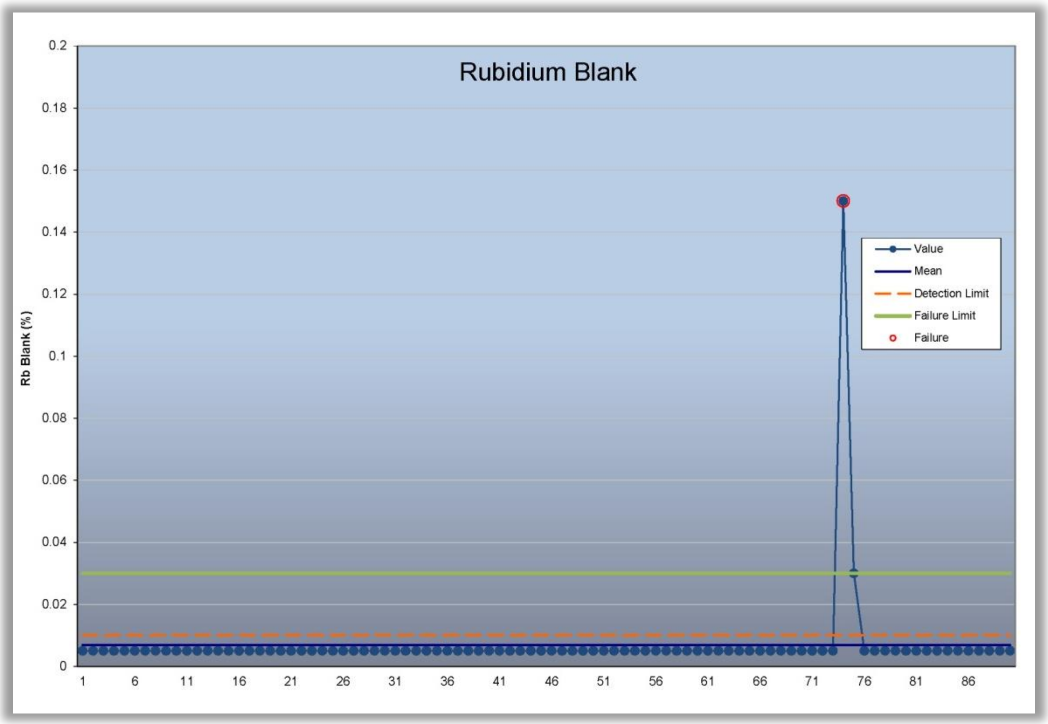


Figure 11.3 2014 Tantalum Blank Chart

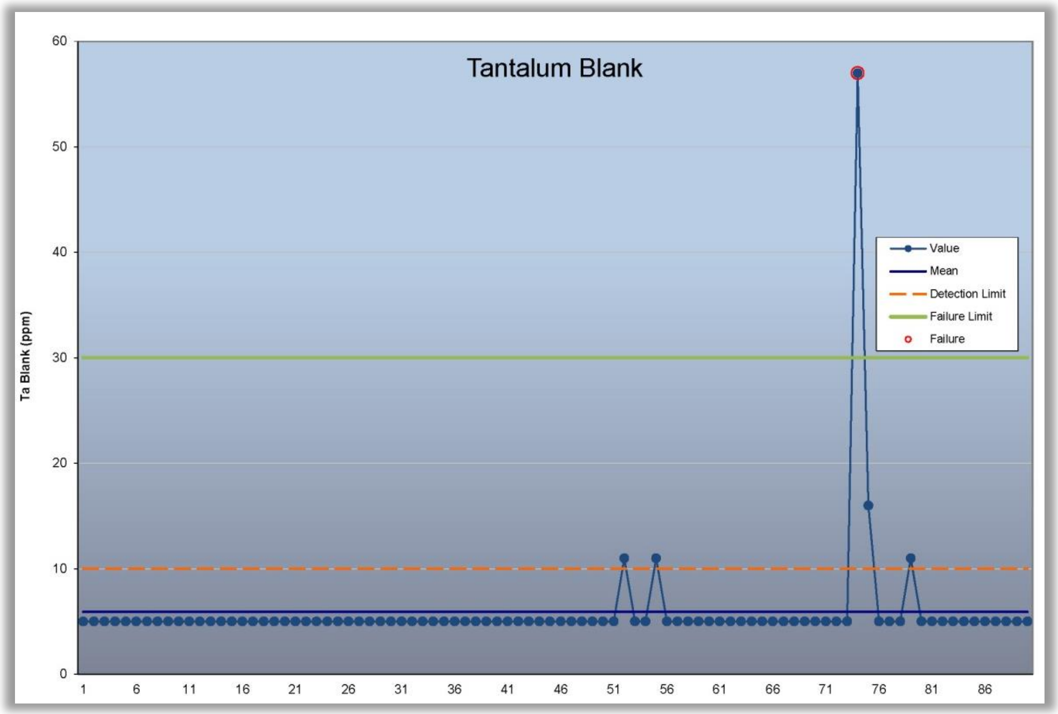
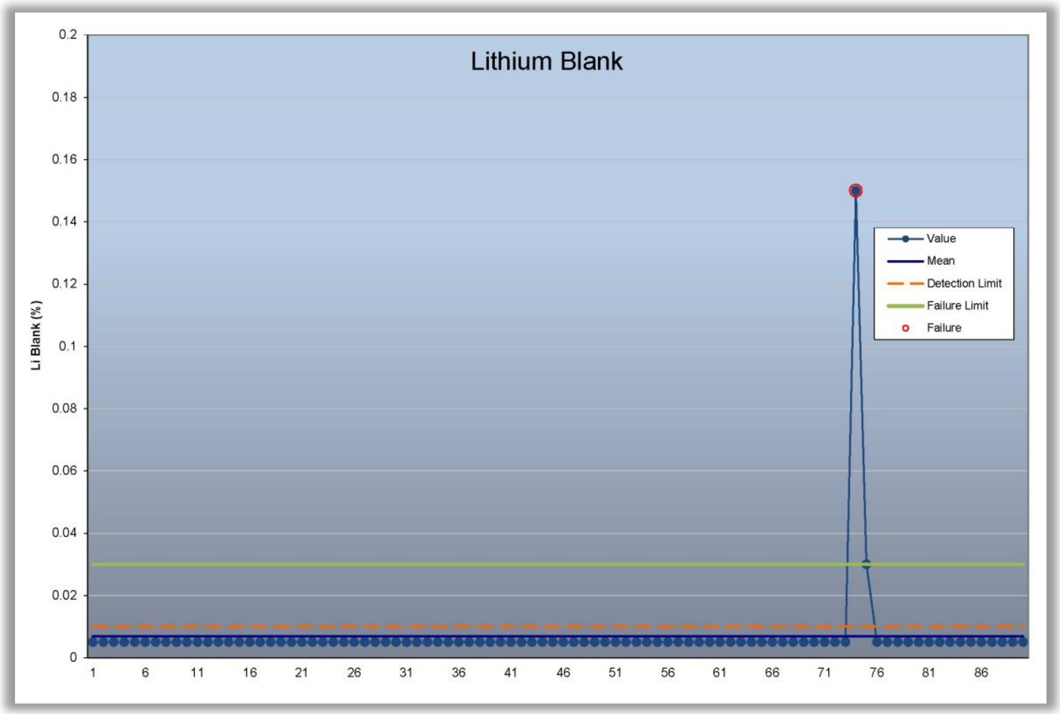


Figure 11.4 2014 Lithium Blank Chart



11.7.1.2 DUPLICATES

During the diamond drill program, 70 field duplicate samples were taken by quartering the drill core for the selected samples. The duplicate samples were inserted into the sample stream with a unique sample number.

Figures 11.5 to 11.8 display the results of the duplicate analysis.

Figure 11.5 2014 Cesium Duplicate Chart

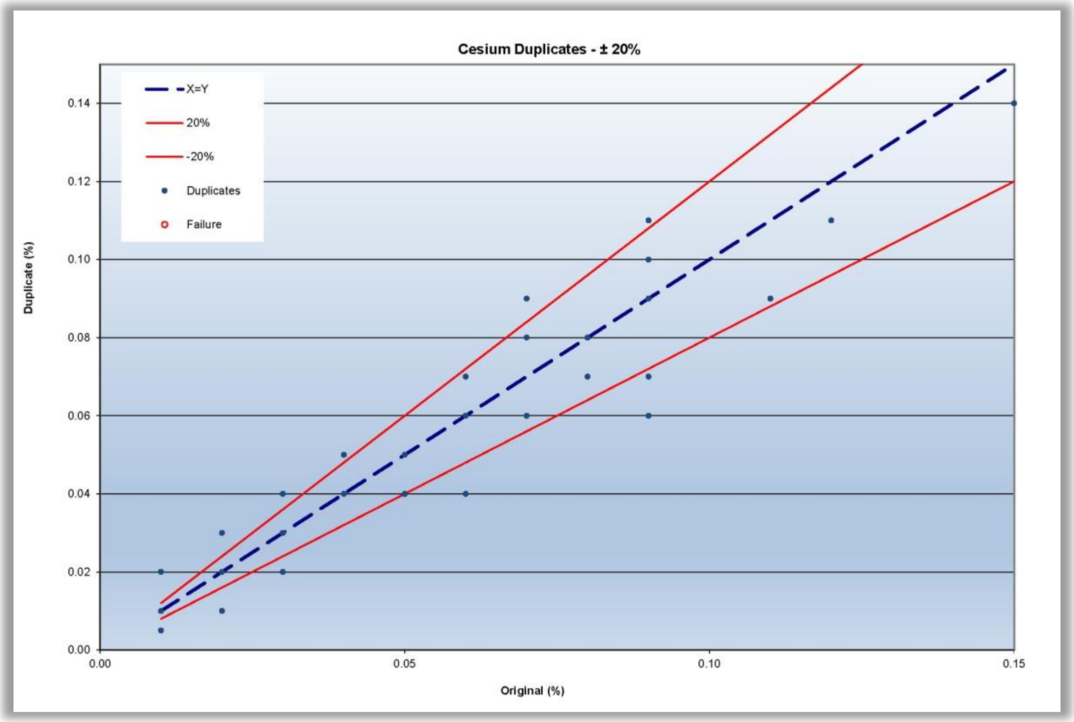


Figure 11.6 2014 Rubidium Duplicate Chart

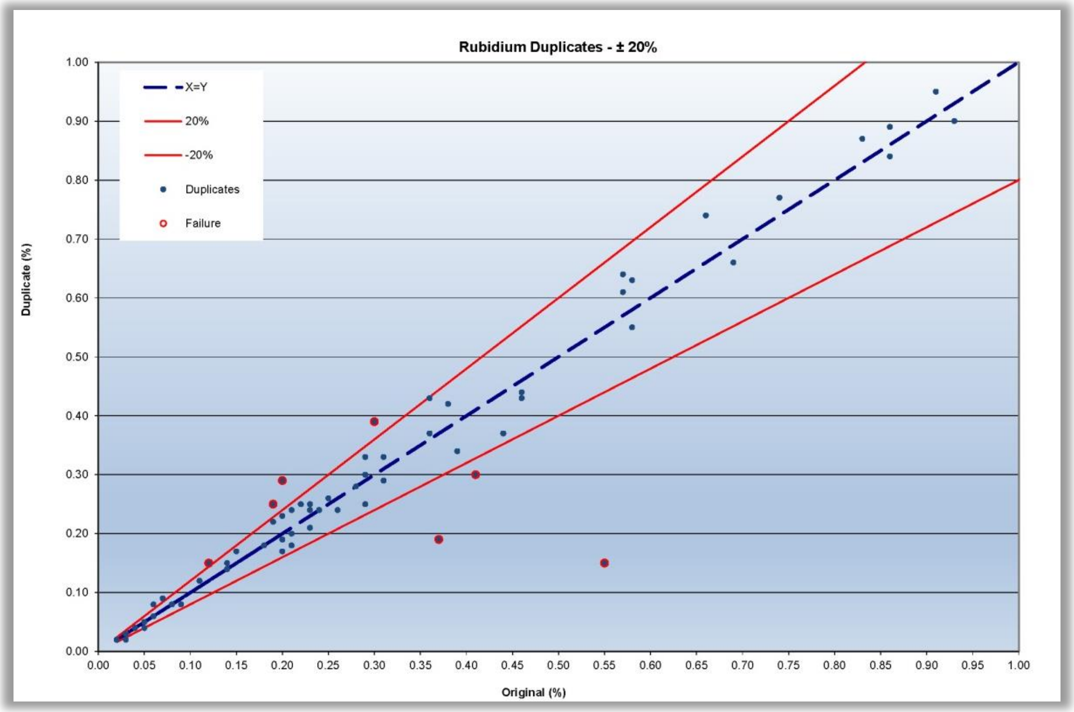


Figure 11.7 2014 Tantalum Duplicate Chart

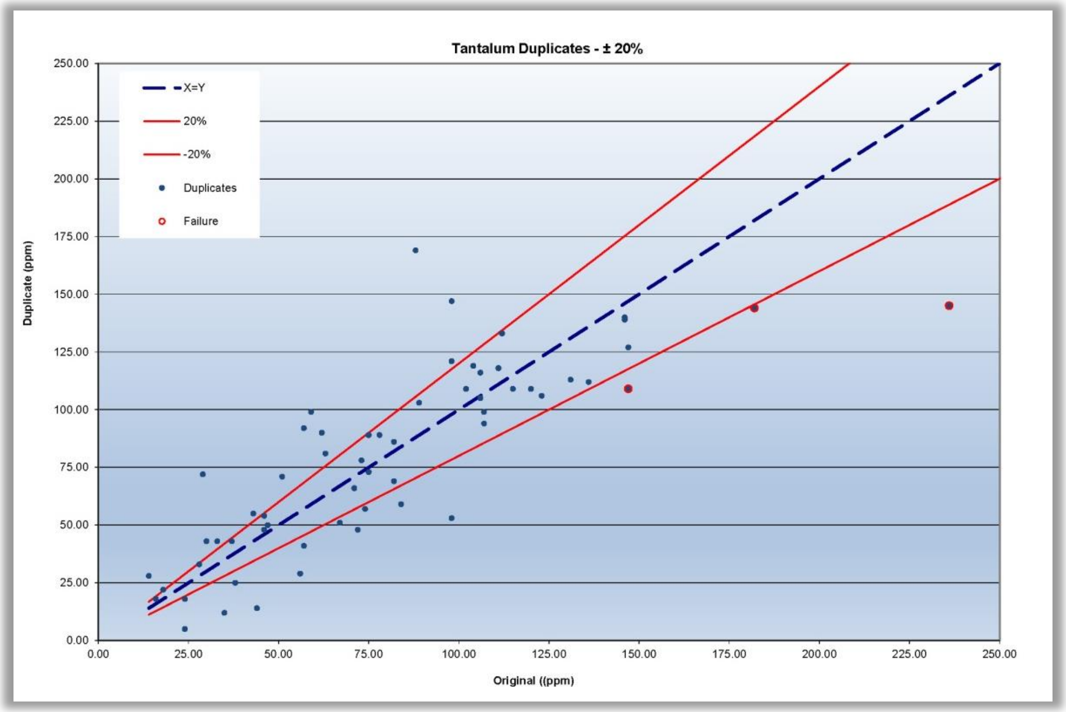
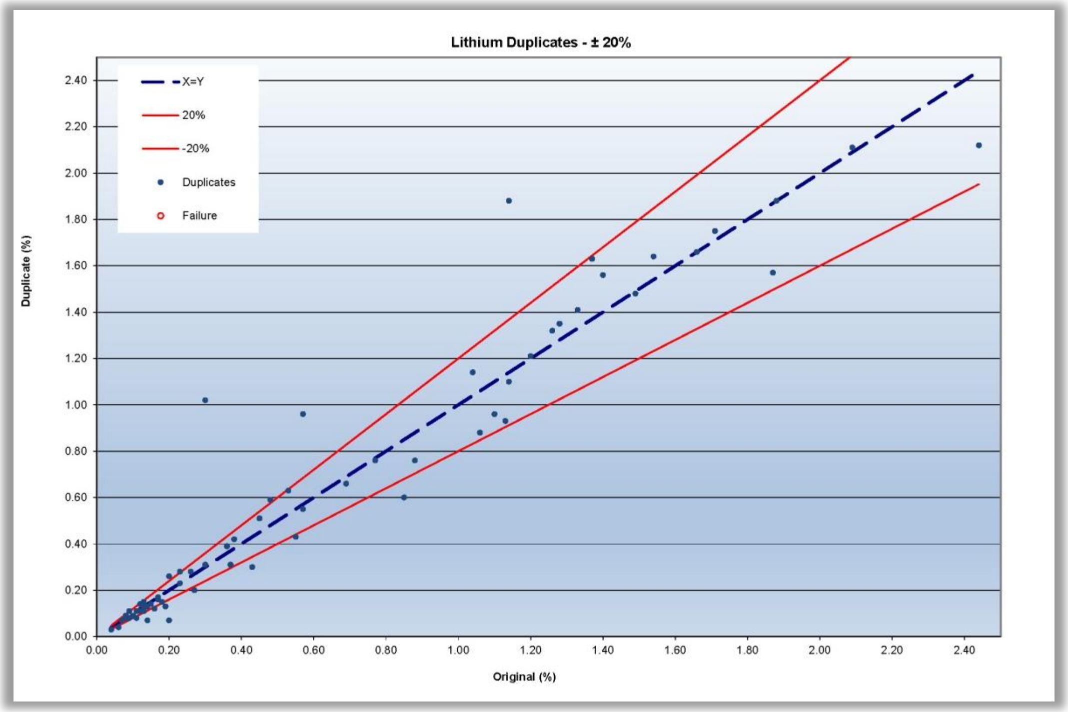


Figure 11.8 2014 Lithium Duplicate Chart



11.7.1.3 STANDARDS

Prior to the program, a set of in-house lithium-rubidium-cesium (LRC) standards was developed at Actlabs in Ancaster, Ontario, using material from the Tanco pegmatite. This material was deemed appropriate as both pegmatites have very similar mineralogy with respect to both the economic mineralogy and the matrix. The materials were blended for Li_2O and Cs_2O composition with target compositions for Li and Cs as listed in Table 11.10. No blending was done for the rubidium. The rubidium value is the inherent rubidium from the pollucite (Cs source) and the K-feldspar in the matrix. Appendix A contains all the control charts.

Tantalum certified reference material (TAN-01) was purchased from Canmet in Ottawa, Ontario and used during the 2013 drilling program only. The TAN-01 standard is approximately 10 times greater than the average Ta concentration of the pegmatite so an in-house tantalum standard (PLTA-01) was developed and used during the 2014 drilling and channel sampling. The tantalum value for the PLTA-01 reference material is found in Table 11.10.

Table 11.10 Composition of Standards

CRM Designation	Target Composition			
	Li_2O%	Cs_2O%	Rb_2O%	Ta_2O_5%
LRC-1	0.86	0.66	0.80	-
LRC-2	2.38	2.23	0.60	-
LRC-3	3.39	4.34	0.48	-
LRC-4	3.36	8.49	0.45	-
PLTA-01	-	-	0.43	0.02

11.8 2015 QUALITY ASSURANCE / QUALITY CONTROL (QA/QC)

The 2015 QA/QC data set is comprised of 57 sample blanks, and 80 standards.

11.8.1.1 BLANKS

For both the channel sampling and diamond drill programs, blank samples were inserted into the sample stream at an approximate interval of every 14 to 22 samples.

Lump carbonate to be used as blank material was purchased from Home Hardware in Val Caron for the Phase III program, and from Canadian Tire Corp. in Dryden for the Phase IV program. A failure of a blank is deemed to be 3 times the detection limit. Figures 11.9 to 11.12 display the results of the blank analysis.

In all four elements there is a considerable amount of noise and failures. This can attributed to the variation in the material and the low detection limit being used in a high grade environment. The Phase IV program was completed at AGAT and shows greater amount of variation in the results. HLM has had discussions with AGAT on how to resolve the issues. Despite the number of failures, the values remain well below the threshold of material that could be reasonably extracted.

Figure 11.9 2015 Cesium Blank Chart

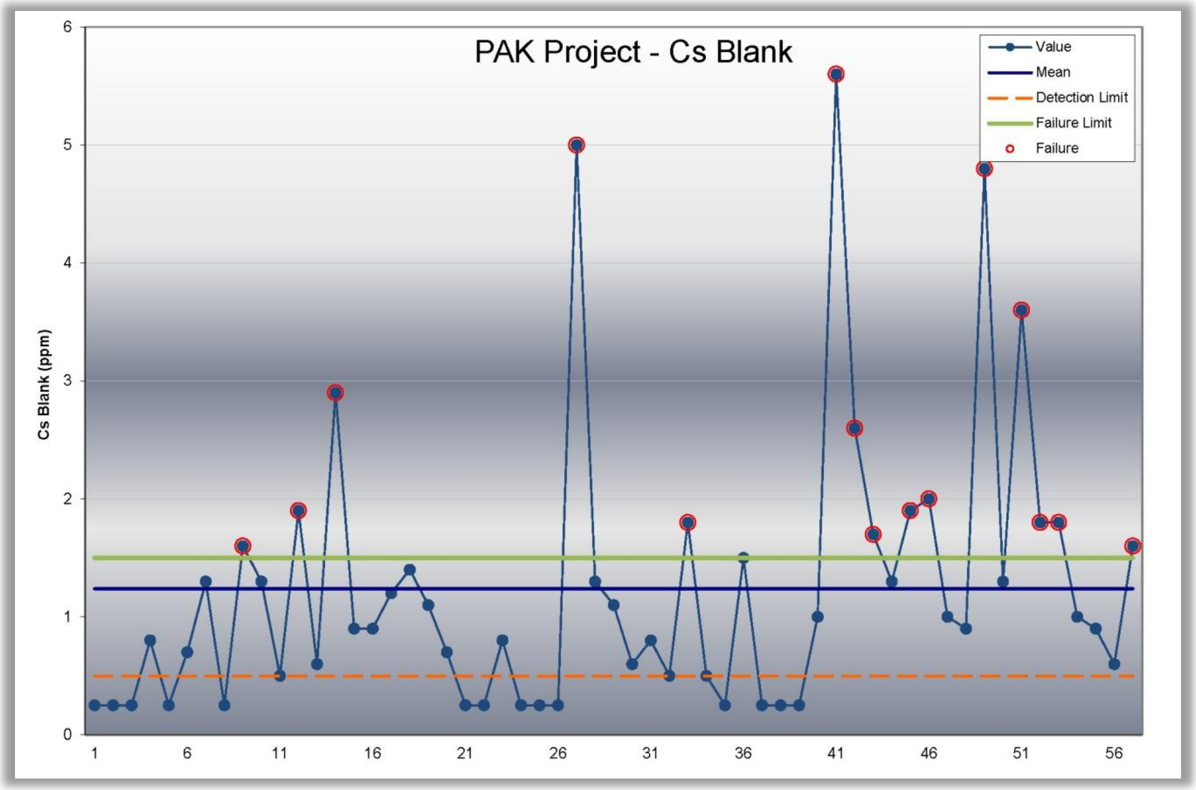


Figure 11.10 2015 Rubidium Blank Chart

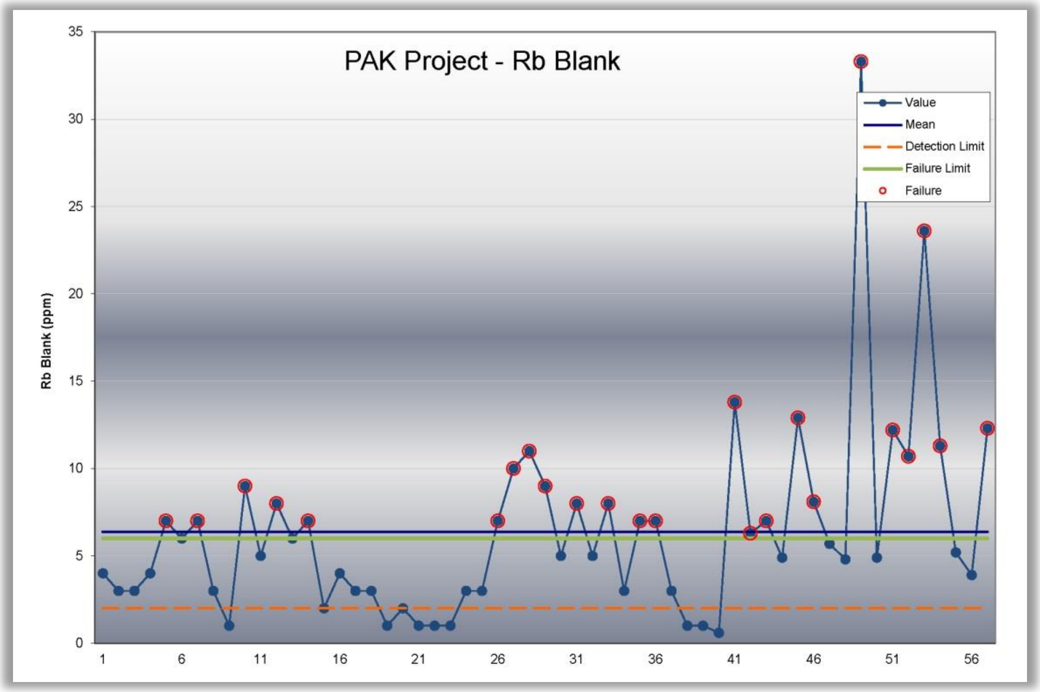


Figure 11.11 2015 Tantalum Blank Chart

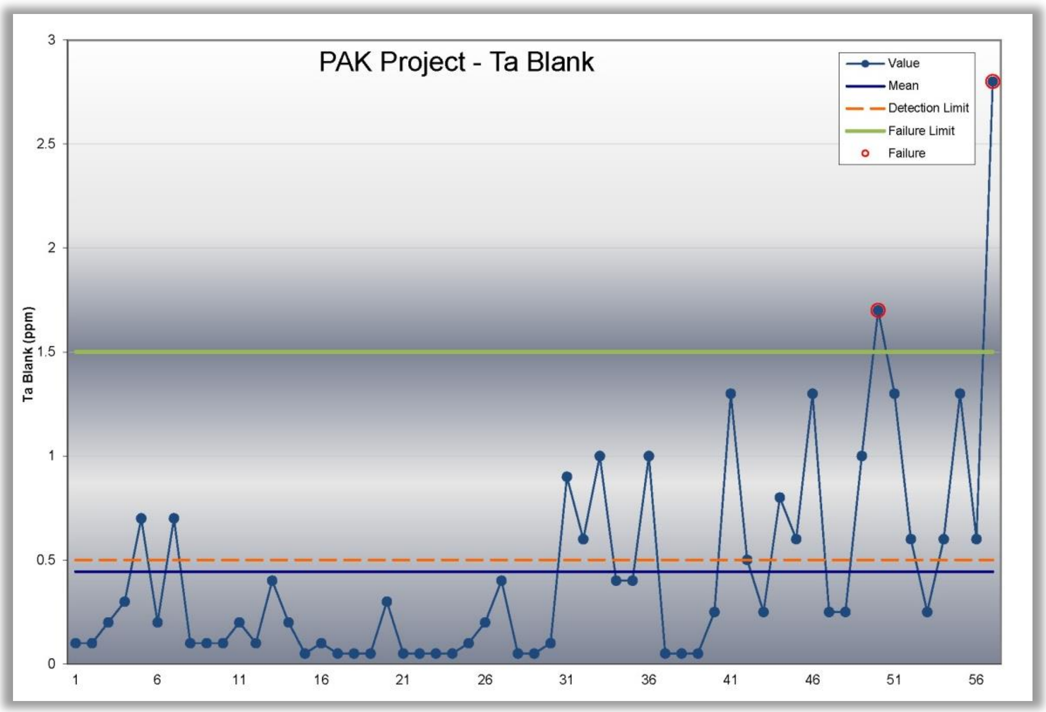
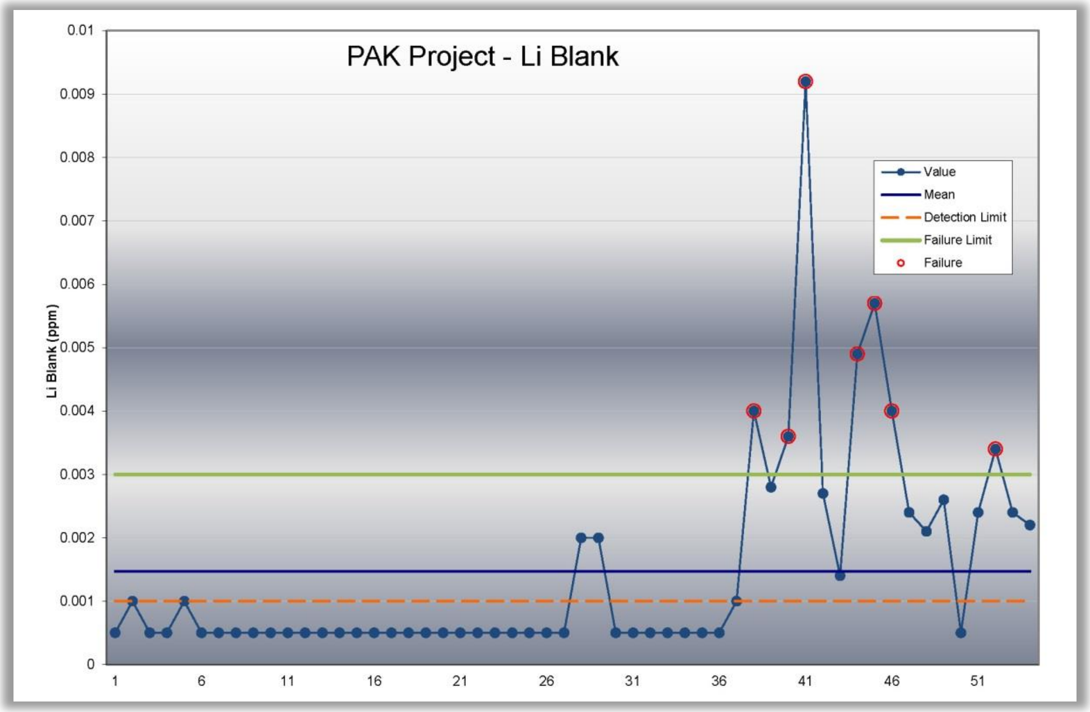


Figure 11.12 2015 Lithium Blank Chart



11.8.1.2 STANDARDS

Prior to the 2013 program, a set of in-house lithium-rubidium-cesium (LRC) standards was developed at Actlabs in Ancaster, Ontario, using material from the Tanco pegmatite. This material was deemed appropriate as both pegmatites have very similar mineralogy with respect to both the economic mineralogy and the matrix. The materials were blended for Li_2O and Cs_2O composition with target compositions for Li and Cs as listed in Table 11.11. No blending was done for the rubidium. The rubidium value is the inherent rubidium from the pollucite (Cs source) and the K-feldspar in the matrix. Appendix A contains all the control charts.

An in-house tantalum standard (PLTA-01) was developed and used during the 2015 drilling and channel sampling. The tantalum value for the PLTA-01 reference material is found in Table 11.11.

Table 11.11 Composition of Standards

CRM Designation	Target Composition			
	Li_2O%	Cs_2O%	Rb_2O%	Ta_2O_5%
LRC-1	0.86	0.66	0.80	-
LRC-2	2.38	2.23	0.60	-
LRC-3	3.39	4.34	0.48	-
LRC-4	3.36	8.49	0.45	-
PLTA-01	-	-	0.43	0.02

All elements with each standard performed within the acceptable parameters for the material. The same standards were used for both Phase III and Phase IV programs despite the fact that different laboratories were used.

The 2015 SRM control charts are found in Appendix A.

11.9 QP'S OPINION

It is WSP's opinion that the sample preparation and analytical procedures put in place by HLM meet acceptable industry standards and that the information can be used for geological and resource modeling.

WSP suggests that HLM work with the laboratory to select an analytical method that is better suited for a mine environment. At the current stage of the Project, HLM does not need an exploration geochemistry detection limit.

12 DATA VERIFICATION

12.1 SITE VISIT

Mr. Todd McCracken, P.Geo. visited the Property, on October 1 to 2, 2013 and again on July 13 to 14, 2015. Mr. McCracken examined the project setting, the bulk sample site, reviewed numerous drill collar sites, and channel samples.

Mr. McCracken also visited the HLM cutting facility and core storage in Val Caron on September 30, 2013; June 7, 2014; and again on June 20, 2015.

12.2 INDEPENDENT SAMPLING

WSP did not collect any independent samples from drill core or channel samples.

12.3 DATABASE VALIDATION

WSP validated 100% of the digital database against the drill logs and assay certificates. No errors were identified.

All assays in the database were converted to oxide values using the conversion available on the British Columbia's Ministry of Energy and Mines website (www.empr.gov.bc.ca). Table 12.1 lists the conversion factors used.

Table 12.1 Conversion Factors

Element	Conversion	Oxide
Cs	1.06	Cs_2O
Rb	1.094	Rb_2O
Ta	1.221	Ta_2O_5
Li	2.153	Li_2O

12.4 QP'S OPINION

WSP believes the sampling practices of HLM meets current industry standards. WSP also believes that the sample database provided by HLM and validated by WSP is suitable to support the resource estimation.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 ELECTRON MICROPROBE STUDY OF SPODUMENE FROM THE PAKEAGAMA LAKE PEGMATITE

13.1.1 SUMMARY

Low-iron lithium-rich ore is well suited to the glass and ceramics industry where it can lower production cost while providing thermo-mechanical and whitening properties. If the lithium-rich in situ material is relatively free of iron with low potassium and sodium content, it may be suitable as a commercial product with minimal processing required.

An independent study commissioned by HLM has demonstrated that the high-grade lithium Upper Intermediate Zone of the Pakeagama Lake Pegmatite has properties that make it suitable for the glass and ceramic industry.

An electron microprobe study to determine the inherent iron content of spodumene, which is the main lithium source in the Pakeagama Lake pegmatite, was performed at the Queen's Facility for Isotope Research at Queen's University, Kingston, Canada. The results of close to 980 analyses clearly determined the spodumene in the Upper Intermediate Zone contains <0.05 wt% Fe_2O_3. The spodumene in the Lower Intermediate Zone is also typically low-iron, however, the iron content is more variable and increases in proximity to the host metasediments, which contain iron formation and iron-rich minerals. Additionally, results show minimal replacement of Li by Na and K in the spodumene.

13.1.2 METHOD

In 2013, Dr. Steve Beyer, Post-Doctoral Fellow at the Queen's Facility for Isotope Research (QFIR) at Queen's University in Kingston, Ontario completed a mineral chemistry study of spodumene in petrographic samples from the Pakeagama Lake pegmatite using an electron microprobe.

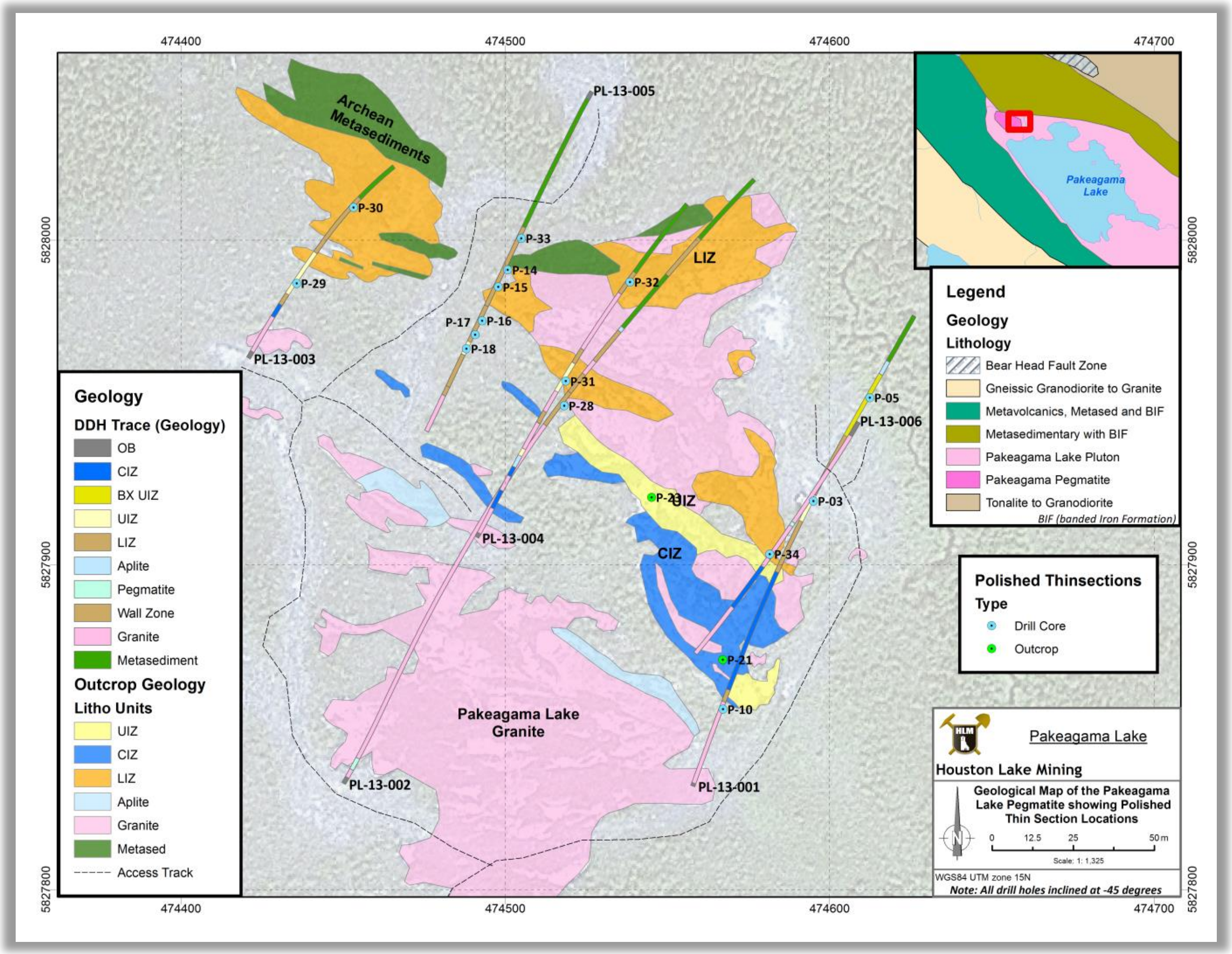
An in-depth study of spodumene mineral chemistry was undertaken at Queen's University using petrographic slides from the project and the electron microprobe at QFIR. The main objectives were to determine the iron content of spodumene from within the various geological units of the pegmatite with emphasis on the UIZ and to determine if elemental concentrations vary between units and within individual crystals.

An electron microprobe study of the lithium silicate mineral spodumene, $LiAlSi_2O_6$, was performed to determine the concentration of impurities within the mineral. Low-impurity spodumene concentrates are desired for ceramics and glass-making applications due to their superior thermo-mechanical and whitening properties. Impurities refer to element substitutions that occur in the crystal lattice of spodumene, such as Na+ or K+ substituting for Li+, or Fe_3+ substituting for Al_3+, the latter which affects the whitening properties. The primary objective of the study was to determine the concentrations of impurities, specifically iron, within spodumene at the Pakeagama Lake pegmatite using an electron microprobe. An advantage of this method is superior spatial resolution (micrometer-scale) and the use of iron-free abrasives for sample preparation.

Seventeen polished thin sections from drill core and outcrop samples from the Pakeagama Lake pegmatite, representing intervals containing high Li_2O grades in each of the six 2013 drill holes and two outcrop samples, were selected (Figure 13.1). They typically represent the Upper Intermediate Zone (UIZ) and Lower Intermediate Zone (LIZ) units of the pegmatite. An outcrop sample (P-21) of spodumene-bearing Central Intermediate Zone (CIZ), and one drill core sample of spodumene-bearing Pakeagama Lake granite (P-10 in DDH PL-13-001) were included in the study.

The polished thin sections were first observed using transmitted-light optical microscopy to characterize the habit of spodumene and to select areas for electron microprobe analysis. Typically 40 to 80 analyses were performed per polished thin section for a total of 978 analyses. The elemental concentrations of Si, Al, Fe, Mg, Mn, Ti, Ca, Na, and K in spodumene were determined using the electron microprobe by wavelength dispersive X-ray method.

Figure 13.1 Thin Section Location



13.1.3 RESULTS

Three distinct spodumene crystal habits were observed, which are coarse euhedral blades (Type-1), dissected blades with “jigsaw” grain boundaries (Type-2), and typically finer-grained, inclusion-rich crystals (Type-3).

Spodumene with the lowest Fe contents was contained within the UIZ unit at the Pakeagama Lake pegmatite. The majority of analyses in both outcrop samples and samples from DDHs PL13-003 and -004 were below the limit of detection for Fe_2O_3 (0.03 wt% Fe_2O_3). Spodumene in the UIZ units in DDHs PL13-001 and -005 contained slightly more Fe, with averages between 0.04 and 0.05 wt% Fe_2O_3, respectively. Spodumene with variable Fe contents commonly occurs in the LIZ unit. Low Fe contents (below detection) were present in LIZ spodumene in DDH PL13-002, with successively higher average wt% Fe_2O_3 values in DDHs PL13-006, -005, and -004, respectively. The highest average wt% Fe_2O_3 value in LIZ spodumene (~0.2 wt% Fe_2O_3) was from DDH PL13-003 within 2 metres of the contact with Fe-rich Archean metasedimentary rocks in Type 3 spodumene. Spodumene with the highest Fe contents (1.7 wt% Fe_2O_3) was from the Pakeagama Lake granite (Type-3 spodumene) within one metre of the contact with the pegmatite.

Significant Na+ contents in spodumene would represent the replacement of Li+, indicating a decrease the Li_2O content. Spodumene in the Pakeagama Lake pegmatite has relatively consistent and low Na concentrations averaging around 0.075 wt% Na_2O.

A diverse assemblage of accessory minerals was observed while viewing the polished thin sections in backscattered electron (BSE) mode, and identified using energy-dispersive spectrometer EDS. The mineral pollucite, was observed in the UIZ unit intersected in DDHs PL13-001 and -004, where it occurs as rounded blebs typically 10 to 20 µm in diameter and up to 100 µm. Manganese-bearing tantalite was observed in the LIZ unit of DDH PL13-003.

13.1.4 CONCLUSIONS

The majority of spodumene contained within the UIZ and LIZ units at the Pakeagama Lake pegmatite contains relatively small concentrations of Fe_2O_3 based on the results of electron microprobe analysis. Approximately 70% of the analyses, from both units are below 0.09 wt% Fe_2O_3. Spodumene in the LIZ unit displays widely varying Fe contents. A possible explanation for more variable Fe contents in the LIZ could be the proximity to Archean metasedimentary country rock. The LIZ is the only known pegmatite unit in contact with the metasediments, which are a significant source of Fe, containing abundant Fe-rich minerals such as chlorite, pyrite, pyrrhotite, and arsenopyrite. The Fe was apparently mobile during the crystallization of the Pakeagama Lake pegmatite, as the Fe content of spodumene increases with decreasing distance (typically within 30 metres) to the contact with the metasediments.

14 MINERAL RESOURCE ESTIMATES

WSP completed a resource estimation of the PAK Property. The effective date of the resource is March 4, 2016.

14.1 DATABASE

HLM maintains all borehole data in a Microsoft Access® relational database. Header, survey, assays, and lithology information are saved as individual tables in the database. The database information in CSV format was provided to WSP originally on December 17, 2015.

The database contains 24 boreholes, 67 rotary blastholes and 28 channels. There are a total of 2,401 assays records in the database, with 2,009 samples from the boreholes 195 samples from rotary blastholes and 197 samples from the channels. The channel data was reviewed and incorporated into the borehole data set as a form of boreholes. Table 14.1 summarizes the borehole and trench data within each geological unit.

The resource estimation was conducted using Surpac version 6.7.1.

Table 14.1 Database Summary

	Number of Boreholes (and intervals)	Length (m)
Project Total	119	5204.55
Channel samples	28	217.65
Rotary Blastholes	67	294.00
Diamond Drillholes	24	4692.90
Host Rock (hr)		
UIZ - Channel samples	64	372.15
UZI - Boreholes	8	653.08
CIZ - Channel samples	6	43.70
CIZ - Boreholes	25	367.95
LIZ - Channel samples	10	72.90
LIZ - Boreholes	20	927.78
APLITE - Channel samples	1	5.40
APLITE - Boreholes	15	155.12
BX UIZ - Boreholes	1	28.05
GRANITE - Channel samples	3	2.01
GRANITE - Boreholes	26	2195.22
METASSEDIMENT - Boreholes	17	640.43
OVB - Boreholes	24	101.35
PEG - Boreholes	2	10.65
TZ - Boreholes	1	2.85
WZ - Channel samples	2	0.70
WZ-Boreholes	3	19.75

14.2 SPECIFIC GRAVITY

HLM collected a total of 1,541 samples from the 14 diamond drillholes for specific gravity (SG) measurements.

HLM used the following procedure to determine the average SG for each the mineral domains:

- Sample selected for SG measurement;
- The Borehole Id, row number, From, To and rock type were entered into a spreadsheet;
- The sample was weighted dry on the scale;
- The sample was then weighted submerged saturated in tab water at a constant 22 °C;
- The specific gravity is determined using the following equation:

$$SG = \frac{Wd}{(Wd - Ws)/CF}$$

Wd = Dry Weight, Ws = Submerged Weight, CF = correction factor for water temperature

Figure 14.1 illustrates the SG measuring set-up employed by HLM during this round of SG data collection.

Table 14.2 summarizes the results of the SG measurements.

Figure 14.1 Specific Gravity Station

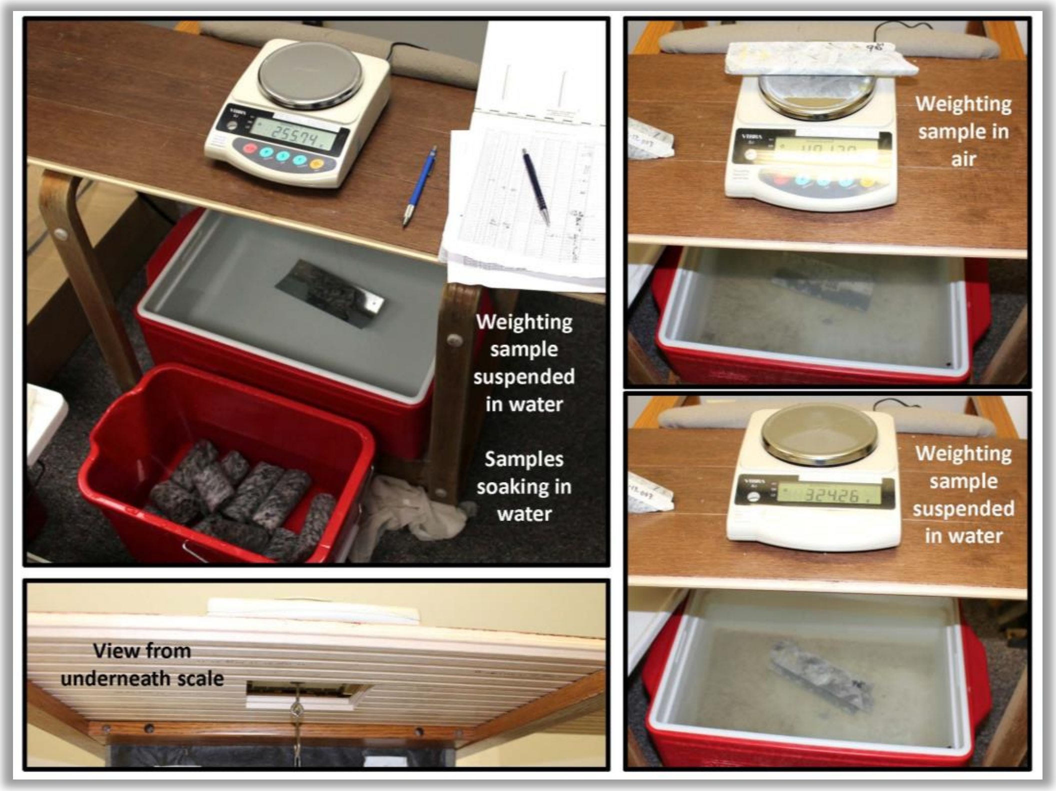


Table 14.2 PAK Specific Gravity Summary

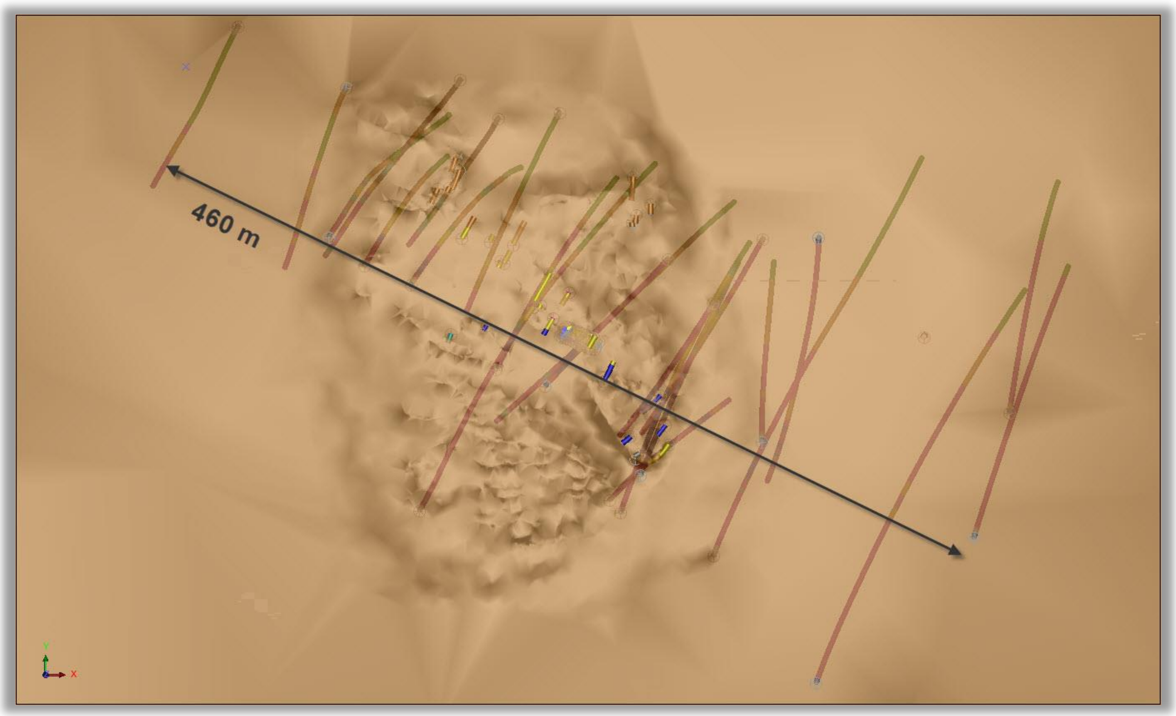
Lithology	No. of Samples	Avg Rock Density
CIZ	148	2.66
UIZ	76	2.86
LIZ	218	2.75
Aplite	144	2.69
Granite	570	2.64
Metasediment	271	2.95

14.3 TOPOGRAPHIC DATA

Topographic data was generated as a Digital Terrain Model (DTM) created using contour lines generated from a combination of the total station survey data completed in August 2013, 1:50,000 scale topographic data and photographic images collected in July 2014 with a PX4-700 UAV (unmanned airborne vehicle).

The area covered by the DTM is sufficient to cover the area defined by the current resource model (Figure 14.2).

Figure 14.2 PAK Topographic Image



14.4 GEOLOGICAL INTERPRETATION

Three-dimensional wireframe models of mineralization were developed in Surpac by WSP. The wireframes were based on the geological interpretation of the zones as distinct domains and not strictly on grade intervals.

Sectional interpretations were completed in Surpac version 6.7.1 software, and these interpretations were linked with control strings and triangulated to build three dimensional solids. Table 14.3 tabulates the solids and associated volumes. The solids were validated in the Surpac software and no errors were found.

The modeling is broken into three separate zones; LIZ, UIZ, and CIZ. The UIZ and CIZ were wireframes as separate and distinct solids. The LIZ was generated to cover the bulk of the pegmatite and surround the UIZ and CIZ to ensure that no voids existed between solids. Figures 14.3 to 14.5 illustrate the model solid for each of the domains.

The wireframes extend at depth, below the deepest diamond drillholes. This is to provide a target for future exploration. The resource model did not estimate grades into the full volume of the wireframes due to sheer size of the wireframes.

The non-assayed intervals were assigned void (-) value. WSP believes that non-assayed material should not be assigned a zero value, as this does not reflect the true value of the material.

Each domain was modeled using the same principal assumptions and methodology.

Table 14.3 Wireframe Summary

Zone	Trisolation	Volume	X min	X max	Y min	Y max	Z min	Z max
UIZ	1	184,010	474,380	474,623	5,827,907	5,828,017	150	330
	3	2,172	474,602	474,626	5,827,924	5,827,940	220	240
	4	23,854	474,594	474,633	5,827,927	5,827,966	180	270
	5	22,035	474,494	474,562	5,827,906	5,827,954	270	330
	Total	**232,070**						
LIZ	1	2,549,853	474,303	474,800	5,827,884	5,828,045	60	340
	2	27,338	474,623	474,731	5,827,833	5,827,901	130	190
	Total	**2,577,191**						
CIZ	2	411,038	474,487	474,666	5,827,843	5,827,945	110	340
	3	87,590	474,422	474,508	5,827,910	5,827,983	205	340
	4	24	474,629	474,635	5,827,855	5,827,858	250	261
	Total	**498,653**						
	Grand Total	**3,307,914**						

Figure 14.3 UIZ Wireframe (Looking Southeast - not to scale)

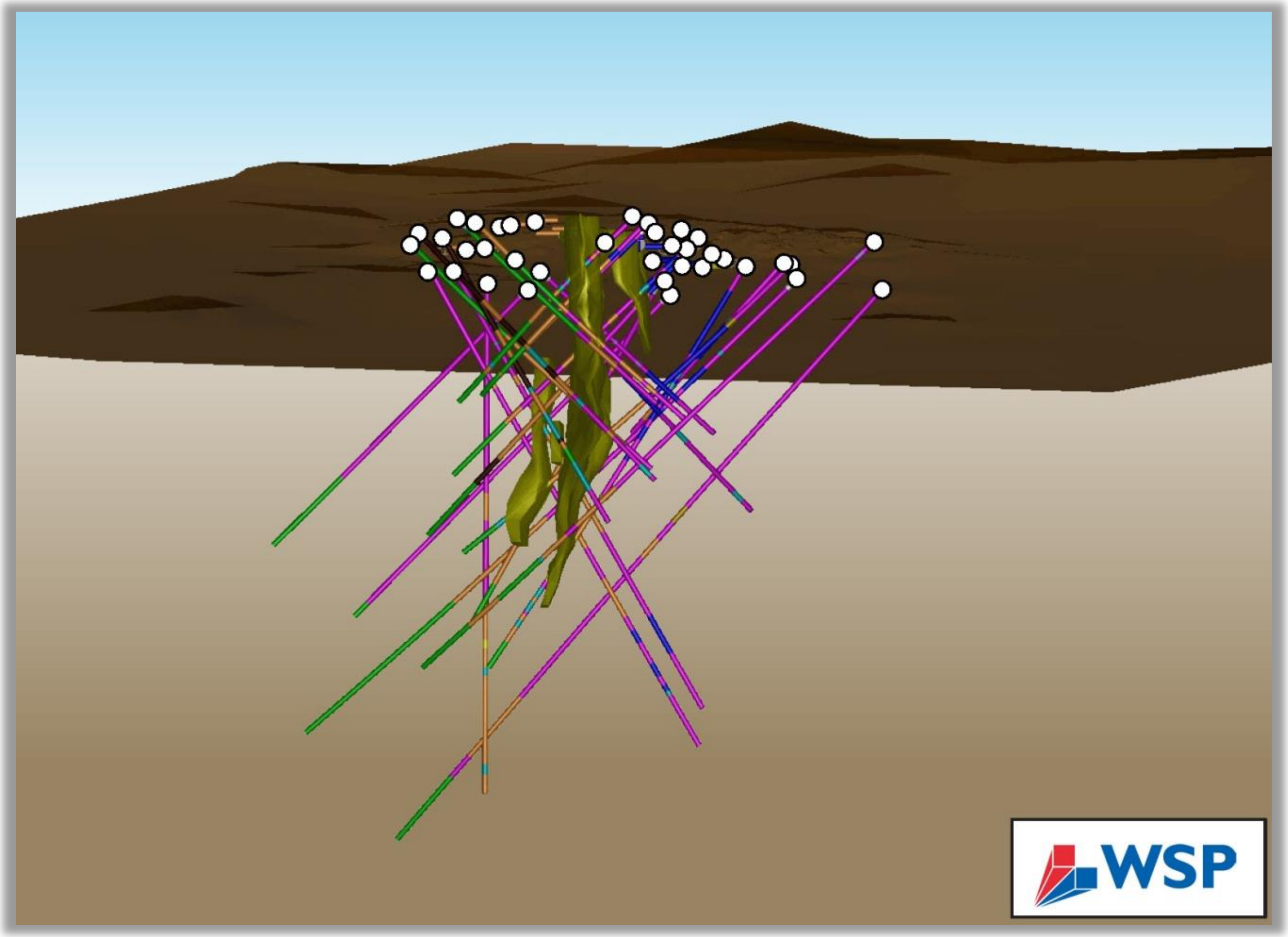


Figure 14.4 UIZ Wireframe (Looking Northwest - not to scale)

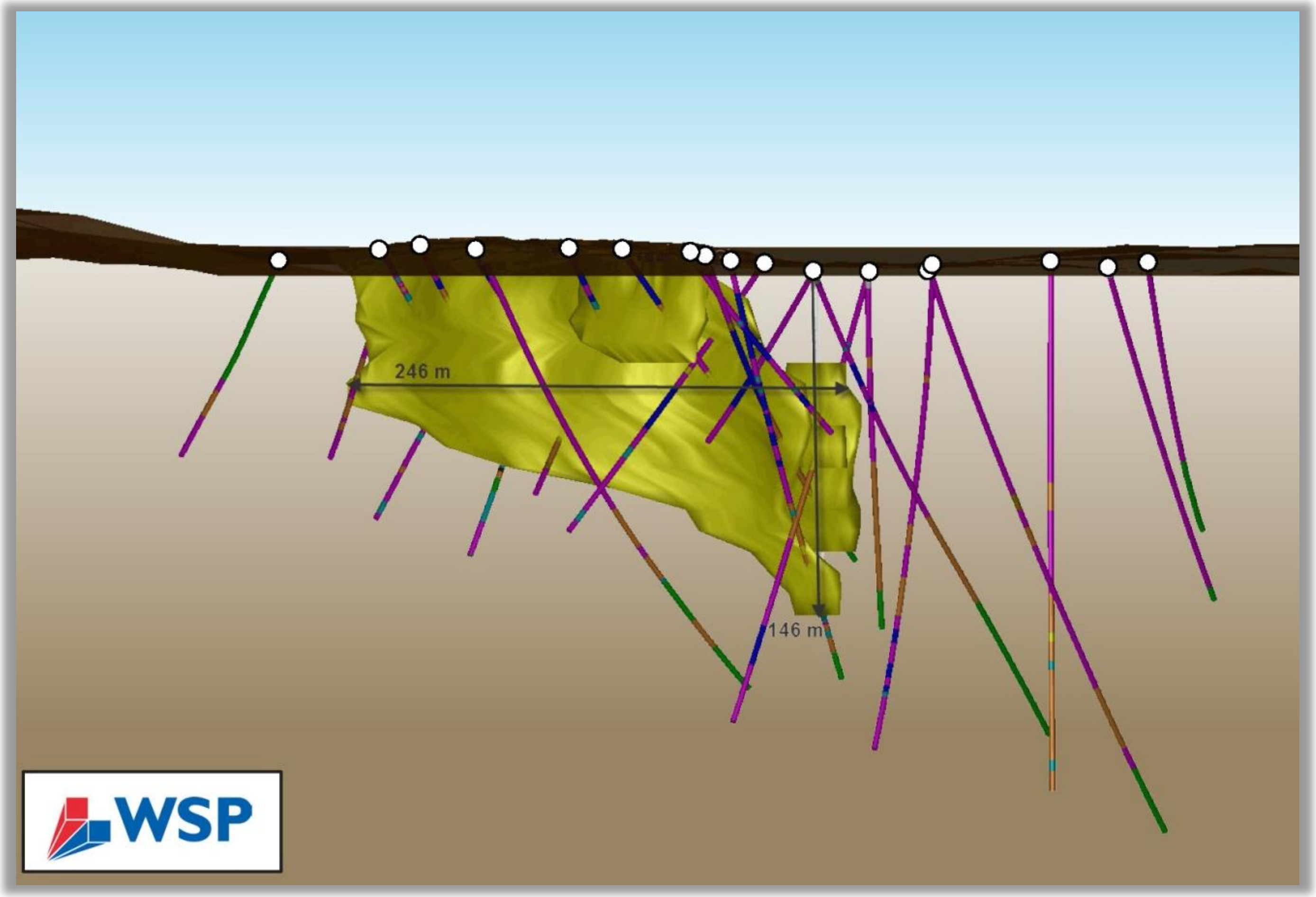


Figure 14.5 CIZ Wireframe (Looking Southeast - not to scale)

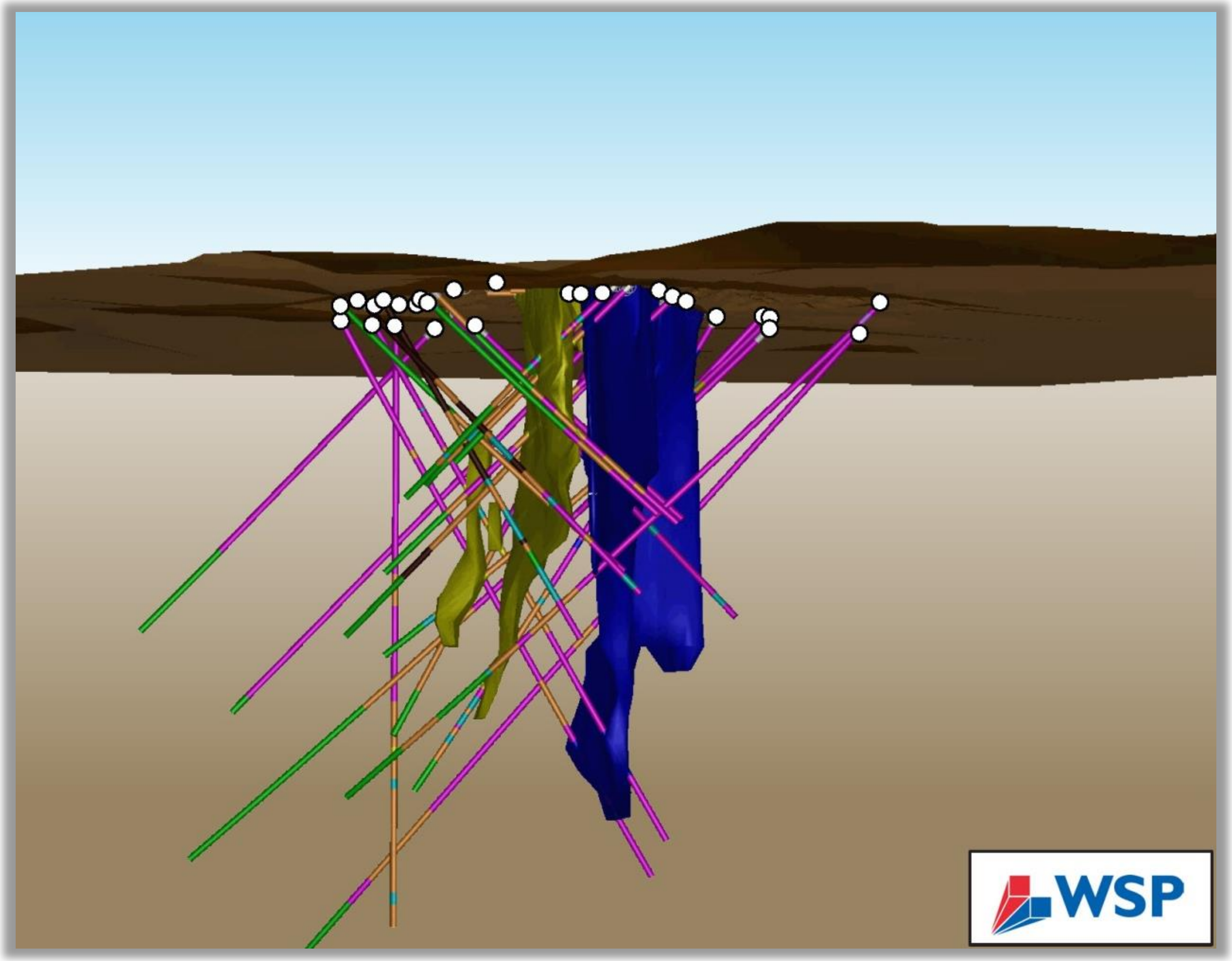


Figure 14.6 CIZ Wireframe (Looking Northeast - not to scale)

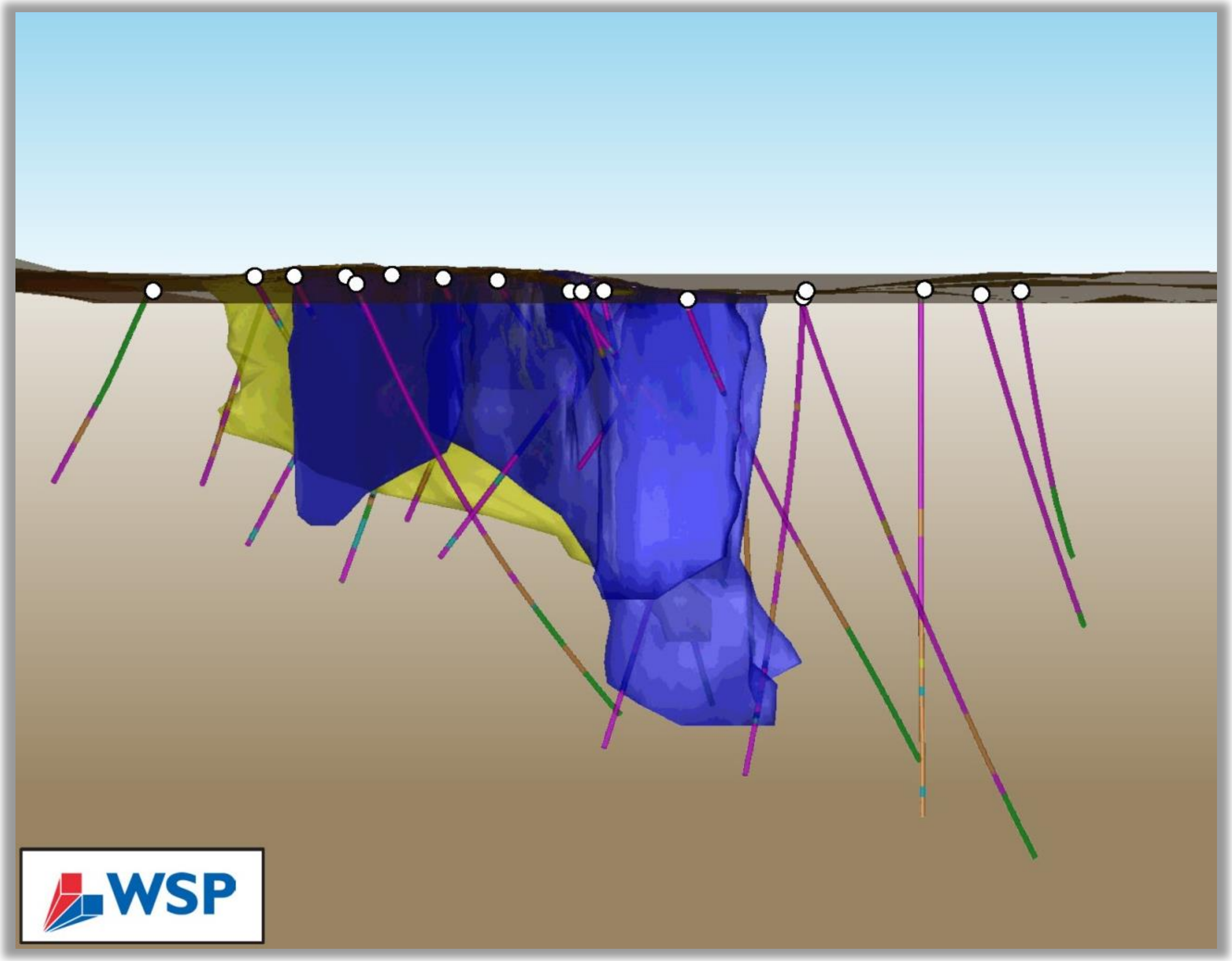


Figure 14.7 LIZ Wireframe (Looking Southwest – not to scale)

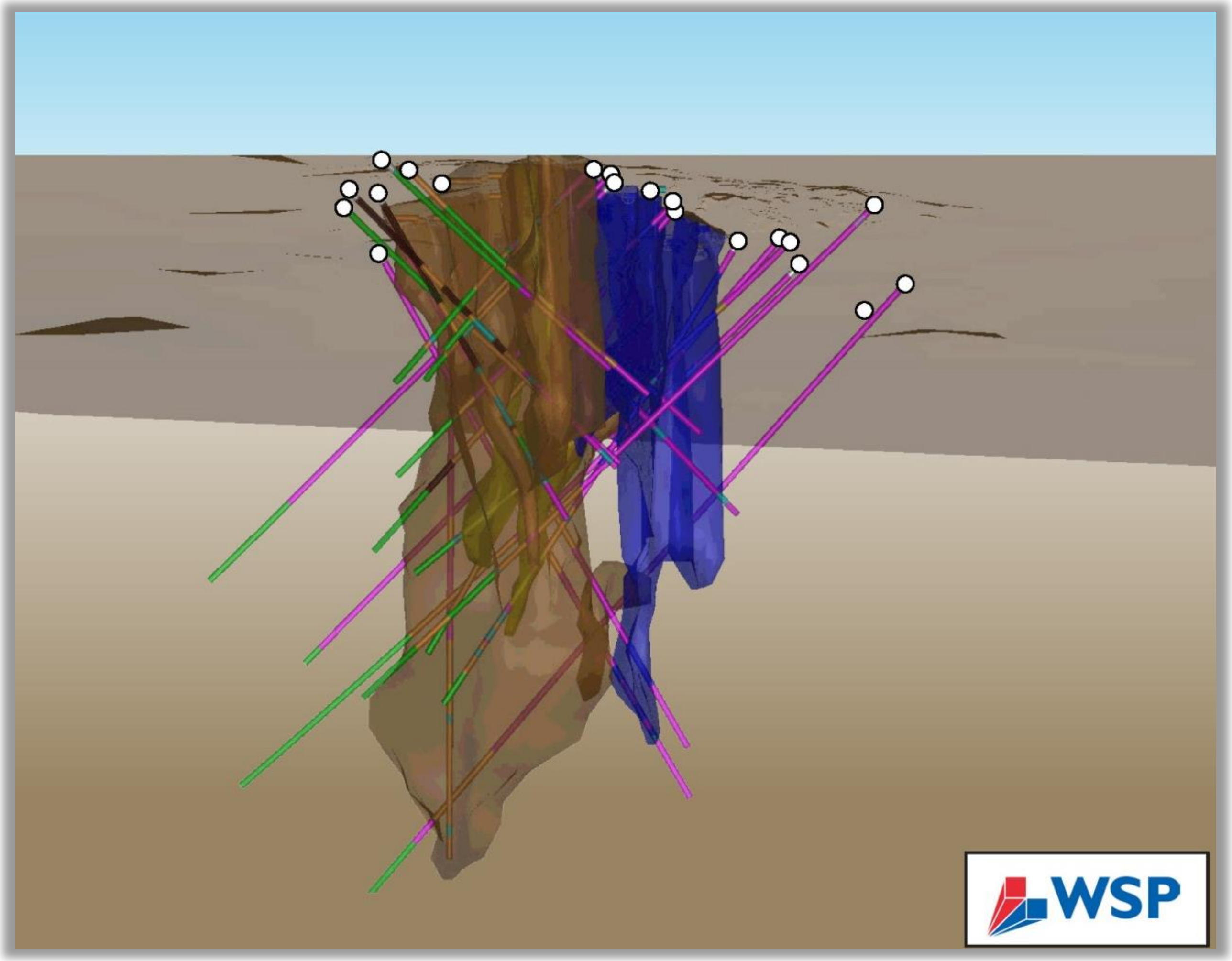
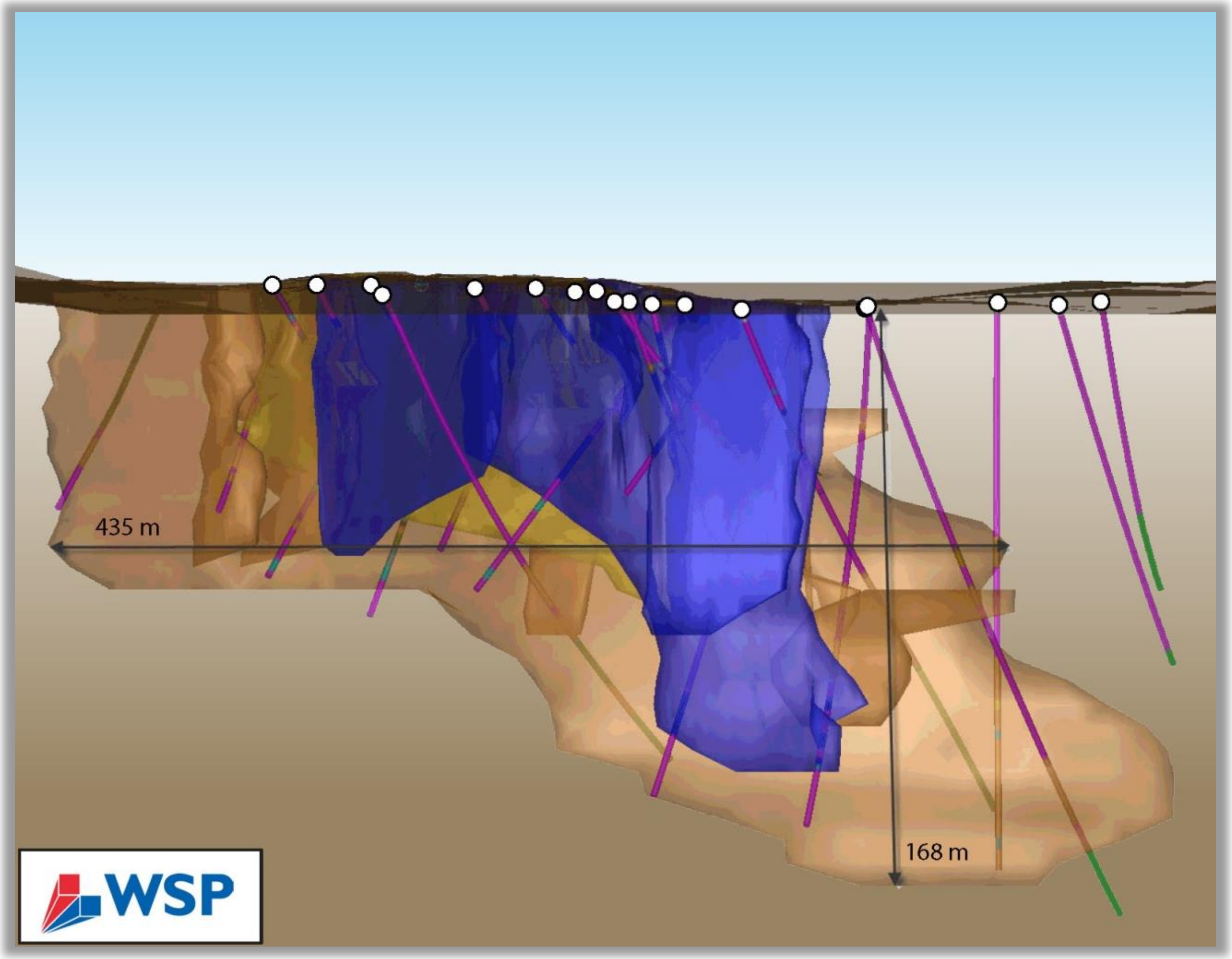


Figure 14.8 LIZ Wireframe (Looking Northeast – not to scale)



14.5 EXPLORATORY DATA ANALYSIS

14.5.1 ASSAYS

The three domains included in the mineral resource were sampled by a total of 1,888 Li_2O assays and 1,691 samples for Rb_2O, Ta_2O_5 and Cs_2O. The assay intervals within each mineral domain were captured using a Surpac™ routine to flag the intercept into a new table in the database. These intervals were reviewed to ensure all the proper assay intervals were properly captured. Table 14.4 summarizes the basic statistics for the assays intervals for each of the mineral domains on the Property.

Table 14.4 Sample Summary by Domain

Zone	Field	Number of intervals	Number of blank intervals	No of Records	Minimum	Maximum	Mean	Standard Deviation
CIZ	Li_2O (%)	421	10	411	0	4.93	0.93	0.97
	Nb_2O_5 (ppm)	421	44	377	1	297.54	60.43	50.75
	Rb_2O (%)	421	44	377	0	1.27	0.57	0.32
	Ta_2O_5 (ppm)	421	44	377	2	387.09	114.56	79.74
	SnO_2 (%)	421	44	377	3	1,456.12	164.86	194.60
	Cs_2O (%)	421	52	369	0	0.46	0.08	0.04
LIZ	Li_2O (%)	1,066	23	1,043	0	5.30	1.73	1.20
	Nb_2O_5 (ppm)	1,066	23	1,043	1	543.30	69.92	49.83
	Rb_2O (%)	1,066	23	1,043	0	1.19	0.30	0.18
	Ta_2O_5 (ppm)	1,066	23	1,043	1	1,653.23	105.79	93.95
	SnO_2 (%)	1,066	23	1,043	4	15,234.00	151.30	521.71
	Cs_2O (%)	1,066	23	1,043	0	1.27	0.04	0.05
UIZ	Li_2O (%)	436	2	434	0	5.77	3.53	1.26
	Nb_2O_5 (ppm)	436	165	271	1	268.93	40.32	38.58
	Rb_2O (%)	436	165	271	0	0.92	0.20	0.19
	Ta_2O_5 (ppm)	436	165	271	6	391.94	70.05	53.81
	SnO_2 (%)	436	165	271	5	1,169.21	70.74	96.02
	Cs_2O (%)	436	165	271	0	0.31	0.04	0.03

14.5.2 GRADE CAPPING

Raw assay data for each domain was examined individually to assess the amount of metal that is bias from high grade assays. A combination of viewing the histogram, QQ and cumulative frequency plots was used to assist in the determination if grade capping was required on each element in each domain.

WSP elected to apply a variable top cut by element by domain. Table 14.5 summarizes the results of the capping procedure. The plots to support the capping are found in Appendix A.

Table 14.5 Grade Capping Summary by Domain

Zone	Field	Number of samples	Minimum	Maximum	Mean	Variance	Standard Deviation	Number of Records Capped
UIZ	Li_2O - uncapped	526	0.21	5.43	3.63	1.32	1.15	
	Li_2O - capped	494	0.21	4.75	3.62	1.32	1.15	32
	Ta_2O_5 - uncapped	256	6.11	274.73	67.30	1975.11	44.44	
	Ta_2O_5 - capped	223	6.11	118.00	62.32	1975.11	44.44	33
	Cs_2O - uncapped	256	0.00	0.30	0.04	0.000837	0.03	
	Cs_2O - capped	254	0.00	0.16	0.04	0.000837	0.03	2
	Rb_2O - uncapped	256	0.01	0.92	0.19	0.03	0.17	
	Rb_2O - capped	252	0.01	0.70	0.19	0.03	0.17	4
CIZ	Li_2O - uncapped	425	0.11	4.93	0.98	1.00	1.00	
	Li_2O - capped	373	0.11	2.00	0.82	1.00	1.00	52
	Ta_2O_5 - uncapped	372	1.82	387.09	115.67	5086.21	71.32	
	Ta_2O_5 - capped	326	1.82	211.00	110.62	5086.21	71.32	46
	Cs_2O - uncapped	364	0.01	0.46	0.08	0.001496	0.04	
	Cs_2O - capped	364	0.01	0.16	0.08	0.00	0.03	6
	Rb_2O - uncapped	372	0.02	1.19	0.58	0.09	0.30	
	Rb_2O - capped	363	0.02	1.12	0.58	0.09	0.30	9
LIZ	Li_2O - uncapped	1,021	0.04	4.89	1.73	1.17	1.08	
	Li_2O - capped	987	0.04	3.92	1.72	1.17	1.08	34
	Ta_2O_5 - uncapped	1,021	1.98	881.68	104.96	5886.98	76.73	
	Ta_2O_5 - capped	1,017	1.98	472.00	103.73	5886.98	76.73	4
	Cs_2O - uncapped	1,021	0.00	1.27	0.04	0.002239	0.05	
	Cs_2O - capped	1,009	0.00	0.13	0.04	0.002239	0.05	12
	Rb_2O - uncapped	1,021	0.01	1.09	0.30	0.03	0.16	
	Rb_2O - capped	978	0.01	0.61	0.29	0.03	0.16	43

14.5.3 COMPOSITING

Compositing of all the assay data within the various domains was completed on downhole intervals honouring the interpretation of the geological solids. Statistics indicate that a majority of the samples were collected at 1 m intervals.

Surpac uses a length weighted option which allows all the composite segments less than 0.75 m to be used in the estimate on a length weighted basis. Table 14.6 summarizes the statistics for the boreholes after compositing.

Table 14.6 Compositing Summary by Domain

Zone	Field	Number of samples	Minimum	Maximum	Mean	Variance	Standard Deviation
UIZ	Li_2O	494	0.21	4.75	3.62	1.32	1.15
	Ta_2O_5	223	6.11	118.00	62.32	1975.11	44.44
	Cs_2O	254	0.00	0.16	0.04	0.000837	0.03
	Rb_2O	252	0.01	0.70	0.19	0.03	0.17
CIZ	Li_2O	373	0.11	2.00	0.82	1.00	1.00
	Ta_2O_5	326	1.82	211.00	110.62	5086.21	71.32
	Cs_2O	358	1.82	211.00	110.62	0.001496	0.04
	Rb_2O	363	0.02	1.12	0.58	0.09	0.30
LIZ	Li_2O	987	0.04	3.92	1.72	1.17	1.08
	Ta_2O_5	1,017	1.98	472.00	103.73	5886.98	76.73
	Cs_2O	1,009	0.00	0.13	0.04	0.002239	0.05
	Rb_2O	978	0.01	0.61	0.29	0.03	0.16

14.6 SPATIAL ANALYSIS

Variograms for lithium were created for each domain in order to be used to search ellipse dimensions. Currently WSP is of the opinion that additional samples are required before kriging would be an effective estimation method.

14.7 RESOURCE BLOCK MODEL

Individual block models were established in Surpac™ for each of the mineral domains using one parent model as the origin. The model was not rotated.

A block size of 2.5 m x 2.5 m x 2.5 m was selected in order to accommodate a small scale open pit mining potential. Sub-blocking of the block was not used.

Table 14.7 summarizes details of the parent block model.

Table 14.7 Summary of Parent Block Model

Type	Y	X	Z
Minimum Coordinates	5827800	474200	80
Maximum Coordinates	5828240	474900	400
User Block Size	2.5	2.5	2.5
Min. Block Size	2.5	2.5	2.5
Rotation	0	0	0
Total Blocks	**514094**		

14.7.1 ESTIMATION PARAMETERS

The interpolations of the zones were completed using the estimation methods nearest neighbor (NN), and inverse distance squared (ID^2). The estimations were designed for a single pass. In each estimation, a minimum and maximum number of samples were required as well as a maximum number of samples from a borehole in order to satisfy the estimation criteria. All estimation passes used the capped and composted dataset for the appropriate domain being estimated.

An anisotropic search ellipse was used for the estimation. Only the samples within the domain wireframe were used in the estimation. The result is that the search ellipse will not locate samples outside the domain wireframe. Table 14.8 summarizes the search ellipse size and rotations and Table 14.9 summarizes the interpolation criteria for each domain.

Table 14.8 Search Ellipse Summary

Zone	Elements	Bearing	Plunge	Dip	Major Axis	Semi-Major Axis	Minor Axis	Anisotropy ratio Major/ Semi Major	Anisotropy ratio Major/ Minor
LIZ CIZ UIZ	Li LIZ/CIZ/UIZ	115.00	0.00	-80.00	105.88	75.41	28.72	1.40	3.69
	Rb LIZ/CIZ/UIZ	320.00	0.00	80.00	108.50	62.18	25.84	1.75	4.20
	Ta LIZ/CIZ/UIZ	202.27	67.73	0.00	89.83	55.04	33.85	1.63	2.65
	Cs LIZ/CIZ/UIZ	177.63	-47.73	65.00	115.94	55.00	29.78	2.11	3.89

Table 14.9 Estimation Criteria Summary

Zone	Pass No.	Search Ellipse Factor	Minimum No. of Composites	Maximum No. of Composites	Maximum Samples per Drillhole
CIZ	1	0.50	4	15	3
	2	0.75	4	15	3
	3	1.00	3	15	3
	4	1.25	2	15	3
LIZ	1	0.50	4	15	3
	2	0.75	4	15	3
	3	1.00	3	15	3
	4	1.25	2	15	3
UIZ	1	0.50	4	15	3
	2	0.75	4	15	3
	3	1.00	3	15	3
	4	1.25	2	15	3

14.8 RESOURCE CLASSIFICATION

Several factors are considered in the definition of a resource classification:

- → NI 43-101 requirements;
- → Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Estimation of Mineral Resource and Mineral Reserve Best Practice Guidelines;
- → Author's experience with intrusion hosted deposits;
- → Spatial continuity based of the assays within the drillholes;
- → Understanding of the geology of the deposit; and
- → Drillhole and channel spacing and the estimation runs required to estimate the grades in a block.

Material in the block model is considered measured when:

- → Li_2O_eq is greater than 0;
- → The Z coordinate is greater than or equal to 270;
- → The block was estimated in the first two passes; and
- → The block does not have a rock code of 520 (CIZ).

Material in the block model is considered indicated when:

- → Li_2O_eq is greater than 0;
- → The block was estimated in the first three passes; and
- → The block has not been classified as measured.

Material in the block model is considered inferred when:

- → All remaining blocks not assigned to measured or indicated.

No environmental, permitting, legal, title, taxation, socio-economic, marketing, or other relevant issues are known to WSP that may affect the estimate of mineral resources. Mineral reserves can only be estimated on the basis of an economic evaluation that is used in a preliminary feasibility study or a feasibility study of a mineral project; thus, no reserves have been estimated. As per NI 43-101, mineral resources which are not mineral reserves, do not have to demonstrate economic viability.

14.9 MINERAL RESOURCE TABULATION

The resource reported is effective as of March 4, 2016 and has been tabulated in terms of a Li_2O equivalent (Li_2Oeq) cut-off grade. The resources are tabulated using various cut-off grades to demonstrate the robust nature of the resource for each of the domains (Tables 14.10 to 14.17).

The Li_2Oeq formula was based on the following price and recovery assumptions and is displayed below:

- $400/tonne of 6% Li_2O concentrate;
- $150/kg of 30% Ta_2O_5 concentrate;
- 78.5% recovery of Li_2O;
- 50% recovery of Ta_2O_5; and
- No credits were applied to the cesium or rubidium as it is currently unclear if these elements will be recoverable from the pegmatite.

$$Li2Oeq = Li2Oid + \frac{\left(\frac{150 * 300}{0.3 * \frac{ta2O5id}{100000} / 0.5}\right)}{\left(\frac{400}{\left(0.06 / \frac{Li2Oid}{100} / 0.785\right)} * Li2O\right)}$$

Table 14.10 UIZ Measured Resource Grade Tonnage

Cut-off	Tonnes	Li_2O %	Ta_2O_5 ppm	Cs_2O %	Rb_2O %
0.1	333,512	3.94	57.51	0.03	0.12
0.2	333,512	3.94	57.51	0.03	0.12
0.3	333,512	3.94	57.51	0.03	0.12
0.4	333,512	3.94	57.51	0.03	0.12
0.5	333,512	3.94	57.51	0.03	0.12
0.6	333,512	3.94	57.51	0.03	0.12
0.7	333,512	3.94	57.51	0.03	0.12
0.8	333,512	3.94	57.51	0.03	0.12
0.9	333,512	3.94	57.51	0.03	0.12
1.0	333,512	3.94	57.51	0.03	0.12
1.1	333,512	3.94	57.51	0.03	0.12
1.2	333,512	3.94	57.51	0.03	0.12
1.3	333,512	3.94	57.51	0.03	0.12
1.4	333,468	3.94	57.51	0.03	0.12
1.5	333,468	3.94	57.51	0.03	0.12
1.6	333,335	3.94	57.51	0.03	0.12

Table 14.11 UIZ Indicated Resource Grade Tonnage

Cut-off	Tonnes	Li_2O %	Ta_2O_5 ppm	Cs_2O %	Rb_2O %
0.1	304,560	3.19	68.82	0.04	0.23
0.2	304,560	3.19	68.82	0.04	0.23
0.3	304,560	3.19	68.82	0.04	0.23
0.4	304,560	3.19	68.82	0.04	0.23
0.5	304,560	3.19	68.82	0.04	0.23
0.6	304,560	3.19	68.82	0.04	0.23
0.7	304,472	3.19	68.80	0.04	0.23
0.8	303,102	3.20	68.59	0.04	0.23
0.9	302,218	3.21	68.47	0.04	0.23
1.0	301,688	3.22	68.40	0.04	0.23
1.1	301,069	3.22	68.31	0.04	0.23
1.2	299,876	3.23	68.15	0.04	0.23
1.3	298,373	3.24	67.95	0.04	0.23
1.4	296,737	3.25	67.77	0.04	0.23
1.5	295,190	3.26	67.61	0.04	0.22
1.6	293,024	3.27	67.40	0.04	0.22

Table 14.12 UIZ Inferred Resource Grade Tonnage

Cut-off	Tonnes	Li_2O %	Ta_2O_5 ppm	Cs_2O %	Rb_2O %
0.1	1,813	2.61	67.50	0.06	0.18
0.2	1,813	2.61	67.50	0.06	0.18
0.3	1,813	2.61	67.50	0.06	0.18
0.4	1,813	2.61	67.50	0.06	0.18
0.5	1,813	2.61	67.50	0.06	0.18
0.6	1,813	2.61	67.50	0.06	0.18
0.7	1,813	2.61	67.50	0.06	0.18
0.8	1,813	2.61	67.50	0.06	0.18
0.9	1,813	2.61	67.50	0.06	0.18
1.0	1,813	2.61	67.50	0.06	0.18
1.1	1,813	2.61	67.50	0.06	0.18
1.2	1,813	2.61	67.50	0.06	0.18
1.3	1,813	2.61	67.50	0.06	0.18
1.4	1,813	2.61	67.50	0.06	0.18
1.5	1,813	2.61	67.50	0.06	0.18
1.6	1,813	2.61	67.50	0.06	0.18

Table 14.13 CIZ Indicated Resource Grade Tonnage

Cut-off	Tonnes	Li_2O %	Ta_2O_5 ppm	Cs_2O %	Rb_2O %
0.1	1,051,240	0.77	113.70	0.07	0.57
0.2	1,051,240	0.77	113.70	0.07	0.57
0.3	1,049,700	0.77	113.81	0.07	0.57
0.4	1,039,668	0.78	114.18	0.07	0.57
0.5	985,722	0.80	115.97	0.07	0.57
0.6	859,015	0.86	118.78	0.08	0.58
0.7	663,835	0.96	121.11	0.08	0.58
0.8	495,587	1.10	117.59	0.08	0.58
0.9	402,930	1.20	116.12	0.08	0.58
1.0	331,460	1.29	117.02	0.08	0.56
1.1	273,393	1.38	118.27	0.08	0.55
1.2	216,866	1.48	119.83	0.08	0.53
1.3	173,784	1.58	122.70	0.07	0.51
1.4	144,938	1.65	125.99	0.07	0.50
1.5	122,294	1.72	130.13	0.08	0.50
1.6	103,646	1.77	136.15	0.08	0.50

Note: Li2O% is not recoverable in the CIZ

Table 14.14 CIZ Inferred Resource Grade Tonnage

Cut-off	Tonnes	Li_2O %	Ta_2O_5 ppm	Cs_2O %	Rb_2O %
0.1	66,934	0.81	119.47	0.07	0.54
0.2	66,934	0.81	119.47	0.07	0.54
0.3	66,934	0.81	119.47	0.07	0.54
0.4	66,934	0.81	119.47	0.07	0.54
0.5	65,519	0.82	120.34	0.07	0.54
0.6	51,450	0.93	127.24	0.07	0.55
0.7	34,259	1.14	137.85	0.07	0.52
0.8	29,430	1.24	141.27	0.07	0.51
0.9	27,474	1.27	144.48	0.07	0.51
1.0	26,558	1.29	146.10	0.07	0.50
1.1	26,558	1.29	146.10	0.07	0.50
1.2	26,017	1.30	147.12	0.07	0.50
1.3	23,353	1.32	151.61	0.07	0.49
1.4	20,356	1.34	153.95	0.07	0.49
1.5	14,404	1.39	154.37	0.07	0.49
1.6	7,369	1.44	155.32	0.06	0.50

Note: Li2O% is not recoverable in the CIZ

Table 14.15 LIZ Measured Resource Grade Tonnage

Cut-off	Tonnes	Li_2O %t	Ta_2O_5 ppm	Cs_2O %	Rb_2O %
0.1	685,034	1.87	90.41	0.03	0.29
0.2	685,034	1.87	90.41	0.03	0.29
0.3	684,436	1.87	90.42	0.03	0.29
0.4	683,112	1.87	90.38	0.03	0.29
0.5	681,702	1.88	90.32	0.03	0.29
0.6	679,908	1.88	90.27	0.03	0.29
0.7	675,508	1.89	90.23	0.03	0.29
0.8	669,656	1.90	90.09	0.03	0.29
0.9	661,283	1.92	89.79	0.03	0.29
1.0	647,100	1.94	89.47	0.03	0.29
1.1	624,801	1.98	88.93	0.03	0.29
1.2	603,185	2.01	88.32	0.03	0.30
1.3	578,195	2.05	88.00	0.03	0.30
1.4	551,154	2.09	87.55	0.03	0.30
1.5	519,927	2.14	86.89	0.03	0.30
1.6	486,606	2.19	86.30	0.03	0.30

Table 14.16 LIZ Indicated Resource Grade Tonnage

Cut-off	Tonnes	Li_2O %	Ta_2O_5 ppm	Cs_2O %	Rb_2O %
0.1	5,581,931	1.59	108.16	0.04	0.29
0.2	5,581,077	1.59	108.18	0.04	0.29
0.3	5,569,628	1.59	108.35	0.04	0.29
0.4	5,526,226	1.61	108.70	0.04	0.29
0.5	5,428,699	1.63	108.64	0.04	0.29
0.6	5,305,199	1.66	108.16	0.04	0.29
0.7	5,173,070	1.69	107.32	0.04	0.29
0.8	5,023,597	1.72	106.41	0.04	0.29
0.9	4,868,058	1.76	105.78	0.04	0.30
1.0	4,702,053	1.79	104.83	0.04	0.30
1.1	4,530,922	1.83	104.23	0.04	0.30
1.2	4,338,602	1.86	103.40	0.04	0.30
1.3	4,128,383	1.90	102.75	0.04	0.30
1.4	3,916,754	1.94	102.21	0.04	0.30
1.5	3,666,935	1.99	101.86	0.04	0.30
1.6	3,339,026	2.04	101.38	0.04	0.31

Table 14.17 LIZ Inferred Resource Grade Tonnage

Cut-off	Tonnes	Li_2O %	Ta_2O_5 ppm	Cs_2O %	Rb_2O %
0.1	226,880	1.54	98.49	0.05	0.30
0.2	226,880	1.54	98.49	0.05	0.30
0.3	226,880	1.54	98.49	0.05	0.30
0.4	226,880	1.54	98.49	0.05	0.30
0.5	226,880	1.54	98.49	0.05	0.30
0.6	226,880	1.54	98.49	0.05	0.30
0.7	226,880	1.54	98.49	0.05	0.30
0.8	225,812	1.55	98.07	0.05	0.30
0.9	225,428	1.55	97.91	0.05	0.30
1.0	222,566	1.56	96.77	0.05	0.31
1.1	220,943	1.57	96.47	0.05	0.31
1.2	213,382	1.59	95.55	0.05	0.31
1.3	191,809	1.65	91.74	0.05	0.31
1.4	164,811	1.72	87.22	0.05	0.31
1.5	141,059	1.79	85.42	0.05	0.31
1.6	120,810	1.86	84.43	0.05	0.32

Although a bulk pegmatite is likely the method of extraction, a cut-off of 0.4% Li_2Oeq was selected for final resource tabulation (Table 14.18).

Note that although the CIZ reports a Li_2O grade, the source of the lithium is not spodumene. Therefore the resource reports no contained Li_2O in the CIZ and is reported as a separate line item. The Bulk Pegmatite grade does not include the lithium content from the CIZ.

Table 14.18 PAK Resource Summary

Cut-off	Resource Category	Commodity	Geologic Zone	Tonnes (t)	Li_2O (%)	Ta_2O_5 (ppm)	Cs_2O (%)	Rb_2O (%)	Contained Li_2O (t)	Contained Ta_2O_5 (t)	Li_2O EQ (%)
0.4% Li_2Oeq	Measured	Lithium	Upper Intermediate Zone (UIZ)	333,500	3.94	58	0.03	0.12	13,136	19	4.02
		Lithium	Lower Intermediate Zone (LIZ)	683,100	1.87	90	0.03	0.29	12,797	62	2.00
		Lithium	Total Lithium Zone	1,016,600	2.55	80	0.03	0.23	25,933	81	2.67
		Tantalum/Rubidium	Central Intermediate Zone (CIZ)	-	-	-	-	-	-	-	-
		Lithium/Tantalum/Rubidium	Bulk Pegmatite	1,016,600	2.55	80	0.03	0.23	25,933	81	2.67
0.4% Li_2Oeq	Indicated	Lithium	Upper Intermediate Zone (UIZ)	304,600	3.19	69	0.04	0.23	9,720	21	3.29
		Lithium	Lower Intermediate Zone (LIZ)	5,526,200	1.61	109	0.04	0.29	88,699	601	1.76
		Lithium	Total Lithium Zone	5,830,800	1.69	107	0.04	0.28	98,419	622	1.84
		Tantalum/Rubidium	Central Intermediate Zone (CIZ)	1,039,700	0.78	114	0.07	0.57	n/a	119	n/a
		Lithium/Tantalum/Rubidium	Bulk Pegmatite	6,870,500	1.43	108	0.04	0.33	98,419	740	1.59
0.4% Li_2Oeq	Measured +Indicated	Lithium	Upper Intermediate Zone (UIZ)	638,100	3.58	63	0.04	0.17	22,856	40	3.67
		Lithium	Lower Intermediate Zone (LIZ)	6,209,300	1.63	107	0.04	0.29	101,496	662	1.79
		Lithium	Total Lithium Zone	6,847,400	1.82	103	0.04	0.28	124,352	703	1.96
		Tantalum/Rubidium	Central Intermediate Zone (CIZ)	1,039,700	0.78	114	0.07	0.57	n/a	119	n/a
		Lithium/Tantalum/Rubidium	Bulk Pegmatite	7,887,100	1.58	104	0.04	0.31	124,352	821	1.73
0.4% Li_2Oeq	Inferred	Lithium	Upper Intermediate Zone (UIZ)	1,800	2.61	67	0.06	0.18	47	0	2.70
		Lithium	Lower Intermediate Zone (LIZ)	226,880	1.54	98	0.05	0.30	3,505	22	1.69
		Lithium	Total Lithium Zone	228,700	1.55	98	0.05	0.30	3,552	22	1.69
		Tantalum/Rubidium	Central Intermediate Zone (CIZ)	66,900	0.81	119	0.07	0.54	n/a	8	n/a
		Lithium/Tantalum/Rubidium	Bulk Pegmatite	295,600	1.20	103	0.06	0.36	3,552	30	1.35

14.10 VALIDATION

The PAK model was validated by three methods:

1. Visual comparison of colour-coded block model grades with composite grades on section.
2. Comparison of the global mean block grades for ID^2, NN, and composites.
3. Swath plots.

14.10.1 VISUAL VALIDATION

The visual comparisons of block model grades with composite grades for each of the zones show a reasonable correlation between the values (Figures 14.9 to 14.11). No significant discrepancies were apparent from the sections reviewed, yet grade smoothing is apparent in some of the lower elevations due to the distance between drill samples being broader in these regions.

Figure 14.9 PAK Validation Section 00SE

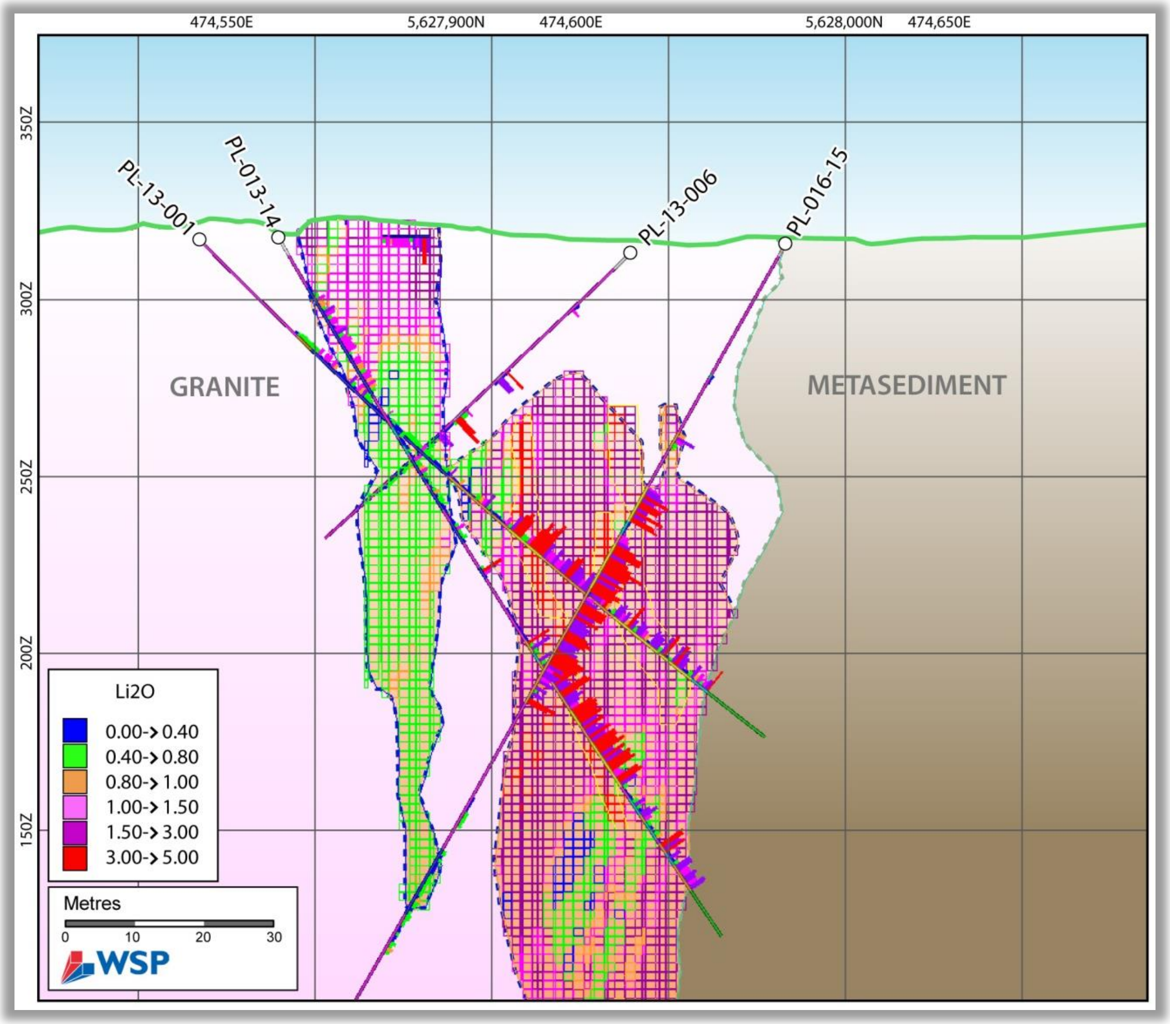


Figure 14.10 PAK Validation Section 050 NW

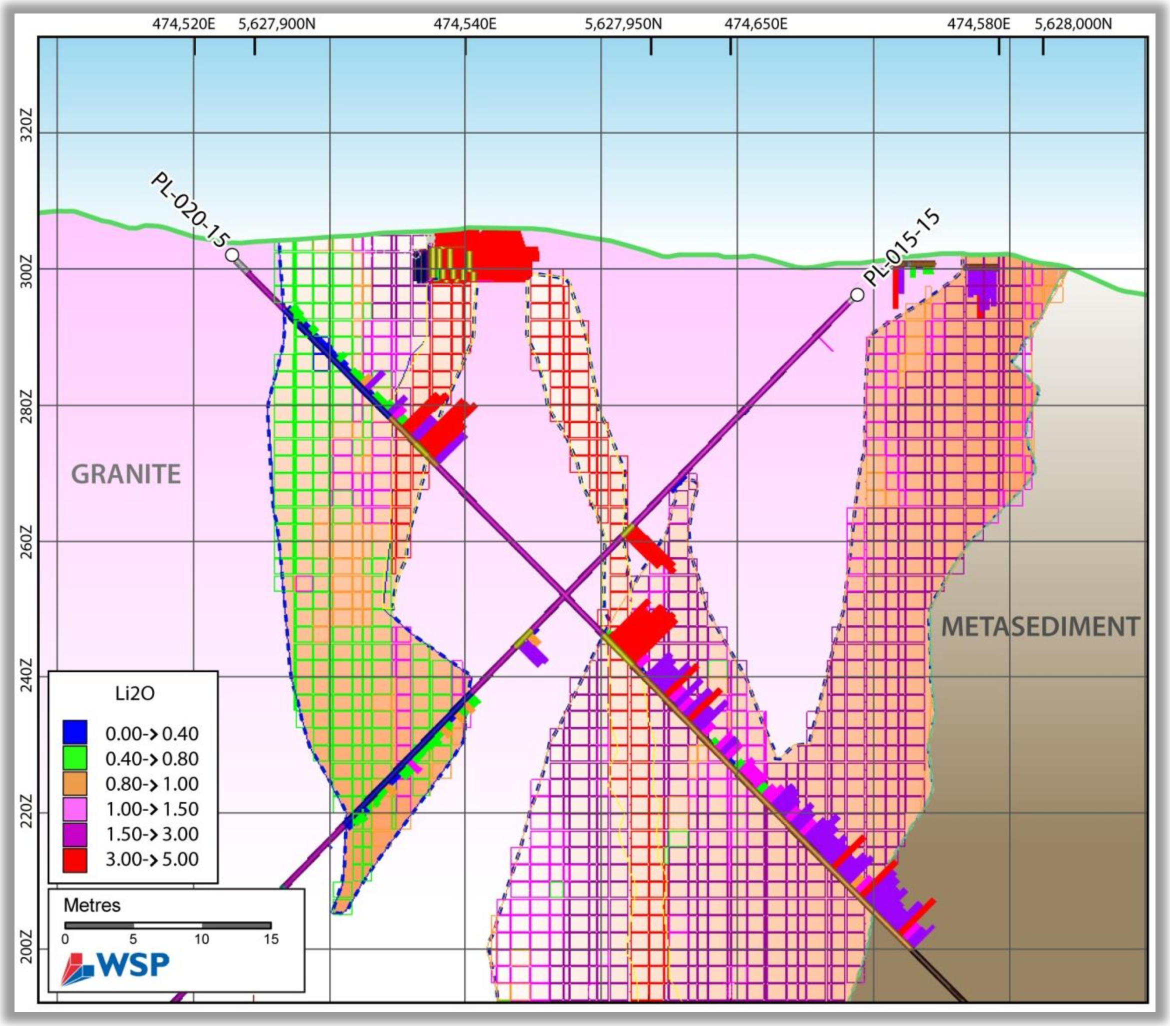
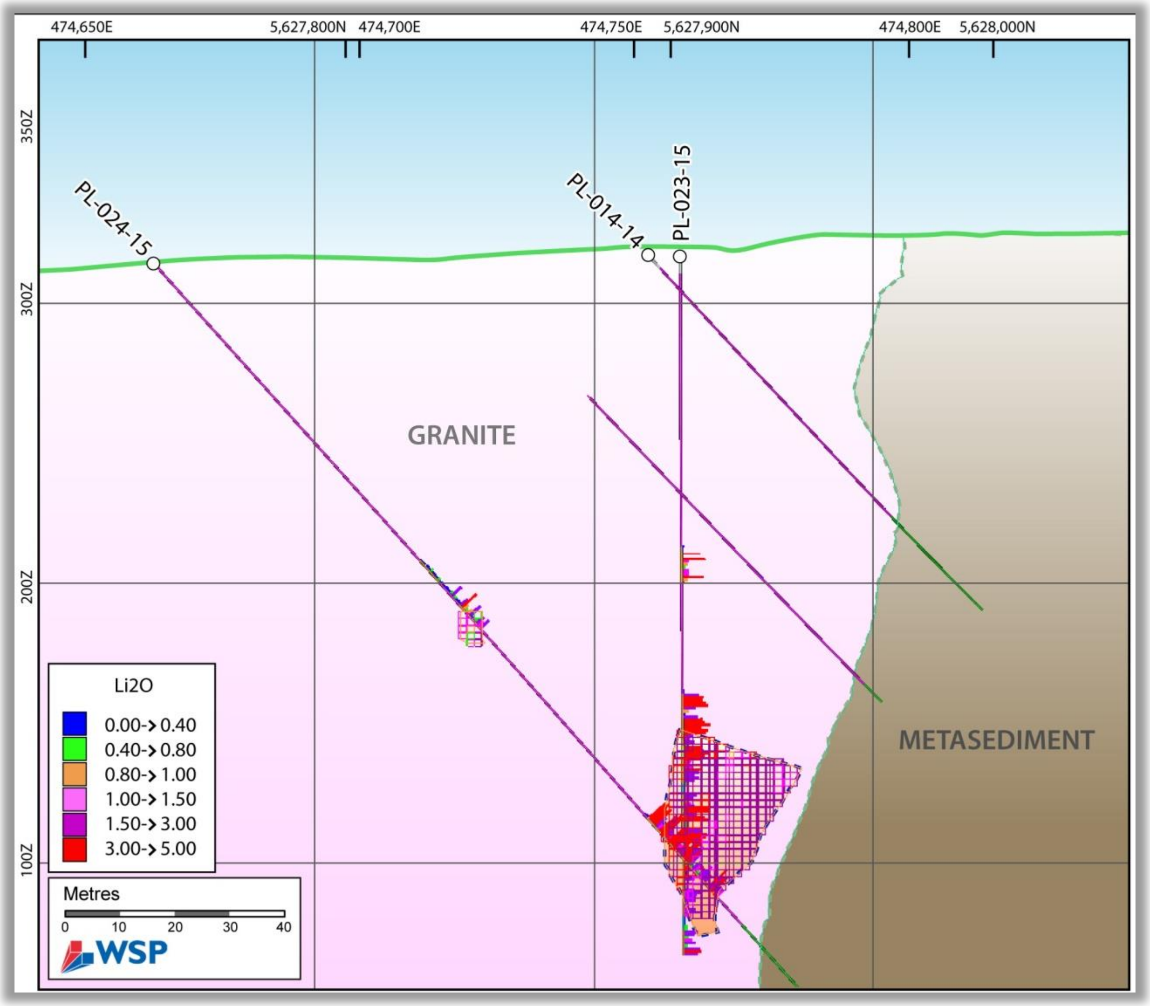


Figure 14.11 PAK Validation Section 150 SE



14.10.2 GLOBAL COMPARISON

The global block model statistics for the ID^2 model were compared to the global NN model values as well as the composite capped drillhole data. Table 14.19 shows this comparison of the global estimates for the two estimation method calculations. In general, the ID^2 and NN results are lower than the drillhole dataset. Larger discrepancies are reflected as a result of lower drill density in some portions of the model. There is a degree of smoothing apparent when compared to the diamond drill statistics. Comparisons were made using all blocks at a 0% Li_2O cut-off.

Table 14.19 Global Comparison

Zone - Element	DDH cap/composite	NN Grade	ID^2 Grade
UIZ - LI_2O%	3.62	3.52	3.58
CIZ - LI_2O%	0.82	0.78	0.77
LIZ - LI_20%	1.72	1.61	1.62
UIZ -TA_2O_5 PPM	62	65	63
CIZ -TA_2O_5 PPM	110	120	114
LIZ -TA_2O_5 PPM	103	105	106

14.10.3 SWATH PLOTS

Figures 14.12 to 14.15 display the comparison between ID^2 estimate with the NN estimate, and the drillhole composites in a swath plot format.

As expected, there is a strong degree of grade smoothing with the ID^2 methodology. In general the ID^2 model has similar trends as the boreholes.

Figure 14.12 Li_2O Swath Plot

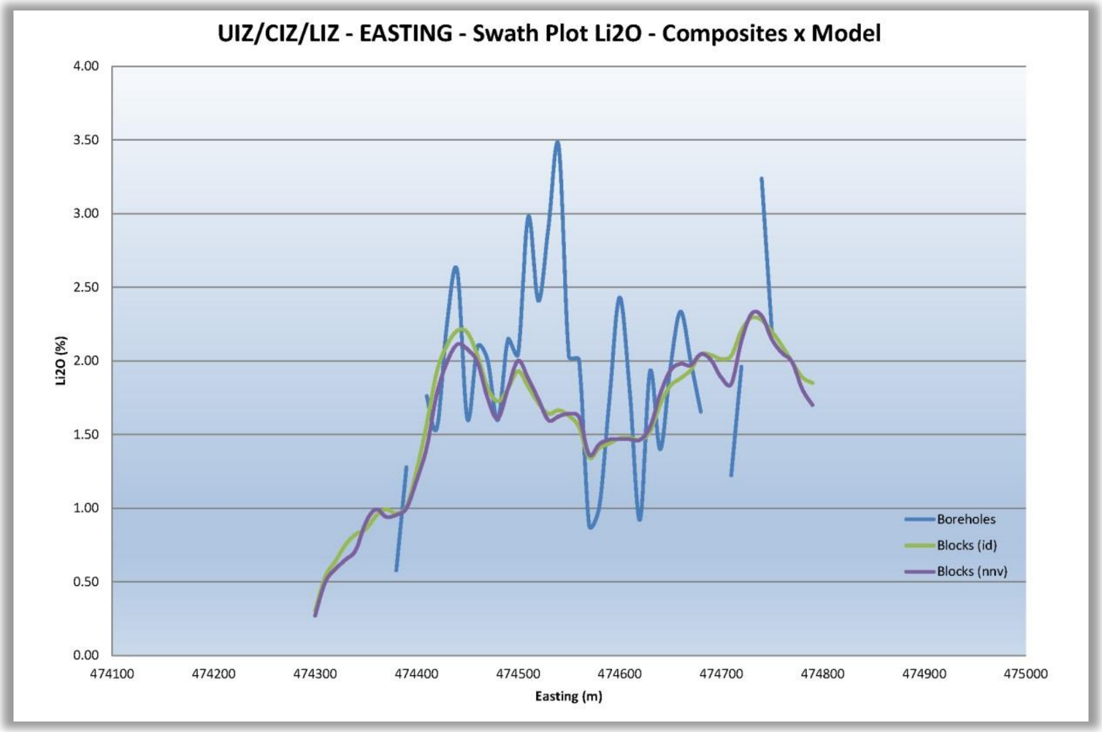


Figure 14.13 Ta_2O_5 Swath Plot

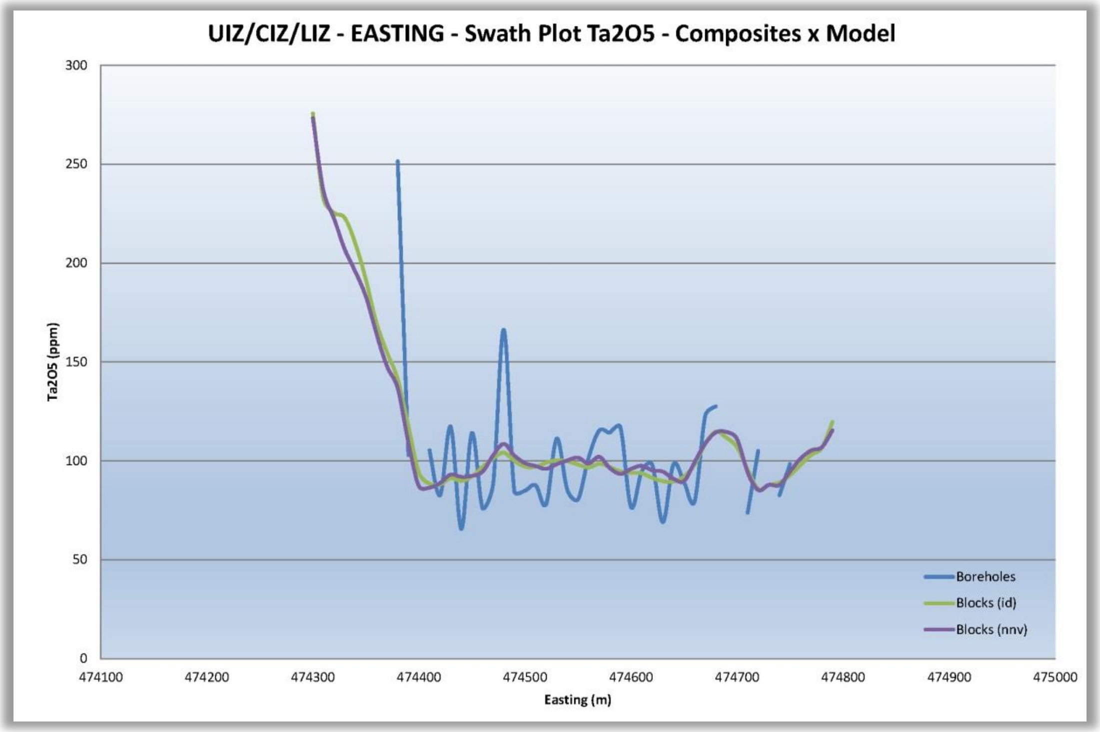


Figure 14.14 Cs_2O Swath Plot

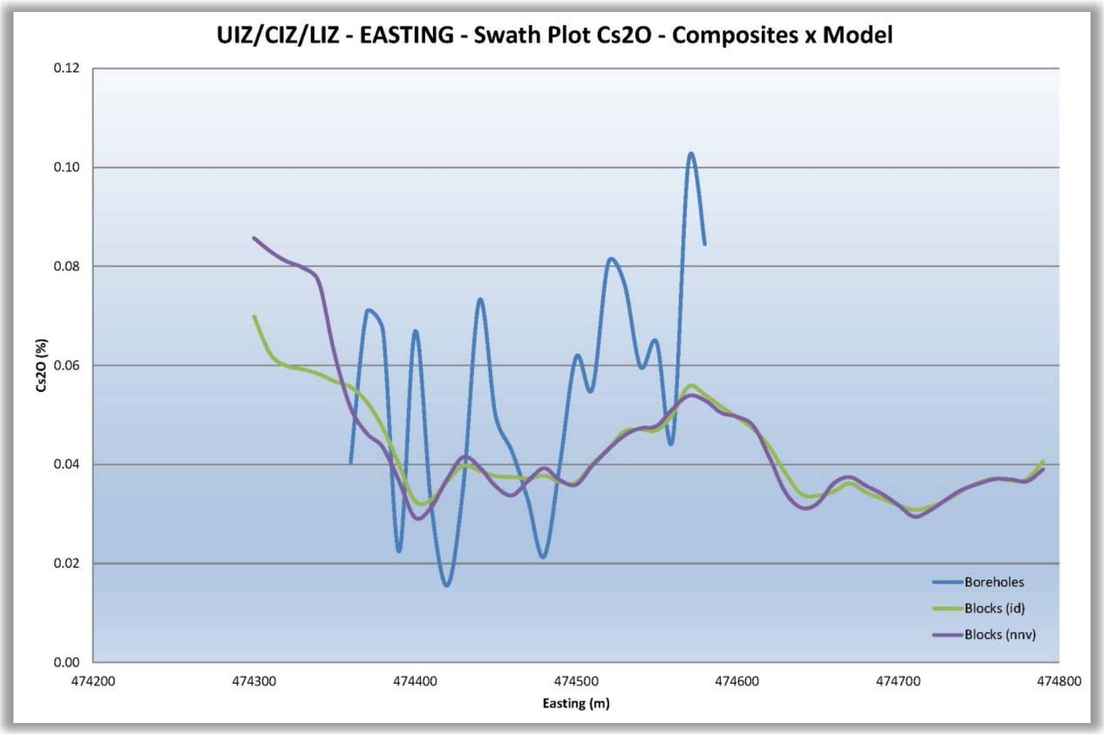
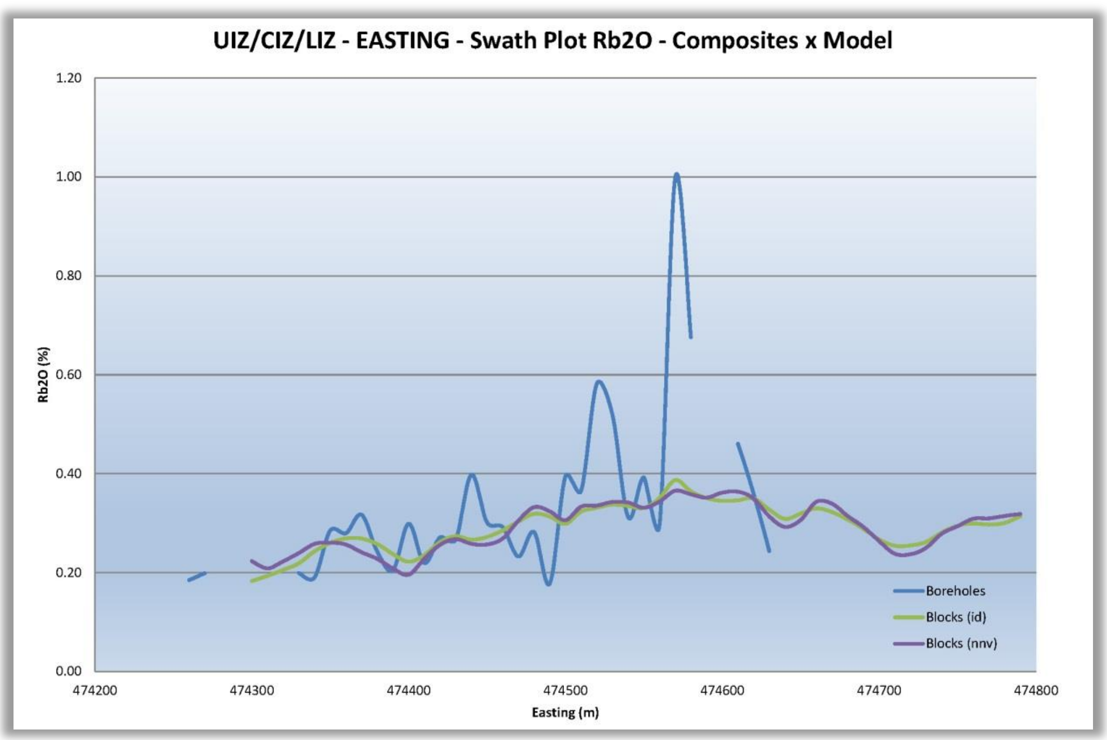


Figure 14.15 Rb_2O Swath Plot



14.11 PREVIOUS ESTIMATES

HLM had commissioned WSP to generate a resource estimate in 2014 (McCracken, 2015). The 2104 estimate was based on 21 channels and 15 diamond drillholes.

Table 14.20 compares the basic parameters of the previous 2014 estimate with the current 2014 NI 43-101 compliant resource.

Table 14.20 Comparison of Parameters

	2014 Resource	**2015 Resource**
Number of Drillholes	15	24
Number of Channels	21	29
Number of Samples	997	1,888
Volume of UIZ (m^3)	284,543	232,070
Volume of CIZ (m^3)	311,683	498,653
Volume of LIZ (m^3)	3,925,372	2,577,191
Grade Capping Li_2O (%)	UIZ - 4.75, CIZ - 2.00, LIZ - 3.92	UIZ - 4.75, CIZ - 2.00, LIZ - 3.92
Grade Capping Ta_2O_5 (ppm)	UIZ - 118, CIZ - 211, LIZ - 472	UIZ - 118, CIZ - 211, LIZ - 472
Block Size	2.5 x 2.5 x 2.5	2.5 x 2.5 x 2.5

The factors that led to the differences between the WSP 2015 resource model and the WSP 2014 resource model were the addition of the Phase III and Phase IV drilling to the dataset which resulting in nearly doubling the number of samples used in the estimate, modifications to the domain solids which resulted in volume changes and a changed estimation strategy.

15 ADJACENT PROPERTIES

There are no immediately adjacent properties to the Property.

Favourable Lake Gold Corp, a private company, has 73 claim units approximately 16 km north along the ice road from the Property. These claims are under option to Golden Share Mining Corporation. There has been no recent reported work on these claim units. These claims are targeting gold exploration.

Rockex Limited hold 337 claim units approximately 28 km southeast of the Property, on the south shore of North Spirit Lake. There are no public records of any recent work by Rockex on this Project. These claims are targeting nickel-PGE exploration.

16 OTHER RELEVANT DATA AND INFORMATION

There is no other relevant data or information on the Project.

17 INTERPRETATIONS AND CONCLUSIONS

The conclusions for the geology and resource of the Property are summarized below.

- The Property is currently held 100% by HLM.
- The Property is analogous to a highly evolved, granitic, rare-element lithium-cesium-tantalum bearing (LCT), complex-type – Petalite Subtype pegmatite similar to the Tanco Deposit in Manitoba.
- There are three main lithological domains on the Property: metasedimentary rock composed of pelitic sediments, iron formation and conglomerate, mafic metavolcanic and related metasedimentary rocks and peraluminous granite and mica pluton.
- There is a good understanding of the regional and local geology to support the interpretation of the mineralized zones on the Property.
- Mineralization is currently defined in three domains: UIZ, a lithium zone dominated by Spodumene + Quartz Intergrowth; CIZ, structurally higher portions of the pegmatite and represents the tantalum and rubidium zone; and LIZ, an internal zone with significant lithium, tantalum and rubidium.
- Sampling procedures, sample preparation, and assay protocols conducted by previous HLM management was generally conducted with best practices at the time.
- HLM has resampled and conducted proper QA/QC on the historical data in order to validate the results.
- Drilling and sampling procedures, sample preparation, and assay protocols conducted by the current HLM management are generally conducted in accordance with accepted practices and meet current standards.
- Verification of the downhole surveys, assays, core, and drillhole logs indicates the data supplied by HLM is reliable.
- The 2012 and 2013 channel sampling, and 2013 and 2014 diamond drill programs were supported by a proper QA/QC program. The 2001 channel program was not supported by a QA/QC program.
- The mineral models have been constructed in conformance to industry standard practices.
- The geological understanding is sufficient to support the resource estimation.
- The specific gravity value used to determine the tonnage was derived from 1,541 samples collected from all rock types.
- The mineral resource estimate for the Pakeagama Lake Pegmatite deposit, at a 0.4% Li_2Oeq cut-off, is 7.9 Mt at 1.58% Li_2O, 104 ppm Ta_2O_5, 0.04% Cs_2O, and 0.31% Rb_2O in a Measured and Indicated Resource. An additional 0.3 Mt at 1.20 % Li_2O, 103 ppm Ta_2O_5, 0.06% Cs_2O, and 0.36% Rb_2O in an Inferred Resource.
- The resource remains un-tested along strike in both directions as well as down plunge.
- The mineral resource was estimated by the Inverse Distance Squared interpolation method.

18 RECOMMENDATIONS

It is WSP's opinion that HLM is ready to commence a pre-feasibility study (PFS) to assess the viability of producing lithium, tantalum and mica product concentrates. There is sufficient resource in the measured and indicated categories to warrant the study. Two separate programs are proposed. The successful completion of Phase 1 will have an impact on how Phase 2 is conducted.

18.1.1 PHASE 1

Phase 1 is to initiate a PFS to determine the economic viability of producing lithium, tantalum and muscovite product concentrates. Phase 1 will involve additional work designed to expand and infill the current resource on the Property. This would include diamond drill testing below the current resource on the north-west extent with a target of additional tonnage that would be amenable to open pit mining methods. Other work in Phase 1 includes the continuation of baseline environmental work, the completion of metallurgical testing, and a geotechnical review of the core for support of the PFS based on producing lithium, tantalum, and muscovite mica product concentrates.

A budget of $850,000 is estimated to be required to complete the Phase 1 program, which would include the PFS, diamond drilling, and continued environmental monitoring (Table 18.1).

Table 18.1 Phase 1 Budget Summary

Activity	Cost ($)
Diamond drilling	250,000
Environmental baseline	150,000
Metallurgical studies	350,000
Geotechnical	100,000
Total	**$850,000**

18.1.2 PHASE 2

Phase 2 is designed to further delineate and test the resource based on results and recommendations from the PFS. Work should include step-out diamond drilling of the deposit and a larger advanced exploration bulk sample of the UIZ for industrial testing purposes of the UIZ as a direct shipping ore (DSO) for the ceramic-thermal glass and the frits and glaze industries.

The budget for Phase 2 is estimated to be $1,500,000, which includes portion of the advanced exploration sample plus additional diamond drilling, and ongoing metallurgical and environmental work (Table 18.2).

Table 18.2 Phase 2 Budget Summary

Activity	Cost ($)
Diamond drilling	500,000
Bulk sample for industrial test	650,000
Environmental baseline	100,000
Metallurgical studies	250,000
Total	**$1,500,000**

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20 CERTIFICATE OF QUALIFIED PERSON

TODD MCCRACKEN, P. GEO.

I, Todd McCracken, P. Geo., of Sudbury, Ontario do hereby certify:

- I am the Manager -Geology with WSP Canada Inc. with a business address at Unit 2, 2565 Kingsway, Sudbury, Ontario.
- This certificate applies to the technical report entitled Resource Estimation Update and Technical Report PAK Lithium Project, Red Lake Mining District, Ontario, (the "Technical Report").
- I am a graduate of the University of Waterloo, 1992 with a Bachelor of Science in Applied Earth Sciences. I am a member in good standing of the Association of Professional Geoscientist of Ontario and Professional Engineers and Geoscientists of Newfoundland and Labrador. My relevant experience includes 24 years of experience in exploration, operations and resource estimations including previous resource estimation on Lithium-bearing Pegmatites. I am a "Qualified Person" for the purposes of National Instrument 43-101 (the "Instrument").
- My most recent personal inspection of the Property was July 14 to 15, 2015 inclusive. I visited the core farm located at 2736 Belisle Drive in Val Caron, Ontario on June 20, 2015.
- I am responsible for Sections 1 to 20 of the Technical Report.
- I am independent of Houston Lake Mining Inc., as defined by Section 1.5 of the Instrument.
- I have prior involvement with the Property that is the subject of the Technical Report., having been a QP on Houston Lake Mining's 2013 and 2014 Technical Report on the PAK Li-Rare Metals Project.
- I have read the Instrument and the sections of the Technical Report that I am responsible for have been prepared in compliance with the Instrument.
- As of the date of this certificate, to the best of my knowledge, information, and belief, the sections of the Technical Report that I am responsible for contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

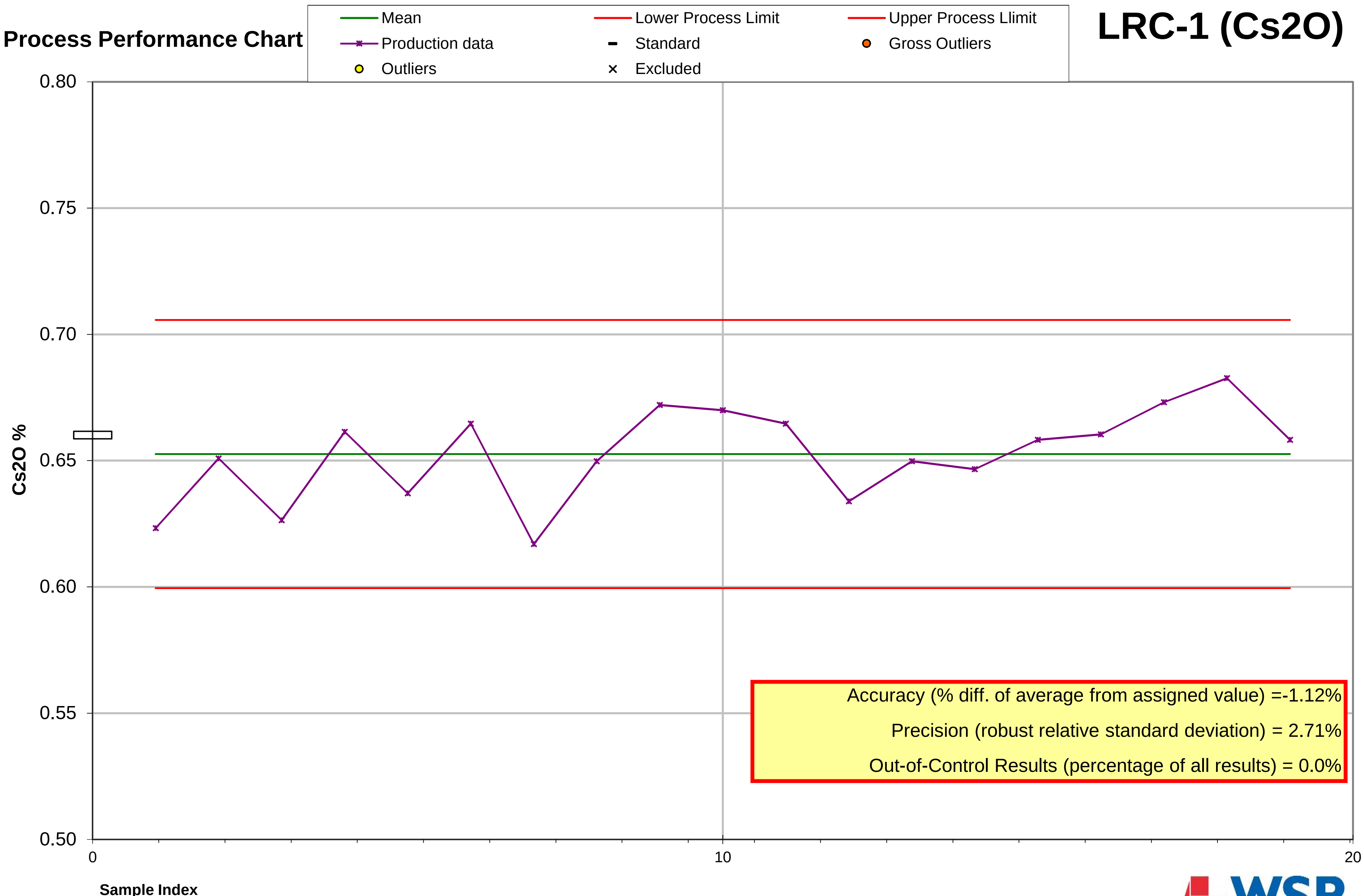
Signed and dated this 10th day of May, 2016, at Sudbury, Ontario.

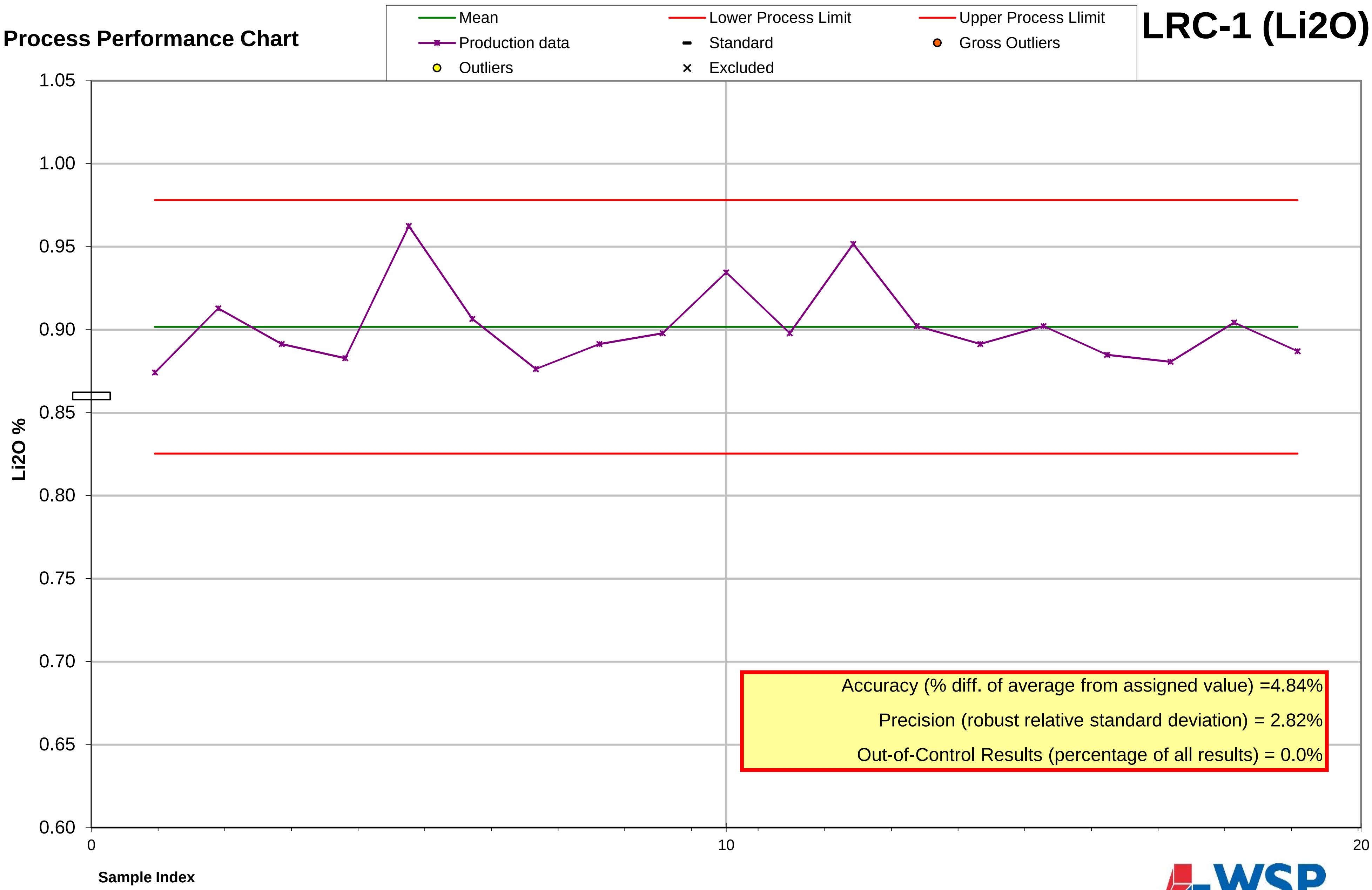
"Original document signed and stamped by Todd McCracken, P.Geo."

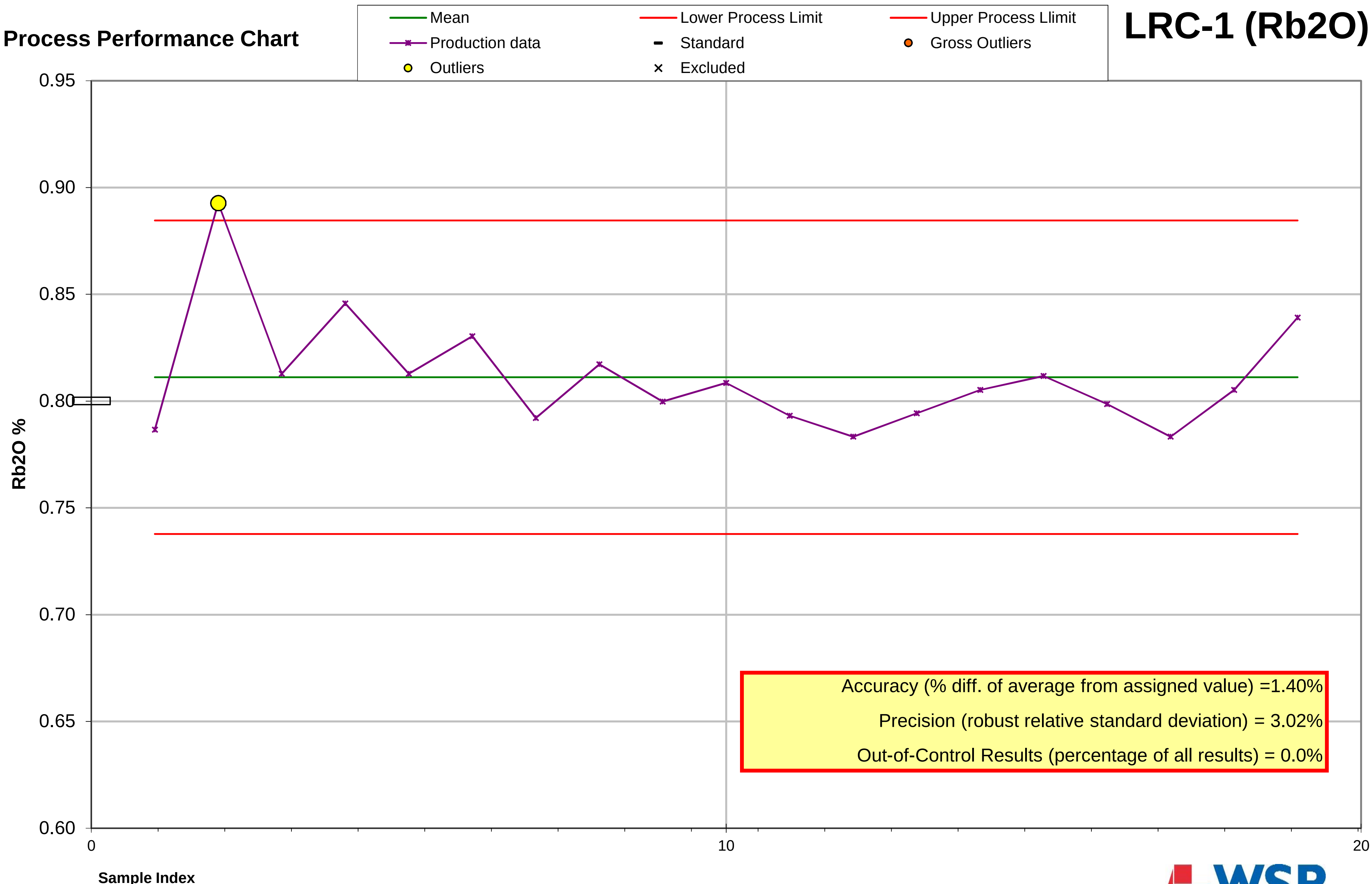
Todd McCracken, P.Geo.
Manager - Geology
WSP Canada Inc.

Appendix A

CONTROL CHARTS


Process Performance Chart
LRC-1 (Cs2O)
Mean
Lower Process Limit
Upper Process Llimit
Production data
Standard
Gross Outliers
Outliers
Excluded
0.80
0.75
0.70
0.65
0.60
0.55
0.50
Cs2O %
0
10
20
Sample Index
Accuracy (% diff. of average from assigned value) =-1.12%
Precision (robust relative standard deviation) = 2.71%
Out-of-Control Results (percentage of all results) = 0.0%

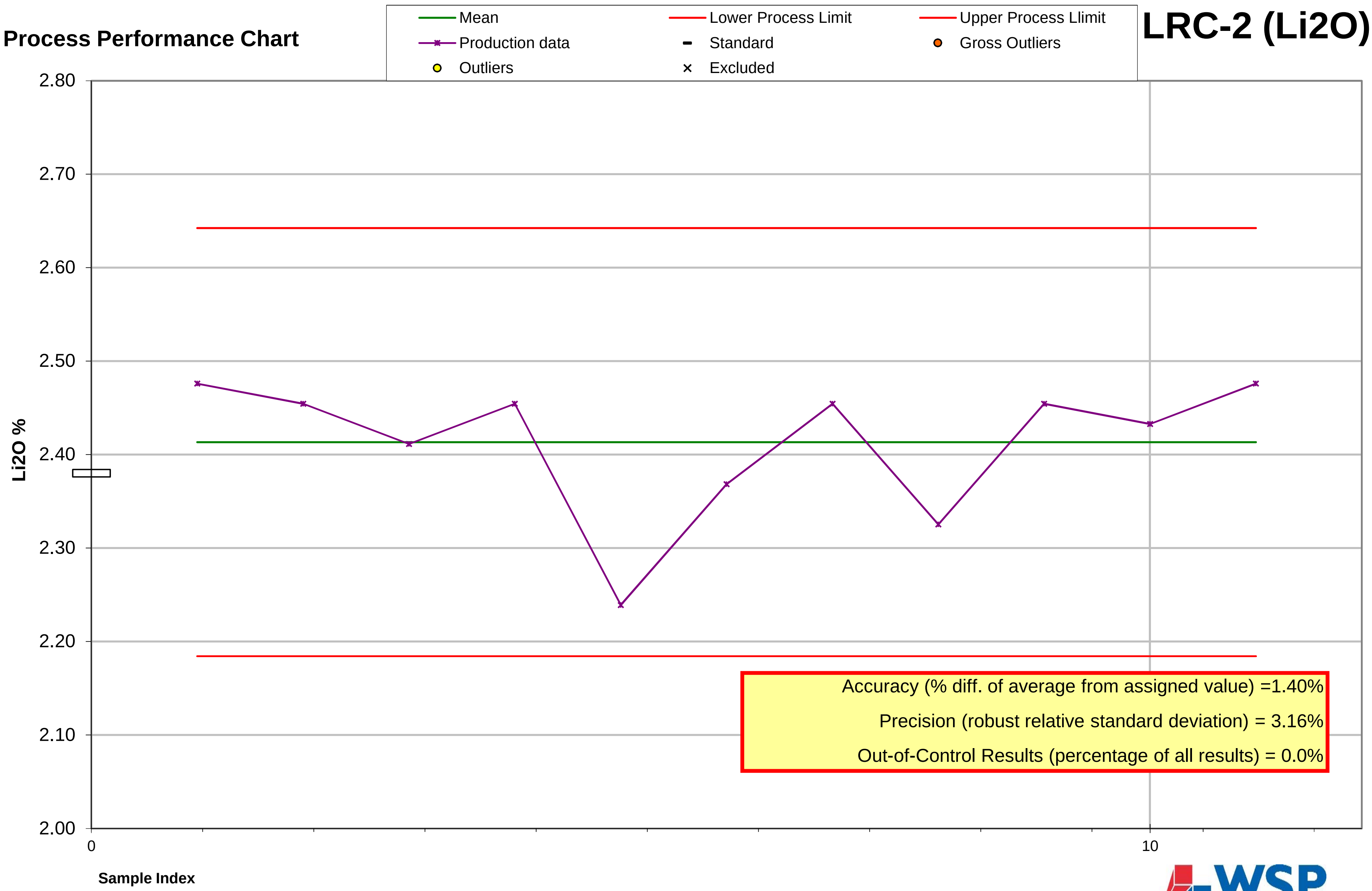

Process Performance Chart
Mean
Lower Process Limit
Upper Process Llimit
Production data
Standard
Gross Outliers
Outliers
Excluded
LRC-1 (Li2O)
1.05
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
Li2O %
0
10
20
Sample Index
Accuracy (% diff. of average from assigned value) =4.84%
Precision (robust relative standard deviation) = 2.82%
Out-of-Control Results (percentage of all results) = 0.0%



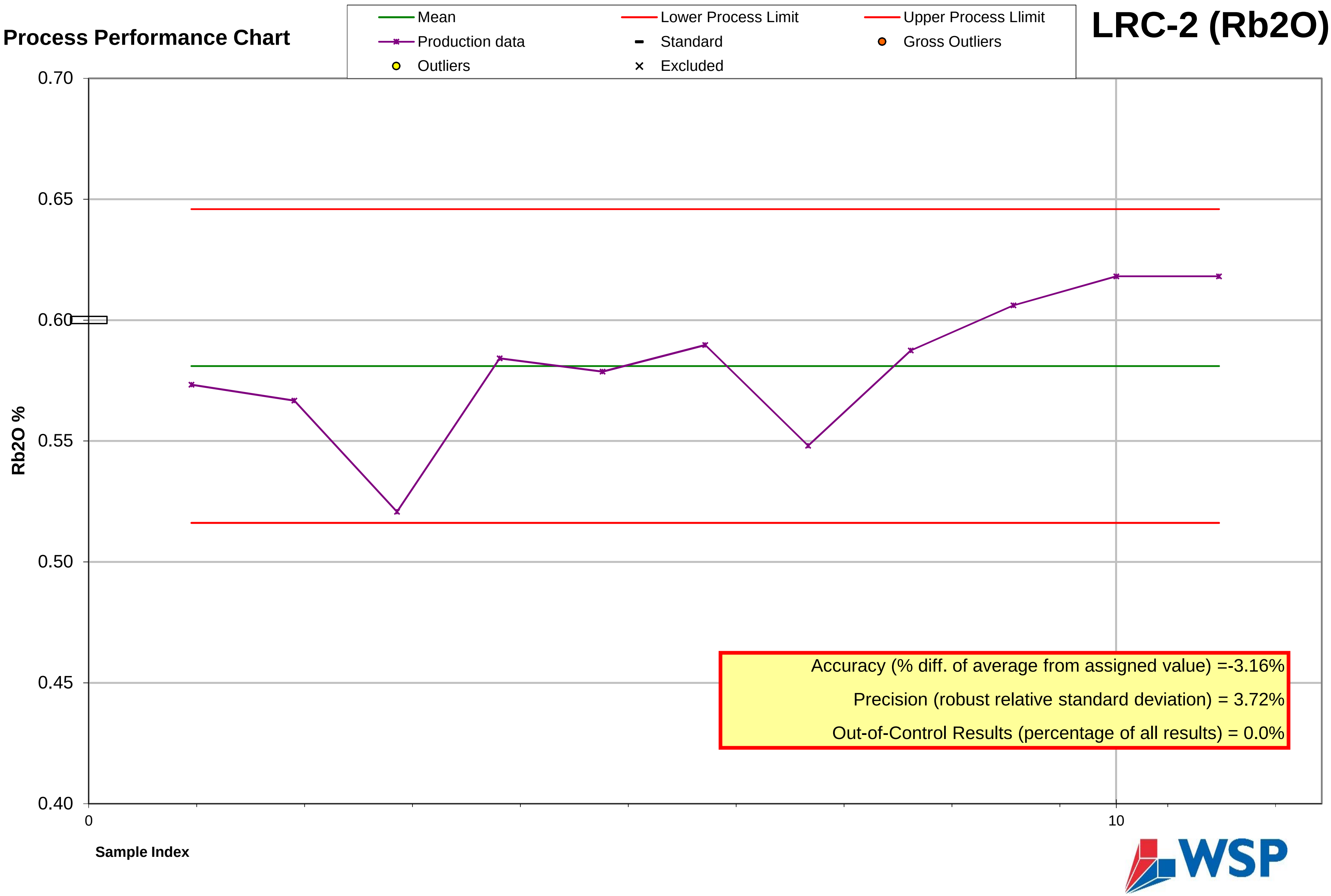
Process Performance Chart
LRC-1 (Rb2O)
Mean
Lower Process Limit
Upper Process Llimit
Production data
Standard
Gross Outliers
Outliers
Excluded
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
Rb2O %
0
10
20
Sample Index
Accuracy (% diff. of average from assigned value) =1.40%
Precision (robust relative standard deviation) = 3.02%
Out-of-Control Results (percentage of all results) = 0.0%

Process Performance Chart

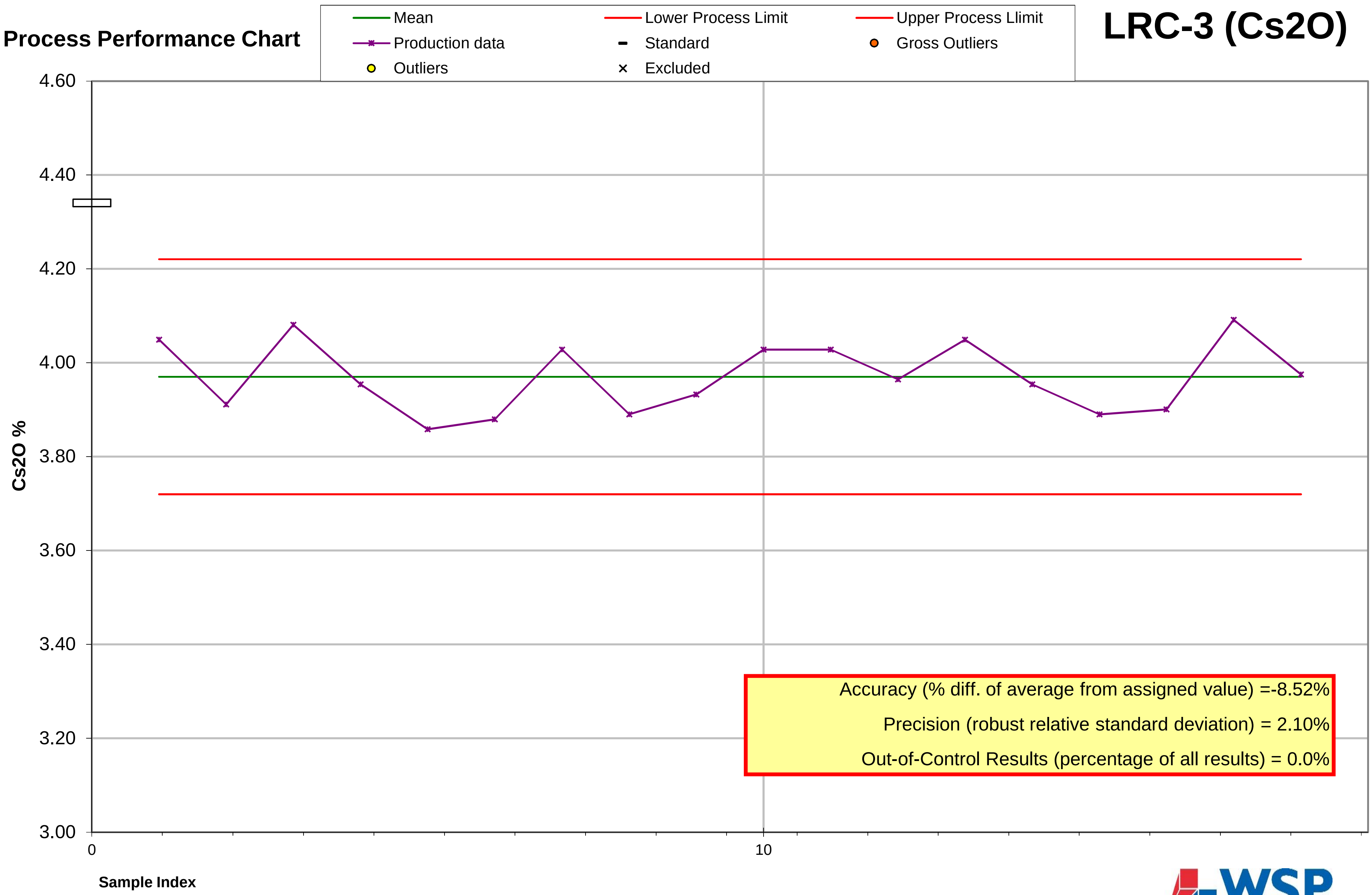
LRC-2 (Cs2O)



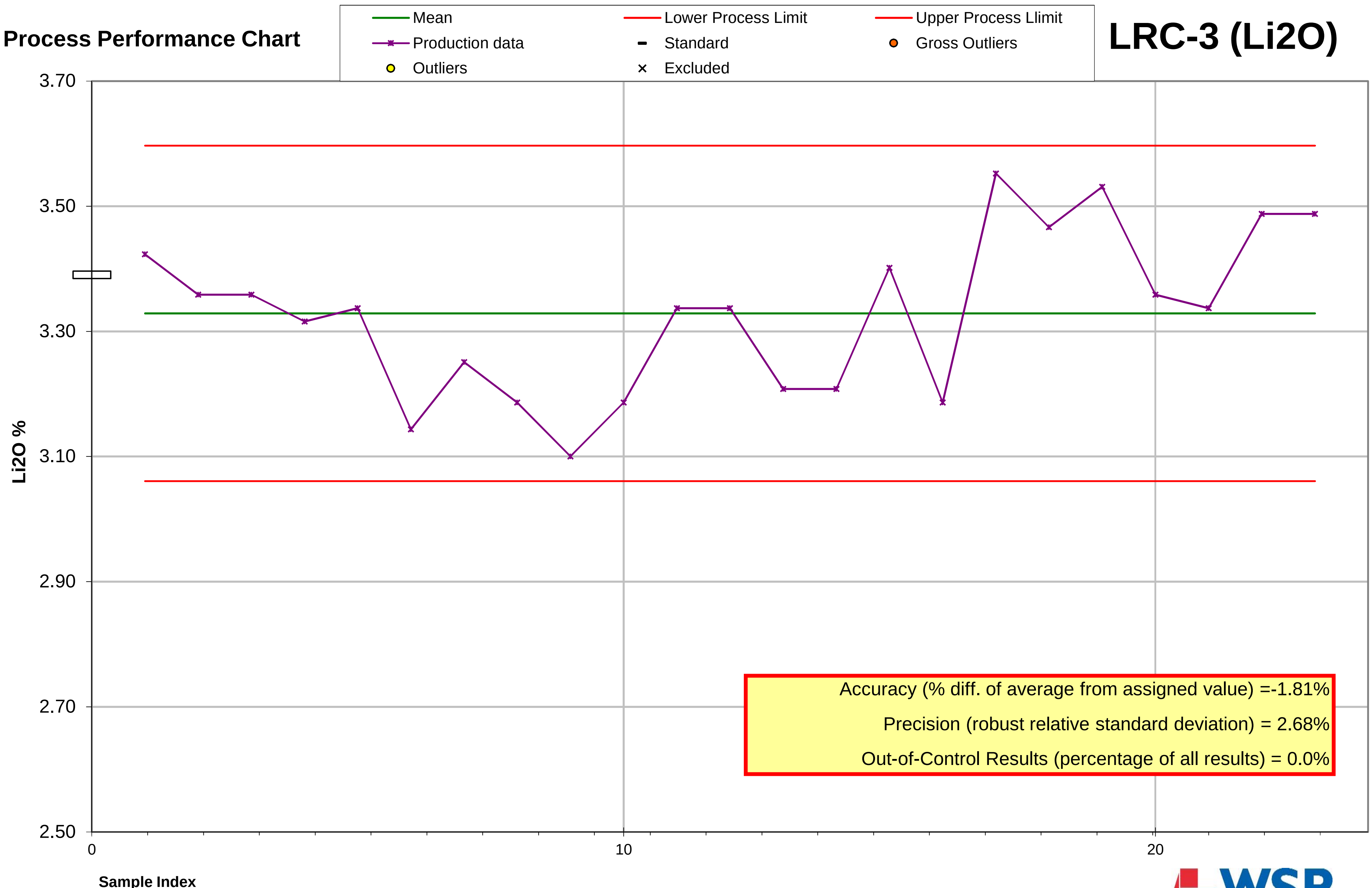
Process Performance Chart
LRC-2 (Li2O)
Mean
Lower Process Limit
Upper Process Llimit
Production data
Standard
Gross Outliers
Outliers
Excluded
2.80
2.70
2.60
2.50
2.40
2.30
2.20
2.10
2.00
Li2O %
0
10
Sample Index
Accuracy (% diff. of average from assigned value) =1.40%
Precision (robust relative standard deviation) = 3.16%
Out-of-Control Results (percentage of all results) = 0.0%



Process Performance Chart
LRC-2 (Rb2O)
Mean
Lower Process Limit
Upper Process Llimit
Production data
Standard
Gross Outliers
Outliers
Excluded
Rb2O %
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0
10
Sample Index
Accuracy (% diff. of average from assigned value) =-3.16%
Precision (robust relative standard deviation) = 3.72%
Out-of-Control Results (percentage of all results) = 0.0%



Process Performance Chart
LRC-3 (Cs2O)
Mean
Lower Process Limit
Upper Process Llimit
Production data
Standard
Gross Outliers
Outliers
Excluded
4.60
4.40
4.20
4.00
3.80
3.60
3.40
3.20
3.00
Cs2O %
0
10
Sample Index
Accuracy (% diff. of average from assigned value) =-8.52%
Precision (robust relative standard deviation) = 2.10%
Out-of-Control Results (percentage of all results) = 0.0%


Process Performance Chart
LRC-3 (Li2O)
Mean
Lower Process Limit
Upper Process Llimit
Production data
Standard
Gross Outliers
Outliers
Excluded
3.70
3.50
3.30
3.10
2.90
2.70
2.50
Li2O %
0
10
20
Sample Index
Accuracy (% diff. of average from assigned value) =-1.81%
Precision (robust relative standard deviation) = 2.68%
Out-of-Control Results (percentage of all results) = 0.0%

Process Performance Chart
LRC-3 (Rb2O)
Mean
Lower Process Limit
Upper Process Llimit
Production data
Standard
Gross Outliers
Outliers
Excluded
Rb2O %
0.52
0.50
0.48
0.46
0.44
0.42
0.40
0
10
20
Sample Index
Accuracy (% diff. of average from assigned value) =-0.19%
Precision (robust relative standard deviation) = 2.36%
Out-of-Control Results (percentage of all results) = 0.0%
WSP

Process Performance Chart
PLT-01 (Ta2O5)
Mean
Lower Process Limit
Upper Process Llimit
Production data
Standard
Gross Outliers
Outliers
Excluded
0.03
0.02
0.02
0.01
0.01
0.00
Cs2O %
0
10
20
Sample Index
Accuracy (% diff. of average from assigned value) =3.22%
Precision (robust relative standard deviation) = 4.01%
Out-of-Control Results (percentage of all results) = 3.8%