ASSESSMENT REPORT-TECHNICAL REPORT NI 43-101 For the LUCKY MIKE COPPER-TUNGSTEN PROPERTY Merritt, BC, Nicola Mining District

Latitude 50° 18' 48" N Longitude 120° 44' 10" W UTM 10 (NAD 83) Northing 5575910, Easting 661185 NTS Map Sheets 092 I BC Trim Maps NTS 092I027-037

> PREPARED FOR: **PLATE RESOURCES INC.,** 430 – 580 Hornby Street, Vancouver, BC. V6C 3B6

BC Geological Survey Assessment Report 33333

Work done on the following Tenures:

544529 544612 544613 544671 573357 574492 575171 578753 904411 687063 845068 871891 871922 872010 872048

> James A. Turner, P.Geo. 14149 17 A Avenue Surrey, B.C. V4A 6R8 778-846-7198 Effective date: September 17, 2012

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# Software used in the preparation of this Report

- 1. MS Word v 2010
- 2. MS Exel v 2010
- 3. Adobe Acrobat v 9.0
- 4. Autodesk AutoCad ver 2009

#### 1.0 SUMMARY

The Lucky Mike property of 22 claims totaling (4003.06 hectares) situated near Merritt is a multi-target porphyry copper prospect owned by Craig Lynes. The property has been optioned to PLATE RESOURCES INC., 430 – 580 Hornby Street, Vancouver, BC., V6C 3B6.

Under the option terms, Plate will pay the vendors \$ 55,000 over 4 years, assign 100,000 shares to the vendors from year 1 to year 4 and complete \$900,000 in property expenditures (\$100,000 in the first year) to earn 100% interest in the property subject to a 2% NSR which can be bought for \$1 million within the first 5 years commencing when the property is put into commercial production.

The property lies in 26 km north of Merritt, British Columbia and has logging road access throughout the claims. Three major showing areas are the Lucky Mike Skarn Showing, (Cu, W), The Sunshine Shear Zone, (Pb, Zn, Ag) and the Sophia Breccia, (Pb, Zn).

The coordinates of the center of the claims are Latitude 50° 18' 48" N Longitude 120° 44' 10" W, UTM 10 (NAD 83) Northing 5575910, Easting 661185 and are located on NTS Map Sheets 092 I., and BC Trim Maps NTS 092I027-037.

The topography of the Lucky Mike Workings is fairly subdued with elevations ranging from about 400 to 1700 metres above sea level.

The lower portions of the property are covered with a dense forest of fir, spruce, cedar and pine. The underbrush is mostly willow and alder. Very few outcrops occur in the area, which is covered by thick layers (up to 20 m) of drift and glacial till. Thin overburden occurs on the higher elevations. Logging road cuts provide most of the exposure at the lower elevations. Ridge tops and creeks provide good exposures.

The property has been explored in the past by a number of individuals and companies; Mineral exploration has been conducted on Swakum Mtn. since the early part of the century. Several small shafts and pits around the Mtn. attest to this era of activity. Many of the showings resulted in crown granted mineral claims. During World War II, the skarn deposit on the Lucky Mike claim attracted attention for its copper and scheelite content. It has remained the major focus on this part of the present property.

Reported total production from the Lucky Mike property is 26 tons which yielded two ounces of gold, 137 ounces of silver, 1,932 pounds of copper and 1,753 pounds of lead.

The Sunshine and the Sophia showing areas are shear and breccia zones of galena, sphalerite and tetrahedrite.

The various assessment reports reflect three strongly mineralized areas suggestive of a porphyry deposit at depths. All three showings have been drilled.

Report numbers: include 2460, 2970, 3936, 4409, 6119, 6441, 6742, 7016, 7488, 8036, 12386, 15318, 16625, 18583, 22900, and 24600.

In 2011 Plate funded an airborne geophysical survey over the property. A small amount of mapping and sampling was done by the author and Craig Lynes.

#### Work to the value of \$103,000.00 included:

- Initial sampling and mapping trip on July 12, 2011 by Craig Lynes and Jim Turner P.Geo. Six selected rock samples from the Lucy Mike and the Sunshine.
- Additional sampling by Crag Lynes. Between September 28-30<sup>th</sup> 2011, 23 rock chip and channel samples were taken from the Lucy Mike and Sunshine mineralized areas.
- An airborne geophysical program of 576 line km covering all but 3 new claims, by Precision Geosurveys of Vancouver, British Columbia. This included magnetic and radiometric surveys.
- The cost of this summary report.
- Accommodation, meals and expenses.

As a general comment there are a number of magnetic anomalies which appear to correlate with potassic radiometric response, indicating that the intrusive plutons which have magnetite content also have potassic content, either as original K-feldspar components or as potassic alteration. This is consistent with the model for intrusive hosted copper porphyrys.

Note: The work cost sited above includes:

- 1) Physical work Event # 5044147
- 2) Technical work Event # 5404928
- 3) Technical work Event # 5386334

This report covers Events 2 & 3. The cost statement at the end of this report does not include the Physical costs.

## 2.0 INTRODUCTION

### 2.1 Qualified Person and Participating Personnel

The following report was commissioned by **PLATE RESOURCES INC.** ("PLATE") in order to satisfy disclosure requirements for the TSX-V exchange. James A. Turner P.Geo, (the Author) was retained to summarise the geology and economic potential for Lucky Mike Property, near Merritt in Southwest British Columbia, in a form consistent with Canadian National Instrument NI 43-101. In June PLATE commissioned the Author, to conduct a property visit to the Lucky Mike Property. The site visit was on August 24, 2011 and the duration of the visit was approximately 1/2 days. The Author was also the manager while rock sampling and airborne Magnetic and Radiometric Surveys were taking place. James A. Turner is the sole Author of this report and it is consistent with NI 43-101 standards.

### 2.2 Terms, Definitions and Units

All costs contained in this report are denominated in Canadian dollars. The term "ppm" refers to parts per million or grams per metric tonne and "ppb" refers to parts per billion or milligrams per metric tonne. The symbol "%" refers to weight per cent unless stated otherwise. All other units are imperial except where noted. Cell claims refers to claims acquired by map "staking". These cells can be acquired over the Government of British Columbia's website MTO Online (www.mtonline.gov.bc.ca/). A group of cells form a claim.

#### 2.3 Source Documents

The Author has reviewed technical data provided from government assessment files and previous work conducted by prior operators within the boundary of the Lucky Mike property, in order to comment on and to make judgments on the geology, previous work completed and work history on the Lucky Mike Property. Descriptions of the regional and property scale geology and geochemistry are taken largely from published scientific papers and published assessment reports, BC MEMPR Minfile reports and scientific papers on porphyry deposits. Geochemical samples from historic work either no longer exist or were inaccessible when the current Report was written.

Limited previous data were also reviewed and incorporated as noted, including records of previous trenching and rock-chip sampling, soil geochemistry and geophysics, completed between 1969 and 1980 by operators not affiliated with the Company. The source information and the data presented in the Report are believed to be reliable and accurate; however, earlier historic information is often incomplete and has not been validated by the Author and he is unaware of any material fact or material change with respect to the subject matter of the Report that is not reflected in this Report, the omission to disclose which makes the Report misleading.

## 2.4 Limitations, Restrictions and Assumptions

James A. Turner did not fully audit or test the accuracy or completeness of data collected by Universal or its predecessors In addition, Plate have informed the Author that, to the best of their knowledge, no events have occurred, other than those taken into account in the report, which might, in their opinion, cause us to change our views. The Author feels that this early work was done on a small portion of the property and the Lucky Mike Property is at a later stage of exploration.

# 2.5 Scope of Review

To accomplish this review, the Author, was asked to complete an evaluation of the exploration history, geology, mineralization and economic potential of the Lucky Mike Property controlled by Plate.

The Author completed several days of supervising the project, during August to November 2011. No metallurgical testing was conducted. The Author has done a brief review of legal documentation and ownership and has assumed that the presented facts are correct.

# 3.0 RELIANCE ON OTHER EXPERTS

Other than as described below, the Author is not relying on a report or opinion of any experts. Claim title is granted through the BC Mineral Titles Online service and supporting government legislation. The Author has relied on the accuracy of these records and information provided by the Company to determine claim ownership.

The author is an independent "Qualified Person" by definition of the Standards for disclosure for Mineral Projects (NI 43-101). The geophysics Interpretation Report was written by Trent Pezzot of GeoSci Data Ltd., of Surrey, B.C.

# 4.0 PROPERTY DESCRIPTION AND LOCATION

## 4.1 Property Location: Figure 1

The Lucky Mike Property is located 26 km north of Merritt B.C., and lies primarily on the north flank of Swakum Mtn in the Nicola Mining District. The coordinates of the center of the claims are Latitude 50° 18' 48" N Longitude 120° 44' 10" W, UTM 10 (NAD 83) Northing 5575910, Easting 661185 and are located on NTS Map Sheet 092 I., and BC Trim Maps NTS 092I027&037. The horizontal datum is NAD 83 and the vertical datum is NGVD 1983.

# 4.2 Property Description: Figure 2

The property forms a continuous block of 22 un-patented claims totaling 4,003.06 hectares and is located in the Nicola Mining District of south central British Columbia.

The claims, listed below, are all located on government (crown) land and are shown on Figure 2.

Table 1: Lucky	Mike Claims	
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Tenure No.	Claim Name	Owner	Expiry Date	Hectares
544529	Lucky Mike Group	116233 100%	2017/Jan/01	433.40
544612	New Zone 3	116233 100%	2017/Jan/01	330.14
544613	Zone 3 SW	116233 100%	2017/Jan/01	103.19
544671	Zone 2 NE	116233 100%	2017/Jan/01	103.15
573357	Zone 3 SW	116233 100%	2017/Jan/01	103.19
574492	Z – NW	116233 100%	2017/Jan/01	41.26
575171	Sophia	116233 100%	2017/Jan/01	82.55
578753	North Sophia	116233 100%	2017/Jan/01	82.54
904411	Lucky Road	116233 100%	2017/Jan/01	41.27
687063	Iron Mike	116233 100%	2017/Jan/01	103.17
845068	West Sophia	116233 100%	2017/Jan/01	82.54
871891	Zone 4	116233 100%	2017/Jan/01	495.01
871922	Sophia-Rey	116233 100%	2017/Jan/01	433.24
872010	West-Rey	116233 100%	2017/Jan/01	330.00
872048	South-Sophia	116233 100%	2017/Jan/01	495.37
941167	Southeast Sophia	116233 100%	2013/Jan/17	185.79
941171	Single Sophia	116233 100%	2013/Jan/17	20.60
941413	Southern Rey	116233 100%	2013/Jan/19	206.30
1011623	Swakum	116233 100%	2013/Aug/01	123.86
1011638	Swakum	116233 100%	2013/Aug/01	82.58
1011651	Swakum Silver	116233 100%	2013/Aug/01	82.61
1011657	Old Corona Silver	116233 100%	2013/Aug/01	41.31
		Total		4003.06

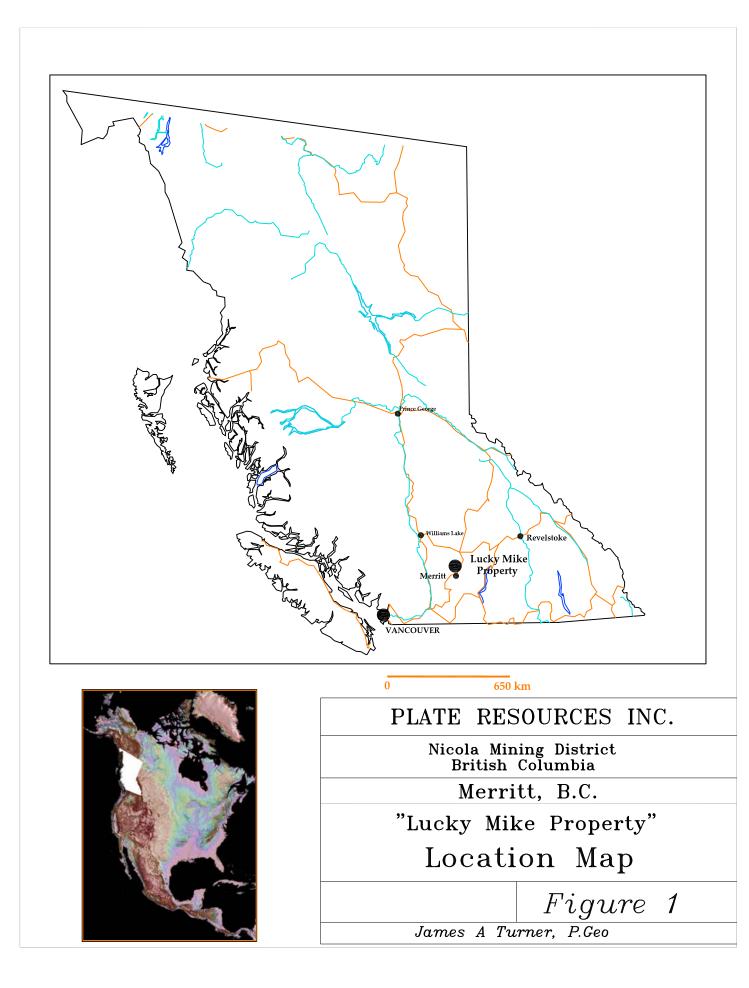
The claims are "cell" claims **which have not been surveyed**, but the corners may be located in the field by reference to precise UTM coordinates using a GPS instrument. The claims have adequate area for exploration or development purposes. They contain two BC Minfile showings named Lucky Mike and Sunshine.

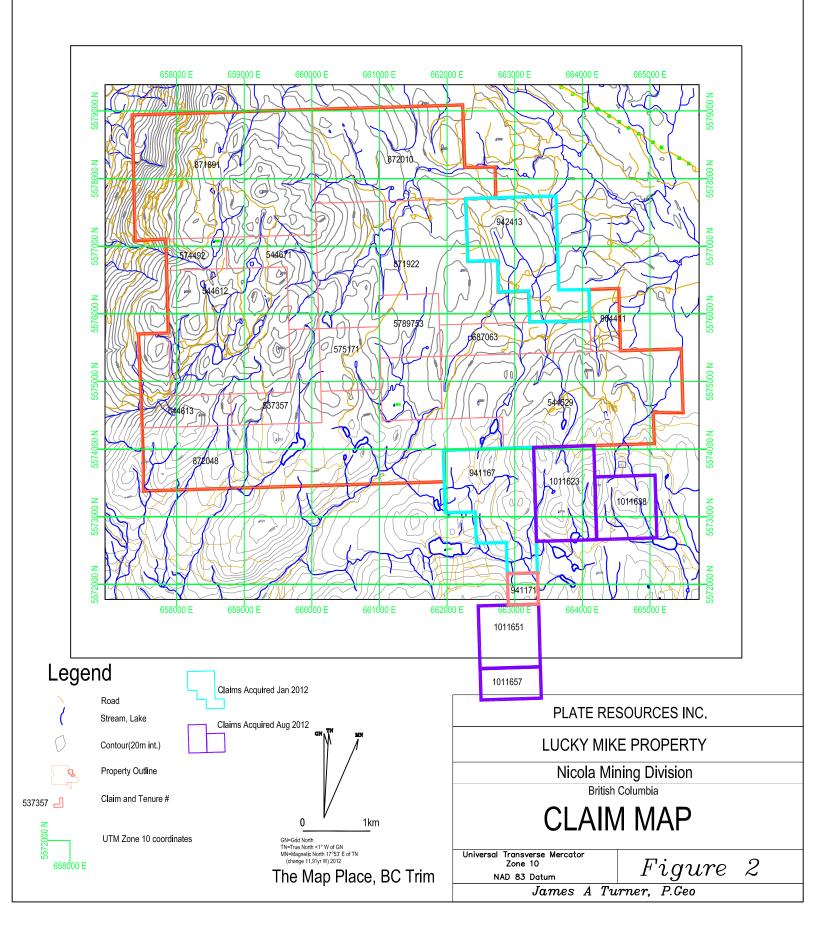
The Author has verified the "cell" claims were acquired by using the modified grid system map staking of BC. The Author can verify the position of the claims as shown in Figure 2 and 4 of this report.

All holdings of the Lucky Mike Property are currently in good standing. To remain in good standing, BC Mining Regulations require each claim to have \$5/hectare

exploration expenditures applied annually for Years 1-3, followed by \$10/hectare for each subsequent year. Currently, the property requires approximately \$20,015.30 worth of exploration work (or cash-in-lieu) plus fees to be applied annually, to keep the mineral claims in good standing. Plate has filed all exploration work conducted to date, as assessment credits, to fulfill this requirement. There are no Crown grants or Mining Leases.

Claim owner # 116233 is Craig Lynes





### 4.3 Option Agreement

The formal option agreement for the Lucky Mike property is dated the 13th day of September, 2012.

Beneficial owner is: **PLATE RESOURCES INC.**, a company duly incorporated pursuant to the laws of the Province of British Columbia and having a registered office at 430 – 580 Hornby Street, in the City of Vancouver, in the Province of British Columbia, V6C 3B6.

Plate has the option to acquire a 100% undivided interest in the Property subject to the terms of this Agreement and a Net Smelter Return. In order to maintain the option Plate must:

(a) pay to the Optionor \$10,000.00 on execution of this Agreement (receipt of this sum is acknowledged);

(b) on or before the second anniversary of the execution of this Agreement, the Optionee will pay the Optionor a further \$15,000.00 and issue and allot to the Optionor 50,000 shares;

(c) on or before the third anniversary of the execution of this Agreement, the Optionee will pay the Optionor a further \$15,000.00;

(d) on or before the fourth anniversary of the execution of this Agreement, the Optionee will pay the Optionor a further \$15,000.00 and issue and allot to the Optionor a further 50,000 shares;

(e) On or before December 31, 2012, the Optionee shall expend not less than \$100,000.00 on Exploration Expenditures on the Property;

(f) On or before September 20, 2013, the Optionee shall expend not less than a further \$200,000.00 on Exploration Expenditures on the Property;

(g) On or before September 20, 2014, the Optionee shall expend not less than a further \$300,000.00 on Exploration Expenditures on the Property;

(h) On or before September 20, 2015, the Optionee shall expend not less than a further \$300,000.00 on Exploration Expenditures on the Property;

The vendors have a 2% NSR which can be purchased by Plate for \$1,000,000.00 during the five year period commencing from the date upon which the Property is put into commercial production.

### 4.4 Environmental Liabilities

There are no significant environmental issues related to the project. Previous disturbance of the area trenching has apparently been properly reclaimed in accordance with regulations in effect at that time

### 4.5 Status of Required Permits

An annual Mineral & Coal Notice of Work and Reclamation Program permit will have to be negotiated with the Ministry of Energy and Mines for British Columbia. This permit allows the user to conduct road building, drilling, trenching and timber cutting. Any use of water is also included. A reclamation bond will also be required.

#### 5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

#### 5.1 Access

Access to the property, from the west, is provided by a public road (Rey Lake Road.), near Mamit Lake, and from the east by the Swakum Mtn. Forest Access Road. Access to the Swakum Mtn. road is either from the Coquihalla Highway (Highway 5) via The Helmer Lake exit, approx. 25 km north of Merritt or from Highway 5a about 1.5 km east of Merritt.

A logging road from Km 26 on the Swakum Mtn. Forest Access road leads to the southern portion of the claims while access to the northern portion is best achieved from the Rey Lake Road. Within the claim block, logging, ranching and old exploration roads provide access to all regions. A 4-wheel drive vehicle is recommended.

#### 5.2 Climate and Physiography

The climate of the region is classified as the Okanagan-Cariboo Dry Belt, with mild but wet winter seasons and medium to hot drier summers, precipitation averages about 50 cm per year. Winters, in the area are usually severe and bring several feet of snow-pack. The highest average temperatures occur in July at 35-40° C and average lowest temperatures occur in January at  $-30^{\circ}$  C (night).

The claims are mostly covered with spruce, fir, and pine forest. Logging over the last 20 years has been conducted on approximately 40% of the claim block. Privately owned rangeland covers the portion of the claims surrounding Rey Lake and the swamps and meadows draining into the lake. Figures 1-3 provide location maps for the claims.

The topography of the Lucky Mike Workings is subdued, elevations on the property vary from 1300 meters on Rey creek near the northwest corner of the property to 1723 meters at Swakum Mtn. in the southern part of the claims. The property lies within the

southern interior region of the province, a generally dry, open forested and grassland terrain.

Several post-glacial drainage features or depressions are now swamps and streams. The field season lasts from early April to the latter part of October.

### 5.3 Local Resources and Infrastructure

Merritt (pop. 7,200), is one of the administrative and logistical centres of the region and offers many basic services such as food stores, fuel and lumber supplies. Helicopter services are also available. Any specialized material, equipment or manpower requirements would be readily available in Kamloops. Merritt is serviced by via Highway #1 and the Coquihalla Highway from Vancouver.

At present there is minimal infrastructure on the property. The existing road network on the Lucky Mike property has been partially reclaimed, Merritt and nearby Kamloops could provide skilled labor for the project.

There are no apparent serious impediments to exploration in the form of surface rights alienation, but this would require careful checking before any development work was contemplated. At present, electrical power is not available on the property, but power lines are within 1 km. In the event of mining activities, there appear to be ample sites for processing facilities, waste storage areas, or tailing ponds.

Timber, water, sand and gravel are available on or near the property.

#### 6.0 HISTORY

The history is summarized from the Assessment Reports filed from 1969 to the present.

Mineral exploration has been conducted on Swakum Mtn. since the early part of the century. Several small shafts and pits around the Mtn. attest to this era of activity. Many of the showings resulted in crown granted mineral claims. During World War II, the skarn deposit on the Lucky Mike claim attracted attention for its copper and scheelite content. It has remained the major focus on this part of the present property.

The first of the Swakum Mountain deposits, the Last Chance or the Lucky Mike was originally discovered in 1916 by Oscar Schmidt. Northwestern Mines Ltd. sank an inclined shaft on the north end of the zone.

Reported total production from these properties is 26 tons from the Lucky Mike which yielded two ounces of gold, 137 ounces of silver, 1,932 pounds of copper and 1,753 pounds of lead.

The Last Chance was re-staked as a scheelite prospect in 1942. Reported values are of 0.25% W0<sub>3</sub> across an average width of 34 feet.

In 1942-43 W.B. Milner conducted numerous trenches and open cuts tracing the skarn 80 metres along a north-south strike. Two bands of skarn are separated by a greenstone unit. Numerous  $WO_3$  values reneging from 0-1% to 1% occur over variable widths.

In 1943 the Strategic Metals Committee part of the Wartime investigation for Tungsten drilled 14 diamond drill holes over a 100 metre strike length. Eight holes intersected a weighted average of  $0.312\% W0_3$  over an average width of 25 feet. No samples were assayed for gold or copper. The deposit was considered too low grade with poor continuity of scheelite mineralization.

In 1948, W.E. Cockfield described the deposit as having an exposed length of 350 feet (actual length concealed by overburden at both ends), with width ranging from 25 feet to 75 feet, averaging 40 feet. On this basis he estimated a "mineral zone of approximately 1,400 tons per foot of depth and the deposit shows no change in character to a depth of 190 feet". Surface samples by Buffam averaged 0.25% W0<sub>3</sub> across an average width of 34 feet. "Dr. Bufram felt that this figure did not necessarily represent the true value of the deposit, because some of the trenches did not the hanging-wall and because the shattered and oxidized character of the surface rock made it difficult to secure satisfactory samples". (Cockfield 1948 p 141).

Results from drill holes 4, 5, 9,10,11,12,13, and 14 gave an average of 0.217%  $WO_3$  across an average of 25 feet. Copper and precious metals were not assayed at that time.

Between 1958-65 Torwest Resources Ltd. conducted work including trenching, geophysical, geochemical and geological surveys. Two or more drill phases on the Lucky Mike, skarn zone. 23 or more holes over 150 metre strike length. Based on these programs plus 1943 data, Torwest defined two east dipping tungsten-skarn bodies.

Consulting Engineer C.H.Donaldson estimated "drill-proven" reserves for the Lucky Mike deposit of <u>350,000 tons grading 0.56% copper</u>, <u>0.30% W0<sub>3</sub></u>, and <u>0.60 oz/ton silver</u>. (SMF for Brendon Resources Ltd. dated July 12, 1973, reported in Bulletin MR 223, 1989, Deposit BC 133.).

"The tonnage and grade estimates were prepared prior to the introduction of National Instrument 43-101. The term "reserves" may have complied with CIM categories at the time of the estimate, but does not comply with the definitions currently accepted by CIM as economic viability at present conditions has not been demonstrated; there is no current feasibility or pre-feasibility study. A qualified person has not done sufficient work to classify the historical estimate as current mineral resources or mineral reserves, the issuer is not treating the historical estimate as current mineral resources or mineral reserves and the historical estimate should not be relied upon."

In 1988 Corona Corporation conducted an exploration program during which culminated in a localized drilling program centred on the Lucky Mike deposit. In connection with this program, a comprehensive airborne geophysical survey was completed over what is now the southern half of the Rey Lake property.

Corona could not conclude an agreement with the owner of adjacent ground to the Lucky Mike claim, and allowed their options to lapse.

The Sophia Property

In 1977, prior to the acquisition of the property by Lakewood Mining,- an E.M. and magnetometer survey in addition to a preliminary geochemical survey was carried out over localized areas of the Property.

In 1978 a localized I.P. survey and "587 feet" of diamond drilling in three holes was completed on the property.

In 1979 Lakewood carried out a six hole percussion drill hole program on the property. There was no work on the property from 1979 to the 1983 percussion drill hole program

In 1983 a percussion drilling program consisting of two holes totalling 560 feet of drilling were completed to test anomalous areas indicated in previous surveys.

In 1986 a VLF-EM and Mag. Survey carried over Lines A.B.C.D. revealed two partly correlating conductors.

In 1987 5.1 kilometers of Induced Polarization was completed on a portion of the property. A total of 101 readings were taken at 40 meter intervals.

The Sunshine Property:

In 1965 Vastlode Mining Co. Ltd. Conducted several open cuts and trenching on Zone #1. They also drilled 3000 feet of diamond drilling.

In 1966 Vastlode drilled an additional 5 holes on Zone #2.

In 1967 San Doh Mines Ltd. conducted trenching and drilled 18 holes on Zone # 2 and 3.

In 1967, Highland Lode Mines concentrated their exploration activities on the central zone. The work was comprised of additional stripping, trenching and 900 meters of diamond drilling in 16 holes. An adit was driven for 325 meters, of which 130 meters was drifted along the mineralized zone.

In 1969 Highland Lode Mines Ltd. Conducted geologic mapping.

In 1971 Highland Lode conducted surface mapping at 1"=40' on Zone #3.

In 1972 Highland Lode drilled 6 diamond drill holes totaling 2162' and 2 miles of road building.

In 1976 Ruskin Development conducted VLM-EM and geochemical surveys on Zones #1-3. In November, Geotronics Surveys Ltd. of Vancouver performed VLF-EM and soil sample surveys over a portion of the property.

In 1977 Ruskin drilled four Diamond drill holes totaling 690' on the #3 Zone.

In 1980 C.D.R. Resources Inc. (formerly Highland Lode Mines Ltd.) carried out a program of diamond drilling in 12 holes totaling 507 metres on Zones # 2 and 3.

Corona Corporation conducted an exploration program during 1988 which culminated in a localized drilling program centred on the Lucky Mike deposit.

In July 1991, Strato Geological Engineering Ltd. completed a preliminary I.P. program for Hera Resources Corp. This was followed by a comprehensive I.P. survey conducted during the spring of 1993 and in turn, was immediately followed by a drilling program. This I.P. survey covered parts of the Southeast Sophia claim and just north of the Lucky Mike deposit. Drilling in 1993 took place just to the northeast of the Southeast Sophia claim.

The following tables are a summary of drill holes conducted on the Sunshine adit area.

		_		· · ·	0	•	) Z n ( %	)C u(%)
<b>Hole</b> 67-1	<b>Dip</b> 47°	<b>F r o m</b> 14.0	<b>To I</b> 25.0	<b>nterval</b> 9.0	oz/tor ?	۱ ?	3.65	0.55
67-2	60°	72.0	101.0	29.0	0.59	3.50	5.56	0.30
67-3	75 <sup>°</sup>	104.0	112.0	8.0	0.35	2.25	11.25	0.42
67-4	60 <sup>°</sup>	68.0	78.0	10.0	0.64	0.92	2.68	0.41
		91.0	105.0	14.0	0.35	1.77	1.57	0.15
67-5	80°	84.0	90.0	6.0	0.45	0.08	1.30	0.10
		120.0	127.0	7.0	0.05	Tr	1.40	0.05
67-6	60°	78.0	82.0	4.0	0.55	0.10	1.25	0.10
67-7	80 <sup>°</sup>	90.0	112.0	22.0	1.15	2.70	8.07	0.22
		122.0	132.0	10.0	0.06	Tr	7.90	0.28
67-8	60°	122.0	130.0	8.0	0.23	1.70	1.85	0.13
67-9	80 <sup>°</sup>	117.0	129.0	12.0	0.76	1.95	2.94	0.06
67-10	70 <sup>°</sup>	Report	ted sam	pled but	no assa	ys on	hand.	
67-11	90°	72.0	82.0	10.0	1.90	0.50	2.15	0.10
77-1	65°	92.5	107.0	14.5	0.24	2.02	5.62	0.35
77-2	80 <sup>°</sup>	101.0	113.0	12.0	0.18	3.17	8.16	0.36
77-3	70 <sup>°</sup>	174.0	190.6	16.6	0.10	0.39	1.32	0.30

Table 2: Summary of 1977 Drill Hole Intersections Sunshine No. 3 Zone to 1977

77-4	70°	158.0	163.0	5.0	0.10	0.18	0.36	0.01
67-12	?	In	formation	not on	hand			
67-13	?	?		8.0	0.83	3.01	5.25	0.23
67-14	?	Inf	ormation	not on	hand			
67-15	?	Inf	ormation	not on	hand			
67-16	45°	330	342	12	1.75	"Low V	alues"	

Table 3: C.D.C. Resources Inc.

Summary o	f 1980	<b>Drill Hole</b>	Intersections
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Hole	From To	Interval	Lead(%)	Zinc(%) Co	opper(%)
H-1	235.0 240.0	5.0	0.01	0.66	-
H-2	210.0 224.0	14.0	0.01	0.31	-
H-3	186.0 191.0	5.0	0.07	0.23	Tr.
H-4	158.0 168.0	10.0	0.03	0.09	Tr.
H-5	160.0 170.0	10.0	0.015	0.54	0.016
	178.0 183.0	5.0	0.02	0.44	0.017
	198.0 203.0	5.0	Tr.	0.08	0.09
	114.0 125.0	9.0	0.02	0.03	Tr.
	130.0 136.0	6.0	0.06	0.48	0.01
	154.0 160.0	6.0	0.09	0.16	1.43
H-6	165.5 173.0	7.5	1.01	4.75	0.28
H-7	157.5 172.0	14.5	0.43	2.27	0.09
(or)	165.0 170.0	5.0	0.43	4.40	0.19
H-8	141.0 155.0	14.0	0.10	1.22	0.02
(or)	146.0 150.0	4.0	0.12	2.26	0.05
H-9	129.0 136.0	7.0	0.09	0.34	-

#### 7.0 GEOLOGIC SETTING AND MINERALIZATION

#### 7.1 Regional Geology Figure 3

The region is underlain by volcanic and sedimentary rocks of the late Triassic to early Jurassic **Nicola Formation.** These rocks have been intruded by Tertiary volcanics, dikes, sills(?) and around Rey Lake by granitic rocks of variable composition.

Within the local region, the Nicola rocks are fault bounded and are believed to occupy a graben structure. Intrusive rocks of the Guichon Batholith (which host the famous Highland Valley porphyry copper mineral deposits) lie to the west of the Nicola rocks. On the east side of the graben, Jurassic aged intrusives of the Nicola Batholith occur. Intrusive rocks of the Tertiary, Iron Mask Batholith about the Nicola Graben on its' northeast side.

Locally, outcropping bedrock is scarce, particularly around Rey Lake and extending about 2 km southwards, about halfway to Swakum Mtn. Within this area overburden depth reaches as much as 300 feet on the north side of Rey Lake but is commonly only a few meters on the southern side where sporadic outcrop occurs. Bedrock is more commonly exposed on the upper, north and west flanks of Swakum Mtn. where limestones, shales and volcanic rocks have been subjected to thermal alteration, locally reaching garnet skarn assemblages (i.e. Lucky Mike showings).

Intrusive quartz monzonite rocks of the Rey Lake Pluton, have been mapped beneath Rey Lake and extending in a "finger" southwards for about 1 km. The extent of the intrusive has been largely inferred from widely spaced percussion and diamond drill holes, dating from the 1972-1976 episodes of exploration.

The area around Swakum Mountain consists of folded Upper Triassic Nicola Group volcanic rocks with interbedded sedimentary units. These rocks are intruded by large north trending felsic to intermediate intrusions (batholiths) east and west of the mountain. Nicola Group rocks on the mountain strike north to northeast with generally steep dips. For a large part they consist of andesitic flows and tuffs, agglomerates, and occasional basalts and rhyolites.

A break occurs in the volcanic stratigraphy and is comprised of a mixed volcanicsedimentary unit consisting of a thick sequence of felsic volcanic flows, lithic and crystal tuffs, limy sediments and a prominent limestone. This unit has a northeast strike and crosses the mountain for a 2.5 kilometre strike length. The unit has been historically used as a marker horizon in interpreting a large, asymmetrical, south plunging anticline with its north trending axis near Swakum Mountain summit. Narrow quartz porphyry dykes locally intrude the Nicola Group sequence.

To the east of this marker unit are a thick, unconformable wedge of immature sediments, predominantly coarse polymictic conglomerates (fan-type) and grits with minor cherty units. Most of the old workings on the mountain occur in close proximity to or within this volcanic-sedimentary unit. The Swakum Mountain deposits consist of polymetallic skarn-type mineralization, lead-zinc-silver bearing quartz veins and replacements, and polymetallic quartz veins.

Regional and property geology are shown in the accompanying figures.

## 7.2 **Property Geology Figure 4** summary from MINFILE Detail Reports

There are several showings on the Lucky Mike Property

- 1. Lucky Mike-Skarn; Copper, Tungsten
- 2. Sunshine-Stockwork; Vein; Zinc, Lead, Copper
- 3. Sophia-Stockwork; Breccia; Zinc, Lead, Copper

1. The Lucky Mike is a polymetallic skarn deposit is associated with altered sections of the marker horizon unit of the Upper Triassic Nicola Group. Limy volcanics,

tuffs and limestone of this marker unit have been in part, converted to garnet-epidotecalcite skarn with associated copper, tungsten, silver and minor gold and zinc mineralization. Recent drilling has indicated that tungsten mineralization is widespread in the garnet skarn while copper-zinc- gold-silver values tend to be restricted to late crosscutting structures.

The main skarn unit is 110 metres long with a northeast strike. It occurs at the contact between epidotized andesitic breccias and intermediate to felsic crystal-lithic tuffs within a lens of limy volcanic rocks, lithic tuffs and limestone (skarn protoliths). The skarn is bimodal in mineralogy, consisting of interfingering garnet skarn (andradite garnet, magnetite, epidote, hornblende, chlorite and calcite) and carbonate skarn (coarse calcite, epidote, hornblende, chlorite, minor magnetite or hematite) possibly reflecting original compositional variation (protolith-coarse, highly carbonated lithic tuffs(?)). Numerous late, fairly wide, east dipping (30-50 degrees) fracture zones cut the skarn with local displacements. A major fault zone is evident in the hangingwall lithic tuffs.

Diamond drilling has tested the skarn for 110 metres strike length and at a variety of elevations 40 to 80 metres below the old surface workings. Based on present and past drilling, indicated reserves of skarn available for tungsten mineralization is less than 90,710 tonnes (Assessment Report 18583).

2. The Sunshine contains 3 zones (1-3);

The Tolman Lake area is underlain by intermediate volcaniclastic and flow rocks of the Upper Triassic Nicola Group which are intruded by Lower Jurassic granitic intrusives. A strongly brecciated shear zone strikes 045° and dips steeply to the northwest and is continuous over a strike length of 2.9 km.

Zone 1 (MINFILE # 92ISE129) is on the west side of Tolman Lake. Open cuts expose a shear that strikes 085° and dips 065° to the north within andesitic tuffs. The shear varies in width from 3-8 metres with steeply dipping quartz veins that coalese downward into a 30 to 60 metre vein. The vein is fractured and brecciated. The fractures are mineralized with sphalerite and galena.

Zone 2 is located approximately 2.9 km northeast of Zone 1. The zone strikes for a minimum of 50 m. Brecciated andesite tuffs are mineralized with quartz, sphalerite, pyrite, chalcopyrite and galena.

Zone 3 is located 2.3 km northeast of Zone 1. Galena, sphalerite, chalcopyrite, pyrite and pyrrhotite occur in a brecciated zone with a quartz-calcite matrix. The hanging-wall consists of bleached and pyritic andesite which grades into numerous calcite veins containing sphalerite and galena. The footwall consists of highly silicified andesite containing un-mineralized quartz and calcite veins.

" The brecciated section increases in sulphide content towards the footwall and attains widths of over 6.5 meters. The higher grade sections grade into highly silicified andesite

of the footwall which contains numerous quartz and calcite stringers. The silicified andesite grades rapidly into relatively unaltered andesite. Post mineral faulting cuts the zone at various angles but there is no significant displacement. The zone has been tested with diamond drilling and by underground drifting and crosscutting for a length of some 165 meters and to a depth of 50 meters. A chip sample cut by the writer along 50 meters of the drift assayed 0.12 oz Ag/ton; 1.04% PB; 4.60% Zn, and 0.20% Cu.

A three meter sample cut from the right wall near where the drift is presently caved, assayed 0.22 oz Ag/ton; 1.24% Pb; 13.20% Zn, and 0.49% Cu. A composite of selected samples taken from both walls and the back of the drift assayed 0.24 oz Ag/ton; 1.68% Pb; 12.00% Zn, and 0.25% Cu. The length of the zone tested was 50 meters." Sookochoff (1978-Ass.Rpt. 6742).

3. "The Sophia Lake area is underlain by interbedded volcanic and sedimentary rocks belonging to the Upper Triassic Nicola Group. The volcanic rocks consist of andesitic flows, porphyries, breccias and tuffs intercalated with limestone, argillite, greywacke and conglomerate. Bedding indicates a regional asymmetric anticline has its axis plunging south-southeast near Swakum Mountain. The Nicola Group rocks are bounded to the east and west by Lower Jurassic granitic intrusives.

A 175 metre wide limestone bed which a north trending ridge over 600 metres in strike length. The grey, coarse-grained limestone contains numerous fracture-controlled randomly oriented calcite stringers generally less than 2 millimetres in width. Local brecciated zones are calcite-healed and oxidized (hematite, limonite). In the central portion of the property a feldspar porphyry intrusive with euhedral pyrite up to 10 millimetres in size contains quartz eyes throughout the matrix.

At the Sophia showing, mineralization occurs in a shear zone exposed in a trench. The zone is 8 metres wide, strikes 220 degrees and dips 30 to 60 degrees south. Calcite and quartz occur as narrow stringers in andesitic porphyry and as a cement in brecciated volcanics. Pyrite, sphalerite, galena and chalcopyrite are associated with the quartz and calcite."

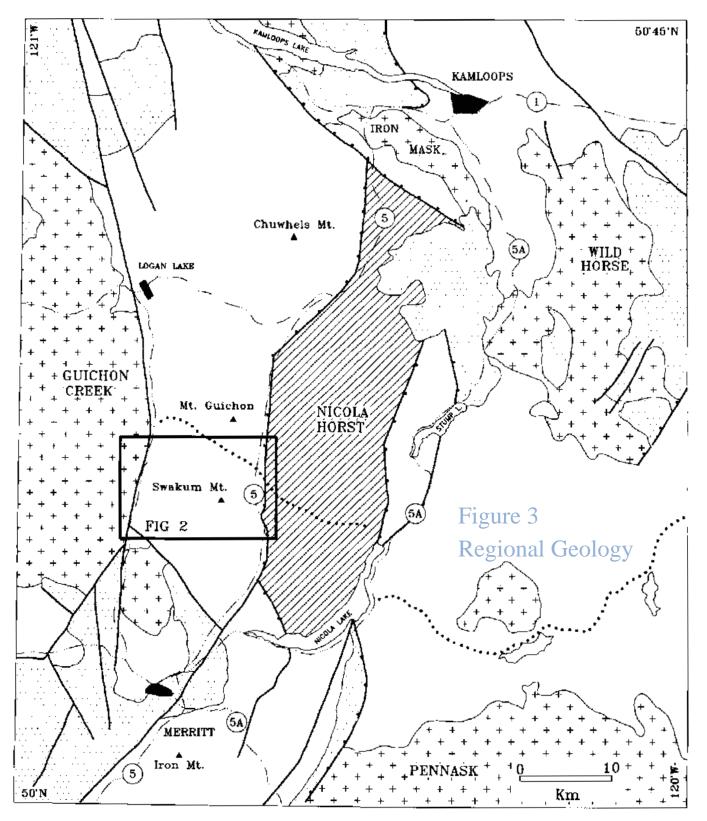
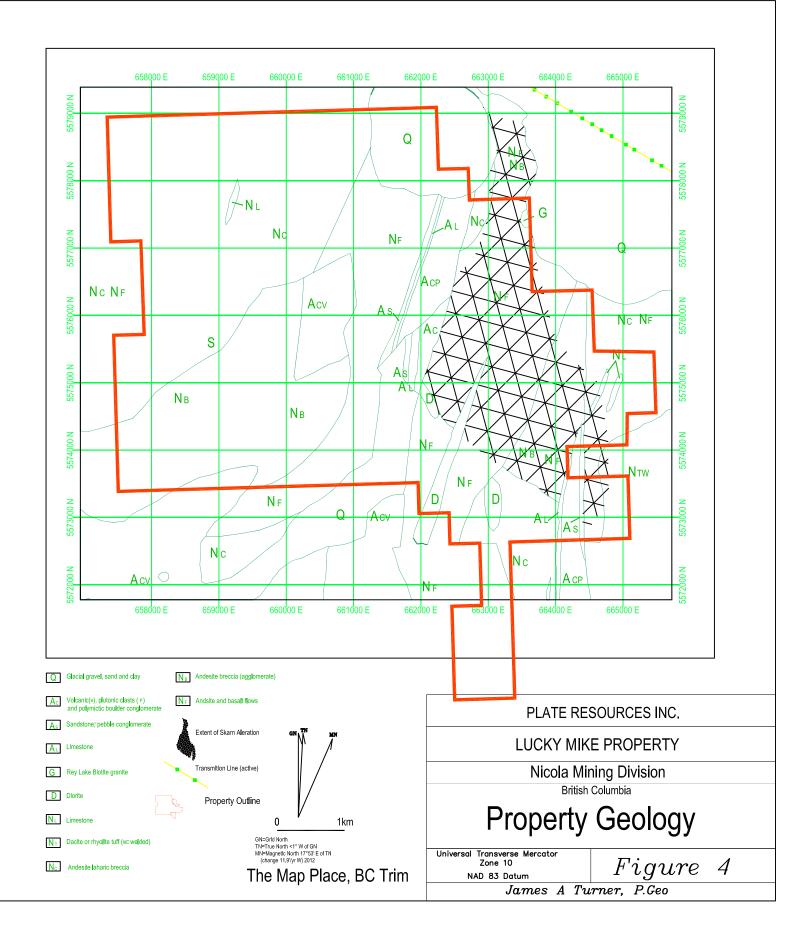


Figure 1-7-1. Location and access map of the Swakum Mountain area. Nicola Group and minor pre-Nicola stratified rocks are unpatterned; undifferentiated igneous and metamorphic rocks of the Nicola horst are hatched. Crosses: Late Triassic-Jurassic plutons, with names of batholiths. Stipple: post-Nicola volcanic and sedimentary rocks. Heavy lines are faults, with dots on downthrown side. Main roads and LITHOPROBE transect are also shown.



### 8.0 DEPOSIT TYPES

Over the years this property has been referred to as hosting a possible porphyry copper deposit.

The Lucky Mike is considered a garnet-copper-tungsten skarn.

The Sunshine and the Sophie are considered to be a shear zone related Pb-Zn-Ag deposit. The three deposits may be the related to a Copper Porphyry system, (Lowell and Guilbert, 1970; Einaudi, M.T., Meinert, L.D., and Newberry, R.J., 1981), and may part of or the extension of the Rey Lake Porphyry Copper deposit.

#### 9.0 EXPLORATION-2011 Figure 5 & 6

#### 9.1 Geochemistry

On April 24, the author and Craig Lynes met on the property and sampled certain exposures of the Lucky Mike and the Sunshine deposits. Eight samples were taken by the author. These are outlined in the tables below:

These samples were transported to the Lab by the author.

Table 4: Lucky Mike Sample Descriptions: April 24, 2011.

easting	Northing	
664391	5574592	Lucky Mike Trench grab garnet skarn ,cpy
664379	5574608	Lucky Mike Trench #2 grab garnet skarn ,cpy
664390	5574632	Lucky Mike Trench #3 grab garnet skarn ,cpy near decline
664392	5574632	Lucky Mike Trench #3 grab garnet skarn ,cpy near decline, 1 m chip
658720	5575373	Sunshine Adit, Zone #3 minor Pb, Zn>2%
659467	5576198	Zone #1 from dump. Minor galena high sphalerite
659468	5576196	Zone # 2 grab, galena 2-3%, sphalerite 20 % in sulphide Breccia
659465	5576199	Zone # 2 grab, galena tr, sphalerite 8-10% in sulphide Breccia

Table 5: April 24 sample results

Sample	Mo(ppm)	Cu(ppm)	Pb(ppm)	Zn(ppm)	Ag(ppm)	W%	Au(ppb)
156672	26	134	<3	42	<0.3	0.309	<2
156673	134	>10000	<3	1034	>100.0	0.494	478
156674	17	>10000	<3	547	33	0.078	53
156675	24	>10000	<3	562	71.3	0.068	296
156676	<1	0.197(%)	0.05(%)	4.8(%)	1.7		14
156678	8	0.239(%)	0.89(%)	11.09(%)	11.2		217
156679	12	1.117(%)	0.45(%)	17.24(%)	18.8		218
156680	10	0.17(%)	0.41(%)	7.45(%)	5.9		161

These samples are essentially grab or select samples and interpretation only demonstrates there is mineralized rock at these locations. A second more detailed sampling program was conducted in September 28-30, 2011. This second batch of samples of 35 confirms the earlier results.

Sample	Easting	Northing	Description
80951	663326	5575650	30 cm Chip across semi mass Py-Po-Minor Cu-Py in rock face of pit
80953	663326	5575650	.5m chip of hanging wall to sulphide. Some volcanics and-diss Py-Po
80954	663326	5575650	1m chip of footwall to sulphide, some volcanics and stringer Py- 1cm Py veins very rusty
00004	000020	0010000	Grab of mass Py in angular float. Sub-crop in road ditch mass Py-minor
80956	663337	5575661	Cu-Py
			1m chip of silicified L-S with 10-30% Py in outcrop in road cut on logging
80957	663991	5574618	road
80958	663991	5574618	grab of semi mass Py in chert. 5m east of 80977
80959	664393	5574595	1 m chip of mostly Garnet ? (old trench)
80961	664393	5574595	1 M chip of mostly Garnet
80962	664393	5574595	1m chip mostly garnet minor malachite stain.
80963	664393	5574595	1 m chip mostly garnet-minor malachite stain. Minor Cu-Py
80964	664384	5574605	1m chip volcanics and wall rock plus 70 cm semi mass Cu+Cu-Py
80966	664384	5574605	1m chip Skarn with diss Cu-Py 1-20%
80967	664384	5574605	1m chip Skarn with minor malachite stn some Cu-Py 1-5%
80968	664384	5574605	1m chip volcanics and wall rock with 1-3% Cu-Py some Py
80970	664389	5574633	1m chip of garnet skarn@ contact with volcanics
80971	664389	5574633	1m chip of garnet skarn diss Cu-Py abundant Malachite Stain. Very crumbly
80972	664389	5574633	Same as CR16
80973	664393	5574635	1m chip of east hanging wall of inclined shaft. Volcanics with minor Malachite.
80974	664393	5574635	Contact of Volcanics and skarn Crumbly garnet with abundant malachite stn.
80976	664393	5574635	.5m chip of qtz calcite skarn. Minor mal Stn.
80977	664393	5574635	Garnet skarn with diss Cu-Py strong malachite stn.
80978	664393	5574635	Garnet skarn (footwall) west side of shaft. Abundant Cu-Py strong mal. Plus azurite
			End of Skarn in footwall. Minor garnet mostly volcanics., malachite on
80979	664393	5574635	fracture
80980	658970	5575482	4m start of trench is coordinate
80981			
80983			
80984			
80985			End of Trench

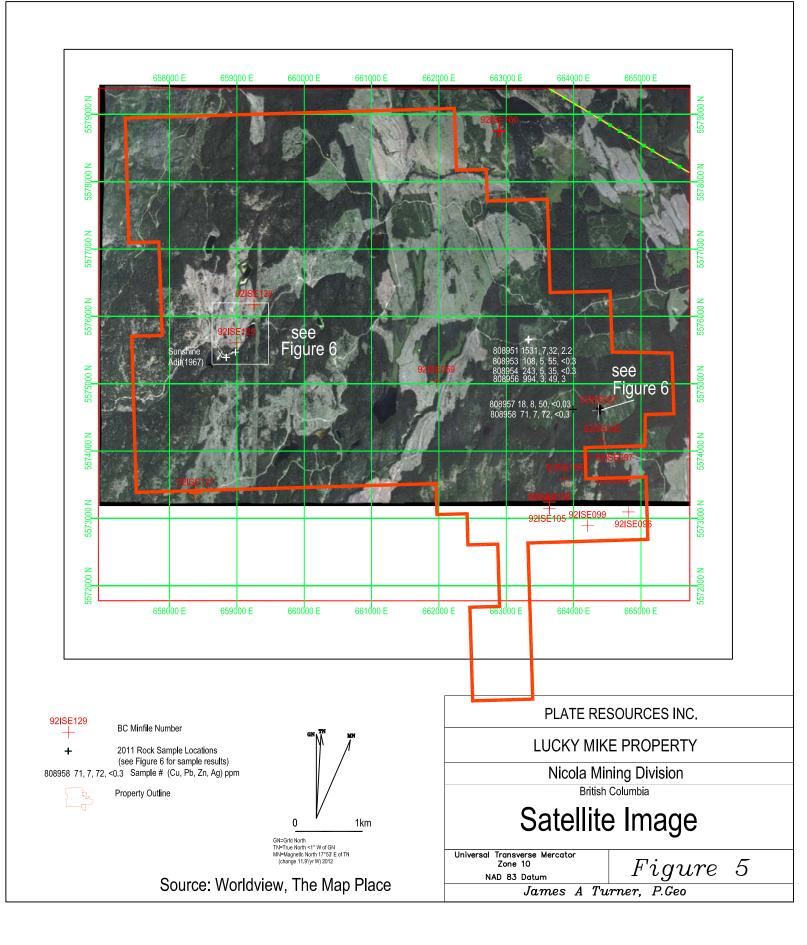
Table 6: Sample Descriptions: September 28-30, 2011.

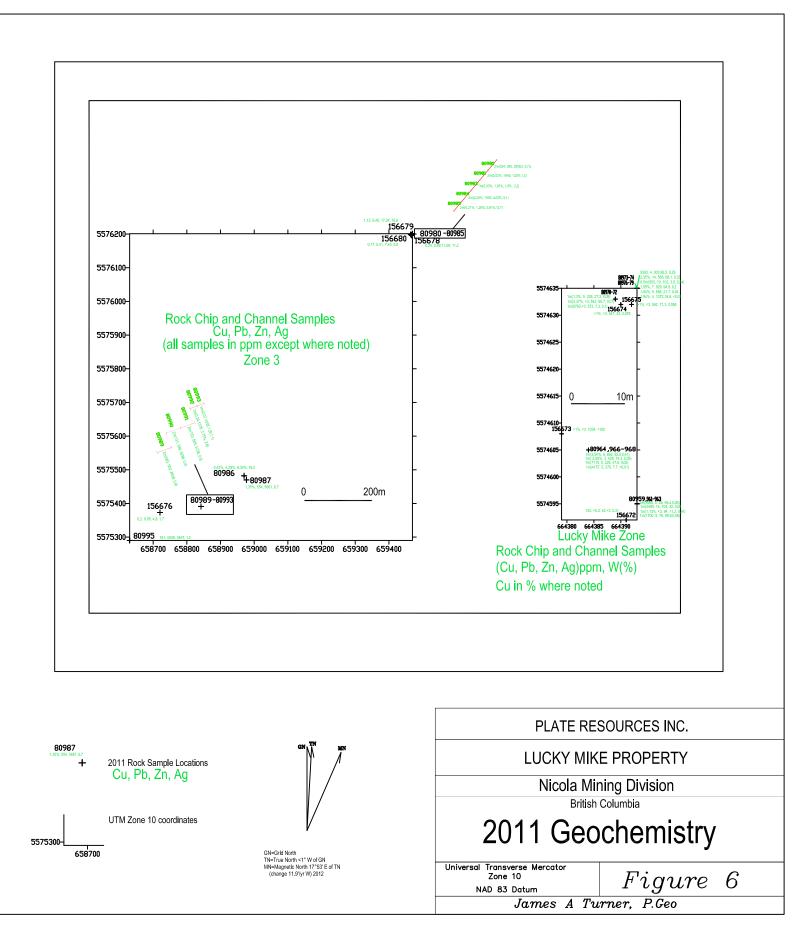
80986	658970	5575482	30 cm chip of qtz-carb
80987	658977	5575470	Grab of Angular rusty volcanics with 10-15% py. 1-5% Cu-Py
80989	658842	5575391	5 m trench coordinate start
80990			
80991			
80992			
80993			End of Trench
80995	658630	5575290	Grab of qtz carb, minor Cu-Py-Galena

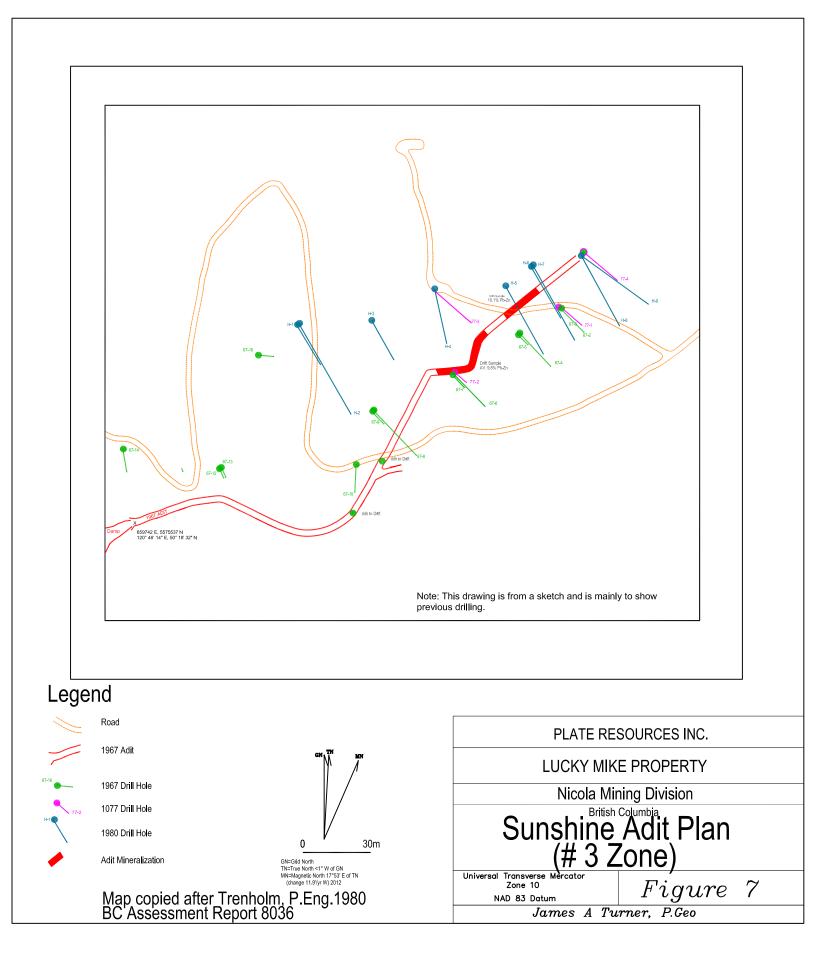
Table 7: September 28-30 sample results:

Sample	Mo(ppm)	Cu	Pb(ppm)	Zn(ppm)	Ag(ppm)	W(%)
80951	<1	1531	7	32	2.2	0.03
80953	<1	108	5	55	<0.3	<0.01
80954	<1	243	8	35	0.7	<0.01
80956	<1	994	3	49	3	<0.01
80957	2	18	8	50	<0.3	<0.01
80958	1	71	7	74	<0.3	<0.01
80959	16	2664	4	48	54.9	0.06
80961	35	4495	14	104	32	0.08
80962	37	1.262(%)	<3	94	11.2	0.24
80963	34	1700	5	78	99.9	0.08
80964	272	3.537(%)	6	862	82.5	0.41
80966	32	2.09(%)	3	428	74.3	0.05
80967	12	7115	5	226	47.6	0.03
80968	275	4157	5	270	7.7	<0.01
80970	140	1.297(%)	5	328	27.2	0.09
80971	40	2.37(%)	<3	542	60.7	0.07
80972	16	9763	<3	572	7.3	0.1
80973	80	9393	4	303	86.5	0.29
80974	76	2.347(%)	14	568	68.1	0.33
80976	43	563	10	102	3.6	0.34
80977	50	1.545(%)	7	629	94.9	0.2
80978	38	1.941(%)	5	688	21.7	0.04
80979	14	1.939(%)	4	1072	16.8	<0.01
80980	1	324	385	2959	0.7	N.A.
80981	2	0.032(%)	1645	1.05(%)	1.2	N.A.
80983	4	0.025(%)	1.03(%)	1.8(%)	2.2	N.A.
80984	9	0.29(%)	1962	4.03(%)	5.1	N.A.
80985	9	0.214(%)	1.28(%)	5.81(%)	12.7	N.A.
80986	4	0.426(%)	4.29(%)	8.34(%)	18.2	N.A.
80987	<1	1.354(%)	554	5661	6.7	N.A.

80989	<1	583	602	8938	0.9	N.A.
80990	<1	131	599	5296	0.4	N.A.
80991	<1	153	805	5738	0.5	N.A.
80992	<1	0.238(%)	1378	3.75(%)	2.6	N.A.
80993	<1	0.069(%)	1038	1.29(%)	1.1	N.A.
80995	<1	161	4009	3487	1.0	N.A.







## 9.2 Airborne Geophysical Survey

The airborne survey was flown by Precision GeoSurveys Inc. from October 22 to 23, 2011. Approximately 553 line kilometres of high resolution radiometric and magnetic data, including tie lines and survey lines were gathered. Sixty-one (61) survey lines were flown at a 100 metre spacing on a  $090^{\circ} - 270^{\circ}$  heading. Nine (9) perpendicular tie lines were flown at 1 km intervals on a heading of  $000^{\circ}$ -180°. The average sensor elevation was 44 metres vertically above the ground. Two other magnetometers were used as base stations to record diurnal magnetic field variations.

Details concerning the survey procedures, instrument specifications and post survey processing are included in a logistics and operations report authored by Jenny Poon of Precision GeoSurveys Inc., dated December, 2011. Flight lines were flown in an azimuthal direction of 90° with a traverse line separation of 200 metres. Tie lines were flown orthogonal to the traverse lines with a line separation of 2000 metres.

## 9.3 Conclusions and Recommendations

"The magnetic survey was successful in delineating a more complex geology than the current interpretation provided by the government mapping. Both the Rey Lake and the Lucky Mike deposits are shown to be near the edge of magnetic high anomalies, likely related to localized intrusions that extend to depth. The Lucky Mike area exhibits magnetic and radiometric responses characteristic of a porphyry deposit. Several magnetic anomalies are mapped that could reflect a similar geological environment. The radiometric survey outlines several trends that coincide with magnetically interpreted features.

There is evidence of potassic alteration in the vicinity of the Lucky Mike magnetic anomaly and across the northwest corner of the claim block. There are three significant uranium anomalies located along or adjacent to major fault zones interpreted from magnetic lineaments.

Detailed prospecting and geological mapping is recommended for the entire claim block and specifically in the vicinity of the strong magnetic anomalies (unit 1). These efforts should be focused on identifying the source of the magnetic anomalies, which is expected to be at or very near the surface west of the Lucky Mike deposit. These efforts should also be focused on finding evidence to confirm or contradict the interpretation of a porphyry system in the area east of the Lucky Mike skarn.

If possible, exploration data associated with the Rey Lake deposit should be reviewed with the goal of determining whether the mineralization is related to the strong magnetic anomaly mapped to the southeast. This study may provide insight and guidance for the exploration efforts focused on the magnetic anomalies within the claim block. If evidence to support the porphyry model is found, it is likely that an induced polarization survey will be warranted. The western half of the claim group exhibits a complex pattern of short strike length magnetic lineaments that delineate a northerly trending and westerly concave arcuate trend that generally parallels the edge of the Guichon batholith to the west. Breaks, discontinuities and offsets of these trends suggest the presence of E-W, NE and NW striking faults across the area. More detailed, ground magnetic surveying will be required to properly delineate these structures.

Large areas exhibiting high potassium and low thorium counts are mapped in the western and northwestern sections of the property. These areas should be searched for evidence of hydrothermal alteration. In addition to detailed geological mapping and prospecting a program of soil, silt and stream geochemistry sampling is recommended to evaluate these anomalies". Pezzot (2012).

A detailed interpretation report by Trent Pezzot of *Geosci Data Analysis Ltd.* is included at the end of this report.

### 10.0 DRILLING

Plate has not carried out any drilling on the Lucky Mike Property. There has been a moderate amount of drilling by several other operators. Drilling has taken place on the three deposits that make up the Lucky Mike Property.

Lucky Mike:

From 1943-1993 at least 49 diamond drill holes were conducted on the Lucky Mike Skarn showing, a small decline was also driven. The author has not correlated these holes as there is very little information on the location.

The Sophia:

From 1978-1983 5 percussion holes were drilled on the Sophia showing for a total of 1147 feet. The author has not conducted an audit on these holes as the locations are not well documented.

The Sunshine:

From 1965-1980 at least 61 diamond drill holes were competed for a total of several thousand feet. The locations and depths of these drill holes are not well known. The Author has plotted some of these drill holes. An adit was completed in 1988 for a total of 985 feet. Figure 7.

#### 11.0 SAMPLING PREPARATION, ANALYSIS AND SECURITY

All previous geochemical sampling on the L was conducted by well-respected and competent geologists and geological engineers. Sample methodology conducted by government geologists are not quoted in the MINFILE reports or the Minister of Mines Annual Reports for the specific year.

Work carried out by Turner and Lynes, included rock sampling. All samples were put in plastic bags with the appropriate sample tags. A copy of the sample tags are retained for reference. The lab was instructed as to the sample type, also they were requested to store any pulps or rejects. Acme Analytical labs of Vancouver were used for the analysis.

All rock samples taken by were placed in plastic bags and closed with ties. Acme Analytical Laboratories Inc. and IPL completed the analysis. Samples were delivered by the author directly to the Lab. The geochemical results were transmitted to the writer via e-mail.

The rock samples were prepared by air-drying, then crushing to 10-mesh (<2 mm); a 250 g portion was pulverized to 200-mesh (<75 microns). The sample pulps will be in locked facility for long-term storage. Access to this facility is only through the particular Laboratory.

At Acme Analytical Laboratories, which is a Standard Council of Canada accredited laboratory No. 720 used by junior and international exploration and mining companies, the samples were analyzed for 34 elements using two methods. The elements were analyzed by ACME's group 1D01 method. A 0.5 g sample was digested in hot (95°C) Aqua Regia; digestion to 100 ml and analyzed by Graphite Furnace Atomic Absorption Spectroscopy or Inductively Coupled Plasma Mass Spectroscopy (ICP-MS) finish. Anomalous values of copper were determined by Fire Assay, the 7AR method.

Groups 7AR, report %-level concentrations as determined by ICP emission spectrometry. The sample minimum is a 1g pulp. Hot Aqua Regia digestion was used for base-metal sulphide and precious-metal ores.

Gold was analyzed by the Group 3A01 Wet Digestion. Samples are digested in Aqua Regia then analyzed by ICP-Mass Spec.

Tungsten (W) analysis by Multi-acid digestion/ICP or AAS, 8X method:

(a) A 0.25 to 1.00 grams of sample is weighed accurately to 4 digits and transferred into a 150 ml Teflon beaker, HCl, HNO3, HCLO4 and HF acid solutions are added and digested on a slow hot plate until dryness, sample is removed and let cooled, then 80 ml of 25 % HCl is added to sample and re-boil for 10 minutes to dissolve any insoluble matter and then let cooled, the sample solution is bulked up to a fixed volume with de-mineralized water, and thoroughly mixed.

(b) The concentration of Tungsten (W) in solutions is determined by using an Inductively Coupled Plasma Spectrophotometer (ICP-AES). Any element interference is eliminated by applying an inter-element correction (IEC) to the calculation. All data are subsequently stored onto computer diskette.

<u>Quality Control (QC)</u> The laboratory has inserted blank 'silt' samples at the start of each batch and also within the batch. These samples went through the same preparation and analysis as the regular samples. The analysis of the blanks shows no problems with contamination in the sample preparation.

The laboratory also monitors precision by analyzing another sub-sample of -80 mesh sediments. This is done about one every 30 analyses. The results indicate the precision of the sample preparation and analysis. The data base is not large enough to measure the precision in a statistically rigorous manner.

The laboratory has inserted a standard, after about every 30 samples, to monitor for errors in the analytical process. The analyses of the inserted standards show acceptable results. Acme Analytical Laboratories Ltd. has ISO 9001:2000 accreditation. Neither the author nor the Plate have any relationship to the laboratory.

Sample data verification other than those provided by ACME (blanks, standards, duplicates) was included in the 2011 program. The 8 samples that we did obtain verified the descriptions of the area. The samples obtained on the more detailed program in September 2011 tend to verify historical results in the area. Nine standards and blanks, from RDN Labs, were inserted into the September samples. The standard pulps and blanks were from CDN Labs. For the tungsten standard CDN-W-4 is used:

Gold 0.319 ± 0.040 g/t ("provisional value, RSD = 6.4%) Copper 0.139 ± 0.008 % Molybdenum 0.110 ± 0.008 % Tungsten 0.366 ± 0.024 %

For blanks CDN-BL-10 is used:

#### Table 8: Standards and Blanks

	Analyte	Wgt	Мо	Cu	Pb	Zn	Ag	W(%)
80952	Blank	0.04	5	27	3	37	<0.3	<0.01
80955	Pulp	0.04	874	1366	218	342	<0.3 2.5	0.37
80960	Pulp	0.03	998	1399	219	343	3	0.37
80965	Blank	0.03	4	<1	<3	37	<0.3	<0.01
80969	Pulp	0.03	860	1326	216	328	2.5	0.37
80975	Pulp	0.03	828	1293	213	334	3	0.37
80982	Blank	0.04	4	25	<3	15	<0.3	N.A.
80988	Pulp	0.03	966	1350	216	328	2.7	N.A.
80994	Blank	0.04	4	23	<3	13	<0.3	N.A.

Except for standard 80975 for copper the analysis is within limits for Cu, Pb, Zn, Ag and W.

# 12.0 DATA VERIFICATION

The author took the following steps to verify the data in the technical report:

1) Examined surface exposures of the Lucky Mike Skarn and the Sunshine Zones 1-3 and took four grab samples from Lucky Mike and four grab samples from the Sunshine to corroborate the tenor of mineralization and to gain an initial understanding of the type of deposits and how they fit in with the overall geology. The Author also verified the tenor from the 21 chip samples taken in September from the Lucky Mike and 14 chip samples from the Sunshine.

2) No attempt was made to examine core stored at the Lucky Mike as it is in poor condition and is mostly spread around by animals etc. However some core may be useful. No drill hole collars were found at either the Lucky Mike or the Sunshine areas.

3) Previous data including magnetics, EM, limited IP and drill data for this area is on assessment maps and sections. The Author attempted to compile this data and put them into one coordinate system. This compilation of previous data will be done in the Phase I program.

# 13.0 MINERAL PROCESSING AND METALURGICAL TESTING

No mineral processing or metallurgical testing has been done on the Lucky Mike, as the property is at an early stage of exploration.

## 14.0 MINERAL RESOURCE ESTIMATES

No estimate of Mineral Reserves or Resources which are compliant with NI-43-101 has been made for the Lucky Mike, The Sunshine or the Sophia deposits.

## 15.0 ADJACENT PROPERTIES

The information below is provided as background material for the reader. The writer has not been able to independently verify the information contained although he has no reason to doubt the accuracy of the descriptions. The information is not necessarily indicative of the mineralization on the property that is the subject of this Technical Report. The source of the information concerning adjacent properties is from publicly available documents, from company websites and press releases published on the Internet.

In 1972, Marco Ltd. identified a porphyry copper/molybdenum deposit near the southern shore of Rey Lake. A geologic reserve of 31 Million tons of 0.23 "copper equivalent" was estimated by Asarco Ltd. after their drilling programs in 1972 and 1973. In 1979, the late R.W. Phendler, P.Eng, prepared a reserve estimate for Tracer Resources Corp. (SMF dated November 30, 1979).

The geological reserve was stated to be 51,662.000 tons with a grade of 0.17% comer

and 0.018% Mo. To the writers knowledge, no grades were estimated for silver and gold. Stripping ratio was said to be 1.12:I. (Source: Energy Mines and Resources Canada MR223: Canadian Mineral Deposits not being mined in 1989., Deposit BC 136).

The tonnage and grade estimates were prepared prior to the introduction of National Instrument 43-101. The term "reserves" may have complied with CIM categories at the time of the estimate, but does not comply with the definitions currently accepted by CIM as economic viability at present conditions has not been demonstrated; there is no current feasibility or pre-feasibility study. A qualified person has not done sufficient work to classify the historical estimate as current mineral resources or mineral reserves, the issuer is not treating the historical estimate as current mineral resources or mineral reserves and the historical estimate should not be relied upon.

The Alameda, located just off the southern border of the Lucky Mike claims reportedly produced three tons of ore yielding one ounce of gold, 52 ounces of silver and 576 pounds of lead.

The Thelma located 1 km south of the Lucky Mike produced 89 tons from the yielding one ounce of gold, 7,419 ounces of silver, 9,683 pounds of lead and 10,237 pounds of zinc.

# 16.0 INTERPRETATION AND CONCLUSIONS

The Lucky Mike Property contains thin shears, veins of anomalous copper and gold with some high values in silver and vanadium. Mineralization consists of chalcopyrite, Scheelite and malachite on the Lucky Mike skarn and galena, sphalerite and tetrahedrite on the Sophia and Sunshine shear and breccia zone.

## 16.1 The Lucky Mike Property:

- 1. Has been subjected to minor deformation and shearing
- 2. Mineralization may be related to a major and minor faults
- 3. Have some epithermal component i.e. veins and veinlets
- 4. There are similarities to periphery zones of Porphyry Copper deposits (Pezzot).

The veinlets and shears on the Lucky Mike may have down dip and on strike extent. Large areas of the property remain untested.

## 16.2 Airborne Geophysics excerpt from Trent Pezzot's Report

"The data has been processed and interpreted with the intention of identifying any characteristic signatures which might be related to the observed mineralization as well as assisting with the general geological mapping of the area.

The magnetic data is delineating a much more complex geology than the one presented on the current geology maps. The magnetic amplitude and character were used to define 8 separate signatures that are likely related to different lithologies. These include several very strong magnetic high anomalies, the strongest of which is located immediately west of the Lucky Mike skarn occurrence and appears to map a near vertical, intrusive body. Strong magnetic lows to the east of this anomaly suggest the geology dips at moderate angles to the east. These responses exhibit several characteristics of a porphyry system. The Rey Lake deposit is located along the NW edge of another of these magnetic high anomalies.

There are two dominant NE striking lineaments in the eastern third of the survey block that suggests the presence of major fault zones and several lineations that delineate E-W, NE and NW striking structures. The strong magnetic anomalies are located along these trends, suggesting they may be mapping intrusions emplaced along faults.

Across the western portion of the claim block, short strike length linears combine to delineate regional arcuate trends that generally parallel the edge of the Guichon batholith to the west. Some of these linears coincide with the mapped geology but most are unexplained.

There is a very complex pattern of intersecting magnetic linears in the vicinity of the Zone1, Zone2 and Zone3 Minfile occurrences. These suggest that Zone2 is located on a different NE striking shear zone than Zones 1 and 3.

The radiometric data includes several trends that are attributed to changes in the overburden thickness and/or properties. There are several patterns evident that coincide with and support the magnetic interpretation outlining geological units.

High potassium isotope measurements are grouped in three clusters. One coincides with the strong magnetic anomaly immediately west of the Lucky Mike skarn. The other two are located in the western and northwestern sections of the property. These clusters all include localized areas with low thorium counts. The combination of high potassium and low thorium is often associated with hydrothermal alteration.

There are three strong uranium anomalies mapped within the claim block. These appear to be elongated along or parallel to geological contacts.

Detailed geological mapping, with emphasis placed on finding evidence to support the intrusion, porphyry, hydrothermal alteration and faulting/contact interpretations based on the geophysical data is recommended as the next exploration phase. Based on these results it is likely that geochemistry and detailed ground magnetic and induced polarization surveys will be warranted."

These conclusions have met the objective of determining if the Lucky Mike is a property of merit and has the potential to host an economic deposit. The Lucky Mike property is classed as an Early Stage Exploration Prospect.

### 17.0 OTHER RELEVANT DATA AND INFORMATION

Exploration work completed to date has been done in compliance with all relevant regulations that existed at the time that the work was done. To the best of the authors knowledge, there are no environmental liabilities related to the property that can be attributed to the Company or that would become the Company's responsibility.

Diamond drilling will require minimum new roadwork. The Lucky Mike Property is in an area in British Columbia that is used for recreation in both the summer and winter, and any development should include discussions with the people involved. Logging companies in the area would also have to be consulted.

### 18.0 **RECOMMENDATIONS**

A recommended program should include a detailed compilation of all data on the property.

- Most of the pre-existing data is not digital and not in any consistent coordinate system.
- Existing maps should be scanned and digitized.
- All existing data should be re-located and plotted in the UTM coordinate system.
- Detailed mapping and sampling should be done.
- Prospecting and trenching is proposed.
- Ground geophysics, 3D IP and Mag is proposed.

### 19.0 COST STATEMENT 2011

Exploration Work type	Comment	Days			Totals
Personnel (Name) * / Position	Field Days (list actual days)	Days	Rate	Subtotal*	
James a Turner, P.Geo		1	\$1,000.00	\$1,000.00	
Craig Lynes	August 18-Oct 2/2011	6	\$550.00	\$3,300.00	
2 helpers	August 18-Oct 2/2011	1	\$450.00	\$450.00	
			\$0.00	\$0.00	
			\$0.00	\$0.00	
			\$0.00	\$0.00	
				\$4,750.00	\$4,750.00
Office Studies	List Personnel (note - Office o	nly, do n	ot include f	ield days	
Literature search	Jim Turner	4.0	\$800.00	\$3,200.00	
Database compilation	Jim Turner	4.0	\$800.00	\$3,200.00	
Computer modelling			\$0.00	\$0.00	
Reprocessing of data		2.4	\$800.00	\$1,920.00	
General research	Trim Data	2.0	\$200.00	\$400.00	

Report preparation NI-43-101 Report	Jim Turner Jim Turner	3.5 1.0	\$800.00 \$7,500.00	\$2,800.00 \$7,500.00	
				\$19,020.00	\$19,020.00
Airborne Exploration Surveys	Line Kilometres / Enter total invoiced				
Aeromagnetics	553	553.0	\$44.30	\$24,500.11	
Radiometrics	553	553.0	\$44.30	\$24,500.11	
Electromagnetics			\$0.00	\$0.00	
Gravity			\$0.00	\$0.00	
Digital terrain modelling		1.0	\$0.00	\$0.00	
Interpretation Report		1.0	\$11,700.00	\$11,700.00	\$60,700.22
Pomoto Sonsing				\$60,700.22	<b>\$60,700.22</b>
Remote Sensing	Area in Hectares / Enter total invoiced	amount	or list personn \$0.00	ei \$0.00	
Aerial photography LANDSAT			\$0.00 \$0.00	\$0.00 \$0.00	
world view hi Res	Worldview hi-res	1.0	\$0.00 \$1,453.00	-	
world view fil Res	Wondview III-res	1.0	\$1,455.00	\$1,453.00 \$1,453.00	\$1,453.00
Ground Exploration Surveys	Area in Hectares/List Personnel			φ1,455.00	<b>Φ</b> 1,455.00
Geological mapping	Area in Hectares/List Personnel				
Regional		noto.	expenditures l	ara	
Reconnaissance			be captured		
Prospect			xpenditures al		
Underground	Define by length and width	neiu e.			
Trenches				\$0.00	\$0.00
Trenches	Define by length and width			φ0.00	\$0.00
Ground geophysics	Line Kilometres / Enter total amount	invoiced	list personnel		
Radiometrics		inteleeu			
Magnetics					
Magnetics Gravity					
Gravity					
Gravity Digital terrain modelling	note: expenditures for vour crew i	n the fie	old .		
Gravity Digital terrain modelling Electromagnetics	note: expenditures for your crew i should be captured above in Perso		eld		
Gravity Digital terrain modelling	should be captured above in Perso		eld -		
Gravity Digital terrain modelling Electromagnetics SP/AP/EP IP	1		ld		
Gravity Digital terrain modelling Electromagnetics SP/AP/EP IP AMT/CSAMT	should be captured above in Perso		old -		
Gravity Digital terrain modelling Electromagnetics SP/AP/EP IP AMT/CSAMT Resistivity	should be captured above in Perso		eld		
Gravity Digital terrain modelling Electromagnetics SP/AP/EP IP AMT/CSAMT	should be captured above in Perso		eld		
Gravity Digital terrain modelling Electromagnetics SP/AP/EP IP AMT/CSAMT Resistivity Complex resistivity	should be captured above in Perso		eld .		
Gravity Digital terrain modelling Electromagnetics SP/AP/EP IP AMT/CSAMT Resistivity Complex resistivity Seismic reflection Seismic refraction	should be captured above in Perso field expenditures above		old		
Gravity Digital terrain modelling Electromagnetics SP/AP/EP IP AMT/CSAMT Resistivity Complex resistivity Seismic reflection Seismic refraction Well logging	should be captured above in Perso		eld		
Gravity Digital terrain modelling Electromagnetics SP/AP/EP IP AMT/CSAMT Resistivity Complex resistivity Seismic reflection Seismic refraction Well logging Geophysical interpretation	should be captured above in Perso field expenditures above		eld		
Gravity Digital terrain modelling Electromagnetics SP/AP/EP IP AMT/CSAMT Resistivity Complex resistivity Seismic reflection Seismic reflection Well logging Geophysical interpretation Petrophysics	should be captured above in Perso field expenditures above		old		
Gravity Digital terrain modelling Electromagnetics SP/AP/EP IP AMT/CSAMT Resistivity Complex resistivity Seismic reflection Seismic refraction Well logging Geophysical interpretation	should be captured above in Perso field expenditures above		old	\$0.00	\$0.00
Gravity Digital terrain modelling Electromagnetics SP/AP/EP IP AMT/CSAMT Resistivity Complex resistivity Seismic reflection Seismic reflection Well logging Geophysical interpretation Petrophysics	should be captured above in Perso field expenditures above		d Rate	\$0.00 Subtotal	\$0.00
Gravity Digital terrain modelling Electromagnetics SP/AP/EP IP AMT/CSAMT Resistivity Complex resistivity Seismic reflection Seismic reflection Seismic refraction Well logging Geophysical interpretation Petrophysics Other (specify) Geochemical Surveying	should be captured above in Perso field expenditures above	onnel	Rate	Subtotal	\$0.00
Gravity Digital terrain modelling Electromagnetics SP/AP/EP IP AMT/CSAMT Resistivity Complex resistivity Seismic reflection Seismic reflection Seismic refraction Well logging Geophysical interpretation Petrophysics Other (specify) Geochemical Surveying Drill (cuttings, core, etc.)	should be captured above in Perso field expenditures above	onnel	Rate \$0.00	Subtotal \$0.00	\$0.00
Gravity Digital terrain modelling Electromagnetics SP/AP/EP IP AMT/CSAMT Resistivity Complex resistivity Seismic reflection Seismic reflection Seismic refraction Well logging Geophysical interpretation Petrophysics Other (specify) <b>Geochemical Surveying</b> Drill (cuttings, core, etc.) Stream sediment	should be captured above in Perso field expenditures above	No.	Rate \$0.00 \$0.00	Subtotal \$0.00 \$0.00	\$0.00
Gravity Digital terrain modelling Electromagnetics SP/AP/EP IP AMT/CSAMT Resistivity Complex resistivity Seismic reflection Seismic reflection Seismic refraction Well logging Geophysical interpretation Petrophysics Other (specify) Geochemical Surveying Drill (cuttings, core, etc.)	should be captured above in Perso field expenditures above	onnel	Rate \$0.00	Subtotal \$0.00	\$0.00
Gravity Digital terrain modelling Electromagnetics SP/AP/EP IP AMT/CSAMT Resistivity Complex resistivity Seismic reflection Seismic reflection Seismic refraction Well logging Geophysical interpretation Petrophysics Other (specify) <b>Geochemical Surveying</b> Drill (cuttings, core, etc.) Stream sediment	should be captured above in Perso field expenditures above	No.	Rate \$0.00 \$0.00	Subtotal \$0.00 \$0.00	\$0.00
Gravity Digital terrain modelling Electromagnetics SP/AP/EP IP AMT/CSAMT Resistivity Complex resistivity Seismic reflection Seismic refraction Well logging Geophysical interpretation Petrophysics Other (specify) <b>Geochemical Surveying</b> Drill (cuttings, core, etc.) Stream sediment Soil	should be captured above in Perso field expenditures above	<b>No.</b> 0.0	Rate \$0.00 \$0.00 \$0.00	Subtotal \$0.00 \$0.00 \$0.00	\$0.00
Gravity Digital terrain modelling Electromagnetics SP/AP/EP IP AMT/CSAMT Resistivity Complex resistivity Seismic reflection Seismic reflection Seismic refraction Well logging Geophysical interpretation Petrophysics Other (specify) <b>Geochemical Surveying</b> Drill (cuttings, core, etc.) Stream sediment Soil Rock	should be captured above in Perso field expenditures above	<b>No.</b> 0.0	Rate \$0.00 \$0.00 \$0.00 \$36.64	Subtotal \$0.00 \$0.00 \$0.00 \$1,612.16	\$0.00

Whole rock			\$0.00	\$0.00	
Petrology			\$0.00	\$0.00	
Other (specify)			\$0.00	\$0.00	_
				\$1,612.16	\$1,612.16
Drilling	No. of Holes, Size of Core and Metres	No.	Rate	Subtotal	
Diamond			\$0.00	\$0.00	
Reverse circulation (RC)			\$0.00	\$0.00	
Rotary air blast (RAB)			\$0.00	\$0.00	
Other (specify)			\$0.00	\$0.00	
				\$0.00	\$0.00
Other Operations	Clarify	No.	Rate	Subtotal	
Trenching			\$0.00	\$0.00	
Bulk sampling			\$0.00	\$0.00	
Underground development			\$0.00	\$0.00	
Other (specify)			\$0.00	\$0.00	
				\$0.00	\$0.00
Reclamation	Clarify	No.	Rate	Subtotal	
After drilling			\$0.00	\$0.00	
Monitoring			\$0.00	\$0.00	
Other (specify)			\$0.00	\$0.00	
Transportation		No.	Rate	Subtotal	
Airfare			\$0.00	\$0.00	
Taxi			\$0.00	\$0.00	
truck rental	4x4 Truck	6.00	\$150.00	\$900.00	
kilometers	4x4 Truck	6.00	\$0.00	\$0.00	
kilometers ATV	4x4 Truck		\$0.00 \$0.00	\$0.00 \$0.00	
kilometers ATV fuel	4x4 Truck	6.00	\$0.00 \$0.00 \$298.68	\$0.00 \$0.00 \$298.68	
kilometers ATV fuel Helicopter (hours)	4x4 Truck	1.00	\$0.00 \$0.00 \$298.68 \$0.00	\$0.00 \$0.00 \$298.68 \$0.00	
kilometers ATV fuel Helicopter (hours) Fuel (litres/hour)		1.00 0.00	\$0.00 \$0.00 \$298.68 \$0.00 \$0.00	\$0.00 \$0.00 \$298.68 \$0.00 \$0.00	
kilometers ATV fuel Helicopter (hours)	4x4 Truck 1 Ton Truck	1.00	\$0.00 \$0.00 \$298.68 \$0.00	\$0.00 \$0.00 \$298.68 \$0.00 \$0.00 \$1,650.00	
kilometers ATV fuel Helicopter (hours) Fuel (litres/hour) Other	1 Ton Truck	1.00 0.00	\$0.00 \$0.00 \$298.68 \$0.00 \$0.00	\$0.00 \$0.00 \$298.68 \$0.00 \$0.00	\$2,848.68
kilometers ATV fuel Helicopter (hours) Fuel (litres/hour) Other Accommodation & Food		1.00 0.00	\$0.00 \$0.00 \$298.68 \$0.00 \$0.00 \$150.00	\$0.00 \$0.00 \$298.68 \$0.00 \$0.00 \$1,650.00 \$2,848.68	\$2,848.68
kilometers ATV fuel Helicopter (hours) Fuel (litres/hour) Other Accommodation & Food Hotel	1 Ton Truck	1.00 0.00	\$0.00 \$0.00 \$298.68 \$0.00 \$0.00 \$150.00	\$0.00 \$0.00 \$298.68 \$0.00 \$0.00 \$1,650.00 \$2,848.68 \$0.00	\$2,848.68
kilometers ATV fuel Helicopter (hours) Fuel (litres/hour) Other Accommodation & Food Hotel Camp	1 Ton Truck Rates per day	1.00 0.00 11.00	\$0.00 \$0.00 \$298.68 \$0.00 \$150.00 \$0.00 \$0.00	\$0.00 \$0.00 \$298.68 \$0.00 \$0.00 \$1,650.00 \$2,848.68 \$0.00 \$0.00	\$2,848.68
kilometers ATV fuel Helicopter (hours) Fuel (litres/hour) Other Accommodation & Food Hotel	1 Ton Truck	1.00 0.00	\$0.00 \$0.00 \$298.68 \$0.00 \$0.00 \$150.00	\$0.00 \$0.00 \$298.68 \$0.00 \$1,650.00 \$2,848.68 \$0.00 \$0.00 \$400.00	
kilometers ATV fuel Helicopter (hours) Fuel (litres/hour) Other Accommodation & Food Hotel Camp Meals	1 Ton Truck Rates per day	1.00 0.00 11.00	\$0.00 \$0.00 \$298.68 \$0.00 \$150.00 \$0.00 \$0.00	\$0.00 \$0.00 \$298.68 \$0.00 \$0.00 \$1,650.00 \$2,848.68 \$0.00 \$0.00	\$2,848.68 \$400.00
kilometers ATV fuel Helicopter (hours) Fuel (litres/hour) Other Accommodation & Food Hotel Camp Meals Miscellaneous	1 Ton Truck <b>Rates per day</b> 100/manX 2	1.00 0.00 11.00 4.00	\$0.00 \$0.00 \$298.68 \$0.00 \$150.00 \$0.00 \$0.00 \$100.00	\$0.00 \$0.00 \$298.68 \$0.00 \$1,650.00 \$2,848.68 \$0.00 \$0.00 \$400.00 \$400.00	
kilometers ATV fuel Helicopter (hours) Fuel (litres/hour) Other Accommodation & Food Hotel Camp Meals Miscellaneous Telephone	1 Ton Truck <b>Rates per day</b> 100/manX 2 sat phone	1.00 0.00 11.00 4.00	\$0.00 \$0.00 \$298.68 \$0.00 \$150.00 \$0.00 \$0.00 \$100.00 \$35.00	\$0.00 \$0.00 \$298.68 \$0.00 \$1,650.00 \$2,848.68 \$0.00 \$0.00 \$400.00 \$400.00 \$350.00	
kilometers ATV fuel Helicopter (hours) Fuel (litres/hour) Other Accommodation & Food Hotel Camp Meals Miscellaneous Telephone Fiels Suplies	1 Ton Truck <b>Rates per day</b> 100/manX 2 sat phone Flagging. Ties, sample bags	1.00 0.00 11.00 4.00 10.00 1.00	\$0.00 \$0.00 \$298.68 \$0.00 \$150.00 \$150.00 \$0.00 \$100.00 \$35.00 \$187.00	\$0.00 \$0.00 \$298.68 \$0.00 \$1,650.00 \$2,848.68 \$0.00 \$0.00 \$400.00 \$400.00 \$350.00 \$187.00	
kilometers ATV fuel Helicopter (hours) Fuel (litres/hour) Other Accommodation & Food Hotel Camp Meals Miscellaneous Telephone	1 Ton Truck <b>Rates per day</b> 100/manX 2 sat phone	1.00 0.00 11.00 4.00	\$0.00 \$0.00 \$298.68 \$0.00 \$150.00 \$0.00 \$0.00 \$100.00 \$35.00	\$0.00 \$0.00 \$298.68 \$0.00 \$1,650.00 \$2,848.68 \$0.00 \$400.00 \$400.00 \$400.00 \$187.00 \$800.00	\$400.00
kilometers ATV fuel Helicopter (hours) Fuel (litres/hour) Other Accommodation & Food Hotel Camp Meals Miscellaneous Telephone Fiels Suplies Tools	1 Ton Truck <b>Rates per day</b> 100/manX 2 sat phone Flagging. Ties, sample bags	1.00 0.00 11.00 4.00 10.00 1.00	\$0.00 \$0.00 \$298.68 \$0.00 \$150.00 \$150.00 \$0.00 \$100.00 \$35.00 \$187.00	\$0.00 \$0.00 \$298.68 \$0.00 \$1,650.00 \$2,848.68 \$0.00 \$0.00 \$400.00 \$400.00 \$350.00 \$187.00	
kilometers ATV fuel Helicopter (hours) Fuel (litres/hour) Other Accommodation & Food Hotel Camp Meals Miscellaneous Telephone Fiels Suplies	1 Ton Truck <b>Rates per day</b> 100/manX 2 sat phone Flagging. Ties, sample bags	1.00 0.00 11.00 4.00 10.00 1.00	\$0.00 \$0.00 \$298.68 \$0.00 \$150.00 \$150.00 \$0.00 \$100.00 \$35.00 \$187.00	\$0.00 \$0.00 \$298.68 \$0.00 \$1,650.00 \$2,848.68 \$0.00 \$400.00 \$400.00 \$400.00 \$187.00 \$800.00	\$400.00
kilometers ATV fuel Helicopter (hours) Fuel (litres/hour) Other Accommodation & Food Hotel Camp Meals Miscellaneous Telephone Fiels Suplies Tools Equipment Rentals	1 Ton Truck <b>Rates per day</b> 100/manX 2 sat phone Flagging. Ties, sample bags Chainsaw, Radio	1.00 0.00 11.00 4.00 10.00 1.00	\$0.00 \$0.00 \$298.68 \$0.00 \$150.00 \$0.00 \$0.00 \$100.00 \$35.00 \$187.00 \$80.00	\$0.00 \$0.00 \$298.68 \$0.00 \$1,650.00 \$2,848.68 \$0.00 \$400.00 \$400.00 \$400.00 \$187.00 \$800.00	\$400.00
kilometers ATV fuel Helicopter (hours) Fuel (litres/hour) Other Accommodation & Food Hotel Camp Meals Miscellaneous Telephone Fiels Suplies Tools	1 Ton Truck <b>Rates per day</b> 100/manX 2 sat phone Flagging. Ties, sample bags Chainsaw, Radio travel trailer 150/day+camp	1.00 0.00 11.00 4.00 10.00 1.00 10.00	\$0.00 \$0.00 \$298.68 \$0.00 \$150.00 \$150.00 \$0.00 \$100.00 \$35.00 \$187.00 \$80.00	\$0.00 \$0.00 \$298.68 \$0.00 \$1,650.00 \$2,848.68 \$0.00 \$400.00 \$400.00 \$400.00 \$187.00 \$187.00 \$800.00 \$1,337.00	\$400.00
kilometers ATV fuel Helicopter (hours) Fuel (litres/hour) Other Accommodation & Food Hotel Camp Meals Miscellaneous Telephone Fiels Suplies Tools Equipment Rentals	1 Ton Truck <b>Rates per day</b> 100/manX 2 sat phone Flagging. Ties, sample bags Chainsaw, Radio	1.00 0.00 11.00 4.00 10.00 1.00	\$0.00 \$0.00 \$298.68 \$0.00 \$150.00 \$0.00 \$0.00 \$100.00 \$35.00 \$187.00 \$80.00	\$0.00 \$298.68 \$0.00 \$0.00 \$1,650.00 \$2,848.68 \$0.00 \$400.00 \$400.00 \$400.00 \$350.00 \$187.00 \$800.00 \$1,337.00	\$400.00 \$1,337.00
kilometers ATV fuel Helicopter (hours) Fuel (litres/hour) Other Accommodation & Food Hotel Camp Meals Miscellaneous Telephone Fiels Suplies Tools Equipment Rentals Other (Specify)	1 Ton Truck <b>Rates per day</b> 100/manX 2 sat phone Flagging. Ties, sample bags Chainsaw, Radio travel trailer 150/day+camp	1.00 0.00 11.00 4.00 10.00 1.00 10.00	\$0.00 \$0.00 \$298.68 \$0.00 \$150.00 \$150.00 \$0.00 \$100.00 \$35.00 \$187.00 \$80.00	\$0.00 \$0.00 \$298.68 \$0.00 \$1,650.00 \$2,848.68 \$0.00 \$400.00 \$400.00 \$400.00 \$187.00 \$187.00 \$800.00 \$1,337.00	\$400.00
kilometers ATV fuel Helicopter (hours) Fuel (litres/hour) Other Accommodation & Food Hotel Camp Meals Miscellaneous Telephone Fiels Suplies Tools Equipment Rentals	1 Ton Truck <b>Rates per day</b> 100/manX 2 sat phone Flagging. Ties, sample bags Chainsaw, Radio travel trailer 150/day+camp ground fee@ \$40.00	1.00 0.00 11.00 4.00 10.00 10.00 10.00	\$0.00 \$0.00 \$298.68 \$0.00 \$150.00 \$150.00 \$0.00 \$100.00 \$35.00 \$187.00 \$80.00 \$80.00	\$0.00 \$298.68 \$0.00 \$1,650.00 \$1,650.00 \$2,848.68 \$0.00 \$400.00 \$400.00 \$350.00 \$187.00 \$800.00 \$11,337.00 \$1900 \$0.00	\$400.00 \$1,337.00
kilometers ATV fuel Helicopter (hours) Fuel (litres/hour) Other Accommodation & Food Hotel Camp Meals Miscellaneous Telephone Fiels Suplies Tools Equipment Rentals Other (Specify)	1 Ton Truck <b>Rates per day</b> 100/manX 2 sat phone Flagging. Ties, sample bags Chainsaw, Radio travel trailer 150/day+camp	1.00 0.00 11.00 4.00 10.00 1.00 10.00	\$0.00 \$0.00 \$298.68 \$0.00 \$150.00 \$150.00 \$0.00 \$100.00 \$35.00 \$187.00 \$80.00	\$0.00 \$298.68 \$0.00 \$0.00 \$1,650.00 \$2,848.68 \$0.00 \$400.00 \$400.00 \$400.00 \$350.00 \$187.00 \$800.00 \$1,337.00	\$400.00 \$1,337.00

\$0.00 \$0.0	0
\$100.0	<b>\$100.00</b>

### TOTAL Expenditures

### \$92,221.06

James Turner, P.Geo., Qualified Person. September 17, 2012.

### 20.0 REFERENCES

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### 21.0 DATE AND SIGNATURE PAGE

The effective date of this report is September 17, 2012.

"Signed and sealed" at Vancouver James A. Turner, PGeo.

## James A. Turner, P.Geo.

14149-17 A Avenue Surrey B.C. V4A 6R8 Dated at Surrey, B.C. this September 17, 2012 Reg. No. 19843 <u>Association of Professional Engineers and Geoscientists of British Columbia.</u>

# 22.0 CERTIFICATE OF AUTHOR, James A. Turner, P.Geo. DECLARATION:

In regard to the report titled "Technical Report NI 43-101 for the Lucky Mike Copper-Tungsten Property", Nicola Mining District, British Columbia, and dated September 17, 2012, I, James A. Turner, P.Geo, 14149 17 A Avenue of South Surrey, British Columbia, hereby certify that:

- 1. I am a graduate of the University of British Columbia with a Bachelor of Science Degree in Physics, Mathematics and Geology in 1973 and 1976 and have practiced my profession since 1976 and continuously since 1980.
- 2. From 1998 to June 2001, I was a consultant to Pacific Geomatics Inc., a private remote sensing company specializing in data acquisition, processing and interpretation.
- 3. From March 1995 to April 1998 I was a principal of TerraSat Geomatics Inc., a private company, specialising in satellite imaging and its application to mining exploration.
- 4. From 1990 to March 1995, I subcontracted my services as an image analyst to MineQuest Exploration Associates Inc.
- 5. Since 1976 I have been involved in mineral exploration (with major mining companies such as Cominco, Noranda and Newmont(1980-1989) for copper, lead, zinc, gold, silver, tungsten, tin and diamonds. I have been involved in remote sensing and Geomatics since 1984. Since 1990 I have been involved in remote sensing and satellite interpretation for diamond deposits in the Lac de Gras area of the NWT. I have also conducted remote sensing work for companies working in Ghana, Guyana, Mali, Alberta, British Columbia, Mexico, Vietnam, China, Ireland, Arizona, Utah, Nevada, Bolivia, Chile, Peru, Nunavut, Quebec, Central America, Brazil, India and Indonesia.
- 6. I am a registered member of the Professional Engineers and Geoscientists of British Columbia, (Registration #19843).
- 7. I am the sole author of this report titled the "Technical Report NI 43-101 for the Lucky Mike Copper-Tungsten Property", Nicola Mining District, British Columbia, and my compensation is strictly on a professional fee basis.
- 8. I am presently a Consulting Geologist and have been so since March 1989.
- 9. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101. I have no previous association with Plate Resources

or with the subject Lucky Mike Property.

- 10. I have read National Instrument 43-101 and Form 43-101F1. This technical report has been prepared in compliance with those documents.
- 11. I have read the several reports and historic documents, and am familiar with the subject matter of the report.
- 12. To the best of my knowledge, information and belief, the technical report, dated December 30, 2011, contains all scientific and technical information that is required to be disclosed to make the report not misleading.
- 13. I, in the company of Craig Lynes, have examined the Lucky Mike Property on August 24, 2011.
- 14.1 am independent of Plate Resources Inc., and I have no interest, direct or indirect, in the Lucky Mike Property or the property ownerships, nor do I expect to receive such interest in applying all of the tests in section 1.5 of National Instrument 43-101.
- 15. Except as stated above I have not had prior involvement with the property that is the subject of the technical report.
- 16. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

"Signed and sealed" at Vancouver James A. Turner, P.Geo.

## James A. Turner, P.Geo.

14149-17 A Avenue Surrey B.C. V4A 6R8 Dated at Surrey, B.C. this 17<sup>th</sup> day of September, 2012. Reg. No. 19843 Association of Professional Engineers and Geoscientists of British Columbia 23.0 APPENDICIES Appendix I Assay Certificates

Appendix II Geosci Data Analysis Ltd. Airborne Geophysical Survey: Interpretation R Report

Appendix III Precision GeoSurveys Geophysical Logistics Report



BC 641640 Ltd. 14149, 17A Ave. Surrey BC V4A 6R8 Canada

1020 Cordova St. East Vancouver BC V6A 4A3 Canada

Acme Analytical Laboratories (Vancouver) Ltd.

AcmeLabs

CERTIFICATE OF ANALYSIS

www.acmelab.com

Submitted By:	Jim Turner
Receiving Lab:	Canada-Vancouver
Received:	August 31, 2011
Report Date:	November 03, 2011
Page:	1 of 3

### VAN11004363.1

#### **CLIENT JOB INFORMATION**

Project: Shipment ID:	TIB		
P.O. Number Number of Samples:	31		
SAMPLE DISPOS	AL		

RTRN-PLP	Return
RTRN-RJT	Return

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	31	Crush, split and pulverize 250 g rock to 200 mesh			VAN
1D01	31	1:1:1 Aqua Regia digestion ICP-ES analysis	0.5	Completed	VAN
3A01	8	Ignite samples, acid digest, Au by ICP-MS	15	Completed	VAN
3B01	23	Fire assay fusion Au by ICP-ES	30	Completed	VAN
7AR2	19	1:1:1 Aqua Regia digestion ICP-ES analysis	1	Completed	VAN
7KP1	4	Phosphoric acid leach, ICP-ES analysis	0.5	Completed	VAN
7AR.1	4	1:1:1 Aqua Regia Digestion ICP-ES Finish	0.1	Completed	VAN

#### **ADDITIONAL COMMENTS**

Insufficient material to recheck Sample 80919 for DUP not match

Invoice To:

BC 641640 Ltd. 14149, 17A Ave. Surrey BC V4A 6R8 Canada

HSIII30 RAYMOND CHAN CHIEF ASSAYER

CC:

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted. "\*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

Page:

BC 641640 Ltd.

14149, 17A Ave.

Surrey BC V4A 6R8 Canada

Project: TIB Report Date:

November 03, 2011

1020 Cordova St. East Vancouver BC V6A 4A3 Canada Phone (604) 253-3158 Fax (604) 253-1716

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#### 2 of 3 Part 1

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			010													V /-		00-	1000	. 1	
	Method	WGHT	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D
	Analyte	Wgt	Мо	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	v	Ca	Р
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	1	1	3	1	0.3	1	1	2	0.01	2	2	2	1	0.5	3	3	1	0.01	0.001
80901 Rock		1.01	<1	96	<3	45	<0.3	35	14	410	3.17	3	<2	<2	76	<0.5	4	<3	106	2.30	0.049
80902 X Rock		0.90	<1	65	<3	51	<0.3	31	14	563	3.67	3	<2	<2	84	<0.5	<3	<3	122	2.01	0.058
80903 Rock		1.30	1	228	7	105	0.4	38	15	851	4.89	6	<2	<2	75	<0.5	7	<3	183	1.45	0.050
80904 A Rock		2.31	<1	119	<3	36	<0.3	31	14	380	2.82	5	<2	<2	89	<0.5	5	3	92	1.91	0.048
80905 X Rock		1.38	<1	143	<3	33 -	<0.3	19	10	309	2.85	• 8	<2	<2	78	<0.5	<3	15	-65	•1-68	0.056
80906 A Rock		1.43		1886	されて	SUI		are	<b>no</b> 1	368	S 80	<u> 2181</u>	<u>ea</u>	W4	80	<b>ne</b>	Æ	<u>CK</u>	y IV.	200	0.063
80907 Rock		1.32	<1	66	<3	54	<0.3	37	16	566	3.78	3	<2	<2	62	<0.5	6	<3	´ 129	2.11	0.055
80908 👗 Rock		1.46	<1	174	<3	26	<0.3	34	16	171	1.84	10	<2	<2	62	<0.5	<3	<3	54	2.60	0.023
80909 Rock		0.78		10000	<3	55	4.9	25	16	416	2.93	2	<2	<2	112	0.9	3	<3	334	1.02	0.021
80910 Rock		0.67		10000	<3	32	7.6	17	11	269	2.00	5	<2	<2	125	1.2	3	3	679	1.32	0.017
80911 <b>A</b> Rock		0.75		10000	5	37	10.4	27	15	336	2.64	7	<2	<2	144	1.3	3	<3	631	1.17	0.012
80912 X Rock		0.30		10000	<3	73	9.6	48	26	551	3.97	7	<2	<2	73	1.3	5	<3	1096	0.81	0.014
80913 Rock		0.25		10000	<3	12	15.7	5	3	164	1.32	2	<2	<2	120	1.4	<3	<3	456	1.08	0.008
80914 Rock		0.42	-	•10000	23	48	18.8	8	3	1658	2.65	6	<2	<2	14	2.9	4		>10000	7.13	0.015
80915 Rock		0.31		10000	29	62	21.9	14	8	1998	3.42	9	<2	<2	19	4.2	5		>10000	8.69	0.015
80916 Rock		0.11	26	7023	33	69	5.5	7	3	1278	2.50	2	<2	<2	22	1.1	<3		>10000	6.26	0.002
100011 10000		1.50		10000	8	44	52.4	3	5	352	2.81	3	<2	<2	1	5.6	3	9	77	1.51	0.062
80918 Rock		0.27		•10000	48	34	24.3	4	12	696	5.57	<2	<2	<2	2	3.0	<3	<3	174	2.78	0.123
80919 Rock		0.22		10000	9	26	32.1	1	2	184	2.11	<2	<2	<2	1	6.2	<3	<3	57	0.93	0.060
00920 ROCK		1.62		10000	106	331	18.3	26	14	1548	7.21	5	<2	<2	17	9.9	<3	43	6236	5.36	0.037
80921 X Rock		2.03		10000	32	44	32.6	6	6	943	4.88	<2	<2	<2	8	4.8	<3	<3	3142	4.13	0.061
80922 Rock		1.26		•10000	8	76	4.3	40	23	813	3.83	3	<2	<2	44	2.0	4	5	294	1.32	0.059
80923 X ROCK		0.95	<1	9086	<3	63	3.5	62	28	642	4.15	<2	<2	<2	132	2.2	<3	<3	322	1.66	0.058
156672 Rock		1.87	26	134	<3	42	<0.3	4	22	6378	8.29	<2	<2	<2	14	< 0.5	6	15	39	12.10	0.043
156673 Rock		1.09		•10000	<3	1034	>100	5	433	562	15.96	19	<2	<2	7	12.7	6	20	79	0.70	0.051
156674 Rock		1.34		10000	<3	547	33.0	<1	78	4329	12.99	8	<2	<2	8	10.4	4	24	106	11.08	0.032
156675 Rock		1.05		•10000	<3	562	71.3	<1	86	3739	12.00	6	<2	<2	2	9.1	6	18	102	6.53	0.038
156676 Rock		0.78	<1	1771		>10000	1.7	2	19	1680	0.85	7	<2	<2	45	254.8	42	<3	6	12.17	0.008
156678 Rock		0.57	8	2405		>10000	11.2	1	87	282	4.12	71	<2	<2	2	751.6	72	11	8	0.19	0.006
156679 Rock		1.24	12 >	10000	5086	>10000	18.8	1	178	338	7.02	156	<2	<2	1	1237	56	15	11	0.11	0.007

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1004363 1

AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.

Project:

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BC 641640 Ltd.

14149, 17A Ave.

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Report Date:

November 03, 2011

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**IFICATE OF ANALYSIS** 

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#### 2 of 3 Part 2

	N	/lethod	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	3A	3B	7AR	7AR	7AR	7AR	7AR
	Α	nalyte	La	Cr	Mg	Ва	Ti	в	AI	Na	κ	w	S	Sc	Ga	Au	Au	Мо	Cu	Pb	Zn	Ag
		Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	%	ppm	ppm	ppb	ppb	%	%	%	%	gm/t
		MDL	1	1	0.01	1	0.001	20	0.01	0.01	0.01	2	0.05	5	5	0.5	2	0.001	0.001	0.01	0.01	2
80901	Rock		2	27	0.88	11	0.292	<20	3.18	0.23	0.08	<2	0.05	5	11	9.7	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
80902	Rock		2	35	1.05	15	0.253	<20	3.00	0.22	0.09	<2	<0.05	6	10	6.3	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
80903	Rock		2	63	2.05	16	0.370	<20	3.71	0.19	0.10	<2	0.18	15	16	37.2	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
80904	Rock		1	30	0.69	9	0.232	<20	2.71	0.21	0.09	<2	0.08	7	10	13.9	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
80905	Rock		4	18	0.67	9	0.107	<20	2.65	0.14	0.08	<2	0.10	<5	11	14.5	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
80906	Rock		3	13	0.95	7	0.089	<20	3.60	0.05	0.08	<2	<0.05	<5	13	102.9	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
80907	Rock		2	38	1.20	6	0.287	<20	2.99	0.15	0.08	<2	<0.05	7	11	5.4	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
80908	Rock		<1	20	0.25	<1	0.248	<20	2.08	0.02	0.02	<2	0.23	<5	10	5.5	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
80909	Rock		2	36	1.05	<1	0.236	<20	1.86	<0.01	<0.01	<2	0.13	8	10	N.A.	39	<0.001	1.823	<0.01	<0.01	5
80910	Rock		1	32	0.51	<1	0.231	<20	1.27	<0.01	<0.01	<2	0.33	<5	8	N.A.	43	<0.001	2.349	<0.01	<0.01	7
80911	Rock		2	31	0.69	<1	0.156	<20	1.49	<0.01	<0.01	<2	0.48	6	9	N.A.	127	<0.001	3.189	<0.01	<0.01	9
80912	Rock		2	40	1.44	<1	0.190	<20	2.06	0.01	<0.01	<2	0.65	7	12	N.A.	21	<0.001	3.574	<0.01	<0.01	8
80913	Rock		1	17	0.19	<1	0.143	<20	0.93	<0.01	<0.01	<2	0.41	<5	7	N.A.	39	<0.001	2.860	<0.01	<0.01	14
80914	Rock		6	204	0.30	<1	0.200	<20	1.88	<0.01	0.01	5	0.70	10	14	N.A.	53	0.002	4.192	<0.01	<0.01	3
80915	Rock		7	273	0.44	2	0.150	<20	2.71	<0.01	0.03	13	1.41	11	17	N.A.	123	0.002	7.141	<0.01	<0.01	9
80916	Rock		4	115	0.65	8	0.029	<20	1.47	<0.01	0.19	<2	0.21	<5	11	N.A.	32	0.003	0.761	<0.01	<0.01	<2
80917	Rock		2	6	0.06	<1	0.020	<20	0.22	<0.01	<0.01	45	2.36	5	<5	N.A.	90	<0.001	>10	<0.01	<0.01	52
80918	Rock		3	9	0.13	<1	0.031	<20	0.51	<0.01	<0.01	<2	3.35	<5	<5	N.A.	28	<0.001	>10	<0.01	<0.01	27
80919	Rock		1	7	0.02	<1	0.012	<20	0.11	<0.01	<0.01	<2	2.11	<5	<5	N.A.	109	<0.001	>10	<0.01	<0.01	36
80920	Rock		3	87	1.13	6	0.126	<20	2.05	0.07	0.05	<2	0.89	9	17	N.A.	131	<0.001	4.598	<0.01	0.04	18
80921	Rock		2	28	0.26	2	0.043	<20	0.83	0.01	0.02	<2	1.90	<5	7	N.A.	226	<0.001	>10	<0.01	<0.01	35
80922	Rock		3	43	1.65	13	0.273	<20	2.48	0.08	0.08	<2	0.14	12	9	N.A.	30	<0.001	1.150	<0.01	<0.01	4
80923	Rock		3	79	1.51	<1	0.390	<20	2.12	<0.01	<0.01	<2	0.22	16	11	N.A.	24	<0.001	0.971	<0.01	<0.01	3
156672	Rock		<1	4	0.18	4	0.019	<20	1.64	<0.01	0.02	>100	0.30	<5	7	N.A.	<2	N.A.	N.A.	N.A.	N.A.	N.A.
156673	Rock		1	6	0.12	17	0.050	<20	0.31	<0.01	<0.01	>100	8.30	<5	<5	N.A.	478	N.A.	N.A.	N.A.	N.A.	N.A.
156674	Rock		1	5	0.23	12	0.039	<20	0.84	<0.01	0.02	>100	1.47	<5	11	N.A.	53	N.A.	N.A.	N.A.	N.A.	N.A.
156675	Rock		<1	5	0.07	13	0.023	<20	0.82	<0.01	<0.01	>100	4.46	<5	8	N.A.	296	N.A.	N.A.	N.A.	N.A.	N.A.
156676	Rock		1	2	0.03	74	<0.001	<20	0.14	<0.01	0.14	<2	2.24	<5	<5	N.A.	14	<0.001	0.197	0.05	4.80	<2
156678	Rock		<1	4	0.06	26	<0.001	<20	0.12	<0.01	0.09	*	8.01	<5	<5	N.A.	217	<0.001	0.239	0.89	11.09	12
156679	Rock		<1	4	0.06	19	<0.001	<20	0.18	<0.01	0.11	*	>10	<5	<5	N.A.	218	0.001	1.117	0.45	17.24	19

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VAN11004363.1



BC 641640 Ltd.

14149, 17A Ave.

Surrey BC V4A 6R8 Canada

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November 03, 2011

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2 of 3 Part 3

# CERTIFICATE OF ANALYSIS

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			Method	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7KP
			Analyte	Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Ca	Р	Cr	Mg	AI	Na	к	w	Hg	S	w
			Unit	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
			MDL	0.001	0.001	0.01	0.01	0.01	0.001	0.001	0.001	0.01	0.01	0.001	0.001	0.01	0.01	0.01	0.01	0.001	0.001	0.05	0.005
80901	X	Rock		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
80902		Rock		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
80903	X	Rock		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
80904		Rock		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
80905	v	Rock		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
80906	Λ	Rock		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
80907		Rock		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
80908	Χ	Rock		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
80909		Rock		0.003	0.002	hes	A27	C <sup>20</sup> Q1	10.00	<0001	<b>3</b> 0.001	<b>1</b> 01	C140	0.021		1027	1 PM	t191	0.01	10,00	~<0.001	/b.16	<b>-  .</b> A.
80910	X	Rock		0.002	<0.001	0.03	2.29	<0.01	0.019	<0.001	<0.001	<0.01	1.85	0.017	0.004	0.50	1.59	<0.01	<0.01	<0.001	<0.001	0.42	N.A.
80911		Rock		0.003	0.001	0.03	2.81	<0.01	0.020	<0.001	<0.001	<0.01	1.53	0.012	0.003	0.64	1.61	<0.01	<0.01	<0.001	<0.001	0.57	N.A.
80912	X	Rock		0.005	0.002	0.06	4.28	<0.01	0.011	<0.001	< 0.001	<0.01	1.16	0.014	0.004	1.37	2.09	<0.01	<0.01	<0.001	<0.001	0.88	N.A.
80913		Rock		<0.001	<0.001	0.02	1.47	<0.01	0.017	<0.001	<0.001	<0.01	1.38	0.008	0.002	0.18	1.13	<0.01	<0.01	<0.001	<0.001	0.48	N.A.
80914	X	Rock		<0.001	<0.001	0.17	2.86	<0.01	0.002	<0.001	<0.001	<0.01	7.30	0.014	0.019	0.30	1.90	<0.01	<0.01	<0.001	<0.001	0.91	N.A.
80915	11	Rock		0.001	0.001	0.20	3.79	<0.01	0.003	<0.001	<0.001	<0.01	8.83	0.015	0.025	0.44	2.86	<0.01	0.04	<0.001	<0.001	1.95	N.A.
80916	v	Rock		<0.001	<0.001	0.14	2.72	<0.01	0.002	<0.001	<0.001	<0.01	6.40	<0.001	0.010	0.68	1.50	<0.01	0.22	<0.001	<0.001	0.23	N.A.
80917	Λ	Rock		<0.001	<0.001	0.04	3.08	<0.01	<0.001	<0.001	<0.001	<0.01	1.61	0.061	<0.001	0.06	0.23	<0.01	<0.01	0.004	<0.001	3.90	N.A.
80918		Rock		<0.001	<0.001	0.08	6.56	<0.01	<0.001	<0.001	<0.001	<0.01	3.72	0.125	<0.001	0.14	0.56	<0.01	<0.01	<0.001	<0.001	3.63	N.A.
80919	Χ	Rock		<0.001	<0.001	0.02	2.28	<0.01	<0.001	<0.001	<0.001	<0.01	1.04	0.062	<0.001	0.02	0.12	<0.01	<0.01	<0.001	<0.001	2.50	N.A.
80920		Rock		0.003	0.001	0.17	8.52	<0.01	0.002	<0.001	0.001	<0.01	6.71	0.038	0.009	1.21	2.15	0.07	0.09	<0.001	<0.001	1.24	N.A.
80921	X	Rock		<0.001	<0.001	0.11	6.46	<0.01	<0.001	<0.001	<0.001	<0.01	5.18	0.062	0.003	0.29	0.90	0.01	0.03	<0.001	<0.001	2.46	N.A.
80922		Rock		0.004	0.002	0.10	4.38	<0.01	0.006	<0.001	<0.001	<0.01	1.69	0.060	0.005	1.67	2.53	0.08	0.10	<0.001	<0.001	0.16	N.A.
80923	Χ	Rock		0.007	0.002	0.07	4.85	<0.01	0.019	<0.001	<0.001	<0.01	2.32	0.062	0.008	1.52	2.36	<0.01	<0.01	<0.001	<0.001	0.30	N.A.
156672		Rock		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	0.309
156673		Rock		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	0.494
156674		Rock		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	0.078
156675		Rock		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	0.068
156676		Rock		<0.001	0.002	0.17	0.94	<0.01	0.005	0.026	0.001	<0.01	11.34	0.007	<0.001	0.03	0.17	<0.01	0.18	<0.001	<0.001	2.53	N.A.
156678		Rock		<0.001	0.009	0.03	4.31	<0.01	<0.001	0.073	0.002	<0.01	0.18	0.006	<0.001	0.06	0.13	<0.01	0.11	<0.001	<0.001	8.67	N.A.
156679		Rock		<0.001	0.017	0.03	7.12	0.02	<0.001	0.119	0.003	<0.01	0.09	0.009	<0.001	0.06	0.18	<0.01	0.13	<0.001	<0.001	14.09	N.A.

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.

Assessment Report Lucky Mike property James A. Turner, P.Geo. September 17, 2012



Page:

BC 641640 Ltd. 14149, 17A Ave.

Surrey BC V4A 6R8 Canada

Project: ΤIΒ Report Date:

November 03, 2011

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## CERTIFICATE OF ANALYSIS

		Method Analyte Unit MDL	7AR.1 Cu % 0.001
80901	Rock		
80902 X	Rock		
80903	Rock		
80904	Rock		
80905 X	Rock		
80906	Rock		
80907	Rock		
80908 X	Rock		
80909	Rock		
80910	Rock		
80911 X	Rock		
80912	Rock		
80913	Rock		
80914 <b>X</b>	Rock		
80915	Rock		
80916	Rock		
80917 X	Rock		17.46
80918	Rock		17.43
80919 X	Rock		12.91
80920 🔨	Rock		
80921	Rock		10.82
80922 🗙	Rock		
80923	Rock		
156672	Rock		
156673	Rock		
156674	Rock		
156675	Rock		
156676	Rock		
156678	Rock		
156679	Rock		

VAN11004363.1

	Client:	<b>BC 641640 Ltd.</b> 14149, 17A Ave. Surrey BC V4A 6R8 Canada
Acme Analytical Laboratories (Vancouver)	Ltd. Project:	ТІВ
1020 Cordova St. East Vancouver BC V6A 4A3 Canada	Report Date:	November 03, 2011
Phone (604) 253-3158 Fax (604) 253-1716		
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1D

Ag

ppm

0.3

5.9

1D

Ni

1

2

ppm

1D

Co

1

61

ppm

1D

Mn

ppm

1093

2

1D

Fe

%

0.01

5.92

Page:

1D

As

ppm

2

89

1D

Au

2

<2

ppm

3 of 3

1D

Th

ppm

2

<2

Part 1

1D

Cd

ppm

0.5

1D

Sr

1

4 445.1

ppm

VAN11004363.1

1D

Bi

3

5

ppm

1D

v

1

21

ppm

1D

Са

%

0.01

0.45

1D

Sb

3

58

ppm

1D P

%

0.001

0.014

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.

CERTIFICATE OF ANALYSIS

Rock

156680

Method

Analyte

Unit

MDL

WGHT

Wgt

kg

0.01

0.95

1D

Мо

ppm

1

10

1D

Cu

1

ppm

1621

1D

Pb

3

4413 >10000

ppm

1D

Zn

1

ppm

AcmeLabs	Acme Analytical Laboratories (Vancouver) Ltd.

Page:

BC 641640 Ltd. 14149, 17A Ave.

Surrey BC V4A 6R8 Canada

Part 2

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Project: TIB

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Report Date:

November 03, 2011

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CERTIFICATE OF ANALYSIS

	-																			
Method	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	3A	3B	7AR	7AR	7AR	7AR	7AR
Analyte	La	Cr	Mg	Ва	Ti	в	AI	Na	к	w	S	Sc	Ga	Au	Au	Мо	Cu	Pb	Zn	Ag
Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	%	ppm	ppm	ppb	ppb	%	%	%	%	gm/t
MDL	1	1	0.01	1	0.001	20	0.01	0.01	0.01	2	0.05	5	5	0.5	2	0.001	0.001	0.01	0.01	2
156680 Rock	<1	5	0.37	42	<0.001	<20	0.58	<0.01	0.14	*	6.15	<5	<5	N.A.	161	0.001	0.170	0.41	7.45	6

Acme Analytical Laboratories (Vancouver) Ltd.	Client:	<b>BC 641640 Ltd.</b> 14149, 17A Ave. Surrey BC V4A 6R8 Canada
Acme Analytical Laboratories (Vancouver) Ltd.	Project:	ТІВ
1020 Cordova St. East Vancouver BC V6A 4A3 Canada Phone (604) 253-3158 Fax (604) 253-1716	Report Date:	November 03, 2011
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	Page:	3 of 3 Part 3
CERTIFICATE OF ANALYSIS		VAN11004363.1

### CERTIFICATE OF ANALYSIS

	Method	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7KP
	Analyte	Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Са	Р	Cr	Mg	AI	Na	к	w	Hg	S	w
	Unit	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
	MDL	0.001	0.001	0.01	0.01	0.01	0.001	0.001	0.001	0.01	0.01	0.001	0.001	0.01	0.01	0.01	0.01	0.001	0.001	0.05	0.005
156680 Rock		<0.001	0.006	0.11	6.34	<0.01	<0.001	0.046	0.002	<0.01	0.45	0.015	<0.001	0.36	0.59	<0.01	0.19	<0.001	<0.001	7.16	N.A.

	Client:	<b>BC 641640 Ltd.</b> 14149, 17A Ave. Surrey BC V4A 6R8 Canada
Acme Analytical Laboratories (Vancouver) Ltd. 1020 Cordova St. East Vancouver BC V6A 4A3 Canada Phone (604) 253-3158 Fax (604) 253-1716	Project: Report Date:	TIB November 03, 2011

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Part 4

## VAN11004363.1

# CERTIFICATE OF ANALYSIS

		Method	7AR.1	
		Analyte	Cu	
		Unit	%	
		MDL	0.001	
Γ	156680	Rock		

Project:

Page:

BC 641640 Ltd.

14149, 17A Ave. Surrey BC V4A 6R8 Canada

Part 1

VAN11004363.1

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### TY CONTROL REPORT

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	Method	WGHT	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D
	Analyte	Wgt	Мо	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	v	Ca	Р
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	1	1	3	1	0.3	1	1	2	0.01	2	2	2	1	0.5	3	3	1	0.01	0.001
Pulp Duplicates																					
80908	Rock	1.46	<1	174	<3	26	<0.3	34	16	171	1.84	10	<2	<2	62	<0.5	<3	<3	54	2.60	0.023
REP 80908	QC																				
80912	Rock	0.30	<1 >	>10000	<3	73	9.6	48	26	551	3.97	7	<2	<2	73	1.3	5	<3	1096	0.81	0.014
REP 80912	QC		<1 >	>10000	<3	73	10.0	49	27	558	3.97	7	<2	<2	73	1.5	3	4	1099	0.82	0.014
80914	Rock	0.42	8 >	>10000	23	48	18.8	8	3	1658	2.65	6	<2	<2	14	2.9	4	7	>10000	7.13	0.015
REP 80914	QC																				
80917	Rock	1.50	1 >	>10000	8	44	52.4	3	5	352	2.81	3	<2	<2	1	5.6	3	9	77	1.51	0.062
REP 80917	QC																				
80921	Rock	2.03	5 >	>10000	32	44	32.6	6	6	943	4.88	<2	<2	<2	8	4.8	<3	<3	3142	4.13	0.061
REP 80921	QC		5 >	>10000	28	43	32.6	6	6	938	4.81	<2	<2	<2	8	4.3	<3	3	3050	4.03	0.059
Core Reject Duplicates																					
80919	Rock	0.22	<1 >	>10000	9	26	32.1	1	2	184	2.11	<2	<2	<2	1	6.2	<3	<3	57	0.93	0.060
DUP 80919	QC		<1 >	>10000	4	11	17.8	2	2	177	1.60	<2	<2	<2	1	3.9	<3	<3	61	0.74	0.058
Reference Materials																					
STD CCU-1C	Standard																				
STD CCU-1C	Standard																				
STD CDN-PGMS-19	Standard																				
STD CZN-3	Standard																				
STD CZN-3	Standard																				
STD DS8	Standard		13	105	121	335	1.3	38	7	628	2.49	26	<2	7	65	1.8	8	8	40	0.68	0.080
STD DS8	Standard		14	106	107	323	1.7	38	5	620	2.45	18	<2	6	62	2.3	<3	<3	46	0.70	0.077
STD GBM997-6	Standard																				
STD NBLG	Standard																				
STD OREAS153AR	Standard																				
STD OREAS131B-A	Standard																				
STD OREAS153AR	Standard																				
STD OREAS131B-A	Standard																				
STD OREAS45CA	Standard		<1	473	13	65	0.5	255	87	967	16.82	7	<2	8	15	<0.5	4	<3	225	0.45	0.041

Page:

BC 641640 Ltd. 14149, 17A Ave.

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QUALITY CONTROL REPORT VAN11004363.1																				
Metho	d 1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	3A	3B	7AR	7AR	7AR	7AR	7AR
Analy	e La	Cr	Mg	Ва	Ti	в	AI	Na	к	w	s	Sc	Ga	Au	Au	Мо	Cu	Pb	Zn	Ag
Ur	it ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	%	ppm	ppm	ppb	ppb	%	%	%	%	gm/t
ME	L 1	1	0.01	1	0.001	20	0.01	0.01	0.01	2	0.05	5	5	0.5	2	0.001	0.001	0.01	0.01	2
Pulp Duplicates																				
80908 Rock	<1	20	0.25	<1	0.248	<20	2.08	0.02	0.02	<2	0.23	<5	10	5.5	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
REP 80908 QC														5.9						
80912 Rock	2	40	1.44	<1	0.190	<20	2.06	0.01	<0.01	<2	0.65	7	12	N.A.	21	<0.001	3.574	<0.01	<0.01	8
REP 80912 QC	2	40	1.44	<1	0.191	<20	2.04	0.01	<0.01	<2	0.66	7	11							
80914 Rock	6	204	0.30	<1	0.200	<20	1.88	<0.01	0.01	5	0.70	10	14	N.A.	53	0.002	4.192	<0.01	<0.01	3
REP 80914 QC															55					
80917 Rock	2	6	0.06	<1	0.020	<20	0.22	<0.01	<0.01	45	2.36	5	<5	N.A.	90	<0.001	>10	<0.01	<0.01	52
REP 80917 QC																				
80921 Rock	2	28	0.26	2	0.043	<20	0.83	0.01	0.02	<2	1.90	<5	7	N.A.	226	<0.001	>10	<0.01	<0.01	35
REP 80921 QC	2	27	0.26	2	0.043	<20	0.83	0.01	0.02	<2	1.86	<5	7							
Core Reject Duplicates																				
80919 Rock	1	7	0.02	<1	0.012	<20	0.11	<0.01	<0.01	<2	2.11	<5	<5	N.A.	109	<0.001	>10	<0.01	<0.01	36
DUP 80919 QC	<1	9	0.02	<1	0.011	<20	0.09	<0.01	<0.01	<2	1.20	<5	<5	N.A.	51	<0.001	7.238	<0.01	<0.01	21
Reference Materials																				
STD CCU-1C Standard																				
STD CCU-1C Standard																				
STD CDN-PGMS-19 Standard														237.1						
STD CZN-3 Standard																				
STD CZN-3 Standard																				
STD DS8 Standard	13	112	0.62	301	0.110	<20	0.91	0.09	0.41	<2	0.16	<5	6							
STD DS8 Standard	14	119	0.59	277	0.109	<20	0.90	0.09	0.40	4	0.16	<5	6							
STD GBM997-6 Standard																				
STD NBLG Standard																				
STD OREAS153AR Standard																0.018	0.696	<0.01	<0.01	<2
STD OREAS131B-A Standard																<0.001	0.020	1.78	3.02	34
STD OREAS153AR Standard																0.018	0.704	<0.01	<0.01	<2
STD OREAS131B-A Standard																<0.001	0.021	1.79	3.09	36
STD OREAS45CA Standard	16	774	0.14	164	0.155	<20	4.07	0.01	0.09	<2	<0.05	49	22							

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Part 3

VAN11004363.1

Acme Analytical Laboratories (Vancouver) Ltd.

Project:	TIB
Report Date:	November

03, 2011

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### ALITY CONTROL REPORT

	Method	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7KP
	Analyte	Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Са	P	Cr	Mg	AI	Na	K	W	Hg	S	W
	Unit	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	%	%
	MDL	0.001	0.001	0.01	0.01	0.01	0.001	0.001	0.001	0.01	0.01	0.001	0.001	0.01	0.01	0.01	0.01	0.001	0.001	0.05	0.005
Pulp Duplicates																					
80908	Rock	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
REP 80908	QC																				
80912	Rock	0.005	0.002	0.06	4.28	<0.01	0.011	<0.001	<0.001	<0.01	1.16	0.014	0.004	1.37	2.09	<0.01	<0.01	<0.001	<0.001	0.88	N.A.
REP 80912	QC																				
80914	Rock	<0.001	<0.001	0.17	2.86	<0.01	0.002	<0.001	<0.001	<0.01	7.30	0.014	0.019	0.30	1.90	<0.01	<0.01	<0.001	<0.001	0.91	N.A.
REP 80914	QC																				
80917	Rock	<0.001	<0.001	0.04	3.08	<0.01	<0.001	<0.001	<0.001	<0.01	1.61	0.061	<0.001	0.06	0.23	<0.01	<0.01	0.004	<0.001	3.90	N.A.
REP 80917	QC																				
80921	Rock	<0.001	<0.001	0.11	6.46	<0.01	<0.001	<0.001	<0.001	<0.01	5.18	0.062	0.003	0.29	0.90	0.01	0.03	<0.001	<0.001	2.46	N.A.
REP 80921	QC																				
Core Reject Duplicates																					
80919	Rock	<0.001	<0.001	0.02	2.28	<0.01	<0.001	<0.001	<0.001	<0.01	1.04	0.062	<0.001	0.02	0.12	<0.01	<0.01	<0.001	<0.001	2.50	N.A.
DUP 80919	QC	<0.001	<0.001	0.02	1.74	<0.01	<0.001	<0.001	<0.001	<0.01	0.83	0.061	0.001	0.02	0.10	<0.01	<0.01	<0.001	<0.001	1.76	N.A.
Reference Materials																					
STD CCU-1C	Standard																				
STD CCU-1C	Standard																				
STD CDN-PGMS-19	Standard																				
STD CZN-3	Standard																				
STD CZN-3	Standard																				
STD DS8	Standard																				
STD DS8	Standard																				
STD GBM997-6	Standard																				
STD NBLG	Standard																				<0.005
STD OREAS153AR	Standard	0.001	<0.001	0.02	3.22	<0.01	0.002	<0.001	<0.001	<0.01	0.94	0.047	0.002	1.61	2.45	0.15	0.62	<0.001	<0.001	1.25	
STD OREAS131B-A	Standard	0.002	0.002	0.18	5.53	<0.01	0.002	0.009	0.005	<0.01	5.24	0.054	0.002	2.86	1.05	0.01	0.77	<0.001	<0.001	5.07	
STD OREAS153AR	Standard	<0.001	<0.001	0.02	3.29	<0.01	0.002	<0.001	<0.001	<0.01	0.94	0.048	0.002	1.67	2.35	0.13	0.58	<0.001	<0.001	1.28	
STD OREAS131B-A	Standard	0.002	0.002	0.18	5.62	<0.01	0.002	0.009	0.004	<0.01	5.38	0.052	0.002	2.92	1.01	0.01	0.70	0.005	<0.001	5.11	
STD OREAS45CA	Standard																				



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VAN11004363.1

## QUALITY CONTROL REPORT

	Method	7AR.1
	Analyte	Cu
	Unit	%
	MDL	0.001
Pulp Duplicates		
80908	Rock	
REP 80908	QC	
80912	Rock	
REP 80912	QC	
80914	Rock	
REP 80914	QC	
80917	Rock	17.46
REP 80917	QC	17.50
80921	Rock	10.82
REP 80921	QC	
Core Reject Duplicates		
80919	Rock	12.91
DUP 80919	QC	
Reference Materials		
STD CCU-1C	Standard	24.79
STD CCU-1C	Standard	25.31
STD CDN-PGMS-19	Standard	
STD CZN-3	Standard	0.667
STD CZN-3	Standard	0.661
STD DS8	Standard	
STD DS8	Standard	
STD GBM997-6	Standard	0.365
STD NBLG	Standard	
STD OREAS153AR	Standard	
STD OREAS131B-A	Standard	
STD OREAS153AR	Standard	
STD OREAS131B-A	Standard	
STD OREAS45CA	Standard	

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### TY CONTROL REPORT

		WGHT	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	10
		Wgt	Мо	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	v	Ca	F
		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	1	1	3	1	0.3	1	1	2	0.01	2	2	2	1	0.5	3	3	1	0.01	0.001
STD OREAS45CA	Standard		2	559	28	66	<0.3	252	89	925	15.96	<2	<2	5	15	<0.5	<3	<3	215	0.43	0.038
STD OXC88	Standard																				
STD OXC88	Standard																				
STD OXC88	Standard																				
STD OXH82	Standard																				
STD OXH82	Standard																				
STD OXH82	Standard																				
STD PTC-1A	Standard																				-
STD PTC-1A	Standard																				
STD W107	Standard																				
STD W107 Expected																					
STD OXC88 Expected																					-
STD OXH82 Expected																					
STD OREAS153AR																					
STD OREAS131B-A																					
STD CZN-3 Expected																					-
STD PTC-1A Expected																					
STD CCU-1C Expected																					
STD GBM997-6 Expected																					
STD DS8 Expected			13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	0.107	6.89	67.7	2.38	4.8	6.67	41.1	0.7	0.08
STD OREAS45CA Expected			1	494	20	60	0.275	240	92	943	15.69	3.8	0.043	7	15	0.1	0.13	0.19	215	0.4265	0.0385
STD CDN-PGMS-19																					
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank		<1	<1	<3	<1	<0.3	<1	<1	<2	<0.01	<2	<2	<2	<1	<0.5	<3	<3	<1	<0.01	<0.001
BLK	Blank																				
BLK	Blank																				
	-	-																			

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### ALITY CONTROL REPORT

		1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	3A	3B	7AR	7AR	7AR	7AR	7AR
		La	Cr	Mg	Ba	Ti	В	AI	Na	ĸ	w	S	Sc	Ga	Au	Au	Mo	Cu	Pb	Zn	Ag
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	%	ppm	ppm	ppb	ppb	%	%	%	%	gm/t
		1	ر 1	0.01	ر 1	0.001	20	0.01	0.01	0.01	2	0.05	5	5	0.5	2	0.001	0.001	0.01	0.01	2
STD OREAS45CA	Standard	17	746	0.14	154	0.134	<20	3.77	<0.01	0.07	<2	<0.05	46	15							
STD OXC88	Standard															203					
STD OXC88	Standard															210					
STD OXC88	Standard															206					
STD OXH82	Standard															1280					
STD OXH82	Standard															1364					
STD OXH82	Standard															1233					
STD PTC-1A	Standard																				
STD PTC-1A	Standard																				
STD W107	Standard																				
STD W107 Expected																					
STD OXC88 Expected																203					
STD OXH82 Expected																1278					
STD OREAS153AR																	0.0175	0.705		0.0051	
STD OREAS131B-A																	0.0003	0.0216	1.86	3.03	33.3
STD CZN-3 Expected																					
STD PTC-1A Expected																					
STD CCU-1C Expected																					
STD GBM997-6 Expected																					
STD DS8 Expected		14.6	115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.1679	2.3	4.7							
STD OREAS45CA Expected		15.9	709	0.1358	164	0.128		3.592	0.0075	0.0717		0.021									
STD CDN-PGMS-19															230						
BLK	Blank															<2					
BLK	Blank															<2					
BLK	Blank																< 0.001	<0.001	<0.01	<0.01	<2
BLK	Blank	<1	<1	<0.01	<1	<0.001	<20	<0.01	<0.01	<0.01	<2	<0.05	<5	<5							
BLK	Blank																				
BLK	Blank															<2					
BLK	Blank															<2					



Client: BC 641640 Ltd.

14149, 17A Ave.

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### QUALITY CONTROL REPORT

		7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7AR	7KP
		Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Ca	Р	Cr	Mg	AI	Na	к	w	Hg	S	w
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
		0.001	0.001	0.01	0.01	0.01	0.001	0.001	0.001	0.01	0.01	0.001	0.001	0.01	0.01	0.01	0.01	0.001	0.001	0.05	0.005
STD OREAS45CA	Standard																				
STD OXC88	Standard																				
STD OXC88	Standard																				
STD OXC88	Standard																				
STD OXH82	Standard																				
STD OXH82	Standard																				
STD OXH82	Standard																				
STD PTC-1A	Standard																				
STD PTC-1A	Standard																				
STD W107	Standard																				0.388
STD W107 Expected																					0.42
STD OXC88 Expected																					
STD OXH82 Expected																					
STD OREAS153AR		0.001		0.024	3.28		0.0018				0.952	0.046	0.0016	1.65	2.425	0.142	0.6138			1.285	
STD OREAS131B-A		0.0025 0	0.00181	0.1771	5.59	0.0083	0.0022	0.0089	0.0042		5.28	0.0536	0.0016	2.94	0.969	0.0112	0.7			5.01	
STD CZN-3 Expected																					
STD PTC-1A Expected																					
STD CCU-1C Expected																					
STD GBM997-6 Expected																					
STD DS8 Expected																					
STD OREAS45CA Expected																					
STD CDN-PGMS-19																					
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<0.001	<0.001	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.01	<0.01	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.05	
BLK	Blank																				
BLK	Blank																				<0.005
BLK	Blank																				
BLK	Blank																				



Acme Analytical Laboratories (Vancouver) Ltd.

**BC 641640 Ltd.** 14149, 17A Ave.

Surrey BC V4A 6R8 Canada

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JALITY CONTROL REPORT

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### VAN11004363.1

		7AR.1
		Cu
		%
		0.001
STD OREAS45CA	Standard	
STD OXC88	Standard	
STD OXC88	Standard	
STD OXC88	Standard	
STD OXH82	Standard	
STD OXH82	Standard	
STD OXH82	Standard	
STD PTC-1A	Standard	13.64
STD PTC-1A	Standard	13.12
STD W107	Standard	
STD W107 Expected		
STD OXC88 Expected		
STD OXH82 Expected		
STD OREAS153AR		
STD OREAS131B-A		
STD CZN-3 Expected		0.685
STD PTC-1A Expected		13.51
STD CCU-1C Expected		25.62
STD GBM997-6 Expected		0.3818
STD DS8 Expected		
STD OREAS45CA Expected		
STD CDN-PGMS-19		
BLK	Blank	

Draigat

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BC 641640 Ltd. 14149, 17A Ave.

Surrey BC V4A 6R8 Canada

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### LITY CONTROL REPORT

		WGHT	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D
		Wgt	Мо	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	v	Ca	Р
		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	1	1	3	1	0.3	1	1	2	0.01	2	2	2	1	0.5	3	3	1	0.01	0.001
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank		<1	<1	<3	<1	<0.3	<1	<1	<2	<0.01	<2	<2	<2	<1	<0.5	<3	<3	<1	<0.01	<0.001
BLK	Blank																				
BLK	Blank																				
Prep Wash																					
G1	Prep Blank	<0.01	<1	2	<3	49	<0.3	3	4	584	2.02	<2	<2	5	63	<0.5	4	<3	36	0.50	0.076
G1	Prep Blank	<0.01	<1	1	<3	47	<0.3	3	3	564	1.90	<2	<2	6	60	<0.5	<3	<3	34	0.50	0.075

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#### 3 of 3 Part 2 Page: QUALITY CONTROL REPORT VAN11004363.1 7AR 1D 7AR 1D 3A 3B 7AR 7AR 7AR Cr Ва Ti в AI Na κ w s Cu Pb Zn La Mg Sc Ga Au Au Мо Ag % % % % % ppm ppm % ppm % ppm % % ppm % ppm ppm ppb ppb gm/t 2 1 1 0.01 1 0.001 20 0.01 0.01 0.01 2 0.05 5 5 0.5 0.001 0.001 0.01 0.01 <2 BLK Blank BLK Blank BLK Blank <0.001 <0.001 < 0.01 < 0.01 <2 BLK Blank BLK Blank <1 <1 < 0.01 <1 <0.001 <20 < 0.01 < 0.01 < 0.01 <2 < 0.05 <5 <5 BLK Blank <0.5 BLK <0.5 Blank Prep Wash G1 Prep Blank 8 7 0.58 231 0.130 <20 1.03 0.09 0.49 <2 < 0.05 <5 8 1.8 <2 <0.001 0.003 < 0.01 < 0.01 <2 <2 G1 9 6 7 Prep Blank 0.56 209 0.118 <20 0.99 0.07 0.45 <2 < 0.05 <5 <0.5 <2 <0.001 0.003 < 0.01 < 0.01

	h										Client	:	14149,	<b>41640</b> 17A Ave. BC V4A 6		ada			
1020 Cordova St. East Vanco Phone (604) 253-3158 Fax (6	ouver BC	V6A 4A		-	cal Lab	oratorie	es (Van	couver)	Ltd.		Project: Report I	Date:	TIB Novemi	ber 03, 20	011				
	,				ww	w.acme	elab.co	m											
											Page:		3 of 3	Par	t 3				
QUALITY CONTROL	REP	OR1	Γ												VA	N11(	0043	363.	1
	7AR Ni	7AR Co	7AR Mn	7AR Fe	7AR As	7AR Sr	7AR Cd	7AR Sb	7AR Bi	7AR Ca	7AR P	7AR Cr	7AR Mg	7AR Al	7AR Na	7AR K	7AR W	7AR Hg	7AR S
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%

0.001

0.001

<0.001

0.01

< 0.01

< 0.01

< 0.01

0.001

<0.01 <0.001 <0.001

0.076 < 0.001

0.076 < 0.001

0.01

0.60

0.59

0.001

0.01

<0.01

0.58

0.55

0.01

< 0.01

1.12

1.06

0.01

<0.01

0.12

0.10

0.01

0.001

<0.01 <0.001 <0.001

0.56 < 0.001

0.50 <0.001 <0.001

0.001

<0.001

<0.001 <0.001

0.001

< 0.001

<0.001 <0.001

Blank

Blank

Blank

Blank

Blank

Blank

Blank

Prep Blank

Prep Blank

BLK

BLK

BLK

BLK

BLK

BLK

BLK

G1

Prep Wash G1

0.01

< 0.01

2.16

2.02

0.01

<0.01

<0.01

0.001

<0.01 <0.001 <0.001 <0.001

0.008 < 0.001

0.008 < 0.001 < 0.001

0.01

< 0.01

0.06

0.06

7KP

w

%

0.005

0.05

< 0.05

<0.05 <0.005

<0.05 <0.005

0.001

<0.001



BC 641640 Ltd.
14149, 17A Ave.
Surrey BC V4A 6R8 Canada

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Client:

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VAN11004363.1

## QUALITY CONTROL REPORT

		7AR.1
		Cu
		%
		0.001
BLK	Blank	
BLK	Blank	<0.001
BLK	Blank	
BLK	Blank	<0.001
BLK	Blank	
BLK	Blank	
BLK	Blank	
Prep Wash		
G1	Prep Blank	
G1	Prep Blank	



Acme Analytical Laboratories (Vancouver) Ltd.

Method

R200-250

Code

1D01

8X

7AR

Client: BC 641640 Ltd. 14149, 17A Ave.

Surrey BC V4A 6R8 Canada

Submitted By: Jim Turner Receiving Lab: Canada-Vancouver Received: December 05, 2011 Report Date: February 10, 2012 Page: 1 of 3

Crush, split and pulverize 250 g rock to 200 mesh

1:1:1 Aqua Regia digestion ICP-ES analysis

1:1:1 Aqua Regia Digestion ICP-ES Finish

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Code Description

X-Ray fluorescence / Fusion

### VAN11006705.1

Test

0.5

0.4

Wgt (g)

Report

Status

Completed

Completed

Completed

Lab

VAN

VAN

VAN

VAN

### **CLIENT JOB INFORMATION**

Project:	Lucky Mike
Shipment ID:	
P.O. Number	
Number of Samples:	45

#### SAMPLE DISPOSAL

RTRN-PLP	Return
DISP-RJT	Dispose of Reject After 90 days

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

#### Invoice To:

BC 641640 Ltd. 14149, 17A Ave. Surrey BC V4A 6R8 Canada

#### CC:



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted. "\*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

# www.acmelab.com CERTIFICATE OF ANALYSIS

# ADDITIONAL COMMENTS

Number of

Samples

36

45

29

17

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BC 641640 Ltd.

14149, 17A Ave.

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Project: Report Date:

Lucky Mike

February 10, 2012

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			010																		
	Method	WGHT	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D
	Analyte	Wgt	Мо	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	v	Ca	Р
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	1	1	3	1	0.3	1	1	2	0.01	2	2	2	1	0.5	3	3	1	0.01	0.001
80951	Rock	2.79	<1	1531	7	32	2.2	6	156	326	14.95	15	<2	<2	42	<0.5	<3	<3	83	1.09	0.060
80952	Rock Pulp	0.04	5	27	3	37	<0.3	30	5	327	2.06	3	<2	<2	31	<0.5	<3	<3	47	0.67	0.047
80953	Rock	1.17	<1	108	5	55	<0.3	14	22	736	5.76	<2	<2	<2	83	0.8	<3	<3	245	2.05	0.039
80954	Rock	1.54	<1	243	8	35	0.7	5	201	421	10.99	20	<2	<2	80	0.5	<3	<3	61	2.21	0.123
80955	Rock Pulp	0.03	874	1366	218	342	2.5	25	19	509	7.68	9	<2	5	44	3.0	6	381	36	1.17	0.056
80956	Rock	2.01	<1	994	3	49	3.0	4	139	641	9.23	36	<2	<2	14	<0.5	<3	<3	52	0.75	0.083
80957	Rock	2.03	2	18	8	50	<0.3	4	18	796	6.82	4	<2	<2	47	<0.5	<3	<3	83	1.51	0.123
80958	Rock	1.40	1	71	7	74	<0.3	9	30	1727	8.47	8	<2	<2	79	0.8	<3	<3	224	2.68	0.073
80959	Rock	1.06	16	2664	4	48	54.9	10	19	6666	9.01	<2	<2	3	11	1.4	<3	<3	59	8.24	0.045
80960	Rock Pulp	0.03	998	1399	219	343	3.0	26	20	503	8.20	10	<2	4	44	2.8	5	389	38	1.17	0.057
80961	Rock	1.23	35	4495	14	104	32.0	13	30	5850	11.69	40	<2	<2	18	2.8	<3	<3	54	8.86	0.058
80962	Rock	0.97	37 >	>10000	<3	94	11.2	11	37	7187	11.25	<2	<2	<2	9	1.8	<3	4	49	8.71	0.038
80963	Rock	1.67	34	1700	5	78	99.9	10	24	5757	11.22	19	<2	4	12	1.8	<3	4	49	8.39	0.052
80964	Rock	1.98	272 >	>10000	6	862	82.5	12	274	775	14.01	10	<2	<2	12	11.4	<3	7	67	0.85	0.051
80965	Rock Pulp	0.03	4	<1	<3	37	<0.3	31	5	330	2.04	3	<2	<2	31	<0.5	<3	<3	49	0.67	0.048
80966	Rock	1.74	32 >	>10000	3	428	74.3	8	113	1248	9.31	9	<2	<2	15	4.9	<3	5	58	1.48	0.061
80967	Rock	1.66	12	7115	5	226	47.6	5	30	3138	10.44	<2	<2	<2	8	3.3	<3	<3	107	3.72	0.042
80968	Rock	1.14	275	4157	5	270	7.7	14	57	2357	4.95	3	<2	<2	31	3.2	<3	<3	58	1.78	0.083
80969	Rock Pulp	0.03	860	1326	216	328	2.5	25	19	489	7.68	9	<2	4	43	2.7	4	378	38	1.15	0.055
80970	Rock	2.34	140 >	>10000	5	455	27.2	8	142	3923	13.07	8	<2	<2	11	10.9	<3	<3	99	6.84	0.086
80971	Rock	2.32	40 >	>10000	<3	542	60.7	5	181	3401	13.34	3	<2	<2	4	9.3	<3	4	85	6.38	0.049
80972	Rock	1.60	16	9763	<3	572	7.3	6	105	4560	9.97	<2	<2	<2	4	12.9	<3	3	84	7.75	0.038
80973	Rock	1.67	80	9393	4	303	86.5	8	90	4771	6.20	37	<2	<2	<1	6.6	<3	11	126	3.67	0.046
80974	Rock	2.51	76 >	>10000	14	568	68.1	6	163	6830	7.13	41	<2	<2	3	16.0	<3	<3	148	3.93	0.036
80975	Rock Pulp	0.03	828	1293	213	334	3.0	22	20	493	8.03	12	<2	5	38	2.4	6	375	34	1.13	0.056
80976	Rock	1.75	43	563	10	102	3.6	1	18	8828	5.69	17	<2	<2	60	2.2	<3	<3	106	15.79	0.035
80977	Rock	1.54	50 >	>10000	7	629	94.9	8	152	6855	11.33	13	<2	<2	<1	14.2	<3	5	148	7.28	0.027
80978	Rock	2.11	38 >	>10000	5	688	21.7	7	238	5340	11.81	20	<2	<2	<1	14.9	<3	<3	88	6.47	0.028
80979	Rock	1.28	14 >	>10000	4	1072	16.8	17	148	2187	4.51	<2	<2	<2	20	15.1	<3	<3	81	1.54	0.078
80980	Rock	1.31	1	324	385	2959	0.7	5	23	1461	3.22	10	<2	<2	14	13.0	<3	<3	16	0.32	0.026



Page:

BC 641640 Ltd.

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Project: Report Date:

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February 10, 2012

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### ERTIFICATE OF ANALYSIS

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	Method	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	8X	7AR	7AR	7AR
	Analyte	La	Cr	Mg	Ва	Ті	в	AI	Na	к	w	S	Sc	Ga	w	Cu	Pb	Zn
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	%	ppm	ppm	%	%	%	%
	MDL	1	1	0.01	1	0.001	20	0.01	0.01	0.01	2	0.05	5	5	0.01	0.001	0.01	0.01
80951	Rock	2	3	0.39	24	0.085	<20	2.03	0.18	0.13	<2	5.50	<5	<5	0.03			
80952	Rock Pulp	5	52	0.53	94	0.100	<20	1.16	0.07	0.09	4	0.06	<5	<5	<0.01			
80953	Rock	<1	30	1.60	148	0.113	<20	5.03	0.57	0.83	<2	0.10	16	5	<0.01			
80954	Rock	3	3	0.74	120	0.118	<20	4.47	0.44	0.71	<2	3.04	13	<5	<0.01			
80955	Rock Pulp	10	39	0.76	113	0.062	<20	1.50	0.06	0.25	>100	2.99	<5	<5	0.37			
80956	Rock	5	<1	0.81	13	0.108	<20	1.74	0.05	0.08	16	4.71	8	<5	<0.01			
80957	Rock	2	4	1.14	90	0.086	<20	3.70	0.29	0.72	4	4.99	7	<5	<0.01			
80958	Rock	1	4	1.81	91	0.141	<20	5.12	0.36	1.24	<2	6.39	21	<5	<0.01			
80959	Rock	1	5	0.23	6	0.023	<20	1.61	<0.01	0.02	>100	0.12	<5	<5	0.06			
80960	Rock Pulp	10	41	0.77	108	0.067	<20	1.55	0.06	0.26	>100	3.50	<5	<5	0.37			
80961	Rock	1	5	0.17	7	0.015	<20	1.19	<0.01	0.03	>100	0.17	<5	<5	0.08			
80962	Rock	1	<1	0.27	10	0.013	<20	1.72	<0.01	<0.01	>100	<0.05	<5	<5	0.24	1.262	<0.01	0.01
80963	Rock	1	6	0.21	5	0.030	<20	1.39	<0.01	<0.01	>100	0.10	<5	<5	0.08			
80964	Rock	2	7	0.27	43	0.088	<20	0.69	0.02	0.22	>100	5.64	<5	<5	0.41	3.537	<0.01	0.10
80965	Rock Pulp	5	52	0.54	97	0.097	<20	1.14	0.07	0.09	22	<0.05	<5	<5	<0.01			
80966	Rock	2	4	0.34	11	0.106	<20	0.67	<0.01	0.01	>100	2.93	<5	<5	0.05	2.090	<0.01	0.05
80967	Rock	2	6	0.22	24	0.063	<20	0.89	<0.01	0.02	>100	0.89	<5	<5	0.03			
80968	Rock	3	23	0.68	45	0.149	<20	1.24	0.05	0.04	39	0.92	<5	<5	<0.01			
80969	Rock Pulp	10	38	0.74	110	0.063	<20	1.45	0.06	0.25	>100	3.09	<5	<5	0.37			
80970	Rock	2	6	0.26	18	0.047	<20	1.00	<0.01	0.02	>100	1.27	<5	<5	0.09	1.297	<0.01	0.05
80971	Rock	1	4	0.12	14	0.024	<20	0.56	<0.01	0.01	>100	2.56	<5	<5	0.07	2.370	<0.01	0.06
80972	Rock	2	2	0.17	10	0.030	<20	0.69	<0.01	0.01	>100	0.28	<5	<5	0.10			
80973	Rock	2	13	0.36	17	0.051	<20	1.15	0.01	0.05	>100	0.49	<5	<5	0.29			
80974	Rock	2	6	0.26	14	0.008	<20	1.01	<0.01	0.05	>100	0.47	<5	<5	0.33	2.347	<0.01	0.05
80975	Rock Pulp	8	36	0.75	110	0.056	<20	1.40	0.05	0.24	>100	3.50	<5	<5	0.37			
80976	Rock	2	5	0.22	22	0.003	<20	0.93	<0.01	0.10	>100	1.57	<5	<5	0.34			
80977	Rock	2	7	0.12	5	0.021	<20	1.00	<0.01	0.01	>100	0.40	<5	<5	0.20	1.545	<0.01	0.06
80978	Rock	2	7	0.37	10	0.028	<20	1.28	<0.01	0.02	>100	1.85	<5	<5	0.04	1.941	<0.01	0.06
80979	Rock	4	27	1.25	96	0.158	<20	1.87	0.09	0.25	30	0.73	8	<5	<0.01	1.939	<0.01	0.10
80980	Rock	2	5	0.05	614	0.001	<20	0.25	<0.01	0.15	9	0.25	<5	<5	N.A.			

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February 10, 2012

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3 of 3 Part 1

CERTIFIC	ATE OF AN	IALY	515													VA	N11	006	105	.1	
	Method	WGHT	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D
	Analyte	Wgt	Мо	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	v	Ca	Р
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	1	1	3	1	0.3	1	1	2	0.01	2	2	2	1	0.5	3	3	1	0.01	0.001
80981	Rock	1.99	2	300	1645	>10000	1.2	5	24	1797	4.17	34	<2	<2	13	69.7	<3	<3	18	0.38	0.028
80982	Rock Pulp	0.04	4	25	<3	15	<0.3	30	6	352	2.18	3	<2	<2	28	<0.5	<3	<3	44	0.65	0.048
80983	Rock	1.59	4	266	>10000	>10000	2.2	6	34	1819	5.94	37	<2	<2	9	107.7	<3	<3	27	0.24	0.024
80984	Rock	2.74	9	2939	1962	>10000	5.1	3	57	883	5.72	70	<2	<2	3	274.5	3	4	14	0.28	0.015
80985	Rock	2.35	9	2146	>10000	>10000	12.7	3	50	234	4.21	182	<2	<2	2	470.3	16	12	6	0.18	0.009
80986	Rock	1.58	4	4187	>10000	>10000	18.2	1	26	668	1.96	239	<2	<2	20	763.8	10	5	7	1.26	0.010
80987	Rock	1.36	<1 >	>10000	554	5661	6.7	<1	42	539	12.91	60	<2	<2	2	38.3	3	<3	40	0.04	0.012
80988	Rock Pulp	0.03	966	1350	216	328	2.7	23	21	520	8.16	13	<2	5	38	2.4	6	384	33	1.15	0.057
80989	Rock	1.42	<1	583	602	8938	0.9	1	10	1309	2.23	9	<2	<2	11	51.5	<3	<3	18	3.23	0.030
80990	Rock	1.63	<1	131	599	5296	0.4	2	10	1584	3.17	5	<2	<2	12	27.4	<3	<3	41	2.17	0.036
80991	Rock	1.18	<1	153	805	5738	0.5	2	13	1641	3.59	13	<2	<2	13	31.4	<3	<3	25	1.72	0.035
80992	Rock	1.78	<1	2235	1378	>10000	2.6	2	15	729	1.75	14	<2	<2	11	192.3	<3	<3	7	2.14	0.009
80993	Rock	1.51	<1	696	1038	>10000	1.1	1	8	723	1.70	10	<2	<2	11	66.1	<3	<3	8	2.15	0.016
80994	Rock Pulp	0.04	4	23	<3	13	<0.3	28	6	335	2.07	4	<2	<2	27	<0.5	<3	<3	42	0.62	0.046
80995	Rock	1.53	<1	161	4009	3487	1.0	1	2	4243	<0.01	16	<2	<2	36	31.3	<3	<3	7	22.96	0.005

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Project: Report Date:

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February 10, 2012

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### RTIFICATE OF ANALYSIS

	Method	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	8X	7AR	7AR	7AR
	Analyte	La	Cr	Mg	Ва	Ті	в	AI	Na	к	w	S	Sc	Ga	w	Cu	Pb	Zn
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	%	ppm	ppm	%	%	%	%
	MDL	1	1	0.01	1	0.001	20	0.01	0.01	0.01	2	0.05	5	5	0.01	0.001	0.01	0.01
80981	Rock	2	5	0.12	463	<0.001	<20	0.33	<0.01	0.17	<2	0.92	<5	<5	N.A.	0.032	0.12	1.05
80982	Rock Pulp	4	48	0.54	96	0.090	<20	1.14	0.07	0.08	6	<0.05	<5	<5	N.A.			
80983	Rock	2	6	0.33	256	0.001	<20	0.73	<0.01	0.16	15	1.82	<5	<5	N.A.	0.025	1.03	1.80
80984	Rock	1	5	0.17	80	<0.001	<20	0.20	<0.01	0.10	25	4.41	<5	<5	N.A.	0.290	0.15	4.03
80985	Rock	<1	7	0.08	32	<0.001	<20	0.11	<0.01	0.07	*	5.86	<5	<5	N.A.	0.214	1.28	5.81
80986	Rock	2	3	0.04	61	0.001	<20	0.14	<0.01	0.12	*	3.42	<5	<5	N.A.	0.426	4.29	8.34
80987	Rock	1	3	0.11	34	<0.001	<20	0.49	<0.01	0.23	<2	8.40	<5	<5	N.A.	1.354	0.03	0.61
80988	Rock Pulp	8	37	0.76	114	0.054	<20	1.41	0.05	0.24	>100	3.60	<5	<5	N.A.			
80989	Rock	3	5	0.04	148	<0.001	<20	0.33	<0.01	0.20	7	0.30	<5	<5	N.A.			
80990	Rock	3	3	0.29	102	<0.001	<20	0.76	<0.01	0.18	<2	0.28	5	<5	N.A.			
80991	Rock	3	4	0.16	108	<0.001	<20	0.44	<0.01	0.23	<2	0.55	5	<5	N.A.			
80992	Rock	2	4	0.08	73	<0.001	<20	0.14	<0.01	0.13	11	2.40	<5	<5	N.A.	0.238	0.11	3.75
80993	Rock	2	6	0.08	63	<0.001	<20	0.18	<0.01	0.17	<2	0.96	<5	<5	N.A.	0.069	0.06	1.29
80994	Rock Pulp	4	45	0.51	93	0.086	<20	1.08	0.07	0.08	4	<0.05	<5	<5	N.A.			
80995	Rock	8	3	0.15	140	<0.001	<20	0.06	<0.01	0.06	<2	0.20	6	<5	N.A.			

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QUALITY CONTROL REPORT

Acme Analytical Laboratories (Vancouver) Ltd.

Project:	Lu
Report Date:	F

ucky Mike ebruary 10, 2012

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Method WGHT

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#### Page: 1 of 2 Part 1 VAN11006705.1 1D 1D 1D 1D 1D 1D 1D

	Analyte	Wgt	Мо	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	v	Ca	Р
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	1	1	3	1	0.3	1	1	2	0.01	2	2	2	1	0.5	3	3	1	0.01	0.001
Pulp Duplicates																					
80960	Rock Pulp	0.03	998	1399	219	343	3.0	26	20	503	8.20	10	<2	4	44	2.8	5	389	38	1.17	0.057
REP 80960	QC		931	1345	221	334	2.6	25	20	501	7.81	10	<2	4	43	2.8	4	367	37	1.16	0.056
80961	Rock	1.23	35	4495	14	104	32.0	13	30	5850	11.69	40	<2	<2	18	2.8	<3	<3	54	8.86	0.058
REP 80961	QC																				
80962	Rock	0.97	37 >	>10000	<3	94	11.2	11	37	7187	11.25	<2	<2	<2	9	1.8	<3	4	49	8.71	0.038
REP 80962	QC																				
80989	Rock	1.42	<1	583	602	8938	0.9	1	10	1309	2.23	9	<2	<2	11	51.5	<3	<3	18	3.23	0.030
REP 80989	QC		<1	569	587	8763	1.0	1	9	1260	2.20	9	<2	<2	12	50.4	<3	<3	17	3.13	0.030
80993	Rock	1.51	<1	696	1038	>10000	1.1	1	8	723	1.70	10	<2	<2	11	66.1	<3	<3	8	2.15	0.016
REP 80993	QC																				
Core Reject Duplicates																					
80973	Rock	1.67	80	9393	4	303	86.5	8	90	4771	6.20	37	<2	<2	<1	6.6	<3	11	126	3.67	0.046
DUP 80973	QC		78	9860	<3	313	91.3	8	96	4762	6.29	36	<2	<2	<1	6.7	4	14	125	3.69	0.046
Reference Materials																					
STD DS8	Standard		11	105	122	323	1.7	37	7	625	2.52	26	<2	6	61	2.2	7	3	39	0.69	0.081
STD DS8	Standard		13	102	117	306	1.3	38	5	578	2.36	26	<2	6	62	2.3	6	6	41	0.68	0.077
STD GC-7	Standard																				
STD GC-7	Standard																				
STD GC-7	Standard																				
STD GC-7	Standard																				
STD MP-2(D)	Standard																				
STD OREAS45CA	Standard		1	515	19	54	<0.3	248	89	981	17.01	4	<2	8	13	<0.5	<3	<3	211	0.47	0.043
STD OREAS45CA	Standard		1	506	18	58	<0.3	246	85	936	16.51	<2	<2	7	15	<0.5	<3	<3	205	0.46	0.038
STD SO-18	Standard																				
STD DS8 Expected			13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	0.107	6.89	67.7	2.38	4.8	6.67	41.1	0.7	0.08
STD OREAS45CA Expected			1	494	20	60	0.275	240	92	943	15.69	3.8	0.043	7	15	0.1	0.13	0.19	215	0.4265	0.0385
STD GC-7 Expected																					
STD MP-2(D) Expected																					

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Acme Analytical Laboratories (Vancouver) Ltd.

Project:	Lucky Mike
Report Date:	February 10, 2012

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#### 1 of 2 Part 2

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QUALITY CONTROL REPORT VAN1100	•••••
Method 1D	AR
Analyte La Cr Mg Ba Ti B Al Na K W S Sc Ga W Cu Pb	Zn
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MDL 1 1 0.01 1 0.001 20 0.01 0.01 2 0.05 5 5 0.01 0.001 0.01 0	.01
Pulp Duplicates	
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REP 80960 QC 10 38 0.75 106 0.063 <20 1.49 0.06 0.25 >100 3.22 <5 <5	
80961 Rock 1 5 0.17 7 0.015 <20 1.19 <0.01 0.03 >100 0.17 <5 <5 0.08	
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80962 Rock 1 <1 0.27 10 0.013 <20 1.72 <0.01 <0.01 >100 <0.05 <5 <5 0.24 1.262 <0.01 0	01
REP 80962 QC 1.301 0.02 C	02
80989 Rock 3 5 0.04 148 <0.001 <20 0.33 <0.01 0.20 7 0.30 <5 <5 N.A.	
REP 80989 QC 3 4 0.04 144 <0.001 <20 0.32 <0.01 0.20 <2 0.31 <5 <5	
80993 Rock 2 6 0.08 63 <0.001 <20 0.18 <0.01 0.17 <2 0.96 <5 <5 N.A. 0.069 0.06 1	29
REP 80993 QC 0.069 0.10 1	25
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DUP 80973 QC 2 12 0.37 17 0.051 <20 1.16 0.01 0.06 >100 0.55 <5 <5 0.25	
Reference Materials	
STD DS8 Standard 12 111 0.61 301 0.107 <20 0.90 0.09 0.42 <2 0.16 <5 <5	
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STD OREAS45CA Standard 17 745 0.13 164 0.123 <20 3.77 <0.01 0.07 <2 <0.05 47 <5	
STD SO-18 Standard <0.01	
STD DS8 Expected 14.6 115 0.6045 279 0.113 2.6 0.93 0.0883 0.41 3 0.1679 2.3 4.7	
STD OREAS45CA Expected 15.9 709 0.1358 164 0.128 3.592 0.0075 0.0717 0.021	
STD GC-7 Expected 0.555 10.44 22	06

STD MP-2(D) Expected

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#### 2 of 2 Part 1 VAN11006705.1

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		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
		0.01	1	1	3	1	0.3	1	1	2	0.01	2	2
BLK	Blank		<1	<1	<3	<1	<0.3	<1	<1	<2	<0.01	<2	<2

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BLK	Blank		<1	<1	<3	<1	<0.3	<1	<1	<2	<0.01	<2	<2	<2	<1	<0.5	<3	<3	<1	<0.01	<0.001
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2 of 2 Part 2

VAN11006705.1

# QUALITY CONTROL REPORT

		1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	8X	7AR	7AR	7AR
		La	Cr	Mg	Ва	Ti	в	AI	Na	к	w	S	Sc	Ga	w	Cu	Pb	Zn
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	%	ppm	ppm	%	%	%	%
		1	1	0.01	1	0.001	20	0.01	0.01	0.01	2	0.05	5	5	0.01	0.001	0.01	0.01
BLK	Blank	<1	<1	<0.01	<1	<0.001	<20	<0.01	<0.01	<0.01	<2	<0.05	<5	<5				
BLK	Blank	<1	<1	<0.01	<1	<0.001	<20	<0.01	<0.01	<0.01	<2	<0.05	<5	<5				
BLK	Blank															<0.001	<0.01	<0.01
BLK	Blank															<0.001	<0.01	<0.01
BLK	Blank														<0.01			
Prep Wash																		
G1	Prep Blank	13	6	0.50	153	0.119	<20	0.93	0.09	0.45	<2	<0.05	<5	<5	<0.01			
G1	Prep Blank	12	7	0.49	148	0.114	<20	0.88	0.10	0.45	<2	<0.05	<5	<5	<0.01			

Geophysical Interpretation Report

on an

Airborne Magnetometer and Radiometric Survey

for

Plate Resources Inc.

on the

# Lucky Mike Project

50°18'54"N, 120°44' 08"W

Nicola Mining Division

N.T.S. 92I/07

British Columbia, Canada

By

E. Trent Pezzot, P.Geo.

January 26, 2012

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#### 1 SUMMARY

The Lucky Mike Property is located in south-central British Columbia, some 26 km north-northeast of Merritt.

Mapping by the Geological Survey of Canada, B.C. Department of Energy and Mines and previous operators show the claims area as lying approximately 1.8 km east of the Guichon batholith, within a large body of undivided rocks of the Western Volcanic Facies of the Nicola Group. Three fault controlled northerly trending lenses of Ashcroft Formation sediments are mapped within the claim boundary and one narrow lens of dioritic intrusive rocks enters the claims area from the south. There are six Minfile occurrences mapped within the claim group. Three are mapped along contacts between the Ashcroft sediments and Nicola volcanics. Three are mapped within the Nicola volcanics and reportedly associated with NE striking shears and fault zones. The Rey Lake occurrence is located some 700 metres east of the claim group.

Approximately 553 line km of airborne magnetometer and radiometric surveying was completed in October, 2011.

The data has been processed and interpreted with the intention of identifying any characteristic signatures which might be related to the observed mineralization as well as assisting with the general geological mapping of the area.

The magnetic data is delineating a much more complex geology than the one presented on the current geology maps. The magnetic amplitude and character were used to define 8 separate signatures that are likely related to different lithologies. These include several very strong magnetic high anomalies, the strongest of which is located immediately west of the Lucky Mike skarn occurrence and appears to map a near vertical, intrusive body. Strong magnetic lows to the east of this anomaly suggest the geology dips at moderate angles to the east. These responses exhibit several characteristics of a porphyry system. The Rey Lake deposit is located along the NW edge of another of these magnetic high anomalies.

There are two dominant NE striking lineaments in the eastern third of the survey block that suggests the presence of major fault zones and several lineations that delineate E-W, NE and NW striking structures. The strong magnetic anomalies are located along these trends, suggesting they may be mapping intrusions emplaced along faults.

Across the western portion of the claim block, short strike length linears combine to delineate regional arcuate trends that generally parallel the edge of the Guichon batholith to the west. Some of these linears coincide with the mapped geology but most are unexplained.

There is a very complex pattern of intersecting magnetic linears in the vicinity of the Zone1, Zone2 and Zone3 Minfile occurrences. These suggest that Zone2 is located on a different NE striking shear zone than Zones 1 and 3.

The radiometric data includes several trends that are attributed to changes in the overburden thickness and/or properties. There are several patterns evident that coincide with and support the magnetic interpretation outlining geological units.

High potassium isotope measurements are grouped in three clusters. One coincides with the strong magnetic anomaly immediately west of the Lucky Mike skarn. The other two are located in the western and northwestern sections of the property. These clusters all include localized areas with low thorium counts. The combination of high potassium and low thorium is often associated with hydrothermal alteration.

There are three strong uranium anomalies mapped within the claim block. These appear to be elongated along or parallel to geological contacts.

Detailed geological mapping, with emphasis placed on finding evidence to support the intrusion, porphyry, hydrothermal alteration and faulting/contact interpretations based on the geophysical data is recommended as the next exploration phase. Based on these results it is likely that geochemistry and detailed ground magnetic and induced polarization surveys will be warranted.

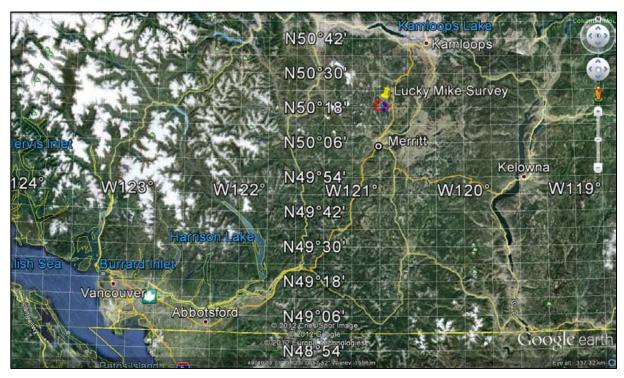
### 2 INTRODUCTION

This report is written as an internal document for Plate Resources Inc. intended to describe the geophysical interpretation of the airborne magnetic and radiometric data recently gathered across the Lucky Mike Project area and to be used as an addendum to a report being prepared to document the larger exploration program completed in the summer and fall of 2011. Topics included with more structured reports, such as the property description, geology and historical work included with assessment reports, and detailed survey procedures and instrumentation descriptions associated with logistics reports, are not included or discussed briefly as required for the context of this interpretation.

## 3 PROPERTY LOCATION AND ACCESS

The Lucky Mike claim group is located approximately 20 kms north of Merritt, centred near geographical coordinates 50°19'N and 120°44'W, in the Nicola Mining Division and NTS map sheet 92107. At the time of the survey, the claim group covered an area of approximately 3262 hectares. After the survey, two additional claim blocks were added to the

property. One immediately south of Rey Lake covers 205 hectares. The other is located at the south end of the block and covers 185 hectares. The entire claim block now encompasses approximately 3652 hectares.

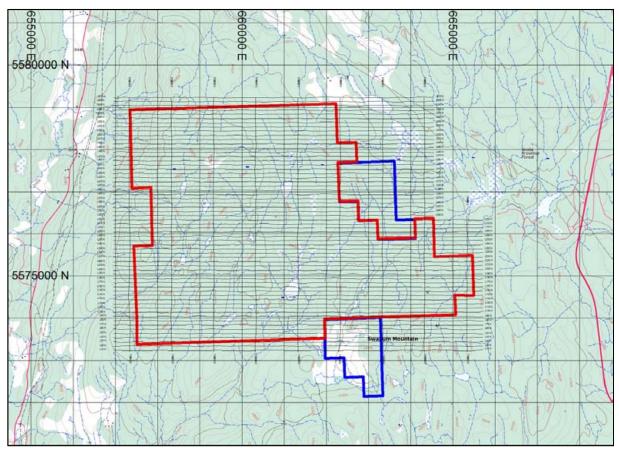


**Figure 1: Location Map** Google Earth Image - Lucky Mike Claim group outlined in red and blue.

The Lucky Mike property lies primarily on the north flank of Swakum Mtn. It extends to the north side of Rey Lake and the lower slopes of Mt. Guichon. Access to the property, from the west, is provided by a public road (Rey L. Road.), near Mamit Lake, and from the east by the Swakum Mtn Forest Access Road. Access to the Swakum Mtn Road is either from the Coquihalla Highway (Highway 5) via the Helmer Lake exit, approx. 25 km north of Merritt or from Highway 5a about 1.5 km east of Merritt. A logging road from km 26 on the Swakum Mtn Forest Access road leads to the southern portion of the claims while access to the northern portion is best achieved from the Rey Lake Road. Within the claim block, logging, ranching and old exploration roads provide access to all regions. A 4 wheel drive vehicle is recommended.

Elevations on the property vary from 1300 meters on Rey Creek near the northwest corner of the property to 1723 meters at Swakum Mtn. in the southern part of the claims. The property lies within the southern interior region of the province, a generally dry, open forested and grassland terrain. The claims are mostly covered with spruce, fir and pine forest. Logging

over the last 20 years has been conducted on approximately 40% of the claim block. Privately owned rangeland overlays that portion of the claims surrounding Rey Lake and the swamps and meadows draining into the lake.

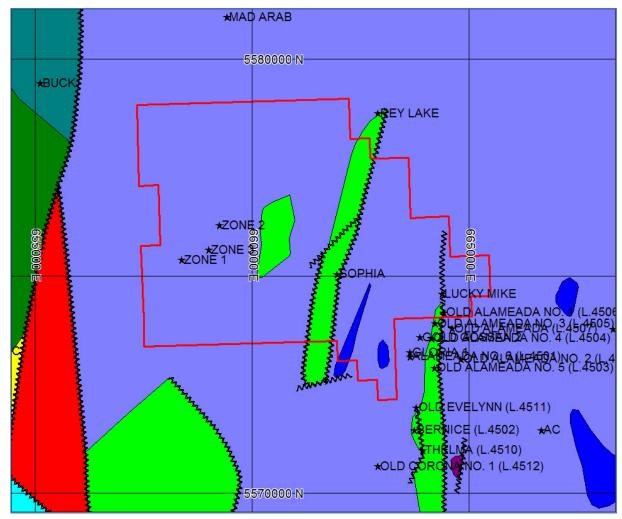


#### Figure 2: Survey Grid and Claim Map

92I07 Topographic Base Map (1:50000) –original claim group outline in red – additional claims outlined in blue - airborne survey lines in black – UTM grid at 1000m (NAD83 Zone 10N).

#### 4 GEOLOGY

BC Geology Maps show the survey area as being primarily underlain by a large body of undivided volcanic rocks of the Western Volcanic Facies of the Nicola Group. Three fault controlled northerly trending lenses of Ashcroft Formation mudstones, siltstones, shales and fine clastic sediments are mapped within the claim boundary. One narrow lens of dioritic intrusive rocks enters the claims area from the south. The eastern edge of the Guichon batholith is mapped approximately 1.8 km to the west of the claim group.



#### Figure 3: BC Geology Map

Claim outline in red – Minfile Occurrences in black stars – UTM grid at 5000m

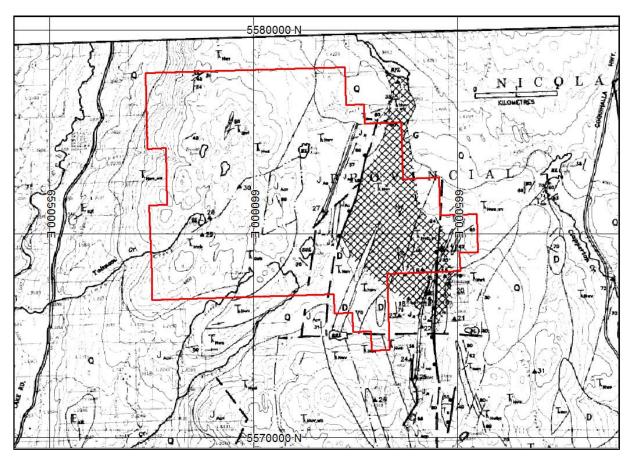
EKav - Cenozoic - Kamloops Group undivided volcanic rocks
ImJA - Mesozoic - Ashcroft Formation mudstone, siltstone, shale fine clastic sed
LTrJdr - Mesozoic - Unnamed dioritic intrusive rocks
LTrJGBe - Mesozoic - Guichon Creek Batholith - Bethlehem Phase granodioritic int
LTrJGBo - Mesozoic - Guichon Creek Batholith - Border Phase quartz dioritic intr
LTrJgd - Mesozoic - Unnamed granodioritic intrusive rocks
LTrJGG - Mesozoic - Guichon Creek Batholith - Gump Lake Phase granodioritic intr
LTrJGH - Mesozoic - Guichon Creek Batholith - Highland Valley Phase granodioriti
LTrJto - Mesozoic - Unnamed tonalite intrusive rocks
Mivb - Cenozoic - Unnamed basaltic volcanic rocks
PzMzcg - Paleozoic to Mesozoic - Unnamed conglomerate, coarse clastic sedimenta
uTrN - Mesozoic - Nicola Group undivided volcanic rocks
uTrNC - Mesozoic - Nicola Group - Central Volcanic Facies andesitic volcanic roc
uTrNml - Mesozoic - Nicola Group lower amphibolite/kyanite grade metamorphic roc
uTrNW - Mesozoic - Nicola Group - Western Volcanic Facies undivided volcanic roo

Legend of BC Geology Map

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There are six (6) Minfile occurrences mapped within the claim group. Three occurrences, Zone1, Zone2 and Zone3, are located in the west central portion of the claim and are described as Pb, Cu and Ag mineralization associated with NE striking shear zones. These appear to be located within the Nicola volcanics. The other three, Sophia, Lucky Mike and Old Alameada No. 1 are in the southeast corner of the claim block and appear to be located along the contact between Ashcroft Formation sediments and Nicola volcanics. The Rey Lake occurrence is located some 700 metres east of the claim block, at the northern end of one of these sedimentary lenses.

The Open Map File (OF-1990-29) from the BC Geological survey outlines some small facies changes within the Nicola Volcanics not evident on the digital maps and includes numerous strike/dip measurements of bedding, cleavage and schistosity. This map was used as a base map in assessment report 24600 which added a large zone of skarn alteration extending south from the Rey Lake deposit to the Lucky Mike deposit.



**Figure 4: Geology Map from Assessment Report 24600** Claim outline in red – hatched area reflects mapped skarn mineralization

### 5 AIRBORNE SURVEY DATA

The airborne survey was flown by Precision GeoSurveys Inc. from October 22 to 23, 2011. Approximately 553 line kilometres of high resolution radiometric and magnetic data, including tie lines and survey lines were gathered. Sixty-one (61) survey lines were flown at a 100 metre spacing on a  $090^{0}$ - $270^{0}$  heading. Nine (9) perpendicular tie lines were flown at 1 km intervals on a heading of  $000^{0}$ - $180^{0}$ . The average sensor elevation was 44 metres vertically above the ground. Two other magnetometers were used as base stations to record diurnal magnetic field variations.

Details concerning the survey procedures, instrument specifications and post survey processing are included in a logistics and operations report authored by Jenny Poon of Precision GeoSurveys Inc., dated December, 2011.

#### 5.1 Magnetic Data Processing

Standard reduction procedures were applied to the magnetic data by Precision, including aircraft compensation, diurnal variations, noise (spike) rejection and lag correction. Final levelled data was provided as colour contour plan maps and in a digital geosoft formatted database that also included base station, raw and intermediate magnetic data, referenced to line, fiducial, utctime and location coordinates (easting and northing in NAD83, UTM Zone 10N). GPS altimeter, laser altimeter and a calculated digital terrain model were also included in this database.

The final magnetic data provided by Precision was imported to Geosoft Oasis Montaj, Encom Profile Analyst and Ermapper for further processing and plotting. Final mapping was completed in MapInfo and combined with topographic and geological data acquired from government data repositories.

Presentation of the magnetic data as profiles and stacked profiles is best suited for mapping small, discrete magnetic responses that can be attributed to near surface source bodies. Linear features can often be traced between lines. This type of display often reveals changes in the character of the magnetic response, such as the spatial frequency, that can be attributed to changes in underlying geology not readily apparent by amplitude maps alone.

2D contour maps are useful for displaying the spatial relationship of the magnetic responses outlining lithological variations and delineating structural trends. These contour maps are typically colored on the basis of amplitude. One of the most useful techniques for viewing these responses is the application of shadow enhancements (sun illumination from different angles) which highlight linear trends that strike perpendicular to the illumination

angle. Draping the plan contour maps over a topographic surface to produce a 3-D visualization is useful for differentiating between responses that may be an artefact of the topographic influences from those due to underlying geology.

The initial step in these processes is the application of a gridding algorithm to convert randomly or line/station oriented data onto a regular grid. The choice of gridding method is critical since this procedure normally acts as a low-pass filter, which can remove many of the high frequency variations seen on the profile displays. Several gridding methods were tested (bi-directional, kriging, nearest neighbour, minimum curvature) and a minimal curvature algorithm, gridding the data to 10 metre cells, was chosen as producing the most effective display.

Additional 2-D filtering was applied to this initial grid using the Encom Profile Analyst program to enhance specific attributes of the data. These included:

- RTP Reduction to pole using a declination of 17.1<sup>o</sup> and inclination of 71.6<sup>o</sup> and a total field amplitude of 55,600 nTs. This filter is designed to digitally modify the magnetic data to appear as if it were gathered at the north pole, thereby removing the asymmetry of the responses due to the inclined magnetic field and moving the peak (high or low) response directly over the source.
- 1vd This filter calculates the first vertical derivative of the total magnetic field. The resulting image is similar to a vertical gradient map and is useful for mapping source boundaries and linears.
- Edge enhancement Several methods of edge enhancement filtering were applied including the Roberts Cross, Sobel and horizontal derivative methods. These filters were applied to enhance gradients in both the N-S and E-W directions. Analysis of this data is similar to that applied to vertical derivative and gradient data.

All of the above grids were generated as color contour plan maps. They have also been rendered as colorshadow images and illuminated from various angles.

All of the above grids were generated with both linear and equal area color distributions. Linear colour distributions provide the best overview to show the relative amplitudes of the various responses however they accentuate the extreme highs and lows in the data. Equal area colour distributions are designed to illustrate more subtle variations.

A gridded elevation map was generated from the Precision database. These results showed excellent correlation with the 1:50,000 topographic base maps and were used for 3-D draping and 3-D inversion processing.

Gridded magnetic data was also processed through a 3-D inversion algorithm designed to produce a 3-D voxel model of the subsurface showing possible distributions of the rock susceptibilities that might produce the magnetic responses observed. A coarse inversion across the entire grid and 4 detail inversions, crossing selected anomalies were completed. The outputs from these inversions were analysed in the meshtools3D viewer and reformatted into the vtk file format for more detailed analysis in the Paraview viewer. Snapshots from these viewing programs are included with the text of this report. The digital files and viewing programs are provided separately.

#### 5.1 Radiometric Data Processing

Processing of the radiometric data was reportedly contracted by Precision to a third party. A description of this processing is documented in the Airborne Geophysical Survey Report authored by Jenny Poon of Precision GeoSurveys Inc., dated December, 2011.

The final radiometric data was provided in a geosoft formatted database and included both the raw and equivalent values for the Potassium (K), Thorium (Th) and Uranium (U) isotopes as well as for the Total Count (TC). Some isotope ratios (Th/K, U/K and U/Th) were calculated and included in the database.

These data were imported into Oasis Montaj and ERmapper software to generate colour contour and shadow enhanced images of the various isotopes and ratios. In addition, ternary maps combining all three isotope and total count data were generated using RGB and CMY colour palettes. Maps were imported into MapInfo for compilation with the other exploration data.

These maps are used to outline areas with different radiometric properties that might be attributed to changes in the underlying geology. Care must be exercised to avoid data variations caused by non-geological factors such as the thickness or moisture content of overburden and vegetation cover.

## 6 **DISCUSSION OF RESULTS**

The magnetic data was interpreted by three methods: line profile analysis, 2-D plan contour mapping and 3-D inversions.

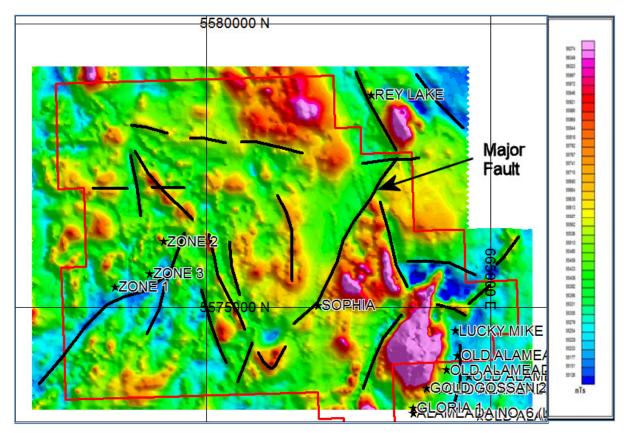
Both digital (pdf and Oasis Montaj format) and hard copy (1:15,000 scale) maps of the of the magnetic and radiometric data were provided as an appendix to the logistics report prepared by Precision GeoSurveys Inc. and have not been reproduced here.

A large number of maps and displays are included as images with the text of this report. All include UTM coordinates, grid lines and/or the claim outline which can be used to reference and scale the applicable features. The digital files (MapInfo format) used to generate these maps are provided to Plate Resources Inc. and scaled plots are available.

The current exploration efforts are focused on general geological mapping, with particular emphasis placed on delineating lithological units and geological structures in the vicinity and related to the known mineral occurrences.

#### 6.1 <u>Magnetic Survey</u>

The initial impression of the airborne magnetic data is that it is delineating a much more complex geology than the one presented on the current geology maps. There are several very strong, localized magnetic high anomalies, the strongest of which is located immediately west of the Lucky Mike skarn occurrence. The Rey Lake deposit is located along the NW edge of another of these anomalies. There is one particularly obvious NE striking lineament in the eastern third of the survey block that suggests the presence of a major fault zone and several lineations that delineate E-W, NE and NW striking structures. Some of these linears coincide with the mapped geology but most are unexplained.



**Figure 5: Total Magnetic Field Intensity – Major Lineament Overlay** Mineral Occurrences – black stars

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There is only moderate topographic relief in the area and it does show any strong correlation with the magnetic responses. The only significant topographic effect is appears to be the coincidence of magnetic low trends with SW trending drainages across the western side of the property. However these effects are minimal and it is likely that the magnetic signatures are reflecting the underlying geology.

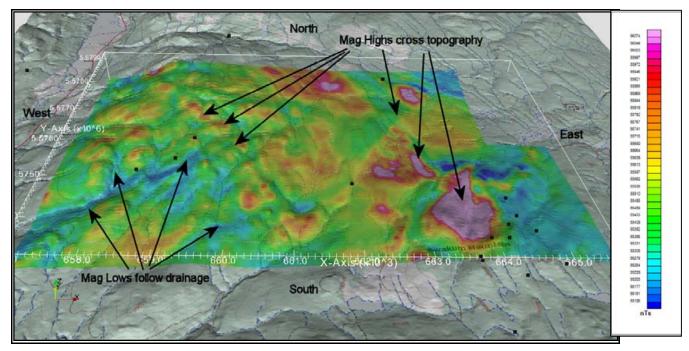


Figure 6: Total Magnetic Field draped over Topography - view from South Black Squares mark Minfile Occurrences.

The magnetic amplitude and character outline eight (8) magnetic environments that could be mapping discrete lithological or facies units. Some of these character differences are subtle and could be effects from changing overburden thickness. No single magnetic map reflects all of these interpreted units. Some are evident on amplitude based maps. Others are more apparent on vertical and horizontal derivative or edge enhancement maps.

Unit 1 – this zone is characterized by the highest magnetic amplitudes recorded in the survey area and high spatial frequency variations. There are five (5) occurrences of this unit, including the dominant magnetic feature mapped immediately west of the Lucky Mike skarn deposit and the anomaly southeast of the Rey deposit.

**Unit 2** – this zone is similar to unit 1 but does not exhibit the same high frequency variations. It could be reflecting a similar lithology but buried at a greater depth.

**Unit 3** – the dominant characteristic of this response is the very quiet magnetic signature. The amplitude is moderate and confined to a narrow range from ~55,420 to 55,500 nTs

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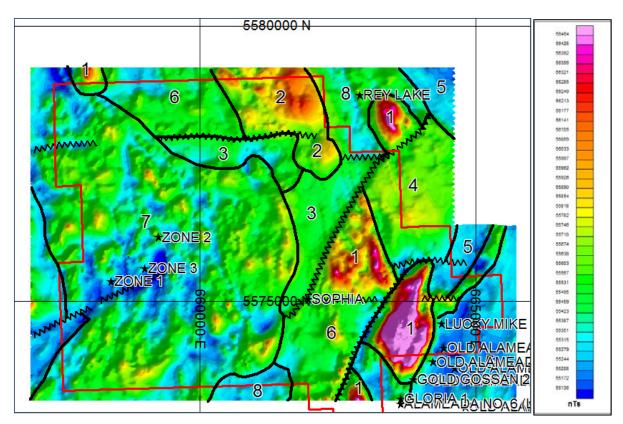
<u>Unit 4</u> – this unit also exhibits a quiet magnetic signature but has a slightly higher background amplitude than unit 3.

<u>Unit 5</u> – this unit covers the eastern part of the survey grid and exhibits quiet and low magnetic amplitudes. This unit also exhibits a linear gradient, decreasing from NW to SE.

<u>Unit 6</u> – this unit exhibits a moderately active character and wide range of amplitudes.

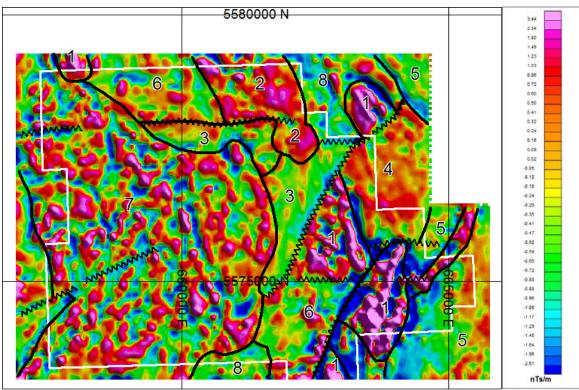
<u>Unit 7</u> – this large unit covers most of the western half of the survey grid and is characterized by high frequency and high amplitude magnetic variations and internal structures that delineate arcuate features concave to the west. Several of the low magnetic lineations within this zone directly coincide with surface drainages and topographic lows. These could be reflecting areas with increased overburden.

<u>Unit 8</u> – this unit has low amplitude similar to unit 5 but exhibits higher frequency variations that generally delineate NNW trending structures.

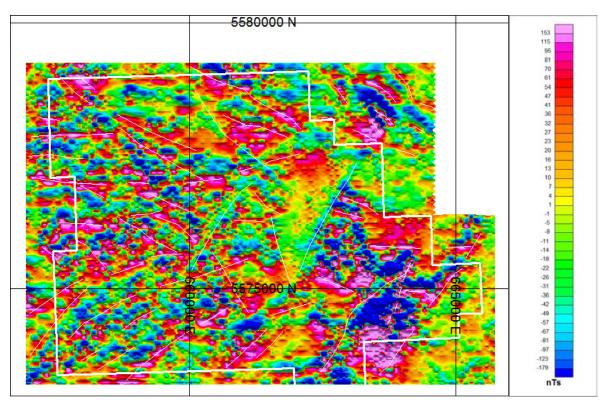


**Figure 7: Reduced to the Pole Magnetic Colour Contour Map – Magnetic Interpretation** Outlines of magnetically interpreted lithological or facies units. – Claim outline in red.

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**Figure 8: First Vertical Derivative Colour Contour Map – Magnetic Interpretation** Outlines of magnetically interpreted lithological or facies units. – Claim outline in white.



**Figure 9: Sobel Horizontal Edge Enhancement Filter - Magnetic Interpretation** Linear trends highlighted with white lines. – Claim outline in white.

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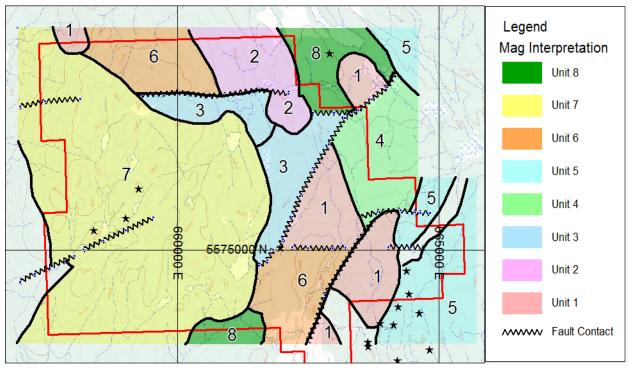


Figure 10: Magnetic Interpretation

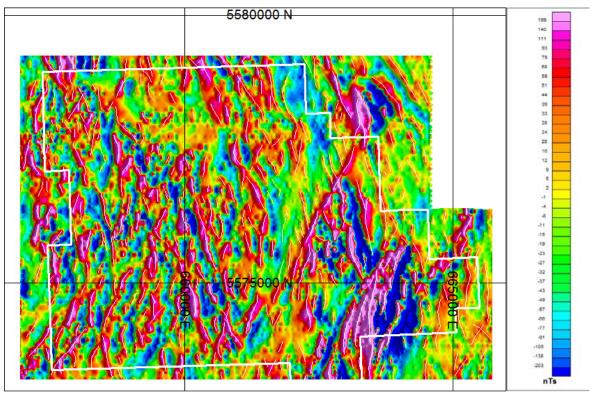
There are a couple of areas where the magnetic signature is not assigned to one of these units. One is a narrow NE striking dyke like response that cuts through the southern occurrence of unit 5. Another is the area immediately south of the strong magnetic anomaly associated with the Lucky Mike skarn.

An examination of the first vertical derivative and various edge enhancement filtered data reveals a large number of short strike length magnetic lineaments across the property but mostly concentrated in magnetic unit 7. These exhibit two dominant orientations: NNW  $(330^{0} \text{ to } 345^{0})$  and NNE  $(018^{0} \text{ to } 025^{0})$ . The NNW structures appear to be more prevalent and are mapped across the northern portion of the property while the NNE structures are more evident to the south. The combination gives the impression that magnetic unit 7 contains a regional arcuate structure that is concave to the west. These structures generally parallel the edge of the Guichon Batholith to the west.

Discontinuities and offsets of these small strike length features support the fault interpretation presented. There appears to be one dominant fault striking N50E that enters the property near the SW corner. This structure closely ties to the Zone 1 and Zone 3 Minfile occurrences. Zone 2 appears to be located on a parallel structure. There are several of these NE structures evident in the area.

Outlines of magnetically interpreted lithological or facies units. – Claim outline in red – Minfile occurrences as stars – Topographic overlay

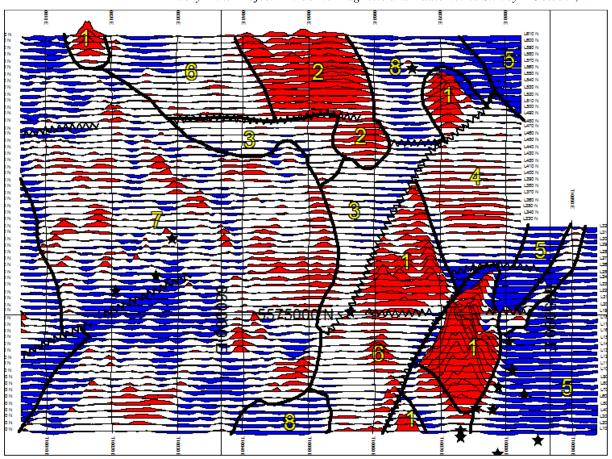
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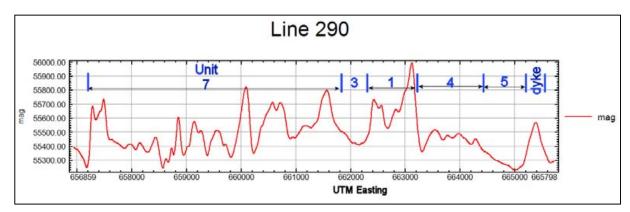
**Figure 11: Sobel Vertical Edge Enhancement Filter - Short Strike Length Lineations** Interpreted structural lineations – White Lines

Analysis of the data as individual and stacked profiles was included with the analysis and interpretations of the 2D plan maps. These displays highlight the amplitude variations and magnetic character across the property that give rise to the lithological interpretation. They also emphasize both the background NNW trends and internal structures within some of the anomalous magnetic high and low zones. For example, the stacked profile display delineates three or more narrow magnetic features striking NNE within the strong magnetic high to the west of the Lucky Mike skarn which is different than the northerly to NNW structures mapped within the other magnetic high anomalies.

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**Figure 12: Total Magnetic Field Stacked Profile Display – Color filled red positive, blue negative** Flight Line = Profile Base at 55,500 nTs. Vertical Scale = 400 nTs/100 ground metres - Outlines of magnetically interpreted lithological or facies units

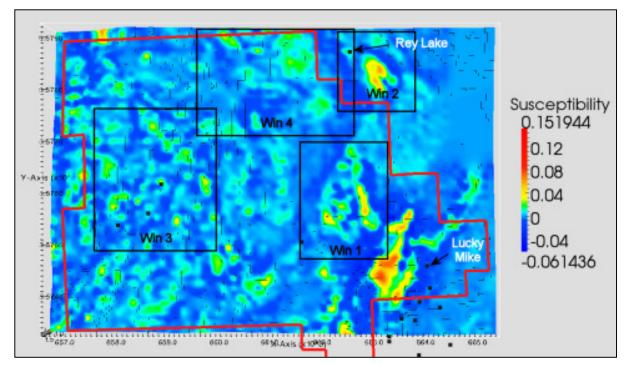


**Figure 13: Interpretation Magnetic Profile Line 290** Magnetic Profile illustrates character and amplitude of interpreted magnetic facies

The magnetic data was input to a 3D inversion algorithm that generates a 3D voxel model showing a subsurface distribution of the rocks' magnetic susceptibility parameter that could produce the observed data. A regional inversion, including the entire data set was completed using input data grid to 100 metre cells and modelled with a 50 metre voxel mesh. In addition,

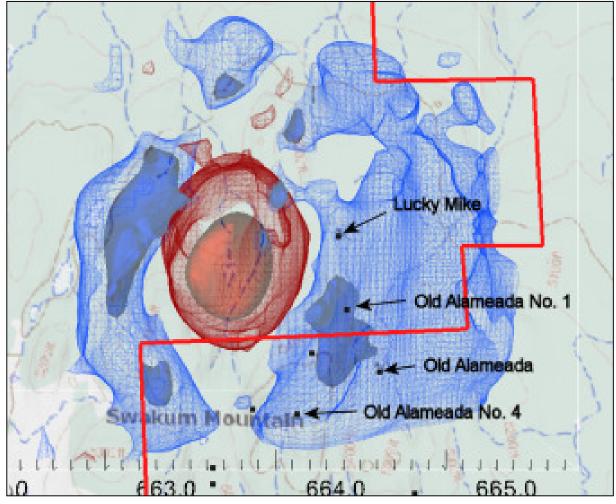
four detailed inversions were completed across selected magnetic anomalies utilizing 50 metre input data and a 25 metre voxel mesh. These models are best viewed in a 3D viewing program that allows the user to visualize the interpreted model from different angles and perspectives, generate depth slices or cross-sections at any angle and isolate specific responses based on threshold or isocontour values. Snapshots from the Paraview viewer are included as images below.

The regional inversion model delineates similar surface patterns to those observed on the RTP and Total Field magnetic plan maps. The strong magnetic highs (units 1 and 2) are clearly mapped and their internal NNE and NNW trends are evident. The high frequency arcuate structures on the west side of the property are evident, as are the strong NE lineations on the east side.

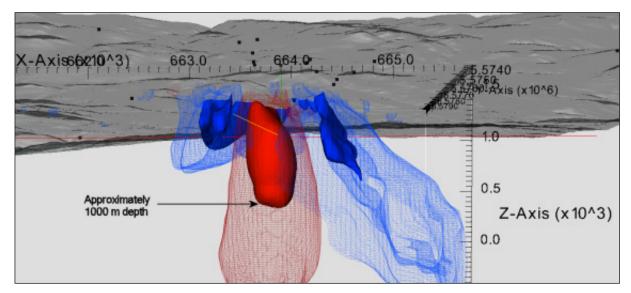


**Figure 14: Regional (coarse) Magnetic Inversion – Top Surface View** –Detail Inversions windows 1 to 4 - Claim Outline (Red) – Minfile Occurrences (black boxes)

The inversion suggests the source of the strong magnetic anomaly to the west of the Lucky Mike skarn has a significantly higher susceptibility index than any other body in the area and the surrounding magnetic lows are also significantly stronger than other units. Displaying these responses as isosurfaces reveals the magnetic high originates from a near vertical, pipe-like body and the surrounding magnetic lows form a conical shaped halo, most prominent along the eastern and western flanks. The low susceptibility unit to the east appears to be more developed than the one to the west and most of the mapped Minfile occurrences in this area are located along the surface projection of this easterly dipping body.



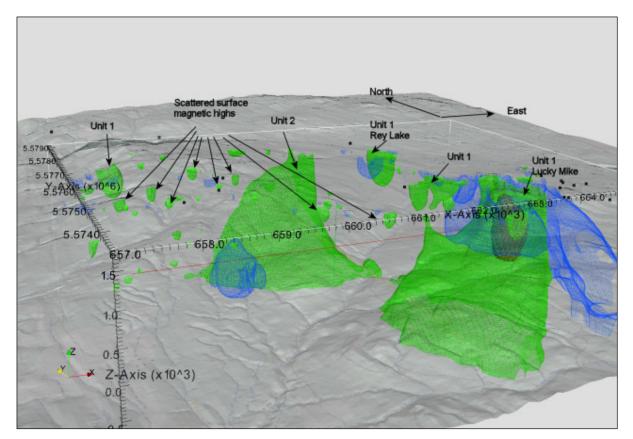
**Figure 15: Mag 3D Inversion – Lucky Mike Area -Isosurfaces–Top View** +0.1 SI (Solid Red), +0.05 SI (Red Mesh), -0.015 SI (Blue Mesh), -0.03 SI (Solid Blue)



**Figure 16: Mag 3D Inversion – Lucky Mike Area – Isosurfaces -Side view from South** +0.1 SI (Solid Red), +0.05 SI (Red Mesh), -0.015 SI (Blue Mesh), -0.03 SI (Solid Blue)

Geosci Data Analysis Ltd., 2060 148<sup>th</sup> Street, Surrey, B.C., Canada V4A8L5 tel: (604) 535-4255 e-mail: geosci@telus.net This response can be interpreted in a couple of ways. The high susceptibility pipe could reflect an intrusive body and the surrounding lows an alteration halo characterized by magnetite destruction. This response might also be interpreted as mapping a porphyry system with a high susceptibility core. In either event, the inversion result implies the skarn mineralization along the eastern magnetic low could extend for considerable depth down dip to the east and raises the possibility that similar mineralization may be found along the magnetic low to the west of the high susceptibility body. Although there are no mineral occurrences mapped within the high susceptibility core, this portion of the system should also be considered a potential target.

Displaying a lower isosurface from this coarse model shows the characteristics of the other magnetic highs. This display shows how the other occurrences of magnetic unit 1, such as the response to the southeast of Rey Lake, appear to be near surface features with limited depth extent while the larger response flagged as magnetic unit 2 may originate from a deep rooted body. The weak, localized magnetic highs scattered across the western portion of the study area all appear to be associated with small, near surface bodies.

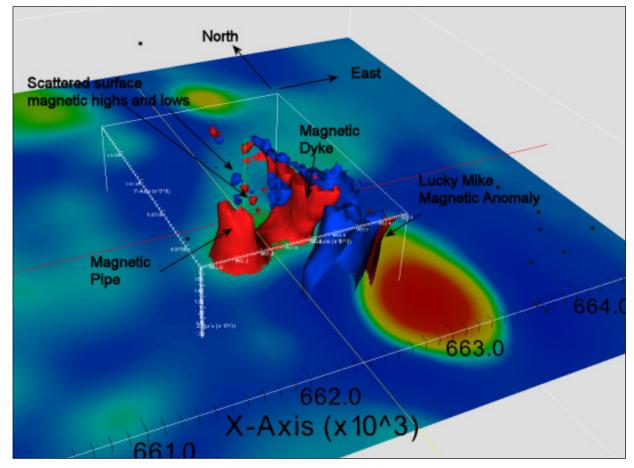


**Figure 17: Mag 3D Inversion – Regional – Isosurfaces –Elevated view from Southwest** +0.1 SI (Solid Red), +0.021 SI (Green Mesh), -0.015 SI (Blue Mesh)

Viewing cross-sections and depth slices through the inversion block reveals aspects of the linear trends. Most, including the remarkably straight lineation extending southwest from the southern edge of the Rey Lake anomaly appear to be near vertically oriented features. One exception is the southwest edge of magnetic unit 2, which appears to dip at a moderate  $(50^{0} - 60^{0})$  angle to the southwest.

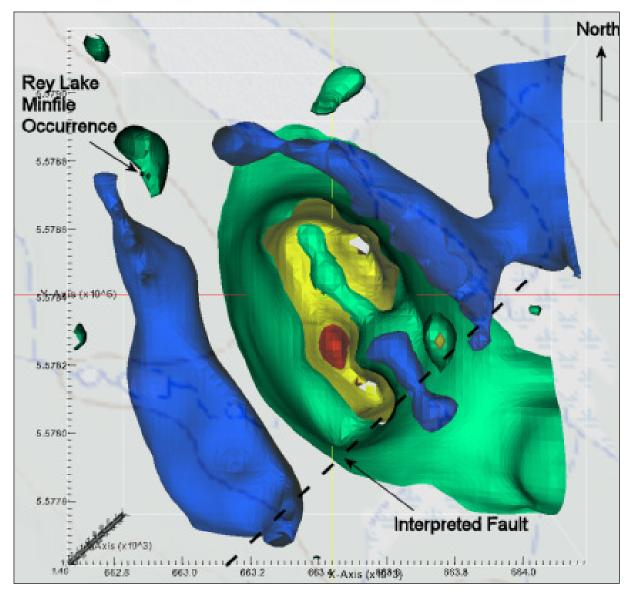
As stated above and illustrated on Figure 14, four areas were selected and submitted for more detailed 3D inversions.

**Detail window 1** encompasses the magnetic high located immediately northwest of the very strong magnetic anomaly associated with the Lucky Mike deposit. This detailed inversion was run to remove the influence from the much stronger magnetic feature to the southeast. The 3D model shows the magnetic high originates from two discrete high susceptibility bodies. The larger one is to the east and forms a N-S striking, thin, dyke-like body approximately 700 metres long and 100m wide. This zone is flanked to the east by a steep easterly dipping low susceptibility plate that is slightly longer strike length but has less depth extent. This body appears to be terminated by near vertical NE striking faults at both its' northern and southern ends. The second magnetic body is a near vertical pipe, centred some 750 metres to the west of the first. This pipe is slightly elongated in a NW direction and likely less than 200 metres across. The inversion suggests these two bodies merge at depth (~ 500m) but this apparent effect could be attributed to a loss of resolution of the model with depth. Small pods of high and low susceptibility material are scattered across the surface in this area, suggesting fairly complex structures. It is likely that faulting is prevalent in this area.



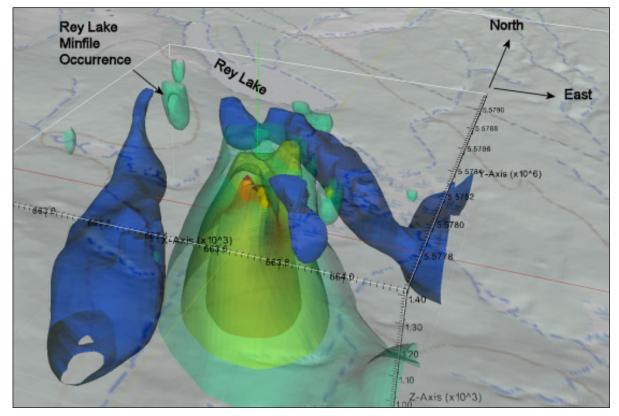
**Figure 18: Mag3D Inversion – Window 1 - Isosurfaces -Elevated view from Southwest** +0.025 SI (Solid Red), -0.015 SI (Solid Blue) – Depth slice through coarse inversion at 500m depth

**Detail window 2** was set up over the strong magnetic anomaly flanking the Rey Lake deposit. Although this area is outside the claim boundary, it contains a magnetic signature that is one of the exploration targets for this area. While the coarse inversion suggested the high susceptibility body is formed as a small bowl shaped body with limited depth extent, the detailed inversion suggests the source as being more of an intrusive type of plug that extends to depth. The high susceptibility core forms a N30W elongated ellipse approximately 600 metres long and 350 metres wide. This body appears to have a small surface depression running along the long axis, giving the impression of two parallel ridges along the northeast and southwest flanks. This high susceptibility plug is flanked to the northeast and southwest by low susceptibility lenses that warp around the northwest nose of the high susceptibility core. The low on the southwest flank appears to be near vertical while the one on the northeast flank dips at a moderate angle to the northeast. The Rey Lake deposit is located near the NW apex of this fold-like structure, associated with a weak high susceptibility pod that breaks the low susceptibility ring. The southeast end of this structure terminates against a regional NE striking fault zone, interpreted from the plan magnetic maps.



**Figure 19: Mag3D Inversion – Window 2 - Isosurfaces -Top view** +0.05 SI (Red), +0.03 SI (Yellow), +0.012 SDI (Green), -0.01 SI (Blue)

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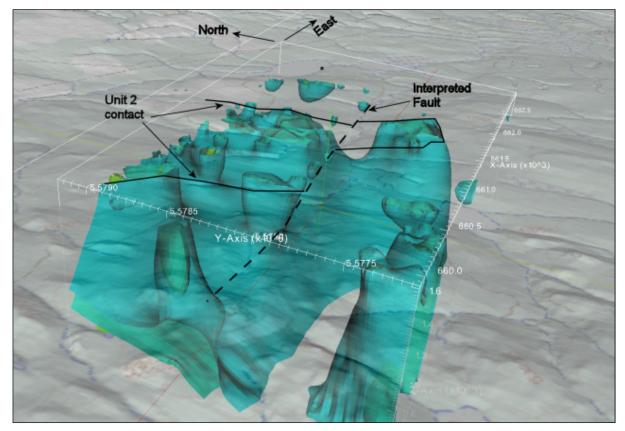


**Figure 20: Mag3D Inversion – Window 2 - Isosurfaces -Elevated view from Southeast** +0.05 SI (Red), +0.03 SI (Yellow), +0.012 SI (Green), -0.01 SI (Blue)

**Detail window 3** was set up over the Zone 1, Zone 2 and Zone 3 Minfile occurrences in the west side of the claim group. The magnetic data in this area is chaotic and appears to reflect a complex pattern of intersecting NE and NW striking lineations Many of the northeasterly trends are associated with magnetic lows and corresponding surface drainage systems while weak magnetic highs appear to define the northwest striking lineations. This detail inversion does not reveal any structures or patterns that were not apparent on the coarse inversion or in the 2D plan magnetic maps. No clear patterns are evident in this inversion block, particularly in the near surface.

**Detail window 4** was setup to encompass the large magnetic high identified as magnetic unit 2. This inversion suffered from the fact that the magnetic anomaly is open to the north and therefore not fully defined. The high susceptibility source is modelled as a large and deep body, centred to the north of the survey block and extending south into the property. At the southern edge of the buried mass there are several apophyses extending up towards the surface and the ground projection of these bodies closely follows an east-west striking lineation that was interpreted as a fault contact from the 2D plan magnetic maps. The inversion supports the interpretation that the small magnetic high at the southeast corner of

the unit 2 body is separated from the larger body to the north. Additional magnetic surveying to the north will be required to properly model this anomaly.

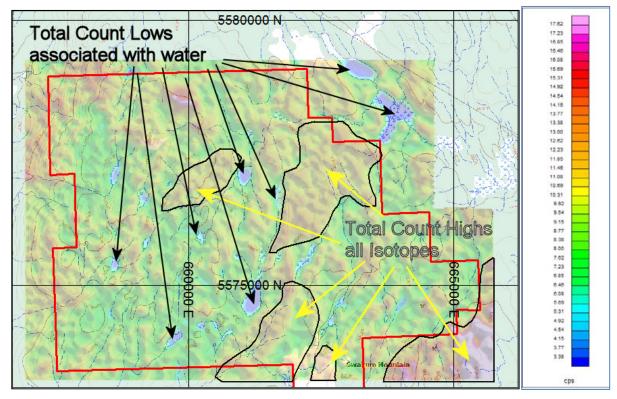


**Figure 21: Mag3D Inversion – Window 4 - Isosurfaces -Elevated view from west** +0.007 SI (Light Blue)

#### 6.2 <u>Radiometric Survey</u>

Overburden masking produces some of the most dominant effects seen in radiometric data. The presence of vegetation and/or soil can significantly reduce the signal from what would be measured over bare outcrop. The presence of standing water (lakes, swamps, marshes) or heavily saturated soils can effectively block all of the gamma radiation originating from the underlying rocks. Consequently, variations in the isotope signals should first be evaluated with respect to the overburden conditions before they are attributed to changes in the underlying geology.

Overburden effects are most clearly seen in the Total Count (TC) measurements. Anomalies and trends observed in this display which are common to all of the individual isotope maps are likely associated with some degree of overburden masking. The TC map below gives a clear indication how the lakes and marshes mask the radiometric signals. It also reveals a large area with very high radiometric counts in the SE corner of the survey grid. This response is observed in all three isotopes and is likely reflecting an area of rock outcrop or very thin overburden. There are four other areas highlighted which exhibit elevated readings in all three isotopes. These responses are not as dramatic as the first instance and likely reflect an area with relatively thin overburden or soil cover as opposed to a discrete geological unit.



**Figure 22: Total Count Radiometric Color Contour Map – Base Map Overlay** High TC areas seen on all isotopes (thin overburden) – Low TC areas associated with water - Claim outline in red.

There are several radiometric highs observed in just one or two isotopes. These anomalies are more likely to originate from underlying geology.

There are four localized uranium anomalies that warrant mention:

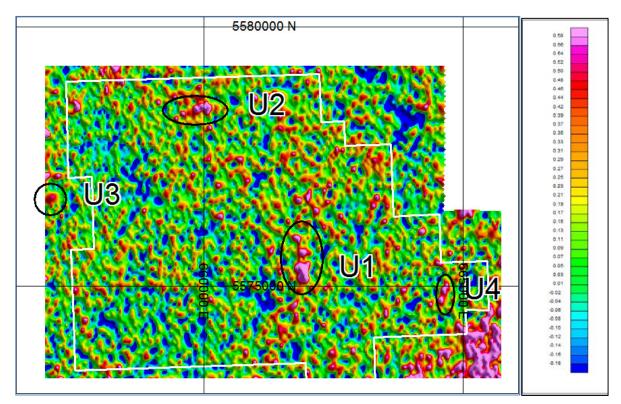
- U1. 661,900E / 5,575,300N: This N-S elongated ellipse is some 700m x 250m in size and associated with low K and background Th. It is located along the southerly trending finger of magnetic unit 3 where it is squeezed between unit 7 to the west and an interpreted NE striking fault zone to east. This elevated uranium response may be characteristic of the magnetic unit 3.
- U2. 660,100E / 5,578,600N: This E-W elongated zone is some 900m x 200m in size. It is located within magnetic unit 6 and parallels an E-W lineament (fault or

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contact with unit 3) to the south. This anomaly overlaps a NW-SE anomaly observed in K isotope.

- U3. 657,100E / 5,576,600N: This small circular anomaly is on the extreme western edge of the grid, outside of the claim block. It coincides with the western edge of unit 7 and lies immediately south of a possible E-W contact mapped by the K isotope.
- U4. 664,600E / 5,574,900N: This narrow linear anomaly is located immediately NE of the Lucky Mike skarn. It appears to lie along the southern end of the narrow, NE striking dyke-like structure mapped by the magnetics.

There are also increased U (and K) readings in the extreme NW corner of the claim block. The strongest in this area straddles the northern claim boundary and coincides with a small magnetic high interpreted as magnetic unit 1.

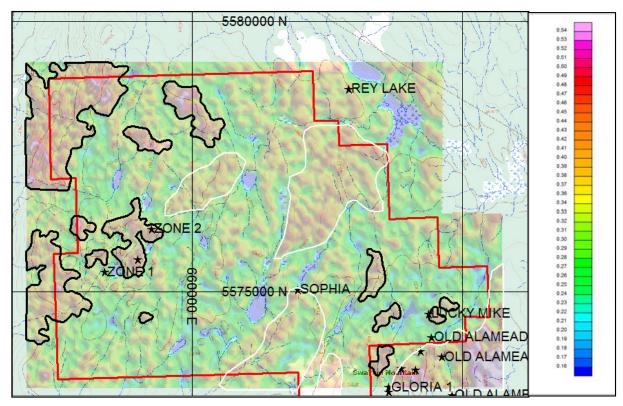


#### Figure 23: Uranium Color Contour Map

High uranium isotope anomalies as black ellipses - Claim outline in white.

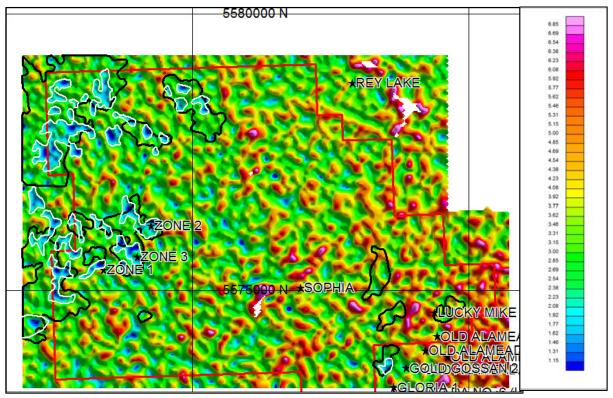
No significant thorium anomalies were observed other than the lows associated with the lakes and weak highs associated with thinning overburden. There appears to be a slight decrease in the Th count associated with magnetic unit 7.

The potassium isotope provides the cleanest radiometric data. There is a very obvious correlation between the extreme K lows and the lakes. There are three clusters of high K readings. One cluster, comprised of 5 anomalies is located in the SE corner of the claim and concentrated around the edges of the strong magnetic anomaly in the area. One of these anomalies coincides with the Lucky Mike deposit. A second cluster is located in the west central portion of the claims. Minfile occurrences Zones 1, 2 and 3 are located at the eastern end of this cluster. The third and largest cluster is located in the NW corner of the claim block.



**Figure 24: Potassium Color Contour Map** High potassium isotope anomalies as black outlines – Thin overburden cover as white outlines - Claim outline in red – Topographic basemap overlay.

Several portions of the K high anomalies in the second and third clusters coincide with thorium lows and are clearly evident on the Th/K ratio map. This relationship is important in that it is a common signature of hydrothermal alteration. This response may be associated with the Guichon batholith, mapped to the west of the claim group or possibly related to the small magnetic anomaly straddling the northern border of the claim group. The potassium anomaly located along the southern edge of the high magnetic anomaly associated with the Lucky Mike deposit is also evident as a Th/K anomaly.



**Figure 25: Th/K Ratio Color Contour Map** Th/K anomalies (low) as white outlines - High potassium isotope anomalies as black outlines –Claim outline in red.

Ternary displays are useful for showing the relationship of various parameters. One of the most common applications is to apply the individual isotope data to the red, green and blue colour pallets (alternatively one can use cyan, magenta and yellow pallets). By varying the colour assignments and the methods of application (linear, logarithmic, histogram equalization) a virtually infinite number of displays are possible. These often reveal trends and features based on combinations of responses that are not readily visible when displaying a single parameter. The following display (Figure 26) assigns the red colour to potassium, green to thorium and blue to uranium. The black and darker areas reflect low amplitude values, likely associated with thicker overburden while the lighter tones reflect regions with higher amplitudes. In addition to the primary colours reflecting highs in the assigned isotope, the composite colours can be used to map lows. For example, yellow areas are generated from green and blue hues (thorium and uranium) and reflect a lack of red (potassium). Similarly, the various shades of purple reflect a lack of thorium (green).

The image has been annotated with the various trends outlined by the individual isotopes and with the contacts and faults based on the magnetic interpretation. Even in the low amplitude regions, this display shows clear evidence of changes in the colour hues that likely reflect geological variations that were not obvious from individual isotope maps. These types of displays should be analysed in more detail as individual targets areas are evaluated.

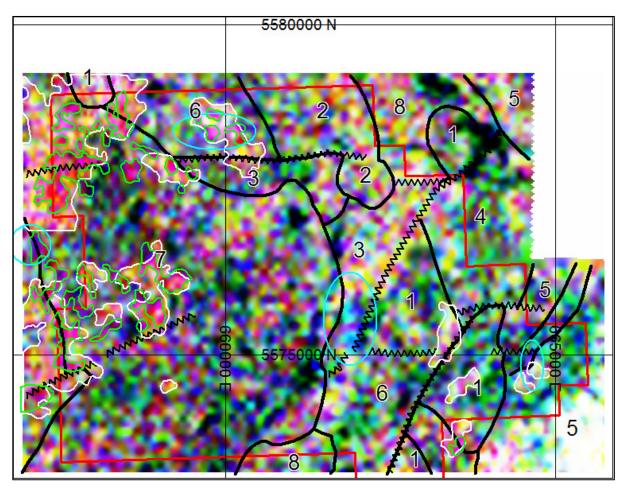
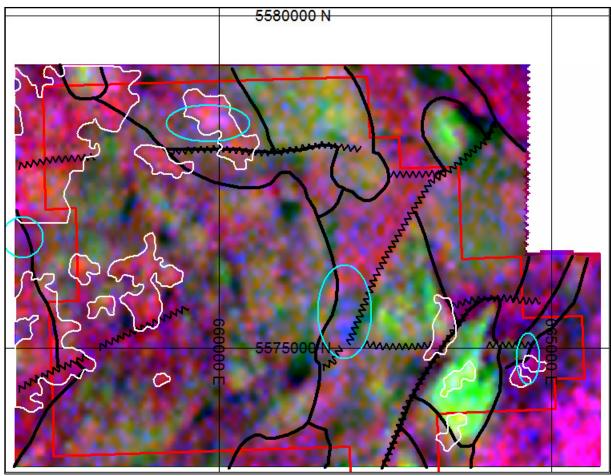


Figure 26: Ternary Image – RGB = K\_Th\_U

Th/K anomalies (low) as green outlines - High potassium anomalies as white outlines -High uranium anomalies as blue ellipses - Magnetic Interpretation in black - Claim outline in red.

In this particular dataset, the thorium response does not appear to be as significant as the other isotopes. By assigning the magnetic amplitude to the green colour, the ternary map (Figure 27) shows the relationship between the potassium (red) and uranium (blue) responses and the high magnetic bodies (green). In this display the pink to purple hues reflect different proportions of potassium and uranium isotopes.



**Figure 27: Ternary Image – RGB = K\_mag\_U** High potassium anomalies as white outlines –High uranium anomalies as blue ellipses – Mag highs in green – Magnetic Interpretation in black - Claim outline in red.

### 7 <u>CONCLUSIONS AND RECOMMENDATIONS</u>

The magnetic survey was successful in delineating a more complex geology than the current interpretation provided by the government mapping. Both the Rey Lake and the Lucky Mike deposits are shown to be near the edge of magnetic high anomalies, likely related to localized intrusions that extend to depth. The Lucky Mike area exhibits magnetic and radiometric responses characteristic of a porphyry deposit. Several magnetic anomalies are mapped that could reflect a similar geological environment.

The radiometric survey outlines several trends that coincide with magnetically interpreted features. There is evidence of potassic alteration in the vicinity of the Lucky Mike magnetic anomaly and across the northwest corner of the claim block. There are three significant

uranium anomalies located along or adjacent to major fault zones interpreted from magnetic lineaments.

Detailed prospecting and geological mapping is recommended for the entire claim block and specifically in the vicinity of the strong magnetic anomalies (unit 1). These efforts should be focused on identifying the source of the magnetic anomalies, which is expected to be at or very near the surface west of the Lucky Mike deposit. These efforts should also be focused on finding evidence to confirm or contradict the interpretation of a porphyry system in the area west of the Lucky Mike skarn.

If possible, exploration data associated with the Rey Lake deposit should be reviewed with the goal of determining whether the mineralization is related to the strong magnetic anomaly mapped to the southeast. This study may provide insight and guidance for the exploration efforts focused on the magnetic anomalies within the claim block.

If evidence to support the porphyry model is found, it is likely that an induced polarization survey will be warranted.

The western half of the claim group exhibits a complex pattern of short strike length magnetic lineaments that delineate a northerly trending and westerly concave arcuate trend that generally parallels the edge of the Guichon batholith to the west. Breaks, discontinuities and offsets of these trends suggest the presence of E-W, NE and NW striking faults across the area. More detailed, ground magnetic surveying will be required to properly delineate these structures.

Large areas exhibiting high potassium and low thorium counts are mapped in the western and northwestern sections of the property. These areas should be searched for evidence of hydrothermal alteration. In addition to detailed geological mapping and prospecting a program of soil, silt and stream geochemistry sampling is recommended to evaluate these anomalies.

Respectfully submitted,

per Geosci Data Analysis Ltd.



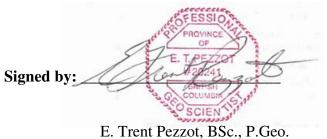
E. Trent Pezzot, BSc., P.Geo,

Geophysics, Geology

Geosci Data Analysis Ltd., 2060 148<sup>th</sup> Street, Surrey, B.C., Canada V4A8L5

#### 8 APPENDIX 1 – STATEMENT OF QUALIFICATIONS E. TRENT PEZZOT

- I, E. Trent Pezzot, of the city of Surrey, Province of British Columbia, hereby certify that:
  - 1) I graduated from the University of British Columbia in 1974 with a BSc. degree in the combined Honours Geology and Geophysics program.
  - 2) I have practised my profession continuously from that date.
  - 3) I am a registered member of the Association of Professional Engineers and Geoscientists of British Columbia.
  - 4) I have no interest in Plate Resources Inc. or any of their subsidiaries or related companies, nor do I expect to receive any.



Geophysics, Geology

#### 9 APPENDIX 1 – REFERENCES

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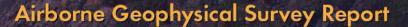
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#### Open File 1990-29

Nicola Lake Region Geology and Mineral Deposits, by J.M. Moore, A.Pettipas, R.E. Meyers and T.B. Hubner, for Mineral Resources Division, Geological Survey Branch, Ministry of Energy, Mines and Petroleum, Resources, B.C., 1990



Precision GeoSurveys Inc.

# Lucky Mike Block

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Prepared for: Plate Resources Inc.

> December 2011 Jenny Poon, B.Sc., GIT

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#### Introduction:

This report outlines the survey operations and data processing actions taken during the airborne geophysical survey flown at Lucky Mike block, BC (Figure 1). The airborne geophysical survey was flown by Precision GeoSurveys Inc. for Plate Resources Inc. The geophysical survey, carried out on October 22, 2011 and October 23, 2011, saw the acquisition of high resolution magnetic and radiometric data.

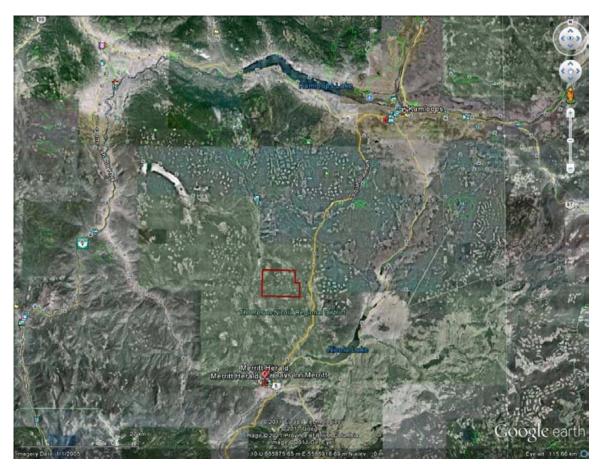


Figure 1: Lucky Mike block location relative to Kamloops, BC and Coquihalla Highway (hwy #5).



The Lucky Mike block is located approximately 47 kilometers south west of Kamloops, BC and 22 kilometers north east of Merrit, BC. The block is on the west side of the Coquihalla Highway (hwy #5). The survey area of Lucky Mike block is approximately 6 km by 8 km (Figures 2 & 3). A total of 553 line kilometers of magnetic and radiometric data were flown for this survey; this total includes tie lines and survey lines. The survey lines were flown at 100 meter spacings at a  $090^{\circ}/270^{\circ}$  heading; the tie lines were flown at 1 km spacings at a heading of  $000^{\circ}/180^{\circ}$  (Figure 4).



Figure 2: Plan View - Lucky Mike block with survey and tie lines marked in yellow and the boundary in red.



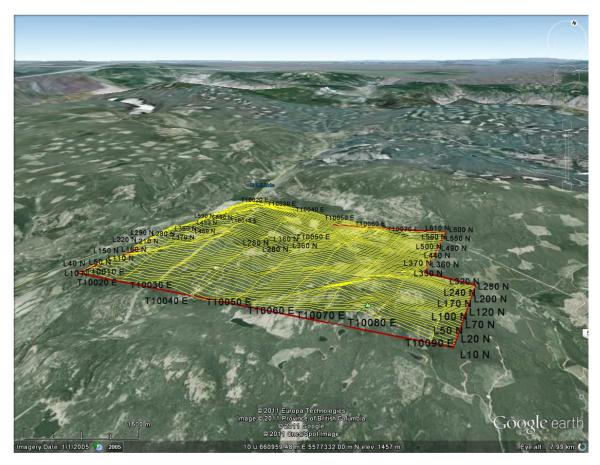


Figure 3: Terrain View - Lucky Mike block with survey and tie lines marked in yellow and the boundary in red.



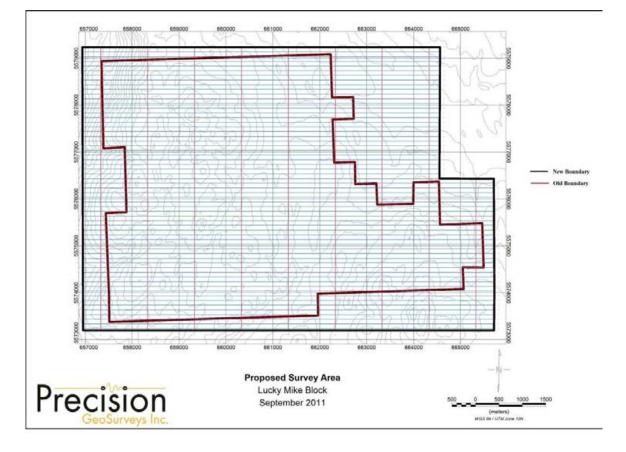


Figure 4: Proposed survey basemap of Lucky Mike block.

#### Survey Specifications:

The geodetic system used for this survey is WGS 84 and the area is contained in zone 10N. The survey data acquisition specifications and coordinates for Lucky Mike block are specified as followed (Tables 1 & 2).

Survey	Line Spacing m	Survey Line km	Tie Line km	Total Line km	Survey Line Orientation	Nominal Survey Height m
Lucky Mike	100	502	51	553	090°/270°	35
Total				553		

Table 1: Lucky Mike block survey acquisition specifications.



Longitude	Latitude	Easting	Northing
120.7942886	50.34428273	656938	5579237
120.6872545	50.34220233	664560	5579237
120.6885888	50.31703419	664552	5576436
120.6723383	50.31668285	665710	5576433
120.6732519	50.29509530	665720	5574031
120.6737012	50.28761150	665714	5573198
120.7966172	50.29000741	656951	5573198

Table 2: Lucky Mike block survey polygon coordinates using WGS 84 in zone 10N.

# 2.0 Geophysical Data:

Geophysical data are collected in a variety of ways and are used to aid in the exploration and determination of geology, mineral deposits, oil and gas deposits, contaminated land sites and UXO detection.

For the purposes of this survey, airborne magnetic and radiometric data were collected to serve in the exploration of Lucky Mike block.

# 2.1 Magnetic Data:

Magnetic surveying is probably the most common airborne survey type to be conducted for both mineral and hydrocarbon exploration. The type of survey specifications, instrumentation, and interpretation procedures, depend on the objectives of the survey. Typically magnetic surveys are performed for:

- 1. Geological Mapping to aid in mapping lithology, structure and alteration in both hard rock environments and for mapping basement lithology, structure and alteration in sedimentary basins or for regional tectonic studies.
- 2. Depth to Basement mapping for exploration in sedimentary basins or mineralization associated with the basement surface.

## 2.2 Radiometric Data:

Radiometric surveys detect and map natural radioactive emanations, called gamma rays, from rocks and soils. All detectable gamma radiation from earth materials come from the natural decay products of three primary elements; uranium, thorium, and potassium. The purpose of radiometric surveys is to determine either the absolute or relative amounts of U, Th, and K in surface rocks and soils.



#### 3.0 <u>Survey Operations:</u>

Precision GeoSurveys flew the Lucky Mike block using a Eurocopter AS350 helicopter (Figure 5). The survey lines were flown at a nominal line spacing of one hundred (100) meters and the tie lines were flown at 1 km spacing for both the spectrometer and magnetometer as they were acquired simultaneously. The average survey elevation was 44 meters vertically above ground for the Lucky Mike block. The experience of the pilot helped to ensure that the data quality objectives were met and that the safety of the flight crew was never compromised given the potential risks involved in airborne surveying.



Figure 5: Eurocopter AS350 equipped with mag stinger for magnetic data acquisition.

The base of operations for this survey was at Merrit, BC. The Precision crew consisted of three members:

Harmen Keyser - Pilot Brenton Keyser - Operator Shawn Walker - Geophysicist

The survey was started on October 22, 2011 and completed on October 23, 2011. The survey did not encounter any delays.



## 4.0 Equipment:

For this survey, a magnetometer, spectrometer, base station, laser altimeter, pilot guidance unit, and a data acquisition system were required to carry out the survey and collect quality, high resolution data. The survey magnetometer is carried in an approved "stinger" configuration to enhance flight safety and improve data quality in this mountainous terrain.

# 4.1 <u>AGIS:</u>

The Airborne Geophysical Information System, AGIS, (Figure 6), is the main computer used in data recording, data synchronizing, displaying real-time QC data for the geophysical operator, and generation of navigation information for the pilot display system.



Figure 6: AGIS installed in the Eurocopter AS350.

The AGIS was manufactured by Pico Envirotec; therefore the system uses standardized Pico software and external sensors are connected to the system via RS-232 serial communication cables. The AGIS data format is easily converted into Geosoft or ASCII file formats by a supplied conversion program called PEIView. Additional Pico software allows for post real time magnetic compensation and survey quality control procedures.



#### 4.2 Spectrometer:

The IRIS, or Integrated Radiometric Information System is a fully integrated, gamma radiation detection system containing 16.8 litres of NaI (T1) downward looking crystals and 4.2 litres NaI (T1) upward looking crystals (Figure 7). The IRIS is equipped with upward-shielding high density RayShield® gamma-attenuating material to minimize cosmic and solar gamma noise. Real time data acquisition, navigation and communication tasks are integrated into a single unit that is installed in the rear of the aircraft as indicated below. Information such as total count, counts of various radioelements (K, U, Th, etc.), temperature, cosmic radiation, barometric pressure, atmospheric humidity and survey altitude can all be monitored on the AGIS screen for immediate QC. All the radiometric data are recorded at 1 Hz.



Figure 7: One of the IRIS strapped in the back seat of the Eurocopter AS350.

## 4.3 <u>Magnetometer:</u>

The magnetometer used by Precision GeoSurveys is a Scintrex cesium vapor CS-3 magnetometer. The system was housed in a front mounted "stinger" (Figure 8). The CS-3 is a high sensitivity/low noise magnetometer with automatic hemisphere switching and a wide voltage range, the static noise rating for the unit is  $\pm$  0.01 nT. On the AGIS screen the operator can view the raw magnetic response, the magnetic fourth difference, aircraft



position, and the survey altitude for immediate QC of the magnetic data. The magnetic data are recorded at 10 Hz. A magnetic compensator is also used to remove noise created by the movement of the helicopter as it pitches, rolls and yaws within the Earth's geomagnetic field.



Figure 8: View of the mag stinger.

## 4.4 Base Station:

For monitoring and recording of the Earth's diurnal magnetic field variation, Precision GeoSurveys uses two base stations: Scintrex proton precession Envi Pro magnetometer and GEM GSM-19T magnetometer. Both base stations are mounted as close to the survey blocks as possible to give accurate magnetic field data. The Envi Pro base station (Figure 9), uses the well proven precession technology to sample at a rate of 0.5 Hz. A GPS is integrated with the system to record real GPS time that is used to correlate with the GPS time collected by the airborne CS-3 magnetometer.





Figure 9: Scintrex Envi Pro proton precession magnetometer.

The GEM GSM-19T magnetometer (Figure 10) also uses the proton precession technology sampling at a rate of 0.5 Hz. The GSM-19T has an accuracy of  $\pm - 0.2$  nT at 1 Hz.



Figure 10: GEM GSM-19T proton precession magnetometer.

#### 4.5 Laser Altimeter:

The pilot is provided with terrain guidance and clearance with an Acuity AccuRange AR3000 laser altimeter (Figure 11). This is attached at the aft end of the magnetometer boom. The AR3000 sensor is a time-of-flight sensor that measures distance by a rapidly-modulated and collimated laser beam that creates a dot on the target surface. The maximum range of the laser altimeter is 300 m off of natural surfaces with 90% reflectance and 3 km off special reflectors. Within the sensor unit, reflected signal light is



collected by the lens and focused onto a photodiode. Through serial communications and analog outputs, the distance data are transmitted and collected by the AGIS at 10 Hz.



Figure 11: Acuity AccuRange AR3000 laser altimeter.

# 4.6 Pilot Guidance Unit:

The PGU (Pilot Guidance Unit) is a graphical display type unit that provides continuous steering and elevation information to the pilot (Figure 12). It is mounted remotely from the data system on top of the instrument panel. The PGU assists the pilot to keep the helicopter on the flight path and at the desired ground clearance.



Figure 12: Pilot Guidance Unit.

The LCD monitor measures 7 inches, with a full VGA 800 x 600 pixel display. The CPU for the PGU is housed in the PC-104 console and uses Windows XP Embedded operating system control, with input from the GPS antenna, laser altimeter, and AGIS.



#### 5.0 Data Processing:

After all the data are collected after a survey flight several procedures are undertaken to ensure that the data meet a high standard of quality. All data were processed using Pico Envirotec software and Geosoft Oasis Montaj geophysical processing software.

#### 5.1 <u>Magnetic Processing:</u>

During aeromagnetic surveying noise is introduced to the magnetic data by the aircraft itself. Movement in the aircraft (roll, pitch and yaw) and the permanent magnetization of the aircraft parts (engine and other ferric objects) are large contributing factors to this noise. To remove this noise a process called magnetic compensation is implemented. The magnetic compensation process starts with a test flight at the beginning of the survey where the aircraft flies in the four orthogonal headings required for the survey ( $090^{\circ}/270^{\circ}$  and  $000^{\circ}/180^{\circ}$  in the case of this survey) at an altitude where there is no ground effect in the magnetic data. In each heading, three specified roll, pitch, and yaw maneuvers are performed by the pilot; these maneuvers provide the data that are required to calculate the necessary parameters for compensating the magnetic data. A computer program called PEIComp is used to create a model for each survey to remove the noise induced by aircraft movement; this model is applied to each survey flight so the data can be further processed.

Followed by the compensation flight, a lag test is conducted. A lag correction of 1.0 seconds was applied to the total magnetic field data to compensate for the lag in the recording system as the magnetometer sensor flies 5.70 m ahead of the GPS antenna.

A magnetic base station is set up before every flight to ensure that diurnal activity is recorded during the survey flights. In this case, the base station was located near the south east corner of the block. Base station readings were reviewed at regular intervals to ensure that no data were collected during periods with high diurnal activity (greater than 5 nT per minute). The base station was installed at a magnetically noise-free area, away from metallic items such as steel objects, vehicles, or power lines. The magnetic variations recorded from the stationary base station are removed from the magnetic data recorded in flight to ensure that the anomalies seen are real and not due to solar activity.

Filtering is applied to the laser altimeter data as to remove vegetation clutter and to show the actual ground clearance. To remove vegetation clutter a Rolling Statistic filter was applied to the laser altimeter data and a low pass filter was used to smooth out the laser altimeter profile to remove isolated noise. As a result, filtering the data will yield a more uniform surface in close conformance with the actual terrain.

Some filtering of the magnetic data is also required. A Non Linear filter was used for spike removal. The 1D Non-Linear Filter is ideal for removing very short wavelength, but high amplitude features from data. It is often thought of as a noise spike-rejection filter, but it can also be effective for removing short wavelength geological features, such as signals from surficial features. The 1D Non-Linear Filter is used to locate and remove data that are recognized as noise. The algorithm is 'non- linear' because it looks at each



data point and decides if that datum is noise or a valid signal. If the point is noise, it is simply removed and replaced by an estimate based on surrounding data points. Parts of the data that are not considered noise are not modified. The combination of a Non-Linear filter for noise removal and a low pass trend enhancement filter resulted in level data as indicated in the results section of this report. The low pass filters simply smoothes out the magnetic profile to remove isolated noise.

# 5.2 Radiometric Processing:

Calibrating the spectrometer system in the helicopter is the first and vital step before the airborne radiometric data can be processed. Once calibration of the system has been complete, the radiometric data are processed by windowing the full spectrum to create channels for U, K, Th and total count. A 5-point Hanning filter was applied to the Cosmic window before going any further with processing the radiometric data.

Aircraft background and cosmic stripping corrections were applied to all three elements, upward uranium channels, and total count using the following formula:

$$C_{ac} = C_{lt} - (a_c + b_c * \operatorname{Cos}_f)$$

where:  $C_{ac}$  is the background and cosmic corrected channel  $C_{lt}$  is the live time corrected channel  $a_c$  is the aircraft background for this channel  $b_c$  is the cosmic stripping coefficient for this channel  $Cos_f$  is the filtered cosmic channel

The radon backgrounds are first removed followed by Compton stripping. Spectral overlap corrections are applied on to potassium, uranium, and thorium as part of the Compton stripping process. This is done by using the striping ratios that have been calculated for the spectrometer by prior calibration, this breaks the corrected elemental values down into the apparent radioelement concentrations. Lastly, attenuation corrections are applied to the data which involves nominal survey altitude corrections, in this case 34 metres is applied to total count, potassium, uranium, and thorium data.

With all corrections applied to the radiometric data, the final step is to convert the corrected potassium, uranium, and thorium to apparent radioelement concentrations using the following formula:

$$eE = C_{cor} / s$$

where: eE is the element concentration K(%) and equivalent element concentration of U(ppm) & Th(ppm) s is the experimentally determined sensitivity Ccor is the fully corrected channel



Finally, the natural air absorption dose rate is determined using the following formula:

E = 13.08 \* K + 5.43 \* eU + 2.69 \* eTh

where: E is the absorption dose rate in nG/h K is the concentration of potassium (%) eU is the equivalent concentration of uranium (ppm) eTh is the equivalent concentration of thorium (ppm)

To calculate for radiometric ratios it follows the guidelines in the IAEA report. Due to statistical uncertainties in the individual radioelement measurements, some care was taken in the calculation of the ratio in order to obtain statistically significant values. Following IAEA guidelines, the method of determining ratios of the eU/eTh, eU/K and eTh/K was as follows:

- 1. Any data points where the potassium concentration was less than 0.25 were neglected.
- 2. The element with the lowest corrected count rate was determined.
- 3. The element concentrations of adjacent points on either side of each data point were summed until they exceeded a certain threshold value. This threshold was set to be equivalent to 100 counts of the element with the lowest count rate. Additional minimum thresholds of 1.6% for Potassium, 20 ppm for thorium, and 30 ppm for uranium were set up to insure meaningful ratios.
- 4. The ratios were calculated using the accumulated sums.

With this method, the errors associated with the calculated ratios will be similar for all data points.



# 5.3 Final Data Format

Channel	Units	Description
X	m	UTM Easting - WGS84 Zone 10 North
Y	m	UTM Northing - WGS84 Zone 10 North
Galt_m	m	GPS height - WGS84 Zone 10 North
Lalt	m	Laser Altimeter readings
DTM	m	Digital Terrain Model
GPStime	Hours:min:secs	GPStime
basemag	nT	Base station diurnal data
mag	nT	Total Magnetic Intensity
Balt	m	Barometric Altitude
BaltSTP	m	Barometric Altitude (Pres and Temp Corrected)
Temp_DegC	Degrees C	Air Temperature
Press_kP	KiloPascal	Atmospheric Pressure
Press_mbars	millibar	Atmospheric Pressure
filCos	counts/sec	Spectrometer - Filtered Cosmic
filUpU	counts/sec	Spectrometer - Filtered Upward Uranium
conTCF	nGy/Hr	Equivalent Dose Rate
conKF	%	Equivalent Concentration - Potassium
conUF	ppm	Equivalent Concentration - Uranium
conTHF	ppm	Equivalent Concentration - Thorium
THKratioF		Spectrometer - eTh/%K ratio
UKratioF		Spectrometer - eU/%K ratio
UTHratioF		Spectrometer - eU/eTh ratio
Date	yyyy/mm/dd	Local Flight Date

Abbreviations used in the GDB files are listed in the following table:

Table 3: Lucky Mike block survey channel abbreviations.

The file format will be provided in two (2) formats, the first will be a .GDB file for use in Geosoft Oasis Montaj, the second format will be a .XYZ file, this is text file. A complete file provided in each format will contain both magnetic and radiometric data.



# Appendix A

Equipment Specifications



#### Scintrex Envi Pro Proton Magnetometer with Integrated GPS (Base Station)

	22,000  to  100,000  nT (gamma)
Total Field	23,000 to 100,000 nT (gamma)
Operating	
Range	
Total Field	±1 nT (gamma)
Absolute Accuracy	
	0.1 gT (common) of 2 commuting mate
Sensitivity	0.1 nT (gamma) at 2 second sampling rate
Tuning/ Sampling	Fully solid state. Manual or automatic, keyboard
	selectable Cycling (Reading) Rates 0.5, 1, 2, or 3 seconds
Gradiometer	Includes a second sensor, 0.5m (20 inch) staff extender
	and processor module
Option	
Gradient Tolerance	> 7000 nT (gamma)/m
'Walking' Mode	Continuous reading, cycling as fast as 0.5 seconds
Supplied GPS	+/- 1m (Autonomous), < 1m WAAS
Accuracy	Connects to most external GPS receivers with
a recuracy	NMEA & PPS output
Standard Memory	Total Field Measurements: 84,000 readings
	Gradiometer Measurements: 67,000 readings
	Base Station Measurements: 500,000 readings
Real-Time Clock	1 second resolution, $\pm 1$ second stability over 24 hours
Real-Time Clock	or GPS time
	DS 222C LISD Adorton
Digital Data Output	RS-232C, USB Adapter
Power Supply	Rechargeable, 2.9 Ah, lead-acid dry cell battery 12 Volts
	External 12 Volt input for base station operations
Operating	40°C to +60°C (-40°F to +140°F)
Temperature	
i cinperature	
Dimensions and	Console: 250mm x 152mm x 55mm (10" x 6" x 2.25")
Weight	2.45 kg (5.4 lbs) with rechargeable battery
	Magnetic 70mm d x 175mm (2.75"d x 7")
	Sensor: 1 kg (2.2 lbs)
	Gradiometer 70mm d x 675mm (2.75"d x 26.5")
	Sensor: (with staff extender) 1.15 kg (2.5 lbs) Sensor Staff: 25mm d x 2m (1"d x 76") 0.8 kg (1.75 lbs)
	SCHSOL Statt. 2511111 u x 2111 (1 u x 70 ) 0.8 kg (1.73 108)



<b>Configuration Options</b>	15
Cycle Time	999 to 0.5 sec
Environmental	-40 to +60 ° Celsius
Gradient Tolerance	7,000 nT/m
Magnetic Readings	299,593
Operating Range	10, 000 to 120,000 nT
Power	12 V @ 0.62 A
Sensitivity	0.1 nT @ 1 sec
Weight (Console/ Sensor)	3.2 Kg
Integrated GPS	Yes

#### GEM GSM-19T Proton Precession Magnetometer (Base Station)



#### Scintrex CS-3 Survey Magnetometer

Operating Principal	Self-oscillation split-beam Cesium Vapor (non-radioactive Cs-133)
Operating Rage	15,000 to 105,000 nT
Gradient Tolerance	40,000 nT/metre
Operating Zones	10° to 85° and 95° to 170°
Hemisphere Switching	<ul><li>a) Automatic</li><li>b) Electronic control actuated by the control voltage levels (TTL/CMOS)</li><li>c) Manual</li></ul>
Sensitivity	0.0006 nT √Hz rms.
Noise Envelope	Typically 0.002 nT P-P, 0.1 to 1 Hz bandwidth
Heading Error	+/- 0.25 nT (inside the optical axis to the field direction angle range $15^{\circ}$ to $75^{\circ}$ and $105^{\circ}$ to $165^{\circ}$ )
Absolute Accuracy	<2.5 nT throughout range
Output	a) continuous signal at the Larmor frequency which is proportional to the magnetic field (proportionality constant 3.49857 Hz/nT) sine wave signal amplitude modulated on the power supply voltage b) square wave signal at the I/O connector, TTL/CMOS compatible
Information Bandwidth	Only limited by the magnetometer processor used
Sensor Head	Diameter: 63 mm (2.5") Length: 160 mm (6.3") Weight: 1.15 kg (2.6 lb)
Sensor Electronics	Diameter: 63 mm (2.5") Length: 350 mm (13.8") Weight: 1.5 kg (3.3 lb)
Cable, Sensor to Sensor Electronics	3m (9' 8"), lengths up to 5m (16' 4") available
<b>Operating Temperature</b>	-40°C to +50°C
Humidity	Up to 100%, splash proof
Supply Power	24 to 35 Volts DC
Supply Current	Approx. 1.5A at start up, decreasing to 0.5A at 20°C
Power Up Time	Less than 15 minutes at -30°C



# Pico Envirotec GRS-10 Gamma Spectrometer

Crystal volume	16.8 liters downward plus 4.2 liters upward
Resolution	256/512 channels
Tuning	Automatic using peak determination algorithm
Detector	Digital Peak
Calibration	Fully automated detector
Real Time	Linearization and gain stabilization
Communication	RS232
Detectors	Expandable to 10 detectors and digital peak
Count Rate	Up to 60,000 cps per detector
Count Capacity per channel	65545
Energy detection range:	36 KeV to 3 MeV
Cosmic channel	Above 3 MeV
Upward Shielding	RayShield <sup>®</sup> non-radioactive shielding on downward looking crystals
Downward Shielding	6mm lead plate on upward looking crystals
Spectra	Collected spectra of 256/512 channels, internal spectrum resolution 1024
Software	Calibration:High voltage adjustment, linearity correction coefficients calculation, and communication test support Real Time Data Collection: Automatic Gain real time control on natural isotopes, and PC based test and calibration software suite
Sensor	Each box containing two (2) gamma detection NaI(Tl) crystals – each 4.2 liters. (256 cu in.) (approx. 100 x 100 x 650 mm) Total volume of approx 8.4 litres or 512 cu in with detector electronics
Spectra Stabilization	Real time automatic corrections on radio nuclei: Th, U, K. No implanted sources.



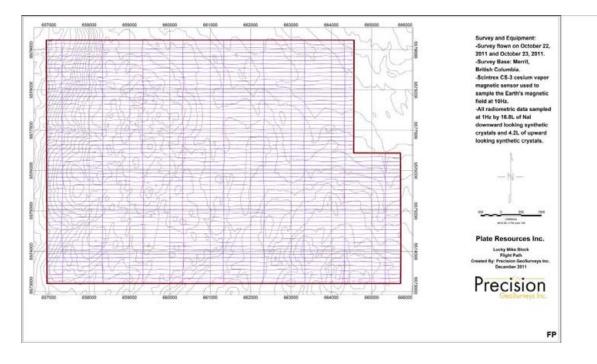
**Pico Envirotec AGIS data recorder system** (for Navigation, Gamma spectrometer, VLF-EM and Magnetometer Data Acquisition)

Functions	Airborne Geophysical Information System (AGIS) with integrated Global Positioning System Receiver (GPS) and all necessary navigation guidance software. Inputs for geophysical sensors - portable gamma ray spectrometer GRS-10, MMS4 Magnetometer, Totem 2A EM, A/D converter, temperature probe, humidity probe, barometric pressure probe, and laser altimeter. Output for the 2 line Pilot Indicator
Display	Touch screen with display of 800 x 600 pixels; customized keypad and operator keyboard. Multi- screen options for real-time viewing of all data inputs, fiducial points, flight line tracking, and GPS channels by operator.
GPS Navigation	Garmin 12-channel, WAAS-enabled
Data Sampling	Sensor dependent
Data Synchronization	Synchronized to GPS position
Data File	PEI Binary data format
Storage	80 GB
Supplied Software	<ul> <li>PEIView: Allows fast data Quality Control (QC)</li> <li>Data Format: Geosoft GBN and ASCII output</li> <li>PEIConv: For survey preparation and survey plot after data acquisition</li> </ul>
Software	<ul> <li>Calibration: High voltage adjustment, linearity correction coefficients calculation, and communication test support</li> <li>Real Time Data Collection: Automatic Gain real time control on natural isotopes and PC based test and calibration software suite</li> </ul>
Power Requirements	24 to 32 VDC
Temperature	Operating:-10 to +55 deg C; storage:-20 to +70 deg C



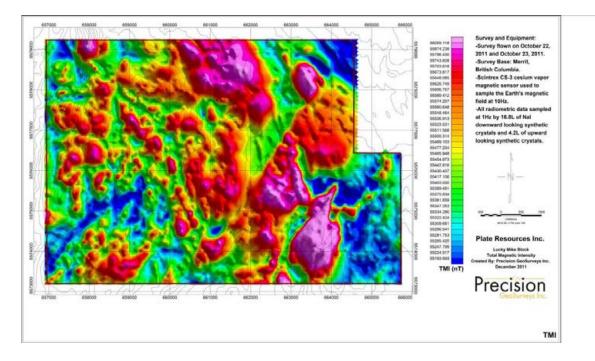
# Appendix B Maps





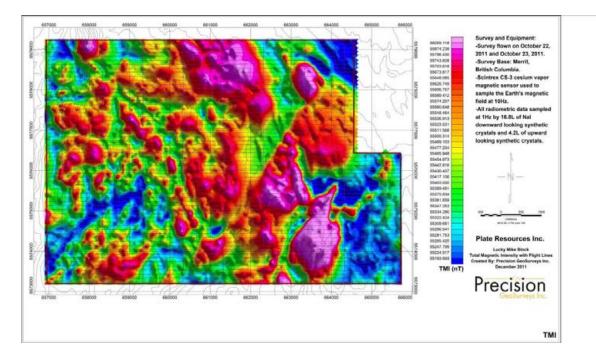
Map 1: Lucky Mike block flight path.





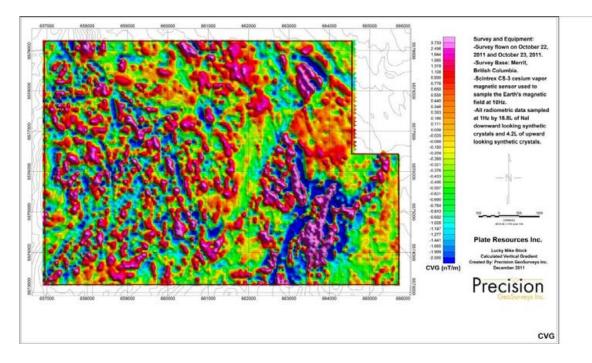
Map 2: Lucky Mike block total magnetic intensity.





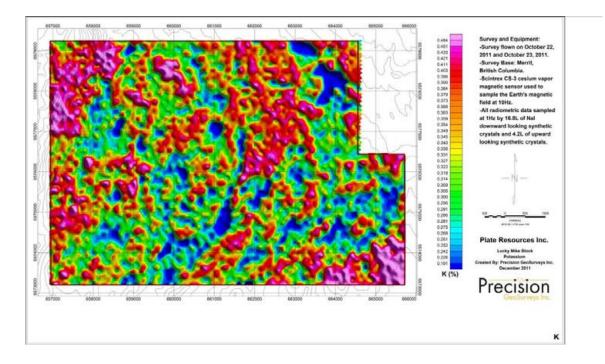
Map 3: Lucky Mike block total magnetic intensity with plotted flight lines.





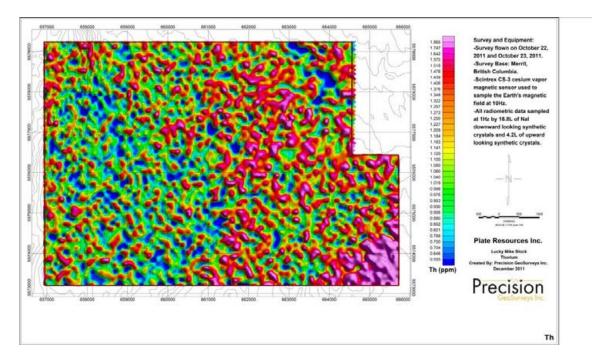
Map 4: Lucky Mike block calculated vertical gradient.





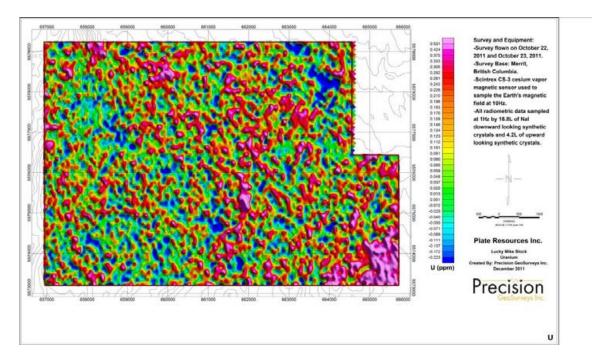
Map 5: Lucky Mike block potassium.





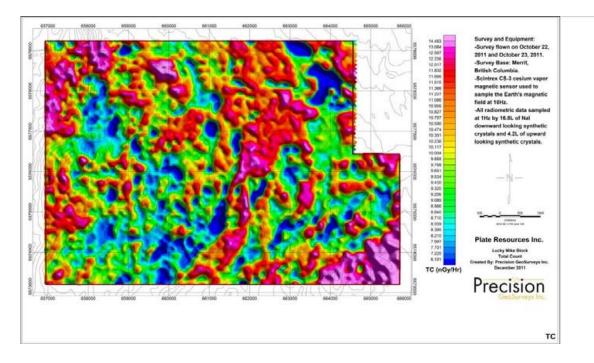
Map 6: Lucky Mike block thorium.





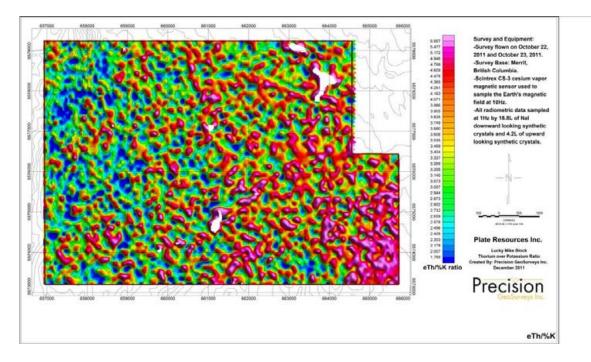
Map 7: Lucky Mike block uranium.





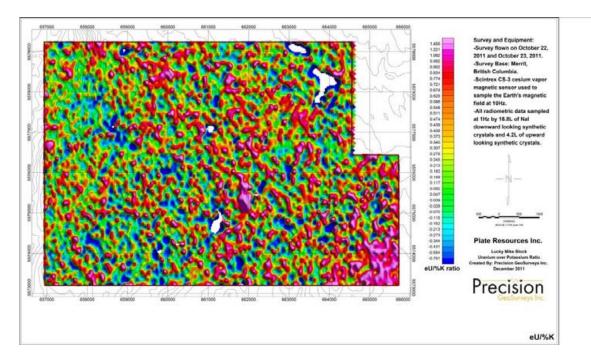
Map 8: Lucky Mike block total count.





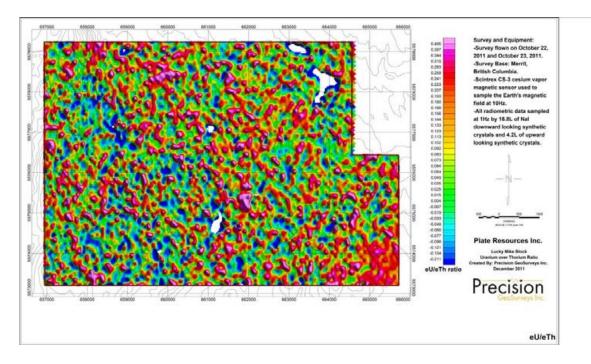
Map 9: Lucky Mike block thorium over potassium ratio.





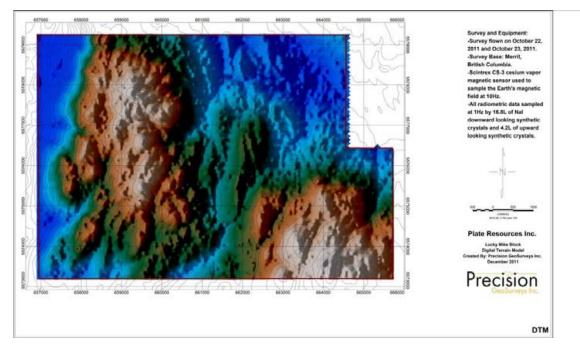
Map 10: Lucky Mike block uranium over potassium ratio.





Map 11: Lucky Mike block uranium over thorium ratio.





Map 12: Lucky Mike block digital terrain model.

