

Ministry of Forests, Mines and Lands  
BC Geological Survey

Assessment Report  
Title Page and Summary

TYPE OF REPORT [type of survey(s)]: Geological

TOTAL COST: \$12671.56

AUTHOR(S): Jarrod Brown, M.Sc., P.Geo.,

SIGNATURE(S):

Jarrod A.  
Brown

Digitally signed by Jarrod A. Brown  
DN: cn=Jarrod A. Brown, o, ou,  
email=jab@terralogicexploration.co  
m, c=CA  
Date: 2016.04.06 14:07:21 -07'00'

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): NA

YEAR OF WORK: 2015

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5583954; Dec 31, 2015; 5598082; April 2, 2016

PROPERTY NAME: Kalum

CLAIM NAME(S) (on which the work was done): 399745, 399743, 1015822, 399634 and 516381

COMMODITIES SOUGHT: Au, Ag, Cu, Mo

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: Minfile 103I019, 211

MINING DIVISION: Skeena

NTS/BCGS: 103I066, 075, 076, 085, 086, 087

LATITUDE: 54 ° 45 ' " LONGITUDE: 128 ° 54 ' " (at centre of work)

OWNER(S):

1) Eagle Plains Resources Ltd

2)

MAILING ADDRESS:

Suite 200, 44-12th Ave S.

Cranbrook, BC, V1C 2R7

OPERATOR(S) [who paid for the work]:

1) Eagle Plains Resources Ltd

2)

MAILING ADDRESS:

Suite 200, 44-12th Ave S.

Cranbrook, BC, V1C 2R7

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):

Coast Crystalling Complex, Cretaceous, Granodiorite, I-Type Magnetite Series, Bowser Lake Group, Jurassic-Cretaceous, Epithermal-Mesothermal veins, intermediate sulphidation, propylitic, ankeritic, sericitic, pyritic, Au, Ag, Galena, Arsenopyrite, Chalcopyrite, pyrite, Molybdenite, Sedimentary-Intrusive Contact, Roof Pendant, VTEM Geophysics, Structurally Linked Sher Zones

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: MEMPR ASSRPT 10523, 13303, 16026, 16411, 1795, 10128, 15455, 13455, 8393, 16302, 9329, 10827, 8201, 17890, 10821, 10045, 32174, 33752

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
<b>GEOLOGICAL (scale, area)</b>			
Ground, mapping			
Photo interpretation			
<b>GEOPHYSICAL (line-kilometres)</b>			
<b>Ground</b>			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
<b>Airborne</b>			
<b>GEOCHEMICAL (number of samples analysed for...)</b>			
Soil 1		399745	110
Silt			
Rock 18		399745, 399743, 1015822, 399634 and	1980
Other			
<b>DRILLING (total metres; number of holes, size)</b>			
Core			
Non-core			
<b>RELATED TECHNICAL</b>			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
<b>PROSPECTING (scale, area)</b>		399745, 399743, 1015822, 399634 and	10581.56
<b>PREPARATORY / PHYSICAL</b>			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
		<b>TOTAL COST:</b>	<b>\$12671.56</b>

2015 GEOLOGICAL REPORT

for the

KALUM PROPERTY  
Terrace B.C. Skeena MD  
128°54'W / 54°45' N  
TRIM Map sheets 103I066, 075, 076, 077, 085, 086, 087

Prepared for

Eagle Plains Resources Ltd.  
Suite 200, 44-12<sup>th</sup> Ave. S.  
Cranbrook BC, V1C 2R7

By  
Jarrod A. Brown, M.Sc., P.Geo.  
-Chief Geologist-  
TerraLogic Exploration Inc.  
Suite 200, 44-12<sup>th</sup> Ave. S.  
Cranbrook, B.C. V1C 2R7

March 23<sup>rd</sup>, 2015

## SUMMARY

The Kalum Property, is located approximately 35 kilometers northwest of Terrace, British Columbia, and comprised 14036.71 hectares of contiguous claim units prior to the 2015 exploration program. The claims are 100 per cent owned by Eagle Plains Resources Ltd., and subject to a one per cent NSR in trust for Bernard Kreft.

The Property is centered upon a Cretaceous-age granodioritic stock of the Coast Crystalline Complex that has intruded Jurassic to Cretaceous-age sedimentary rocks of the Bowser Lake Group. A number of high-grade, vein-type gold occurrences are associated with the contact zone and magnetic signature of the intrusive stock. These occurrences have been explored by various operators and to various degrees over the past 80 years, with the discovery of notable mineralization at the following occurrences: Kalum Lake, Burn, Quartz-Silver, Allard, Misty, Chris, Martin and Hat. Select highlights from showings remaining in the 2016 tenured area are as follows:

Misty: Campbell Resources established an extensive gold soil anomaly in 1982. Follow-up trenching revealed a system of auriferous quartz veins and veinlets in a fracture zone with grab samples returning up to 77.30 g/t Au, and chip samples returning up to 21.6 g/t Au over 60 cm.

Chris: Conwest exploration returned assays up to 4.96 oz/t Au and 173 oz/t Ag from established trenches in 1959. Prism Resources completed working rehabilitation, followed by trenching and ultimately drilled the vein occurrence in 1981. Consistent mineralization was encountered in the drilling with chip samples collected along the entire 300-metre length of the vein returning average values of 11.25 g/t Au, 80.57 g/t Ag, and 1.4 per cent Pb.

Martin: The Martin mineralization consists of gold-bearing quartz veins near the contact between sediments and granodiorite. A 30.0-centimetre sample collected from the main vein assayed 8.2 g/t Au, 137 g/t Ag, and 4.0 per cent Pb (Minister of Mines Annual Report, 1928). A second parallel vein, 50 metres from the main vein, assayed 6.8 g/t Au and 12.3 g/t Au over 0.18 metres (Geological Survey of Canada Memoir, 205).

Hat: The last recorded work by industry was in 1982 and included the collection of 16 float samples, 19 grab samples and 11 chip samples. A number of quartz veins with arsenopyrite, galena, sphalerite, and pyrite were noted, which are generally associated with a later diorite intrusive. The best geochemical values returned were 41.10 g/t Au and 9587.8 g/t Ag from a chip sample of vein material.

The current Eagle Plains tenure represents the first time the gold occurrences have been consolidated by a single company. The Bling-Rico area was discovered in 2003 by Eagle Plains. Mineralization occurs along the western margin of the main Allard Stock, just north of Mayo Creek. Numerous quartz veins are hosted in greywacke along a north-to-north-northwest-striking structural corridor. These veins are interpreted to represent en echelon sets of the main Rico vein and have historically returned high-grade gold values (BRKMR019 – 12.1 grams per tonne (g/t) Au; CGKMV036 – 12.6 g/t Au). A highly gossanous, silicified, and pyritiferous fault zone was also sampled and returned anomalous gold values of up to 600 ppb Au (CGKMR007).

In 2004, a total of five diamond drill holes (414.3 m) were drilled at the Rico Vein, which intersected a highly-sheared sub-vertical sinusoidal quartz-carbonate vein hosted in an altered andesitic dyke. The vein was typically heavily mineralized with ~5-10 per cent pyrite, one- to five per cent chalcopyrite

and one- to two per cent sphalerite; despite high gold grades, no visible gold was noted. Sampling of the drill core returned values of 2.5 metres @ 33.5 g/t Au including 0.5 metres @ 106.7 g/t Au.

Similar structural trends in the Hat Structural Zone are host to high-grade polymetallic showings such as the Babit and God occurrences, which represent both sub-vertical and flat-lying, possibly structurally imbricated, vein sets.

The 2012 exploration program consisted of a total of two diamond drill holes (420 metres) from one drill pad and focused on the southern strike extension of the Bling-Rico structure at lower elevations than the 2004 drilling. It was successful in intersecting the Bling-Rico structure in both holes along with similar geology and alteration styles. Although the 2012 drilling failed to intersect notable mineralization in the two holes, the pervasive alteration assemblages and their relationships to geology are similar to previous mineralization intersections and suggest that the Bling-Rico zone is a large scale continuous hydrothermal feature.

The 2015 exploration program included a 1-day, 2-person road assessment of the Burn Showing area, located near the Northwest transmission lines and Kitsumkalum Lake on tenures # 399745, 399743, 1015822, 399634 and 516381. A total of 18 rock samples and 1 B-horizon soil sample were collected during the program. The program included a north to south transect starting in greywacke (unit GW: Figure 4), through the Allard Granodiorite (Grano), ending in Bowser Group Mudstone (Mud). Rock sampling tested each of the 3 general units focussing on gossanous alteration, mineralized granitic dykes, or quartz veins. The best 2015 sample result came from pyritiferous quartz vein float near the southwest limit of the 2009 Burn showing soil grid. Float sample CDKMR002 returned 786 ppb Au, 55.9 ppm Ag, and 711 ppm Pb. An adjacent outcrop grab sample (CDKMR001) of orange weathered granite was low in gold, but weakly anomalous in silver (0.46 ppm Ag), molybdenum (25.9 ppm Mo), and copper (157 ppb Cu). Total exploration expenditures for 2015 were \$12671.56.

The results from the 2008-2012 programs continue to support the potential for the Kalum Property to host both high-grade Au-Ag deposits and lower-grade, bulk-tonnage-type Au mineralization. This report includes recommendations for additional work on the property, specifically in the Hat Structural Zone. Total expenditures on the property by Eagle Plains and partners since 2003 are approximately \$2,313,354.00.

## Table of Contents

Location and Access.....	5
Tenure.....	7
History and Previous Work .....	11
History of work by Eagle Plains Resources Ltd. ....	18
Geology.....	20
Regional Geology .....	20
Local Geology.....	21
Property Geology .....	24
Lithology.....	24
Metamorphism .....	25
Alteration .....	26
Paragenesis.....	26
2015 Exploration Program.....	29
2015 Exploration Program Results .....	29
Conclusions.....	31
Recommendations.....	31
References.....	32

## List of Figures

Figure 1 – Property Location Map.....	6
Figure 2a – 2015 Tenure Map.....	9
Figure 2b – 2016 Tenure Map.....	10
Figure 3a – Regional Geology Map.....	22
Figure 3b – Regional Geology Legend.....	23
Figure 4 – Property Geology Map.....	28
Figure 5 – Sample Location Map.....	30

## List of Tables

Table 1a – 2015 Kalum Tenure Summary.....	7
Table 1b – 2016 Kalum Tenure Summary.....	8

## List of Appendices

**Appendix I – Statement of Qualifications**

**Appendix II – Statement of Expenditures**

**Appendix III – ACME (Bureau Veritas) Analytical Techniques**

**Appendix IV – Sample Locations and Descriptions**

**Appendix V – Analytical Certificates**

## **LOCATION AND ACCESS**

The project area is situated 35 kilometers northwest of the city of Terrace, B.C., approximately 600 kilometres north of Vancouver (Figure 1). The Kalum property consists of 13850.22 hectares centered at UTM 6069000 N / 504550 E on NTS map sheets 103I066, 075, 076, 077, 085, 086 and 087. Terrace is located along the Yellowhead Highway, approximately 100 kilometres east of the major port of Prince Rupert, and 60 kilometres north of the port of Kitimat. Rail service is provided in Terrace, and direct air service is provided twice-daily from Vancouver. The project area is accessed by a network of B.C. Forest Service and private logging roads that cover most of the project area. Review of existing (year 2000) five-year logging plans provided by Skeena Cellulose indicate that extensive roadwork and logging activities are planned for the project area, with some of the proposed activity now underway. A hydroelectric power line runs north-south along the eastern boundary of the project area.

The Property is located within the Kitimat Range of the Coast Mountains in the area of Mount Allard (1,505 meters above sea level). Elevation varies from 300- to 1,500 meters above sea level and topography is steep to moderately steep. Outcrop is present within numerous drainages and along ridges and escarpments but is sparse on timbered slopes. Much of the Property has a thin to moderate veneer of glacial till; total outcrop exposure is estimated at 10- to 20 per cent. The eastern part of the claim block borders Kitsumkalum Lake and the Nelson River drainage is located directly north of the southern claim boundary. A number of small creeks and several Alpine lakes are also found on the claims. Tributary streams to the main drainages are deeply incised where they enter the larger U-shaped valleys.

The weather is typically coastal with wet summers and heavy snowfall in the winters. Large snowdrifts cover parts of the property until mid-June, with minor areas of permanent snow found only at the highest elevations and in sheltered areas. Vegetation varies from heather, blueberry, and huckleberry on the upper slopes to Douglas fir, hemlock, alder, and devil's club on the lower slopes below tree line.





**Eagle Plains Resources Ltd.** EPL-TSX-V  
**Kalum Property**  
Figure 1 - Property Location  
Projection - NAD 83 UTM Zone 11N  
Scale - 1: 7 500 000  
31/03/2016

## TENURE

The 2015 property consisted of 34 MTO mineral claims totalling 14036.71 hectares, located within NTS map sheets 103I066, 075, 076, 077, 085, 086 and 087 (Figure 2). Previous to the 2015 work program, all claims were in good to January 08, 2016. Eagle Plains Resources Ltd. owns 100 per cent unencumbered interest in the Property, and holds one per cent Net Smelter Royalty in trust for Bernard Kreft.

*Table 1a – 2015 Kalum Tenure Summary*

Tenure Num	Claim Name	Client Num*	Issue Date	Good To	Area Ha
1015822		138073	08/01/2013	08/01/2016	186.50
399745	YCC 8	138073	24/01/2003	08/01/2016	500.00
399746	YCC 9	138073	23/01/2003	08/01/2016	500.00
399747	YCC 10	138073	23/01/2003	08/01/2016	500.00
399748	YCC 11	138073	23/01/2003	08/01/2016	400.00
399749	YCC 12	138073	23/01/2003	08/01/2016	400.00
399750	YCC 13	138073	23/01/2003	08/01/2016	500.00
399755	YCC 18	138073	23/01/2003	08/01/2016	350.00
399756	YCC 19	138073	28/01/2003	08/01/2016	450.00
399757	YCC 20	138073	28/01/2003	08/01/2016	450.00
399759	YCC 22	138073	28/01/2003	08/01/2016	450.00
399760	YCC 23	138073	28/01/2003	08/01/2016	300.00
399762	YCC 25	138073	30/01/2003	08/01/2016	500.00
399763	YCC 26	138073	30/01/2003	08/01/2016	300.00
399764	YCC 27	138073	30/01/2003	08/01/2016	375.00
399766	YCC 64	138073	23/01/2003	08/01/2016	25.00
399767	YCC 65	138073	23/01/2003	08/01/2016	25.00
399743	YCC 6	138073	22/01/2003	08/01/2016	500.00
399744	YCC 7	138073	24/01/2003	08/01/2016	500.00
399634	YCC 1	138073	21/01/2003	08/01/2016	500.00
399635	YCC 2	138073	21/01/2003	08/01/2016	500.00
404554	DREAM 19	138073	04/08/2003	08/01/2016	100.00
<b>516372</b>		138073	08/07/2005	08/01/2016	522.20
516374		138073	08/07/2005	08/01/2016	559.20
516379		138073	08/07/2005	08/01/2016	933.08
516381		138073	08/07/2005	08/01/2016	671.30
516382		138073	08/07/2005	08/01/2016	671.76
516404		138073	08/07/2005	08/01/2016	205.31
516405		138073	08/07/2005	08/01/2016	74.58

516409		138073	08/07/2005	08/01/2016	503.03
516411		138073	08/07/2005	08/01/2016	223.58
<b>516412</b>		138073	08/07/2005	08/01/2016	857.13
504249	HAT 3	138073	19/01/2005	08/01/2016	223.91
516401		138073	08/07/2005	08/01/2016	280.15
<b>Total:</b>	34				<b>14036.71</b>

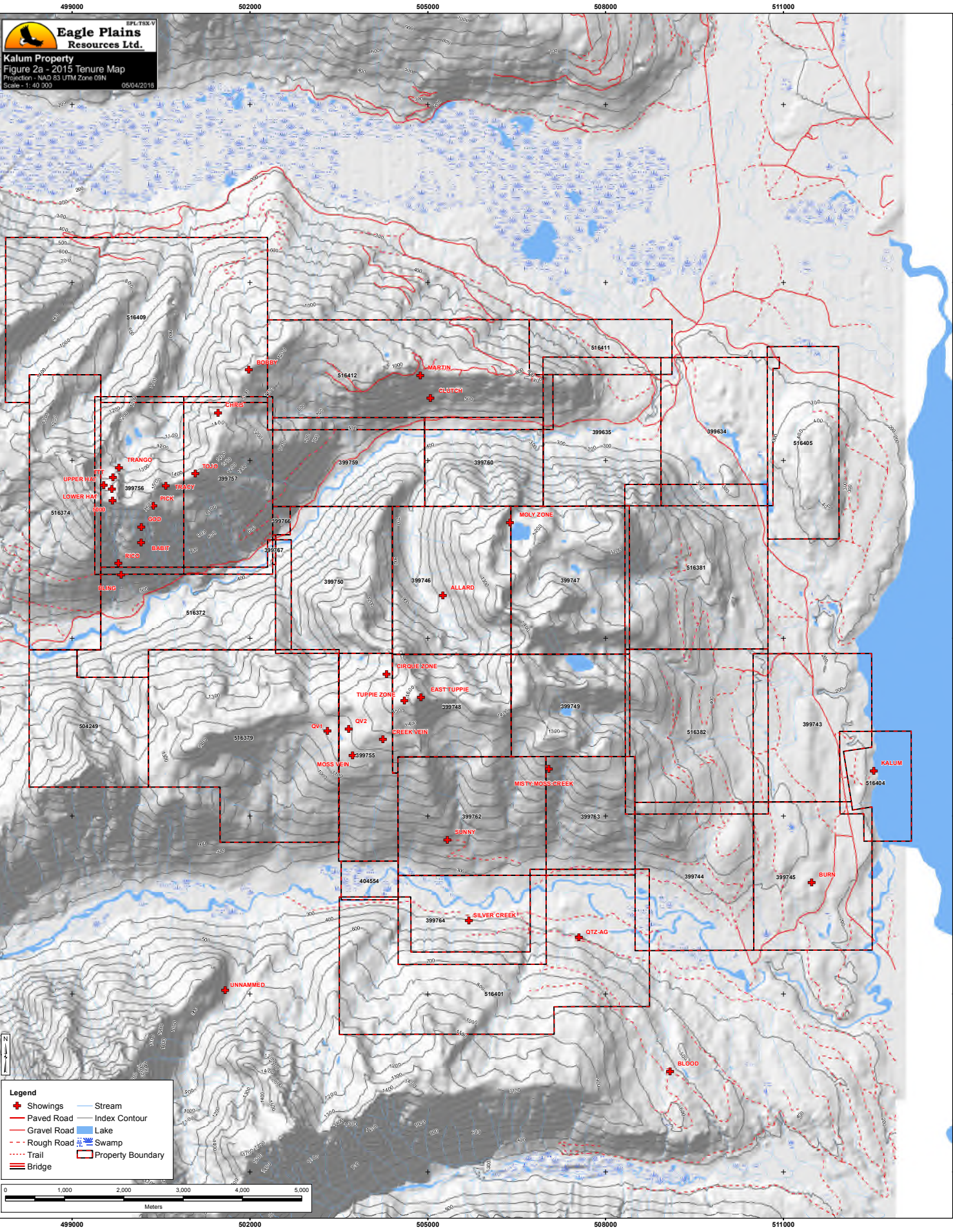
\*138073 is Eagle Plains Resources Ltd.

In December of 2015, parts of the Kalum tenure were reduced and field and PAC expenditures were applied and selectively grouped in order to preserve the remaining 6 tenures, totalling 1658.98 ha (Figure 2b, Table 1b).

Table 1b – 2016 Kalum Tenure Summary

<b>Tenure Num</b>	<b>Claim Name</b>	<b>Client Num</b>	<b>Issue Date</b>	<b>Good To**</b>	<b>Hectares</b>
516372		138073	16/12/2015	25/02/2018	149.18
516412		138073	16/12/2015	25/02/2018	354.05
1040574		138073	17/12/2015	08/01/2021	876.12
1040788	KALUM	138073	30/12/2015	30/12/2016	37.30
1040563		138073	16/12/2015	25/02/2018	37.29
1040564		138073	16/12/2015	25/02/2018	205.03
<b>Total:</b>	6				<b>1658.98</b>

\*\*incorporates 2015 SOW on reduced tenures



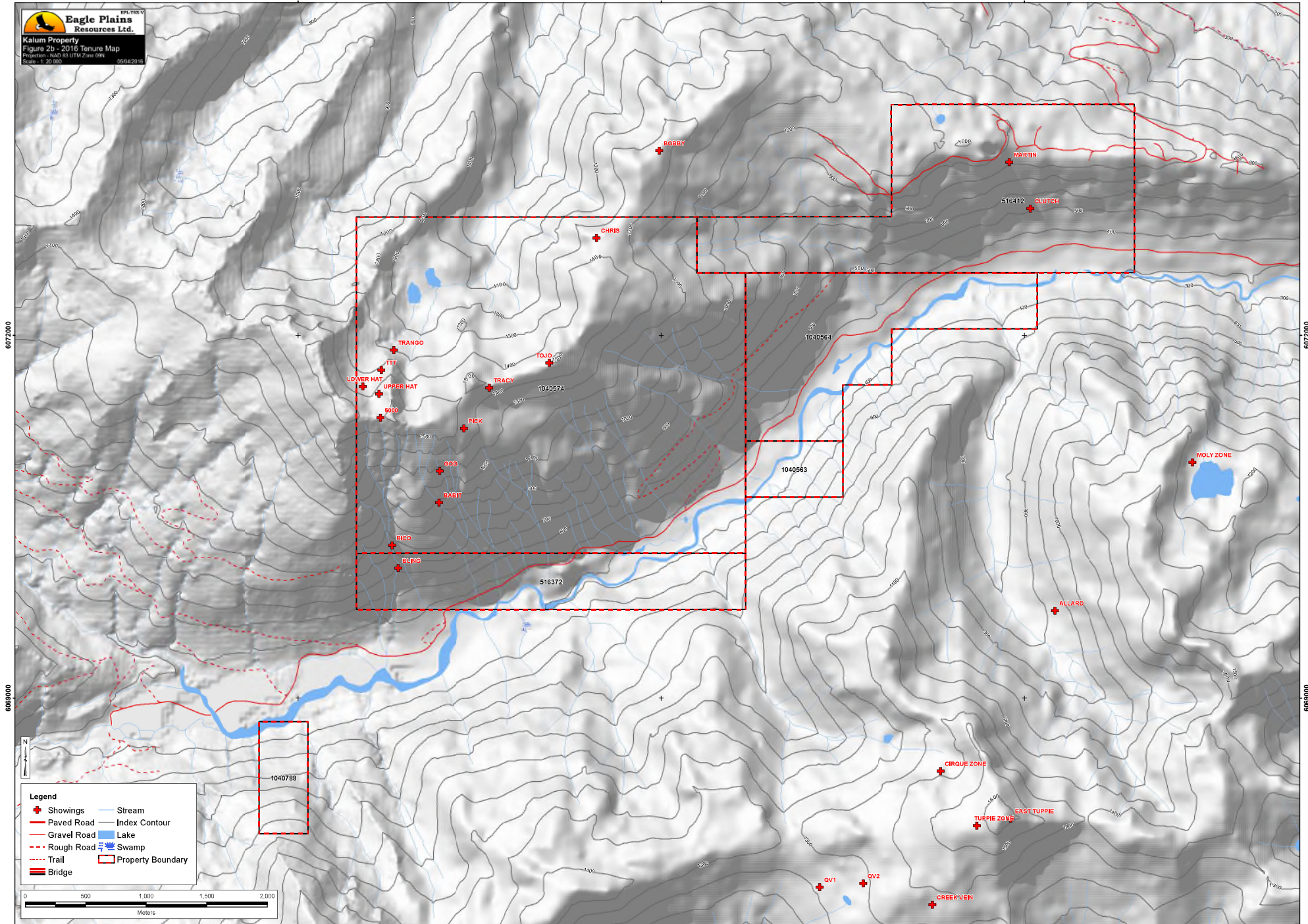

**Eagle Plains Resources Ltd.**  
 Kalum Property  
 Figure 2a - 2015 Tenure Map  
 Projection: NAD 83 UTM Zone 08N  
 Scale: 1:40,000  
 05/04/2018

**Legend**

- + Showings
- Paved Road
- - - Gravel Road
- - - - Rough Road
- - - - - Trail
- = Bridge
- Stream
- Index Contour
- Lake
- + Swamp
- Property Boundary



**Eagle Plains Resources Ltd.**  
 Kalum Property  
 Figure 2b - 2016 Tenure Map  
 Projection: NAD83 UTM Zone 18N  
 Scale: 1:20,000  
 06/04/2016



607200

607200

606900

606900

**Legend**

- Showings
- Paved Road
- Gravel Road
- Rough Road
- Trail
- Bridge
- Stream
- Index Contour
- Lake
- Swamp
- Property Boundary



## **HISTORY AND PREVIOUS WORK**

Previous exploration on the Property was directed at evaluating a number of separate mineral showings now located within the Kalum Property boundaries. Prior to Eagle Plains' involvement in the project, each showing area had been worked at various times by various owners and operators; the current Eagle Plains land position represents the first time the mineral showings have been consolidated and evaluated as a whole by a single owner. The locations of the Minfile Showings with respect to the Property boundaries are shown in Figure 2.

### **Kalum Lake and Burn Occurrences**

MINFILE NAME **KALUM LAKE**; OTHER NAMES PORTLAND, BAV, GOLD BAR, BURN

MINFILE NUMBER **103I 019**

and

MINFILE NAME **BURN**; OTHER NAMES KALUM LAKE, PORTLAND

MINFILE NUMBER **103I 211**

The earliest recorded activity on the Kalum Lake and Burn showing area was 1919, when C.A. Smith of Terrace staked the original Lakeside claims. The Portland and West Portland claims were staked in 1922. Between 1923 and 1925, the newly-formed Kalum Mines Ltd. conducted considerable work on the Property, which consisted of shaft sinking and drift development along the main (Portland - #1) vein that was discovered in 1919. Two shafts were sunk with the east shaft reaching 9.1 meters (30 feet) depth and the main or west shaft developed to 18.2 metres (60 feet) with 64 metres (210 feet) of drifting westerly along the vein. A selected grab sample collected in 1930 assayed 21.3 g/t (0.62 ounces per ton (oz/t)) gold and 75.4 g/t (2.2 oz/t) silver. Approximately 90 metres (295 feet) southeast of the main vein, Kalum Mines Ltd. put in a 26-metre (85 foot) adit along a second vein (#2 Vein). Assay values from samples of this vein collected in 1937 contained only minor amounts of gold and silver.

In 1972, the original claims were restaked as the Bav 1-4 by J. Apolczer of Terrace, B.C. One drill hole 114 metres (374 feet) in length was drilled in an attempt to intersect the main vein and a zone of silicification lying adjacent to the known mineralized structure and workings. Drill records indicate that the main vein was not located but granodiorite with areas of quartz veining and weak alteration were intersected. Gold and silver values ranged from 0.07- to 0.38 g/t (0.002 - 0.011 oz/t) and 2.7 g/t to 0.68 g/t (0.08 - 0.02 oz/t) respectively. Cavey and Chapman (1987) believed that this hole was drilled almost parallel to the strike of the main vein. The total cost of the 1972 program was \$9,408.07.

In November of 1983, the property was owned by Bradner Resources. Kalum Lake Mining Group was formed at this time and they trenched and sampled along the Main and #2 veins. Values up to 251 g/t (7.32 oz/t) gold and 225.6 g/t (6.58 oz/t) silver were obtained in a few grab samples collected from the #2 vein. Five trenches were dug using a tracked hoe accompanied by blasting and hand trenching. Several of the trenches did not reach bedrock and were abandoned due to slope stability concerns. This work was not filed for assessment and no record of the costs has been located.

In 1984, OreQuest Consultants were retained by Bradner Resources to complete a soil geochemical survey over the southwestern portion of the claim block (Burn Showing area). A total of 576 soil samples and 17 rock samples were collected. A four-kilometre cut base line was used for control. Results from the survey indicated a coincident Au-Ag-As anomaly in the area of a granodiorite knob

(Cavey and Howe, 1984). The highest gold value returned from the soil geochemical survey was 9,400 ppb. The total cost of the 1984 program was \$18,540.62.

In 1987, a 395-metre (1,300 foot) NQ diamond drilling program was undertaken on the Kalum property under the supervision of OreQuest Consultants Ltd. At the time, the claims were owned by Terracamp Development Ltd. through an option with the Kalum Lake Mining Group. The objective of the program was to test the known gold bearing quartz veins and locate additional mineralized zones. Two holes were drilled from one setup, with a third hole collared approximately 60 metres southeast. The continuity of the vein system and mineralization were established to a depth of 120 metres and 65 metres for the #1 and #2 veins respectively. Strike extensions of 150 metres on the #1 vein and 60 metres on the #2 vein were also proven. Visible gold was encountered in the #2 vein in holes DDH-TR-87-1 and 87-2, and was also present at surface in the #1 vein. Assay values of up to 63.22 g/t (1.86 oz/t) Au and 170 g/t (4.9 oz/t) Ag were returned from drill intersections that were comparable with high grade surface samples of up to 250.3 g/t (7.3 oz/t) gold and 476.6 g/t (13.9 oz/t) Ag. Anomalous gold values were also recorded for up to five metres on either side of the #2 vein (Cavey and Chapman, 1987). Drill core from the 1987 program was stored at the drill sites but was not found during the recent property visit.

A 52.4-kilogram bulk sample taken from these veins assayed 11.86 g/t Au and 15.43 g/t Ag. Inferred reserves reported for the two main veins are estimated at 9434 tonnes grading 16.1 g/t Au to a depth of 45 metres (Collins and Arnold, 1987). The authors of this report do not believe that this inferred reserve estimate is in accordance with sections 1.3 and 1.4 of the Instrument. Further diamond drilling was recommended to test the vertical and lateral extensions of the vein systems. Additional mapping, sampling, and trenching with follow up diamond drilling were also recommended for the south (Burn) showing area. Reconnaissance sampling of historical trenches in the area of the Burn showing returned values of up to 16.8 g/t (0.49 oz/t) Au, 242.1 g/t (7.06 oz/t) Ag and 0.5 per cent Cu. The total cost of the 1987 program was \$65,780.48.

In 1987, Terracamp Developments Ltd. retained Guillermo Salazar, P.Eng., to evaluate the potential grade and tonnage available in the Main (#1) and #2 veins on the Kalum Lake property. The Salazar report relied on data generated by past work programs, particularly OREQUEST Consultants Ltd. (Cavey and Howe, 1984; Cavey and Chapman, 1987).

The 1987 Salazar report recommended a multi-stage revenue-producing program designed to confirm the resources on the Kalum Lake property. Stage One recommendations included preparation of a topographic contour map from 1:20,000 scale air photos, re-opening of the trench between the high grade pit and hole TR-87-3 in the #2 vein, and drilling into the Main and #2 veins. Salazar suggested the material extracted from the trench be processed and the recovered gold sold. Stage Two recommendations included re-opening of the 1923 adit after confirmation that it followed the #2 vein and/or trenching to the northeast from the high-grade pit. Stage Three recommendations included driving an adit into the upper 15 metres of the #2 vein; Stage Three work was dependent on results from the first two stages. The total cost estimated for completion of Stage One, Two, and Three was approximately \$300,000.00 (Salazar, 1987).

The last work recorded on the Kalum Lake property was in 1988. Terracamp Developments Ltd. retained Richard E. Arndt, P.Eng., P.Geol., to carry out an underground exploration program. The purpose of this work was to obtain a bulk sample of material from a quartz vein exposed at the surface

by trenching, and to determine the lateral and at-depth size and grade of the #2 Vein. The planned work consisted of driving a crosscut to the vein from the north and then drifting along the vein to collect a sample of ore-grade material. A small underground diamond-drilling program was also anticipated.

McElhanney Associates of Terrace were retained to prepare a detailed topographic map of the site surrounding the proposed mining activity and to be involved in surveying of the portal and underground workings. The map was done at a scale of 1:500 with two-metre contour intervals. Based on the results from this work, an underground program of approximately 100 metres was anticipated, consisting of an initial 2.45-by-2.45 metre (8-by-8 ft) crosscut and a 2.13 -by 2.13-metre (7 -by-7 ft) drift. The design also included three diamond drill stations. The mine design was for a tracked crosscut with a timbered trestle at the portal to dump muck cars. Northward Mining Contractors was mobilized to the site on September 6, 1988, and the portal was collared on September 9. On October 11th, the #2 Vein was intersected at 91.6 metres from the portal mouth and the crosscut was terminated at 94.18 metres. This face is also approximately the south wall of the 1920's drift, with the back of the 1920's drift one metre below the floor of the 1988 crosscut. A bulkhead was placed in front of the break into the old drift and a slash was started to turn on the #2 Vein.

On October 12, 1988, work was halted on the slash due to budget considerations and Northward started demobilization of their equipment and crew. After the mining contractor left the site, OreQuest Consultants Ltd. surveyed, mapped, and sampled the crosscut as well as the old drift. However, the area where the crosscut broke into the old drift was unstable, with bad ground on the back of the drift. Therefore, no detailed mapping or sampling programs were attempted.

Recommendations from the program included surface diamond drilling to carefully test the #2 Vein along its strike length and down-dip extension to better establish control for further underground exploration drifting. There was no statement of costs included with the 1988 report.

### **Quartz-Silver and Allard Occurrences**

MINFILE NAME **QUARTZ – SILVER**; OTHER NAMES QS1 - 6

MINFILE NUMBER **103I 018**

and

MINFILE NAME **ALLARD**

MINFILE NUMBER **103I 151**

The original discovery was made in 1968 by John Apolczer, who, during road building for logging operations, exposed a well-mineralized quartz-sulfide vein. The Quartz-Silver claims were located by Apolczer and Bates (no first name available) to cover this showing. Subsequent trenching and blasting were undertaken to increase exposure of the discovery showing and several other zones were identified. The first record of work on the Quartz-Silver claims was carried out by W.M. Sharp for Atlantis Mines in 1969. This consisted of preliminary geological mapping and sampling, primarily along the road cut. In 1970, Apolczer and Bates had the property returned to them and they completed two pack-sack diamond-drill holes in the vicinity of the quartz-sulfide vein. Recovery was poor; however sludge samples were collected and assayed. No record of the results was found.

In 1985, Imperial Metals acquired an option on the property and conducted geological mapping and soil sampling (EMPR ASS RPT 13455). The bulk of this work was carried out in the vicinity of the



main showing. A 3.5-kilometre grid was established and approximately 112 hectares were mapped on a scale of 1:5,000. A total of 132 soil samples were collected and analyzed by multi element I.C.P. with gold analyzed by atomic absorption. Some weak coincident Au-Pb soil anomalies were reported from this work; however no follow up was implemented. A 60-centimetre chip sample across the main sulphide vein returned values of 0.34 g/t (0.01 oz/t) Au, 78.9 g/t (2.3 oz/t) Ag, 7.74 per cent Pb and 15.38 per cent Zn. The total cost of the 1985 program was \$7025.00.

The last recorded work on the QUARTZ-SILVER MinFile showing was in 1987, at which time the ground was held by Mount Allard Resources through an option agreement with the Kalum Mining Group. The work was carried out by OreQuest Consultants Limited (EMPR ASS RPT 16411), and the program included geological mapping, soil and rock geochemistry, prospecting, VLF, and magnetometer surveying. Cut lines were established over two zones on the property for survey control. A total of 828 soil samples, 90 silt samples, eight rock chip samples, and 14 rock samples were collected. Soil and silt geochemical surveys outlined a number of weak- to moderate Au-Ag-Pb-Zn-Cu anomalies. Results of the VLF and magnetometer surveys were largely inconclusive, with a weak east-west trend identified by the magnetometer on the northern grid. Mapping was limited to creek beds and road cuts due to overburden cover over most of the property. A number of felsic dykes, as well as minor quartz-sulphide veins were noted. A program of additional geochemical sampling and trenching was recommended. The cost of the program was not included in the assessment report.

### **Misty Occurrence**

MINFILE NAME **MISTY**; OTHER NAMES MOSS, CREEK

MINFILE NUMBER **103I 213**

The Misty claim was staked by C.C.H. Resources Ltd. in 1979 on the basis of a stream sediment anomaly indicated by a B.C. Ministry of Mines regional silt sampling program. Geological mapping, prospecting, silt sampling, and reconnaissance soil sampling were carried out in 1979 and 1980. The soil geochemistry indicated widespread anomalous gold and arsenic values to the east of the Misty claim and led to the staking of the Misty I claim in 1981. The total costs of the programs were \$2,193.98 and \$8,210.99 respectively.

In August of 1980, the Misty claim was sold to C.C.H. Resources Ltd.'s parent company, Campbell Chibougamu Mines Ltd., which later changed its name to Campbell Resources Inc. The claims were then sold to another wholly owned subsidiary, C.C.H. Minerals Ltd., on April 6, 1981, with Campbell Resources remaining as operator. Campbell Resources completed geological mapping and soil sampling in 1981 (EMPR ASS RPT 10128). A total of 303 soil samples and six rock samples were collected and analyzed for Au, Ag, and As. The soil geochemistry indicated a large area with anomalous gold values. The total cost of the 1981 program was \$17,959.75.

An extensive program was carried out by Campbell Resources during 1982 to investigate the gold anomalies (EMPR ASS RPT 10827). This included staking the Misty II claim and hand-trenching and rock geochemistry over the soil geochemical anomalies. A total of 40 soil samples and 113 rock chip samples were collected, and a total of 102 metres of trenching and 270.21 metres of NQ diamond drilling was completed. A system of auriferous quartz veins and veinlets in a fracture zone was found in the soil geochemical anomaly on the Misty I claim. Assays of up to 77.30 g/t (2.25 oz/t) gold were obtained from the narrow veinlets. Chip sampling in the trenches returned values of up to 21.6 g/t Au over 60 centimetres and 4.9 g/t over 1.1 metres. The geochemical results indicated good correlation

between bedrock gold sources and anomalous soil samples. Five diamond-drill holes tested the fracture zone and gold soil geochemical anomaly in the area of the Wishbone anomaly trenches. Core recoveries were very poor and led to inconclusive results. Further work was recommended including detailed mapping, soil geochemistry, trenching, and diamond drilling. The total cost of the 1982 program was \$68,825.56.

Mascot Gold Mines Ltd. purchased the claims in 1984. In 1986, Mascot Gold carried out prospecting and soil geochemical and geophysical surveys (EMPR ASS RPT 15455). A total of 336 soil samples, three silt samples and 87 rock samples were collected. The results extended existing soil geochemical anomalies and located additional gold soil anomalies. A total of 8.725 line kilometres of VLF and 7.8 kilometres of total field magnetics were run. The magnetic survey was successful in locating the contact between sedimentary and intrusive rocks. The results from the VLF survey were largely inconclusive. The total cost of the 1986 program was \$36,532.00.

Work in 1987 by Mascot consisted of line cutting, prospecting, and soil and rock geochemical sampling (EMPR ASS RPT 16302). Several Au geochemical anomalies with coincidental As, Pb, and Zn were found. The Creek and Moss veins were also located during this time, and the Misty III and IV claims were staked. Further work was recommended including geological mapping, trenching, soil sampling, and diamond drilling. The total cost of the 1987 program was \$50,879.77.

In 1988, the property was acquired by Corona Corporation with the 1988 field program on the Misty claims funded by Goldways Resources Ltd. The 1988 program concentrated on investigating the gold geochemical anomalies and quartz veins on the Misty IV and Misty claims (EMPR ASS RPT 17952). Soil sampling, magnetometer and VLF EM surveying, geological mapping, and prospecting were carried out. A total of 110 rock samples and 560 soil samples were collected and analyzed for 31 element ICP plus gold-by-fire assay.

No broad-Au soil geochemical anomalies were located during the 1988 program. A number of quartz bedrock and float samples located on the property gave anomalous values in gold and silver. Prospecting of the previously located soil anomalies indicated that trenching would be required to determine the causes of the anomalies. A total of 20.5 kilometres of VLF electromagnetic and 20.8 kilometres of total field magnetic ground surveying were completed. The magnetic survey appeared to be partially successful in distinguishing contacts between intrusive and sedimentary rocks. The VLF EM survey indicated four main northwest-trending conductor systems. A limited program of trenching was carried out on the Creek and Moss veins. Recommendations for further work included:

- 1) Completing the magnetometer and VLF EM surveys on the 1987 and 1988 grids.
- 2) Completing the geological mapping and prospecting over the remaining parts of the property.
- 3) Investigating the VLF EM conductor systems by prospecting and/or trenching to test their association with shearing and possibly quartz veining and precious metal mineralization.
- 4) Investigating the 1987 Au and As soil geochemical anomalies by hand trenching.
- 5) Completing the trenching and sampling on the Creek and Moss veins to fully evaluate them.

The total cost of the 1988 program was \$55,000.00. The 1988 program is the last work recorded on the Misty Property and Misty showing area.

### **Chris Occurrence**

MINFILE NAME **CHRIS**; OTHER NAMES ORO, IKE, BEAVER, MAYOU, LAURA

MINFILE NUMBER **103I 174**

The Chris vein showing was first staked in 1945 by S.R. Ling and W. Jorgenson; minimal work was done by the original stakers. The first physical work in the form of a number of trenches was completed in 1950 by Lake Expanse Gold Mines Ltd. There was no further work until 1959, when Conwest Exploration Co. Ltd. located a number of new trenches and established a good walking trail to the property from the existing logging road system. Samples from their trenching averaged 0.5 oz/t Au and 2.8 oz/t Ag, with assays up to 4.96 oz/t Au and 173 oz/t Ag. Conwest dropped their option on the property and no further work was completed until 1962 when Kootenay Base Metals drove a 57.1-metre (202-foot) adit into the vein structure.

No other significant work was done on the property until Prism Resources Ltd. staked the Chris claims in September, 1979. Prism's 1980 work consisted of clearing the portal, cleaning and mapping the adit. (EMPR ASS RPT 8393). The 1980 report concluded that the 1962 adit was in sound shape, but appeared to have missed the major shear vein system exposed on surface in the area of the portal. Recommendations included detailed sampling of veins, surface prospecting, and geophysics to determine the presence of parallel structures to the main vein system, and underground diamond drilling. The total cost of the 1980 program was \$7,179.82.

1981 work by Prism Resources included: 122.7 metres (402.5 feet) of IAX drilling in five holes; geological mapping at a scale of 1:1,000 over a 300 metre-by-200 metre grid; cleaning, blasting, and sampling of 23 old and new trenches; installing a geochemical 400 metre-by-250 metre grid with a 50-metre line spacing and a 25-metre sample spacing; collecting a total of 99 samples; and conducting a topographic survey of the two previously mentioned grids.

The results from the 1981 program indicated that gold and silver values were relatively consistent throughout the 300-metre length of the main vein system; the average values of chip samples collected along the entire 300-metre length of the vein were 11.25 g/t Au, 80.57 g/t Ag, and 1.4 per cent Pb. The greatest widths of the vein are at the east and west ends; the west end is cut off by cliffs but the east end is still open to further exploration. Sampling of another vein 40 metres to the south of the Main vein returned average values of 2.09 g/t Au, 8.23 g/t Ag, and 0.1 per cent Pb over approximately 35 metres of strike length. Soil geochemical results indicated the presence of a possible mineralized structure along strike to the east of the known Main vein and continuing for another 300 metres.

Five IAX-size drill holes were drilled to test for surface and underground extensions of the Main vein: three from surface (107.0 metres) and two underground (15.5 metres) with an aggregate length of 122.7 metres (402.5 feet) of IAX-size core. Core recoveries were very poor, and although mineralized quartz veins were intersected, the size and grade of the veins could not be evaluated (Cavey, 1981). The drill contract was terminated because the drill was not getting the recoveries necessary to properly evaluate the property.

Recommendations in the 1981 report included further diamond drilling using a larger drill to improve core recovery. The report also concluded that consideration must be given to road access to the property from the existing system of logging roads. The total cost of the 1981 program was \$48,591.87.

### **Martin Occurrence**

MINFILE NAME: **MARTIN**; OTHER NAMES: NOBLE, REX, GLEN NO.1

MINFILE NUMBER **103I 020**

No assessment work has been recorded on the Martin showing area. The Martin mineralization consists of gold-bearing quartz veins near the contact between sediments and granodiorite. A 30.0-centimetre sample collected from the main vein assayed 8.2 g/t Au, 137 g/t Ag, and 4.0 per cent Pb (Minister of Mines Annual Report, 1928). A second parallel vein, 50 metres from the main vein, assayed 6.8 g/t Au and 12.3 g/t Au over 0.18 metres (Geological Survey of Canada Memoir, 205).

### **Hat Occurrence**

MINFILE NAME **HAT**; OTHER NAMES DRUM, KIT

MINFILE NUMBER **103I 173**

Don Young and Peter Ogryzlo staked the KM and Drum claims in 1979 to follow up a reconnaissance geochemical survey sponsored by the B.C. Dept. of Mines and Petroleum Resources; this survey indicated that the Mayo Creek ridge was anomalous in arsenic and silver. Reconnaissance prospecting and following float and stream sediment dispersion trains led to the discovery and acquisition of the Hat and Flare claims in 1980. The first recorded assessment work on the Hat showing area was in 1981(EMPR ASS RPT 10045). The property owners undertook stream sediment sampling, prospecting, and geological mapping. Detailed sampling was conducted on the projection of the CHRIS vein mineralization onto the KM9 claim, and on the Drum arsenopyrite showing. A total of 40 stream sediment samples, 15 soil samples, and 10 rock chip samples were collected and analyzed for Au, Ag, Hg, Cu, Pb, Zn, As and Co. The report concluded that precious metal values appeared to be associated with quartz-arsenopyrite veins, which in turn appear to be associated with a diorite intrusion. Further work including detailed soil geochemistry, trenching, and diamond drilling was recommended. The total cost of the 1980-81 work was \$7,682.00.

The last recorded work on the property was conducted by the owners during the 1982 field season (EMPR ASS RPT 10821). The goal of the project was to map and sample veins on the property. Geological mapping was included in the sampling program, and float prospecting was used to search for other veins. Geochemical rock analyses were performed to clarify trace element associations with the precious metals. A total of 16 float samples, 19 grab samples, 11 chip samples, and one stream sediment sample were collected. The samples were analyzed using a 30-element ICP package. A number of quartz veins with arsenopyrite, galena, sphalerite, and pyrite were noted, which are generally associated with a later diorite intrusive. The best geochemical values returned were 41.10 g/t Au and 9587.8 g/t Ag from a chip sample of vein material. The total cost of the 1982 work was \$5,890.00.

The Full and Moon claims were staked in 1986 by Don Young and Peter Ogryzlo to cover mineralized quartz veins discovered approximately three kilometres southwest of the Chris showing. The veins were discovered by following up stream-sediment geochemical anomalies and quartz float dispersion trains. No previous reference to these veins is known, and therefore the largest vein may have been exposed by retreating snow and ice shortly before the discovery.

The object of the 1987 program was to chip sample and map the most highly mineralized veins discovered during the initial exploration, to sample the mineralized stock-work zones, and to extend the

area of mapping and prospecting (EMPR ASS RPT 17890). Geological mapping located a number of precious-metal-bearing quartz veins clustered in and around a younger composite multiphase stock of predominately diorite composition. A total of seven soil and 26 rock samples were collected and analyzed by induced coupled plasma (ICP) for Cu, Pb, Ag, and As, with all samples analyzed for Au using Atomic Absorption (AA).

Over 30 veins were noted associated with the diorite stock, 15 of which had significant precious metal values. The 5000 vein returned values of 6.1 g/t Au and 17.3 g/t Ag from a 100-centimetre chip sample, the 4700 vein returned values of 7.3 g/t Au and 1077 g/t Ag from a 45-centimetre chip, and the Pick vein returned 4.8 g/t Au and 380 g/t Ag over a 70-centimetre chip. Samples from veins discovered during the 1987 program also returned precious metal values of up to 5.7 g/t Au and 429.6 g/t Ag from a 30-centimetre chip. Also significant was a grab sample of ankeritic vein material collected from a talus field which returned a value of 50.4 g/t Ag. Further work was recommended for the Full and Moon claims including more detailed sampling at depth of the 5000, 4700 and Pick veins to determine potential for economic tonnage and grade, as well as more detailed sampling on the veins discovered during 1987. The report also recommended further exploration of ankeritic alteration zones. The total cost of the 1987 program was \$4,824.95. Work by Eagle Plains Resources Ltd. in 2003 indicated that the Full Moon showing is likely the same structure referred to as the Hat.

### **History of work by Eagle Plains Resources Ltd.**

#### **2003 Exploration by Eagle Plains Resources Ltd.**

Eagle Plains Resources Ltd. completed a significant exploration program on the Kalum Au-Ag property between June and August, 2003. The program included geological mapping and prospecting, rock grab and channel sampling, and stream sediment and soil sampling. The program was very successful and defined numerous new, high-grade zones of Au-Ag mineralization. These included four new showings: Bling/Rico, Tuppie, Tojo, and Nelson Creek. In addition, many of the historical showings on the property were located, sampled and surveyed. This work confirmed that the Kalum property is highly prospective for economically viable Au-Ag epithermal vein-type deposits.

The 2003 exploration program consisted of silt sampling, soil sampling, geological mapping, and prospecting. A total of 1,225 soil samples, 408 rock samples, and 341 silt samples were collected with 1:10,000 scale geological mapping traverses over approximately 100 square kilometres. For a detailed account of the 2003 exploration program and results, please refer to Downie and Mosher, 2003 and Downie and Stephens, 2003. Total expenditures for the 2003 exploration program were C\$258,745.60.

#### **2004 Exploration by Eagle Plains Resources Ltd.**

Work by Eagle Plains in 2004 followed up on recommendations generated by the 2003 work. This consisted of a three-phase program that included a 1,512.3-kilometre winter VTEM airborne-geophysical survey and an extensive geochemical program that included 1,578 soil samples, 158 rock samples, 152 vein samples, and seven silt samples. A two week, five-person fly camp was also established just below the Tuppie showing. This program also included a 19-hole diamond-drill program that intersected high-grade Au mineralization at every showing tested. For a detailed account of the 2004 exploration program and its results, please refer to Downie and Gallagher, 2004. Total expenditures for the 2004 exploration program were C\$909,719.00.

### **2005 Exploration by Eagle Plains Resources Ltd.**

Analytic results derived from the 2003-2004 geologic, geophysical, and geochemical dataset are consistent with the Hat area of the Kalum property, possessing the best potential to host high-grade and bulk-tonnage Au mineralization. Eagle Plains Resources Ltd. developed an exploration program to test this new theory; this consisted of a two-week, 10-person fly camp in the Hat area, from which surficial geology and geochemistry exploration programs were based. A modest diamond drilling program, consisting of three holes from one pad totaling 568.75 metres was also based from this camp. Although the limited drill program did not intersect ore grade Au-Ag mineralization, results from the surface programs were very encouraging, resulting in the discovery of three new high-grade polymetallic Au – Ag showings. Total 2005 exploration expenditures by Eagle Plains Resources Ltd. on the Kalum property were \$327,086.87.

On October 9, 2007, Mountain Capital Inc. and Eagle Plains Resources Ltd. signed a letter of intent pursuant to an option agreement on the Kalum Property. Under the terms of the option agreement, MCI can earn 60 per cent interest in the Kalum property—commencing on the date of signing of a formal agreement by both parties—by making make cash payments to Eagle Plains totalling \$500,000.00, carrying out \$4 million in exploration expenditures on the property, and issuing an aggregate of 500,000 common shares of MCI.

### **2008 Exploration by Eagle Plains Resources Ltd.**

The 2008 exploration program, funded by option partner Mountain Capital Inc., was directed towards exploring and attempting to define a broad zone of gold mineralization in a satellite granodiorite stock located on Tenure #399745 in the southeast corner of the property. The work program consisted of 7.75 line-kilometres of grid establishment, collection of 55 soil samples, eight rock samples, 4.1 line-kilometres of induced-polarization survey and the drilling of 11 NQ diamond drill holes. W. Murton and Associates conducted the program on behalf of Mountain Capital Inc.

The results from the 2008 exploration program revealed that the granodiorite stock that was the focus of exploration is in fact a thrust-emplaced granodiorite mass overlying a sequence of argillite/greywacke. Weak but pervasive gold mineralization associated with pyritic quartz stringers and veinlets is widespread in the stock.

The total expenditure on the property by Mountain Capital Inc. in 2008 was \$311,282.16. Of this amount, \$305,252.56 was filed for assessment purposes and resulted in the extension of the valid dates for all tenures listed to November 30, 2010.

### **2009 Exploration by Eagle Plains Resources Ltd.**

The 2009 fieldwork by Eagle Plains at the Kalum included an induced-polarization geophysical program that extended the grid in the area of the Burn showing, as well as a prospecting and geochemical sampling program in the areas of the Hat, Cirque, Tuppie, Babit, and Misty showings. The results were very favourable, with the discovery of a new high-grade gold showing in the Cirque area, and the definition of high-priority geophysical targets.

It has been interpreted that the majority of showings in the area, including the Tuppie, the HAT, the Trango, and the Cirque Zone—collectively referred to as the Hat Structural Zone—are structurally linked and represent a single large-scale mineralized system over one square kilometre in size. As part

of the 2009 exploration program, two days were spent in the area of the Hat structural zone, which confirmed the widespread nature of the mineralization. The best sample collected during the 2009 program was a grab sample from the Cirque zone (DKKMR002), which returned 973 g/t Au and 502 g/t Ag. Another occurrence near this location returned 2.54 g/t Au and 32.3 g/t Ag (AHKMR039), while a third occurrence returned 0.12 g/t Au, 100 g/t Ag, 2.5 per cent Pb, and 7.2 per cent Zn (AHKMR038). The area is attractive because these zones are structurally repeated on a scale of 50 metres over a thickness of 300 metres, making it an excellent target for a bulk-tonnage, low-grade, open-pit operation.

The total cost of the 2009 program was \$109,835.43.

#### **2010 Exploration by Eagle Plains Resources Ltd.**

An 18-day helicopter-supported diamond drill program was conducted on the Kalum property from August 6-24, 2010. The program consisted of two days of geologic mapping in the Cirque and Tuppie zones and a total of 13 days of drilling from three pads including mobilization and demobilization. A total of 419.11 metres of NQ core were drilled from six holes.

The goal of the program was to drill-test high-grade, shear-hosted quartz-carbonate veins and breccias that are present in the cupola of the Allard Stock. These north-south striking shear-hosted veins are interpreted to be continuous from the Cirque Zone to the Tuppie Zone (Figure 4).

Unfortunately, results from the program at the Cirque and Tuppie zones were disappointing and did not confirm the presence of high-grade structurally controlled Au mineralization in quartz-carbonate breccias in the subsurface. The drill program did identify anomalous Au and As values within these weakly developed breccias and their iron carbonate alteration halos.

Total expenditures for the 2010 exploration program were \$180 848.85.

#### **2012 Exploration by Eagle Plains Resources Ltd.**

The 2012 exploration program consisted of a total of two diamond drill holes (420 metres) from one drill pad and focused on the southern strike extension of the Bling-Rico structure at lower elevations than the 2004 drilling. It was successful in intersecting the Bling-Rico structure in both holes along with similar geology and alteration styles. Although the 2012 drilling failed to intersect notable mineralization in the two holes, the pervasive alteration assemblages and their relationships to geology are similar to previous mineralization intersections and suggest that the Bling-Rico zone is a large scale continuous hydrothermal feature. Total expenses for the 2012 exploration program were \$197,228.41.

## **GEOLOGY**

### **Regional Geology**

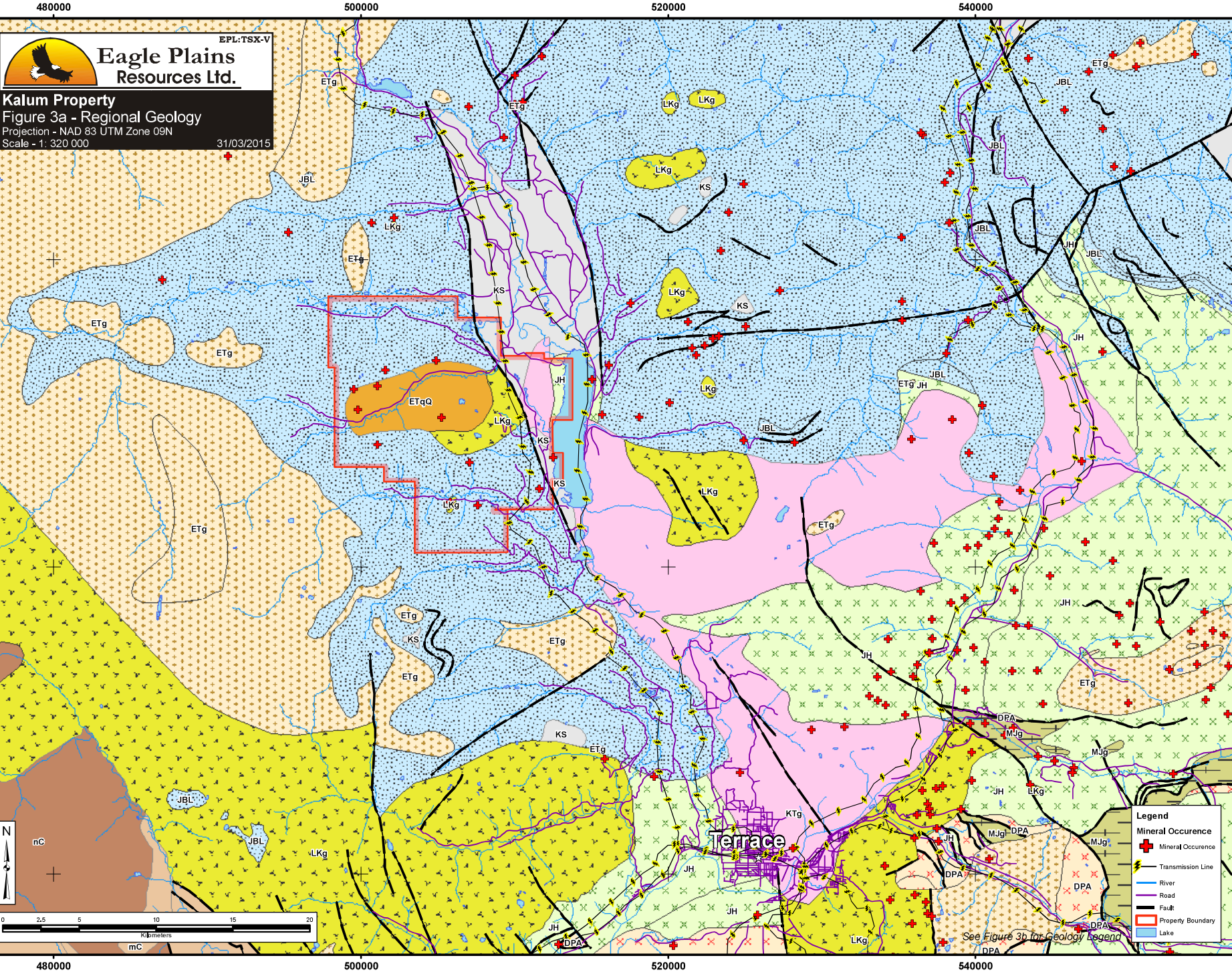
The geology in the Terrace area is dominated by a broadly anticlinal structure that trends north-northeast from Kitimat, has core of Paleozoic carbonate rocks, and is flanked to the east and west by Mesozoic volcanics. This axis is the locus of hot springs and two stockwork-molybdenum deposits at Nicholson (Shannon) and Fiddler creeks (Figure 3a). Evidence of rifting and extensional tectonics is seen in the Kitsumkalum Valley, where Mesozoic volcanics are exposed in the valley adjacent to Paleozoic carbonates on the valley slopes. The Tseaux lava field, some 40 kilometres north of the property, is the site of recent (400-year-old) volcanic activity.

The Kalum property lies within the Kitimat Range of the Coast Mountains physiographic subdivision, 10 kilometres west of the boundary with the Nass Range section of the Hazelton Mountains physiographic subdivision. The Coast Mountains are comprised of Jurassic-age and older sedimentary and volcanic rocks that have been intruded by the Cretaceous Coast Crystalline Complex. This belt of granitic rocks stretches from Vancouver into the Yukon, and is comprised chiefly of granodiorite, quartz diorite, and diorite.

### **Local Geology**

The Kalum property is located on the northeast-trending contact between dioritic intrusions of the Cretaceous-age Coast Crystalline Complex, and the fine-grained sedimentary and volcanic sequence of the Upper Jurassic to Lower Cretaceous-age Bowser (Lake) Group. The Bowser Lake Group consists mainly of marine and freshwater shale, arenite, greywacke, conglomerate, argillite, and minor tuff. Intrusions range in composition from quartz monzonite to granodiorite and diorite and vary in size from small stocks to large batholiths. Contacts between the intrusions and sedimentary rocks are generally irregular. Hypabyssal rocks, in the form of porphyritic, aplitic, and basaltic dikes and sills, intrude both the sediments and Coast granitoids. On the northern part of the Property, in the area of the Chris occurrence, cross-cutting rhyolite dykes have also been reported (Young and Ogryzlo, 1988).





## Figure 3b - Regional Geology Legend

after Journeay J.M. and Williams S.P., 1996

### Tertiary

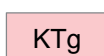


**Quanchus Suite** - hbl-biotite-granite - Terrane-stitching plutons of the Omineca / Intermontane / Coast / and Insular belts



**Undivided plutonic assemblage** - granodiorite / leucogranodiorite / qtz-monzonite / qtz-diorite / tonalite

### Cretaceous



**Undivided plutonic assemblage** - granodiorite / leucogranodiorite / qtz-monzonite / qtz-diorite / tonalite

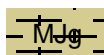


**Undivided plutonic assemblage** - granodiorite / leucogranodiorite / qtz-monzonite / qtz-diorite / tonalite



**Skeena** - greywacke / sandstone / siltstone / shale / conglomerate / coal - easterly derived back-arc clastics

### Jurassic



**Undivided foliated plutons** - hbl-bt-diorite / granodiorite - amalgamated by Latest Jurassic/accreted to continental margin in Late Jurassic and Cretaceous time



**Hazelton volcanics** - basalt / andesite / rhyolite / dacite / pyroclastics - amalgamated by Latest Triassic time and accreted to Ancestral North America in the Jurassic



**Bowser Lake** - conglomerate / sandstone / siltstone / shale / limestone / coal - post-Accretion back-arc (?) and foredeep clastic wedge on Stikinia

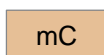
### Devonian - Permian



**Asitka** - basalt / rhyolite / pyroclastics / limestone / shale / sandstone / chert - amalgamated by Latest Triassic time and accreted to Ancestral North America in the Jurassic



**Central Gneiss Complex** - orthogneiss - undifferentiated metaplutonic rocks of the Central Gneiss Complex



**Central Gneiss Complex** - schist/gneiss - undifferentiated metamorphic rocks of uncertain protolith

## **Property Geology**

The Kalum property is centered on an irregularly shaped granodioritic pluton of the Coast Crystalline Complex that has surface dimensions of approximately 8-by-12 kilometres. This pluton, and many associated smaller intrusions, were emplaced into Upper Jurassic to Lower Cretaceous Bowser Lake Group sedimentary rocks.

### **Lithology**

#### ***The Bowser Lake Group***

Bowser Lake Group rocks on the property comprise a monotonous package of arenite, greywacke, siltstone, and mudstone, with lesser carbonaceous mudstone and conglomerate. Bedding is generally upright with variable strike, although all dips are generally shallow and mostly under 40 degrees. Three broad, stratigraphic units were identified during the 2003 field season. The lower greywacke unit that comprises mostly greywacke—with lesser conglomerate, siltstone, and mudstone—dominates the southern portion of the property. The central mudstone unit dominates the central portion of the property and consists of mudstone with lesser greywacke, siltstone, and carbonaceous mudstone. The upper greywacke unit that consists of massive greywacke—with some interbedded mudstone and minor carbonaceous mudstone—dominates the northern part of the property. Bowser Lake Group rocks south of Nelson Creek locally have a penetrative foliation. The more pelitic units contain muscovite and chlorite, and indicate pre-Coast Plutonic Complex metamorphism of sub- to lower greenschist facies.

Hand-sample rock descriptions were done on three of the types of Bowser units: the greywacke, the feldspathic arenite, and the mudstone/shale were done during the geological mapping around the Hat showing in 2005. The sedimentary units, especially the sandstones, are very difficult to distinguish and have highly irregular contacts, and so are mapped for the most part as undifferentiated Bowser sediments.

The greywacke is dark grey in colour and for the most part massive. It is moderately well sorted, with fine- to medium-grained quartz grains that are difficult to distinguish with the naked eye. The rock is comprised roughly of 70 per cent grains, most of which are quartz and 30 per cent calcite matrix. Calcite is also very commonly seen on fractured surfaces.

The feldspathic arenite is usually green-grey in colour and poorly sorted. The rock is comprised mostly (50 per cent) of medium to coarse-grained sub-angular feldspar grains. The rest of the rock is comprised of medium- to coarse-grained calcite (25 per cent), some kind of medium-grained dark grain (10 per cent) and medium- to coarse-grained quartz (five per cent). The matrix is comprised of calcite and quartz and represents 5-10 per cent of the rock. Calcite veinlets of up to two centimetres wide are common throughout. The rock can also occur with a more silica rich matrix but still has the same rock classification.

The shale/mudstone unit is dark black and very fine grained. The rock is usually very fissile and fractured and has a common rusty surface, evidence of some sort of low metamorphism. There is little to no mineralization, other than the rare patch of disseminated euhedral pyrite.

### ***Intrusive Suites***

The Coast Plutonic Complex and associated hypabyssal intrusions on the property have a large range in composition and texture. Two main intrusive suites, the Allard pluton, and Hat quartz diorite–diorite have been mapped in detail (Figure 3).

The main pluton, here named the Allard, has an irregular, east-west elongate shape, with a large embayment of Bowser Lake Group sedimentary rocks on the western side (Figure 4). The outcrop pattern along the northern margin indicates that the contact here is likely to be steeply dipping, perhaps to the north. Exposed contacts and outcrop patterns across the central and southern portions of the property indicate an irregular, shallowly dipping, partially bedding-controlled sill-like geometry for the main pluton in this area. The eastern portion of the pluton is cut by a north-northwest-striking, steep fault that may have experienced normal movement.

The Allard pluton is dominated by coarse-grained hornblende-porphyrific tonalite (locally poikilitic) and medium-grained hornblende-biotite granodiorite. The cupola of the pluton is exposed at the Tuppie Zone (Figure 4). Dykes and sills of similar lithologic composition are common and display a strong foliation and/or carbonate alteration. A K/Ar cooling age of  $100.2 \pm 6.8$  Ma was derived from the pluton (Godwin, unpublished in Breitsprecher and Mortensen, 2004).

The Hat Quartz Diorite – Diorite is an east – west trending elongate body north of Mayo Creek (Figure 4). It occurs as a weakly to strongly folded and foliated hornblende – pyroxene quartz diorite or diorite. Pyroxene remains fresh, while hornblende is altered to chlorite and pompellyite (Mihalynuk and Friedman, 2004). Mihalynuk and Friedman (2004) obtained a U-Pb crystallization age of  $93.8 \pm 0.5$  Ma for this intrusive.

Many sills, dykes, and plugs of variable composition and texture intrude Bowser Lake Group rocks around the margins of the main plutons—in particular in the embayment region on the pluton's western side and to a much lesser extent, the Allard pluton itself. The embayment of sedimentary rocks on the pluton's western side hosts numerous sills of medium- and coarse-grained granodiorite that range in thickness from 300 metres to less than one metre along with generally thin (0.5 to 10 metres) sills, and dykes of granodiorite to diorite, which are fine- to medium-grained, and have plagioclase as the dominant phenocryst. A sill of pyroxene-porphyrific diorite with unknown width intrudes the Allard pluton near its northern margin. A fine- to medium-grained lamprophyre sill crops out north of the northern margin of the Allard pluton. At least two small intrusions of garnet-plagioclase-muscovite granite crop out north of the main pluton. Plagioclase-porphyrific granite (rhyolite) sills and/or dykes crop out near the Chris adit (Young and Ogryzlo, 1988) and in the western embayment area. A small plug or sill of medium-grained quartz-syenite crops out northwest of the Misty Moss Creek showing. Aplitic and pegmatitic dykes are also common around the main pluton boundaries, but have highest densities in the western embayment area.

### **Metamorphism**

A weak contact metamorphic and metasomatic aureole exists around the main Allard stock and is normally 100- to 300 metres in width. In most areas it is defined by limonitic fractures, weak silica alteration and disseminated pyrite, chalcopyrite, and arsenopyrite. Rocks within the aureole, particularly the mudstones, have a distinctive rusty appearance. In general, no metamorphic minerals could be identified in hand samples in the contact aureole. However, a number of country rock roof

pendants have contact metamorphic andalusite and biotite. This indicates low-pressure greenschist facies metamorphism in these areas.

### **Alteration**

A number of different alteration assemblages associated with Au-Ag mineralization were observed in different areas across the property. These assemblages are summarized as follows:

1. Propylitic alteration (chlorite-epidote) associated with vein-dykes and aplite dykes (e.g. Moly zone), as pervasive alteration in more mafic portions of the stock (e.g. east of Hat vein) and associated with mineralized veins on the eastern side of the property (e.g. Kalum veins);
2. Ankeritic/silicic/pyritic alteration associated with mineralized veins hosted in granodiorite and diorite (e.g. Tojo, Hat);
3. Argillic/silicic/pyritic alteration around and distal to mineralized veins (e.g. Kalum, Burn and north Kalum);
4. Silicic and pyritic (lesser chalcopyrite and arsenopyrite) alteration as a pervasive phase in the contact aureole of the main stock;
5. Metre-scale carbonate alteration envelopes are commonly associated with polymetallic Au-Ag veins; particularly at the Tuppie and Hat zones (the most promising zones on the property).

Carbonate alteration is also associated with magnetite destruction and may be responsible for the magnetic low along the eastern margin of the Allard pluton.

### **Paragenesis**

The 2003 field-mapping program by Stephens led to the recognition of the following broad, generalized magmatic-hydrothermal sequence (from oldest to youngest);

1. Granodiorite and diorite plutonism, contact metamorphism and metasomatism
2. Hypabyssal dykes and sills, mostly granodiorite to diorite in composition
3. Hypabyssal dykes and sills, more fractionated phases including plagioclase porphyritic granite (rhyolite), quartz-rich granite
4. Aplite dykelets with associated propylitic alteration
5. Vein-dykes of varying composition
6. Smoky quartz veins, some with feldspar selvages
7. Molybdenite-bearing veins with K-feldspar selvages hosted in main pluton
8. Main stage of Au-Ag bearing veins

It should be noted that many of these stages are transitional and overlap in both time and space. For example, many sills and dykes would be forming at the same time the main pluton was crystallizing, and aplite dykelets and molybdenite-bearing veins are all closely associated with each other.

### **Structural Geology**

The structural architecture of the rocks on the Kalum property can be described in terms of five main structural elements: bedding, intrusive bodies (sills/dykes and pluton contacts), mineralized veins, faults, and joints.

#### **Bedding**

Bedding in the Bowser Lake Group sedimentary rocks on the property has variable strikes and shallow to moderate dips. Cross-bedding in the greywacke units indicates that bedding is upright across the entire property. Stereonets show that the maximum density of bedding is at  $240^{\circ}/36^{\circ}$  NW, with other sub-maxima at  $236^{\circ}/18^{\circ}$  NW,  $308^{\circ}/30^{\circ}$  NE,  $020^{\circ}/33^{\circ}$  SE and  $126^{\circ}/36^{\circ}$  SW. These data and field observations indicate broad warping of the bedding across a south-southwest-trending axis.

#### **Intrusive bodies**

Coast Plutonic Complex intrusive rocks on the property occur in the major pluton and as sills and dykes. In general, sills are more abundant than dykes. The sills and dykes are mostly granodiorite to diorite in composition (c.f. Property Geology section). Sills are mostly bedding parallel, and thus have variable orientations across the property. The stereonet maximum density for the sills is  $162^{\circ}/30^{\circ}$  W and for the dykes is  $129^{\circ}/90^{\circ}$ .

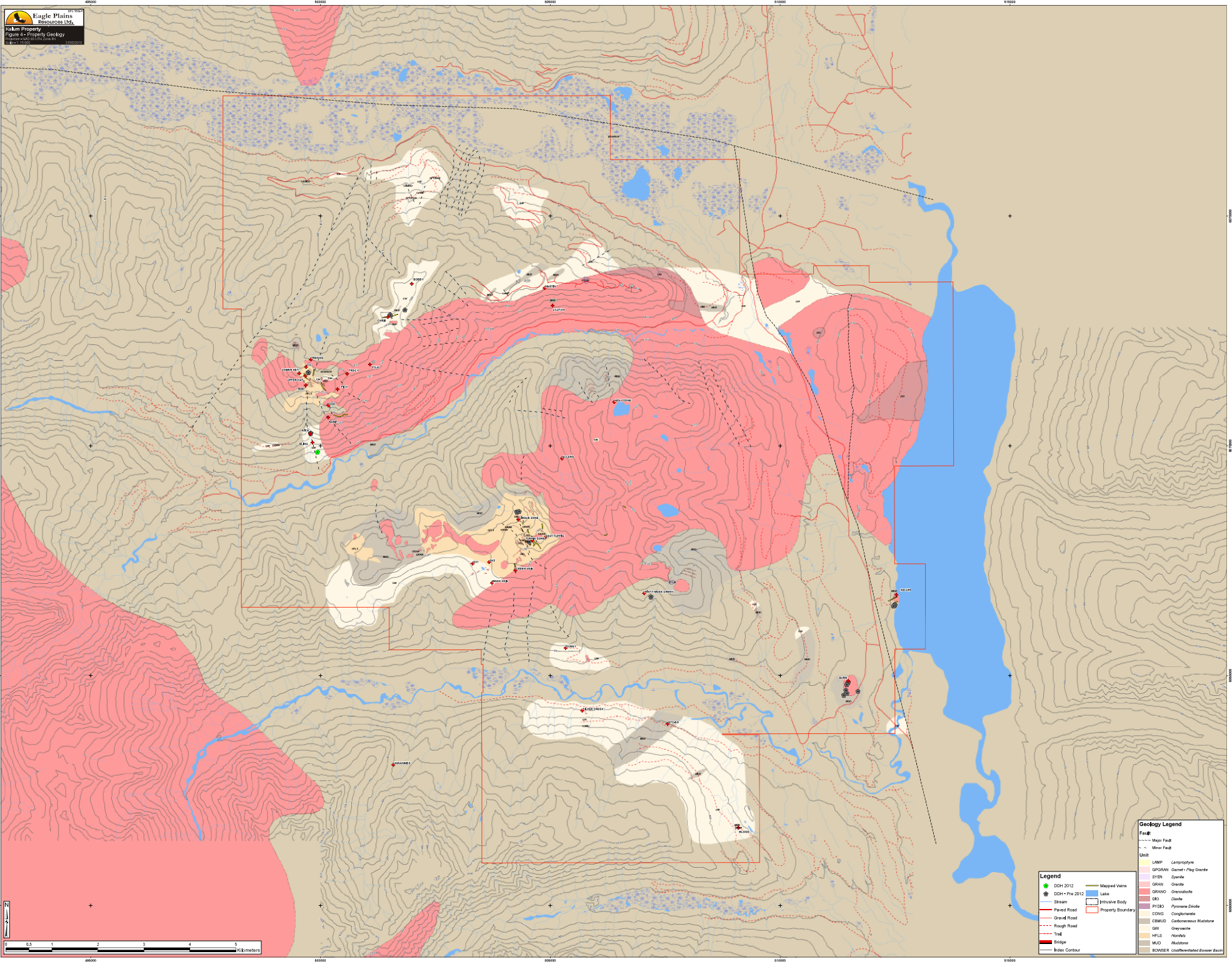
#### **Faults**

The faults measured in the field are dominated by a north-northeast-striking set with moderate- to vertical dips and have a stereonet maxima at  $026^{\circ}/84^{\circ}$  E. These faults cut all other geological features on the property and have a normal movement sense. The largest displacement observed was about two metres (Fig lamprophyre photo offset). A minor set of northwest-striking, steeply dipping faults, parallel to mineralized veins is also apparent.

The predominance of variably dipping, north-northeast-striking normal faults is consistent with a late extensional event that had a vertically plunging  $\sigma_1$  and horizontally plunging, east-southeast-directed  $\sigma_3$ .

#### **Joints**

Joints measured on the property fall into three major sets that have stereonet maxima at  $139^{\circ}/66^{\circ}$  SW,  $352^{\circ}/72^{\circ}$  E and  $236^{\circ}/72^{\circ}$  NW. The first two sets have northwest strikes and thus are likely to be related to the northwest-striking set of shear veins. The minor northeast-striking joint set corresponds with the northwest-striking set of vein-dykes.



**Eagle Plains Resources Ltd.**  
**Oklam Property**  
 Geology Property Geology  
 2012-10-01 to 2012-10-01  
 1:50,000



## **2015 EXPLORATION PROGRAM**

The 2015 exploration program included a 1-day, 2-person road assessment of the Burn Showing area, located near the Northwest transmission lines and Kitsumkalum Lake on tenures # 399745, 399743, 1015822, 399634 and 516381. The prospecting and rock/soil sampling program was carried out by Tim Turmuende and Chuck Downie of Eagle Plains Resources Ltd. on September 9, 2015.

A total of 18 rock samples and 1 B-horizon soil sample were collected during the program. Analytical procedures are included in Appendix III, with sample locations and descriptions included in Appendix IV, and corresponding analytical certificates included in Appendix V.

All 2015 samples were shipped to ACME Labs (now Bureau Veritas) in Vancouver, BC (Appendix 3) and analyzed using a combination of strong acid digest (MA250, 251) and limited weak acid digest (AQ250, 251) on select sulphide associated metals, with additional fire assay analysis for gold on the rock samples. Sample locations and analytical results for rock, and soil samples are thematically plotted by element in Figure 5.

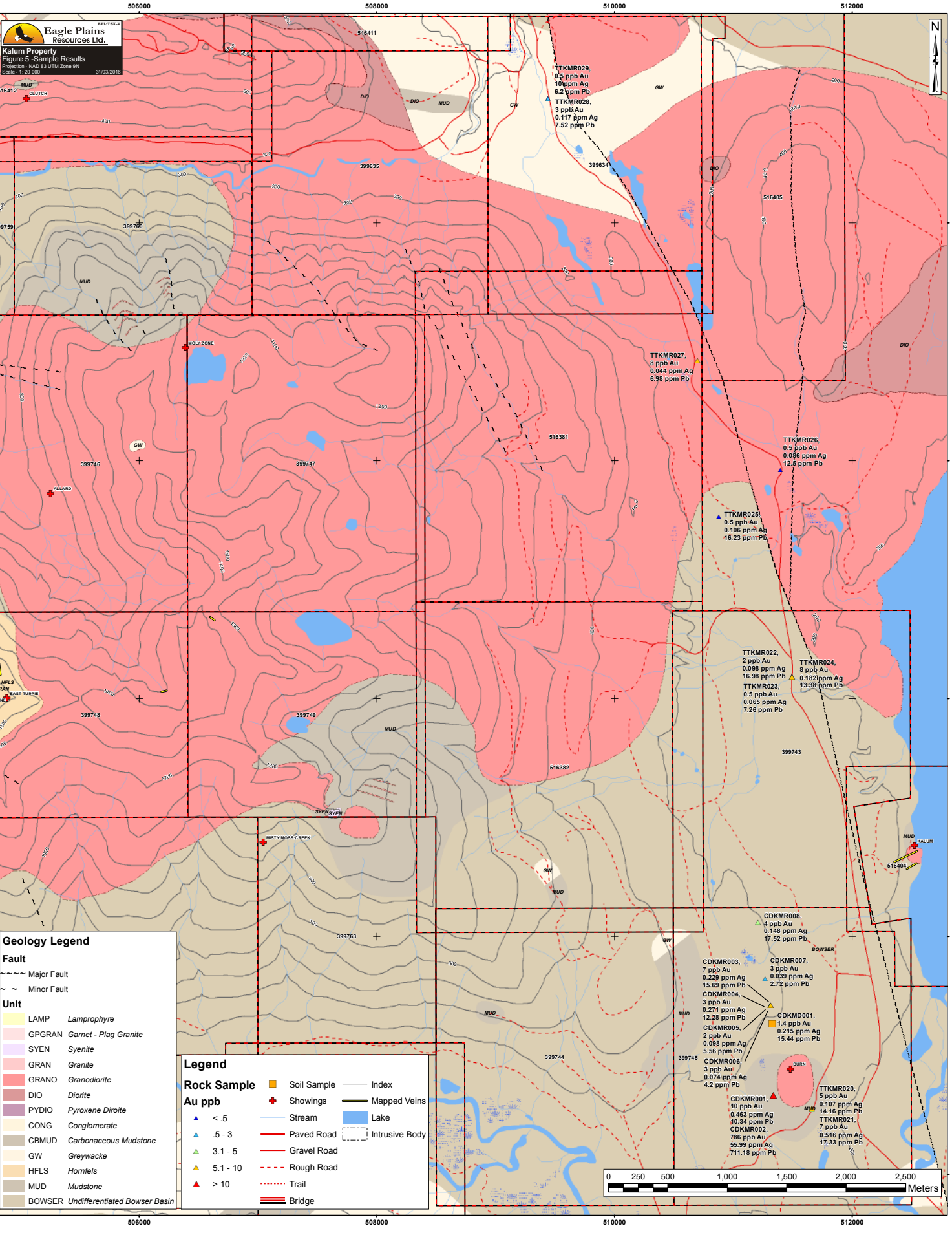
Total expenditures, including report writing, were \$12671.56

## **2015 EXPLORATION PROGRAM RESULTS**

The road assisted traverse in 2015 includes a north to south transect starting in greywacke (unit GW: Figure 4), through the Allard Granodiorite (Grano), ending in Bowser Group Mudstone (Mud). Rock sampling tested each of the 3 general units focussing on gossanous alteration, mineralized granitic dykes, or quartz veins (Appendix 4; Figure 5). The best 2015 sample result came from pyritiferous quartz vein float near the southwest limit of the 2009 Burn showing soil grid. Float sample CDKMR002 returned 786 ppb Au, 55.9 ppm Ag, and 711 ppm Pb. An adjacent outcrop grab sample (CDKMR001) of orange weathered granite was low in gold, but weakly anomalous in silver (0.46 ppm Ag), molybdenum (25.9 ppm Mo), and copper (157 ppb Cu). The next nearest anomalous sample (TTKMR021), located 345m to the southeast, is a dyke sample of light grey sucrosic dacite/lamprophyre? which returned anomalous silver (0.52 ppm Ag) and copper (344 ppm Cu). Adjacent mudstone grab sample (TTKMR020), contained minor pyrite but did not return any significant metal values of interest. No other samples to the north returned significant metals of interest.

The one soil sample collected (CDKMD001; Figure 5) returned background values for all metals, and is consistent with low values returned from nearby 2004 soil sample at grid station K040 00+50E( Downie and Gallagher, 2004).





**Eagle Plains Resources Ltd.**  
**Kalum Property**  
**Figure 5 - Sample Results**  
 Projection: NAD 83 UTM Zone 8N  
 Scale: 1:20,000  
 31/03/2016

- Geology Legend**
- Fault**
- Major Fault
  - Minor Fault
- Unit**
- LAMP Lamprophyre
  - GPGRAN Garnet - Plagioclase Granite
  - SYEN Syenite
  - GRAN Granite
  - GRANO Granodiorite
  - DIO Diorite
  - PYDIO Pyroxene Diorite
  - CONG Conglomerate
  - CBMUD Carbonaceous Mudstone
  - GW Greywacke
  - HFLS Hornfels
  - MUD Mudstone
  - BOWSER Undifferentiated Bowser Basin

- Legend**
- Rock Sample**
- ▲ Au ppb
  - ▲ < .5
  - ▲ .5 - 3
  - ▲ 3.1 - 5
  - ▲ 5.1 - 10
  - ▲ > 10
- Soil Sample**
- Soil Sample
- Other Features**
- ⊕ Showings
  - Stream
  - Paved Road
  - Gravel Road
  - Rough Road
  - ⋯ Trail
  - Bridge
  - Index
  - Mapped Veins
  - Lake
  - Intrusive Body

TTKMR029,  
0.5 ppb Au  
10 ppm Ag  
6.2 ppm Pb  
TTKMR028,  
3 ppb Au  
0.117 ppm Ag  
7.52 ppm Pb

TTKMR027,  
8 ppb Au  
0.044 ppm Ag  
6.38 ppm Pb

TTKMR026,  
0.5 ppb Au  
0.086 ppm Ag  
12.5 ppm Pb

TTKMR025,  
0.5 ppb Au  
0.106 ppm Ag  
16.23 ppm Pb

TTKMR022,  
2 ppb Au  
0.098 ppm Ag  
16.98 ppm Pb  
TTKMR023,  
0.5 ppb Au  
0.065 ppm Ag  
7.26 ppm Pb

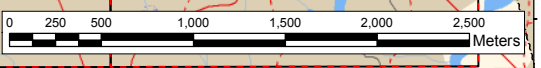
TTKMR024,  
8 ppb Au  
0.162 ppm Ag  
13.38 ppm Pb

CDKMR003,  
7 ppb Au  
0.229 ppm Ag  
15.69 ppm Pb  
CDKMR004,  
3 ppb Au  
0.271 ppm Ag  
12.28 ppm Pb  
CDKMR005,  
2 ppb Au  
0.099 ppm Ag  
5.58 ppm Pb  
CDKMR006,  
3 ppb Au  
0.074 ppm Ag  
4.2 ppm Pb

CDKMR007,  
3 ppb Au  
0.039 ppm Ag  
2.72 ppm Pb  
CDKMD001,  
1.4 ppb Au  
0.215 ppm Ag  
15.44 ppm Pb

CDKMR001,  
10 ppb Au  
0.463 ppm Ag  
10.34 ppm Pb  
CDKMR002,  
786 ppb Au  
55.89 ppm Ag  
711.18 ppm Pb

TTKMR020,  
5 ppb Au  
0.107 ppm Ag  
14.16 ppm Pb  
TTKMR021,  
7 ppb Au  
0.516 ppm Ag  
17.33 ppm Pb



## CONCLUSIONS

The 2015 one-day prospecting and sampling program confirmed the presence of gold mineralization from a quartz vein float sample located down ice of the Burn showing. Additional sampling along 6 kilometers of road cut to the north did not locate any new significant mineralized outcrops.

The Kalum property consists of a large land package containing 14 separate historical showings coincident with a regional airborne magnetic anomaly and the contact zone of Cretaceous intrusive plutons. Since initiating property acquisition in 2003, Eagle Plains Resources Inc. and its partners have spent approximately \$2,300,000.00 on exploration on the Kalum property. The programs included airborne and ground-based geophysics, regional- and property-scale geologic mapping, geochemical surveying, and diamond drilling. In addition to locating, sampling, and surveying many of the historical showings, a number of new showings including the Tuppie, the HAT, the Trango, the Cirque Zone, and the Babbit have been discovered. This work confirmed that the Kalum property is highly prospective for economically significant, Au-Ag epithermal vein-type deposits. Recent historical drilling has generated high-grade Au intercepts including hole KRC04001, drilled at the Rico Zone which returned 35 g/t Au over 2.5 metres from 101.8 metres to 104.3 metres; including a 0.5-metre interval that assayed 107 g/t Au.

Many other high priority targets remain on the property, suitable for grassroots and diamond drill exploration. These include the Martin vein, the Tuppie Zone, and the southern extension of the Hat structural zone. Most of the high-grade mineralization on the property is located near the margins of the main Allard pluton, both within the granodiorite and in the surrounding sedimentary country rocks. This indicates that most fluid-flow was focused near the intrusion margins, and in country-rock roof pendants around the main pluton. Only a relatively small portion of the sedimentary-intrusive contact zone has been explored to date. Potential exists along the unexplored contact zones, especially in areas that have a favorable geophysical signature. In areas of known mineralization, new discoveries are possible through soil geochemical sampling, prospecting and airborne geophysics. Ground work has been greatly aided due to the low annual snow pack that currently exists at the higher elevations in the Coast Mountains, which in turn has exposed many mineralized veins, structures and favorable geology for the first time in modern history.

## RECOMMENDATIONS

The Hat Structural Zone remains a highly prospective zone on the Kalum property and continued mapping, prospecting, and geochemical surveys along strike of the Bling Rico structural zone to the south of Mayo Creek is highly recommended. Also recommended is firming up a number of drill ready targets that are present along the eastern portions of the Hat Structural Zone through detailed mapping. These include the Babbit Showing (6.0 metres @ 7.3 g/t Au-Channel), and similar showings in the area (Figure 5). A budget of \$200,000.00 is proposed for this phase of exploration.

Contingent on favorable results from Phase 1, a diamond drilling program should be undertaken to test the highest priority targets. This should include drilling at the Hat Structural Zone and other areas identified as favorable targets by the Phase 1 interpretation. The estimated cost of the Phase 2 program is \$500,000.00.

## REFERENCES

- Arndt, Richard E. (1989) : Report on Underground Exploration Program on the Kalum Lake Property; for Terracamp Developments Ltd.
- Baker, T. (2003) : Intrusion-Related Gold Deposits: Explorable Characteristics; Gold Short Course, Cordilleran Exploration Roundup, January 2003
- Bates, R.H. (1979) : Report on Diamond Drilling on BAV Mineral Claims #'s 1 – 4 Inclusive; MEMPR AR 8299
- Cavey, G. (1981) : Geological Report Chris Claims; for Prism Resources Limited, MEMPR AR 10523
- Cavey, George and Howe, Diane (1984) : Report on the Kalum Lake Claim Group; for Bradner Resources Ltd., MEMPR AR 13303
- Cavey, George and Chapman, Jim (1987) : Report on the 1987 Drilling Program, Kalum Lake Claims; for Terracamp Developments Ltd., MEMPR AR 16026
- Cavey, G. and Chapman, J. (1987) : Summary Report on the Quartz – Silver Claims; for Mt. Allard Resources Ltd., MEMPR AR 16411
- Chapman, J. (1988) : Summary Report on the Quartz – Silver Claims; for Mt. Allard Resources Ltd.
- Corbett, Greg (2002) : Epithermal Gold for Explorationists; AIG Journal Paper 2202-01
- Crooker, G.F. (1988) : Geochemical and Geophysical Report on the Misty and Misty 1 – 4 I Mineral Claims; for Corona Corporation, MEMPR AR 17952
- Downie, C.C. and Mosher, G.Z. (2003) Geological Report on the Kalum Gold Property; internal report prepared for Eagle Plains Resources Ltd.
- Downie, C.C. and Stephens, J.R. (2003) : Preliminary 2003 Geological Report for the Kalum Property; internal report prepared for Eagle Plains Resources Ltd.
- Downie, C.C. and Gallagher, C.S. (2004): 2004 Exploration and Geological Report for the Kalum Property; for Eagle Plains Resources Ltd.; MEMPR AR 27892
- Downie, C.C. and Gallagher, C.S. (2006): 2005 Exploration and Geological Report for the Kalum Property; internal report prepared for Eagle Plains Resources Ltd.
- Downie, C.C. and Gallagher, C.S. (2006): 2005 Exploration and Geological Report for the Kalum Property; internal report prepared for Eagle Plains Resources Ltd. MEMPR AR 28462
- Form 43-101F1 Technical Report
- Friedman, R.M., Diakow, L.J., Lane R.A. and Mortensen, J.K., (2001): New U-Pb age constraints on latest Cretaceous magmatism and associated mineralization in the Fawnie Range, Nechako Plateau, central British Columbia: Canadian Journal of Earth Sciences, Volume 38, pages 619-637.
- Gravel, J. (2002) : Methods and Specifications for Group 7AR; Acme Analytical Laboratories Ltd Fact Sheet
- Gravel, J. (2002) : Methods and Specifications for Group 6; Acme Analytical Laboratories Ltd Fact Sheet

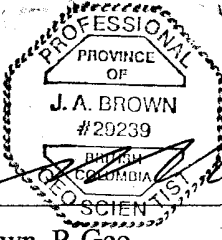
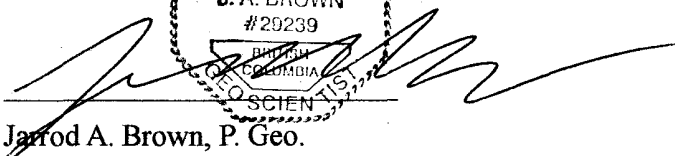
- Gravel, J. (2003) : Methods and Specifications for Group 1D and 1DX; Acme Analytical Laboratories Ltd Fact Sheet
- Hedenquist, J.W. (2003) ; Epithermal high sulfidation gold deposits : Characteristics, related ore types, and exploration
- Jorgensen, Neil B. (1981) : Geological and Geochemical Report on the Misty 1 Claim; for C.C.H. Minerals Ltd., MEMPR AR 10128
- McNaughton, Ken (1987) ; Geochemical and Geophysical Report on the Misty, Misty I and Misty II Mineral Claims; for Mascot Gold Mines Limited, MEMPR AR 15455
- Mihalynuk, M. and Friedman, R. (2005) Gold in the Kalum Area, Terrace, BC; BCGS – Eagle Plains Resources GeoScience Partnership, Poster
- Morton, J.W. (1985): A Geological and Geochemical Survey of a Portion of the Quartz-Silver ( Q.S.) Claim Group (Quartz Hill Project); for Imperial Metals Corporation MEMPR AR 13455
- Panteleyev, A. (1991): Gold in the Canadian Cordillera – A Focus on Epithermal and Deeper Environments; in Ore Deposits, Tectonics and Metallogeny in the Canadian Cordillera; BC MEMPR Paper 1991-4
- Salazar, G. (1987): Evaluation of the Kalum Lake Project; for Terracamp Developments Ltd.
- Stacey, J.S. and Kramers, J.D., (1975)L: Approximation of terrestrial lead isotope evolution by a two-stage model: Earth and Planetary Science Letters, v. 26, p. 207-221.
- Stacey, Norman W. (1980) : Geological Report Mineral Claims Chris 1 – 4; for Prism Resources Limited, MEMPR AR 8393
- Stephens, J. and Downie, C. (2003) : Exploration and Geological Report for the Kalum Gold Silver Project; for Eagle Plains Resources Ltd.
- Tindall, M. (1987) : Geological and Geochemical Report on the Misty and Misty 1 – 4 Mineral Claims; for Mascot Gold Mines, MEMPR AR 16302
- Wilson, Robert G. (1981) : Report on Geology and Soil Geochemistry on the Misty Claim; for Campbell Resources Inc., MEMPR AR 9239
- Wilson, Robert G. (1982) : Report on Geology, Geochemistry, and Drilling on the Misty 1 Claim; for C.C.H. Minerals Ltd., MEMPR AR 10827
- Wilson, Norma J. (1979) : Report on Prospecting Misty Claim; for CCH Resources Ltd., MEMPR AR 8201
- Young, D. and Ogryzlo, P. (1988) : Geological and Geochemical Assessment of the Full and Moon Mineral Claims, MEMPR AR 17890
- Young, D. and Ogryzlo, P. (1982) : Geological and Geochemical Assessment of the Hat and Flare Mineral Claims, MEMPR AR 10821
- Young, D. and Ogryzlo, P. (1981) : Geological and Geochemical Assessment of the KM 9, KM 10 and Drum Mineral Claims, MEMPR AR 10045
- EMPR MINFILE 103I 018, 103I019, 103I020, 103I151, 103I173, 103I174, 103I211, 103I213

**Appendix I**  
**Statement of Qualifications**

I, Jarrod A. Brown of 6660-A Harrop-Procter Road, in the city of Nelson in the Province of British Columbia hereby certify that:

- 1) I am a Professional Geoscientist in good standing, registered with the Association of Professional Engineers and Geoscientists of British Columbia (#29239) and Saskatchewan (#16652).
- 2) I am a graduate of the University of Manitoba with the degree of Master of Science in Geology (2001).
- 3) I am a graduate of Simon Fraser University with the degree of Bachelor of Science in Physical Geography (1997).
- 4) I have practiced my profession in North America since 1998, having worked for various Junior Resource Companies and government surveys.
- 5) This report is based upon a review of historical assessment reports generated by Eagle Plains Resources, and by interviews and assessment of field notes provided by Tim Turmuende and Charles Downie.
- 6) I am familiar with the general geology and logistics of the Kalum Property, having worked extensively as a professional geologist on Eagle Plains' adjacent Elsiar Property, located 5 to 15 km to the north.
- 7) I hold an option to purchase 205,000 Common Shares of Eagle Plains Resources at a price of \$0.15

Dated this 30th day of March, 2016, in Nelson, British Columbia.

  
  
Jarrod A. Brown, P. Geo.

**Appendix II**  
**Statement of Expenditures**

Sep 8-10, 2015

## Kalum 2015 Exploration Expenditures

Exploration Work type	Comment	Days			Totals
<b>Pre-field Office Studies</b>					
		<b>Days</b>	<b>Rate</b>	<b>Subtotal</b>	
Chuck Downie, Project Manager	Project planning/permitting	0.50	\$850.00	\$425.00	
Tim Turmuende, Senior Geo	Project planning	0.50	\$850.00	\$425.00	
Aaron Higgs, Project Geologist	Project planning/maps	1.65	\$675.00	\$1,113.75	
				<b>\$1,963.75</b>	<b>\$ 1,963.75</b>
<b>Field</b>					
	<b>Personnel</b>	<b>Days</b>	<b>Rate</b>	<b>Subtotal</b>	
Chuck Downie, Project Manager	Project planning/permitting	2.50	\$850.00	\$2,125.00	
Tim Turmuende, Senior Geo	Project planning	2.50	\$850.00	\$2,125.00	
				<b>\$4,250.00</b>	<b>\$ 4,250.00</b>
<b>Report Writing</b>					
	<b>Comments</b>	<b>Days</b>	<b>Rate</b>	<b>Subtotal</b>	
Jarrold Brown, Sr. Geo	Report writing/filing	3.0	\$792.26	\$2,376.78	
Brad Robison, GIS Specialist	Maps and Figures	1.9	\$525.00	\$1,002.75	
				<b>\$3,379.53</b>	<b>\$ 3,379.53</b>
<b>Geochemical Analysis</b>					
	<b>Number of Samples</b>	<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
Rock Samples		<i>18</i>	18	\$42.81	\$770.51
Soil Sample		<i>1</i>	1	\$42.81	\$42.81
				<b>\$813.31</b>	<b>\$ 813.31</b>
<b>Transportation</b>					
		<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
Truck Mileage		1510.0	\$0.30	\$453.00	
Truck Rental	To Terrace	2.50	\$100.00	\$250.00	
				<b>\$703.00</b>	<b>\$ 703.00</b>
<b>Accommodation &amp; Food</b>					
	<b>Rates per day</b>	<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
Hotel	total cost	4.00	\$125.00	\$500.00	
Meals	total cost	5.00	\$85.00	\$425.00	
Fuel	total cost	1.00	\$607.91	\$607.91	
				<b>\$1,532.91</b>	<b>\$1,532.91</b>
<b>Freight</b>					
				\$31.77	
				<b>\$29.05</b>	<b>\$29.05</b>
<b>Repairs and Maintenance</b>					
				\$0.00	
				<b>\$0.00</b>	<b>\$0.00</b>
<b>TerraLogic Exploration Handling and Administration Fees</b>					
				\$0.00	
				<b>\$0.00</b>	<b>\$0.00</b>

**TOTAL Expenditures**

**\$12,671.55**

**Appendix III**  
**ACME (Bureau Veritas) Geochemical Protocol**





# Sample Preparation

---

**Receiving** Samples arrive via courier, post or by client drop-off; shipment inspected for completeness.

**Sorting and Inspection** Samples sorted and inspected for quality of use (quantity and condition). Pulp samples inspected for homogeneity and fineness.

## SOILS

**SS80, SS230, SSXXX Drying and Sieving** Wet or damp soil samples are dried at 60°C (Air dried or 40°C if specified by the client). Soil and sediment sieved to -80 mesh (SS80) or -230 mesh (SS230), unless client specifies otherwise (SSXXX). Sieves cleaned by brush and compressed air between samples.

## ROCKS AND DRILL CORE

**PRP70-250, PRP70-500, PRP70-1000** Rock and Drill Core crushed to 70% passing 10 mesh (2mm), homogenized, riffle split (250g, 500g, or 1000g subsample) and pulverized to 85% passing 200 mesh (75 microns). Crusher and pulverizer are cleaned by brush and compressed air between routine samples. Granite/Quartz wash scours equipment after high-grade samples, between changes in rock colour and at end of each file. Granite/Quartz is crushed and pulverized as first sample in sequence and carried through to analysis.

**PUL85, PULCB** Samples requiring pulverizing only are dried at 60°C and pulverized to 85% passing 200 mesh (75 microns), using a mild-steel pulverizer (PUL85), per 250g or a ceramic pulverizer (PULCB), per 100g.

**PULHP** Rock and Drill Core are pulverized by using a mortar and pestle.

## VEGETATION

**VGMAS** Plant material is dried then milled to 1mm

**VA475** Up to 0.1 kg of wet vegetation is ashed by heating to 475°C.

**VGWSH** Plant samples are washed with Type-1 water then dried at 60°C prior to analysis, per 100g.



# MA300, MA200

Package Description	Geochemical Four-Acid Digestion
Sample Digestion	HF-HNO <sub>3</sub> -HClO <sub>4</sub> acid digestion
Instrumentation Method	ICP-ES (MA300, MA200), ICP-MS (MA200)
Legacy Code	1E, 1EX
Applicability	Sediment, Soil, Non-mineralized Rock and Drill Core

## METHOD DESCRIPTION:

Prepared sample is digested to complete dryness with an acid solution of (2:2:1:1) H<sub>2</sub>O-HF-HClO<sub>4</sub>-HNO<sub>3</sub>. 50% HCl is added to the residue and heated using a mixing hot block. After cooling the solutions are transferred to test-tubes and brought to volume using dilute HCl. Sample splits of 0.25g are analyzed.

Element	MA300 Detection	MA200 Detection	Upper Limit	Element	MA300 Detection	MA200 Detection	Upper Limit
Ag	0.5 ppm	0.1 ppm	200 ppm	Ni	2 ppm	0.1 ppm	10000 ppm
Al*	0.01%	0.01%	20%	P	0.002%	0.001%	5%
As†	5 ppm	1 ppm	10000 ppm	Pb	5 ppm	0.1 ppm	10000 ppm
Ba*	1 ppm	1 ppm	10000 ppm	Re	-	0.005 ppm	100 ppm
Be*	1 ppm	1 ppm	1000 ppm	Rb	-	0.1 ppm	2000 ppm
Bi	5 ppm	0.1 ppm	4000 ppm	S*	0.1%	0.1%	10%
Ca	0.01%	0.01%	40%	Sb†	5 ppm	0.1 ppm	4000 ppm
Cd	0.4 ppm	0.1 ppm	4000 ppm	Sc	1 ppm	1 ppm	200 ppm
Ce	-	1 ppm	2000 ppm	Se	-	1 ppm	1000 ppm
Co	2 ppm	0.2 ppm	4000 ppm	Sn*	2 ppm	0.1 ppm	2000 ppm
Cr	2 ppm	1 ppm	10000 ppm	Sr	2 ppm	1 ppm	10000 ppm
Cu	2 ppm	0.1 ppm	10000 ppm	Ta*	-	0.1 ppm	2000 ppm
Fe*	0.01%	0.01%	60%	Te	-	0.5 ppm	1000 ppm
Hf*	-	0.1 ppm	1000 ppm	Th	2 ppm	0.1 ppm	4000 ppm
In	-	0.05 ppm	1000 ppm	Ti	0.01%	0.001%	10%
K	0.01%	0.01%	10%	Tl	-	0.5 ppm	10000 ppm
La	2 ppm	0.1 ppm	2000 ppm	U	20 ppm	0.1 ppm	4000 ppm
Li	-	0.1 ppm	2000 ppm	V	2 ppm	4 ppm	10000 ppm
Mg*	0.01%	0.01%	30%	W*	4 ppm	0.1 ppm	200 ppm
Mn*	5 ppm	1 ppm	10000 ppm	Y	2 ppm	0.1 ppm	2000 ppm
Mo	2 ppm	0.1 ppm	4000 ppm	Zn	2 ppm	1 ppm	10000 ppm
Na	0.01%	0.001%	10%	Zr*	2 ppm	0.1 ppm	2000 ppm
Nb	2 ppm	0.1 ppm	2000 ppm				

**Limitations:** \*This digestion is only partial for some Cr and Ba minerals and some oxides of Al, Hf, Mn, Sn, Ta and Zr. †Volatilization may occur during fuming resulting in some loss of As, Sb and Au



# MA250

Package Description	Ultratrace Geochemical Four-Acid Digestion
Sample Digestion	HF-HNO <sub>3</sub> -HClO <sub>4</sub> acid digestion
Instrumentation Method	ICP-ES & ICP-MS
Legacy Code	1T
Applicability	Sediment, Soil, Non-mineralized Rock and Drill Core

## METHOD DESCRIPTION:

Prepared sample is digested to complete dryness with an acid solution of (2:2:1:1) H<sub>2</sub>O-HF-HClO<sub>4</sub>-HNO<sub>3</sub>. 50% HCl is added to the residue and heated using a mixing hot block. After cooling the solutions are transferred to test-tubes and brought to volume using dilute HCl. Sample splits of 0.25g are analyzed.

Element	MA250 Detection	Upper Limit	Element	Detection Limit	Upper Limit	Element	Detection Limit	Upper Limit
Ag	20 ppb	200 ppm	K	0.02%	10 %	Ta*	0.1 ppm	2000 ppm
Al*	0.02%	20 %	La	0.1 ppm	2000 ppm	Tb	0.1 ppm	2000 ppm
As <sup>†</sup>	0.2 ppm	10000 ppm	Li	0.1 ppm	2000 ppm	Te	0.05 ppm	1000 ppm
Au <sup>†</sup>	0.1 ppm	200 ppm	Lu	0.1 ppm	2000 ppm	Th	0.1 ppm	4000 ppm
Ba*	1 ppm	10000 ppm	Mg*	0.02%	30 %	Ti	0.001%	10 %
Be*	1 ppm	1000 ppm	Mn*	2 ppm	10000 ppm	Tl	0.05 ppm	10000 ppm
Bi	0.04 ppm	4000 ppm	Mo	0.05 ppm	4000 ppm	Tm	0.1 ppm	2000 ppm
Ca	0.02%	40 %	Na	0.002%	10 %	U	0.1 ppm	4000 ppm
Cd	0.02 ppm	4000 ppm	Nb	0.04 ppm	2000 ppm	V	1 ppm	10000 ppm
Ce	0.02 ppm	2000 ppm	Nd	0.1 ppm	2000 ppm	W*	0.1 ppm	200 ppm
Co	0.2 ppm	4000 ppm	Ni	0.1 ppm	10000 ppm	Y	0.1 ppm	2000 ppm
Cr	1 ppm	10000 ppm	P	0.001%	5 %	Yb	0.1 ppm	2000 ppm
Cs	0.1 ppm	2000 ppm	Pb	0.02 ppm	10000 ppm	Zn	0.2 ppm	10000 ppm
Cu	0.02 ppm	10000 ppm	Pr	0.1 ppm	2000 ppm	Zr*	0.2 ppm	2000 ppm
Dy	0.1 ppm	2000 ppm	Re	0.002 ppm	100 ppm			
Er	0.1 ppm	2000 ppm	Rb	0.1 ppm	2000 ppm			
Eu	0.1 ppm	2000 ppm	S*	0.04%	10 %			
Fe*	0.02%	60 %	Sb <sup>†</sup>	0.02 ppm	4000 ppm			
Ga	0.02 ppm	100 ppm	Sc	0.1 ppm	200 ppm			
Gd	0.1 ppm	2000 ppm	Se	0.3 ppm	1000 ppm			
Hf*	0.02 ppm	1000 ppm	Sm	0.1 ppm	2000 ppm			
In	0.01 ppm	1000 ppm	Sn*	0.1 ppm	2000 ppm			
Ho	0.1 ppm	2000 ppm	Sr	1 ppm	10000 ppm			

**Limitations:** \*This digestion is only partial for some Cr and Ba minerals and some oxides of Al, Hf, Mn, Sn, Ta and Zr.

<sup>†</sup>Volatilization may occur during fuming resulting in some loss of As, Sb and Au



# AQ250

Package Description	Ultra Trace Geochemical aqua regia digestion
Sample Digestion	HNO <sub>3</sub> -HCl acid digestion
Instrumentation Method	ICP-ES and ICP-MS
Legacy Code	1F
Applicability	Sediment, Soil, Non-mineralized Rock and Drill Core

## METHOD DESCRIPTION:

Prepared sample is digested with a modified Aqua Regia solution of equal parts concentrated HCl, HNO<sub>3</sub> and DI H<sub>2</sub>O for one hour in a heating block or hot water bath. Sample is made up to volume with dilute HCl. Sample splits of 0.5g, 15g or 30g can be analyzed.

Lead isotope Add On (+ISO) Pb<sub>204</sub>, Pb<sub>206</sub>, Pb<sub>207</sub>, Pb<sub>208</sub> are suitable for geochemical exploration of U and other commodities where gross differences in natural to radiogenic Pb ratios, is a benefit. Isotope values can be reported in both concentrations and intensities. Sample splits of 0.5g, 15g or 30g can be analyzed.

Element	AQ250 Detection	Upper Limit	Element	Detection Limit	Upper Limit	Element	Detection Limit	Upper Limit
Ag	2 ppb	100 ppm	Sb	0.02 ppm	2000 ppm	Y*	0.01 ppm	2000 ppm
Al*	0.01%	10%	Sc	0.1 ppm	100 ppm	Zr*	0.1 ppm	2000 ppm
As	0.1 ppm	10000 ppm	Se	0.1 ppm	100 ppm	<b>REE Add On</b>		
Au	0.2 ppb	100 ppm	Sr*	0.5 ppm	10000 ppm	Pr	0.02 ppm	2000 ppm
B*^	20 ppm	2000 ppm	Te	0.02 ppm	1000 ppm	Nd	0.02 ppm	2000 ppm
Ba*	0.5 ppm	10000 ppm	Th*	0.1 ppm	2000 ppm	Sm	0.02 ppm	10000 ppm
Bi	0.02 ppm	2000 ppm	Ti*	0.001%	5%	Eu	0.02 ppm	10000 ppm
Ca*	0.01%	40%	Tl	0.02 ppm	1000 ppm	Gd	0.02 ppm	10000 ppm
Cd	0.01 ppm	2000 ppm	U*	0.05 ppm	2000 ppm	Tb	0.02 ppm	10000 ppm
Co	0.1 ppm	2000 ppm	V*	2 ppm	10000 ppm	Dy	0.02 ppm	10000 ppm
Cr*	0.5 ppm	10000 ppm	W*	0.05 ppm	100 ppm	Ho	0.02 ppm	10000 ppm
Cu	0.01 ppm	10000 ppm	Zn	0.1 ppm	10000 ppm	Er	0.02 ppm	10000 ppm
Fe*	0.01%	40%	<b>Extended Package</b>			Tm	0.02 ppm	10000 ppm
Ga*	0.1 ppm	1000 ppm	Be*	0.1 ppm	1000 ppm	Yb	0.02 ppm	10000 ppm
Hg	5 ppb	50 ppm	Ce*	0.1 ppm	2000 ppm	Lu	0.02 ppm	10000 ppm
K*	0.01%	10%	Cs*	0.02 ppm	2000 ppm	<b>Lead Isotopes</b>		
La*	0.5 ppm	10000 ppm	Ge*	0.1 ppm	100 ppm	Pb <sub>204</sub>	0.01 ppm	10000 ppm
Mg*	0.01%	30%	Hf*	0.02 ppm	1000 ppm	Pb <sub>206</sub>	0.01 ppm	10000 ppm
Mn*	1 ppm	10000 ppm	In	0.02 ppm	1000 ppm	Pb <sub>207</sub>	0.01 ppm	10000 ppm
Mo	0.01 ppm	2000 ppm	Li*	0.1 ppm	2000 ppm	Pb <sub>208</sub>	0.01 ppm	10000 ppm
Na*	0.001%	5%	Nb*	0.02 ppm	2000 ppm	<b>PGM Add on</b>		
Ni	0.1 ppm	10000 ppm	Rb*	0.1 ppm	2000 ppm	Pt*	2 ppb	100 ppm
P*	0.001%	5%	Re	1 ppb	1000 ppb	Pd*	10 ppb	100 ppm
Pb	0.01 ppm	10000 ppm	Sn*	0.1 ppm	100 ppm			
S	0.02%	10%	Ta*	0.05 ppm	2000 ppm			

\* Solubility of some elements will be limited by mineral species present. ^Detection limit = 1 ppm for 15g / 30g analysis.



# FA100, FA300, FA400 & FA500

Package Description:	Precious Metals by Lead Collection Fire Assay
Sample Digestion:	Lead-collection fire assay fusion
Instrumentation Method:	ICP-MS (FA100), ICP-ES (FA300), AAS (FA400), Gravimetric (FA500)
Legacy Codes	3B, G6
Applicability:	Rock, Drill Core

## METHOD DESCRIPTION

Prepared sample is custom-blended with fire-assay fluxes, PbO litharge and a silver inquart. Firing the charge at 1050°C liberates Ag, Au and PGEs that report to the molten Pb-metal phase. After cooling the Pb button is recovered, placed in a cupel and fired at 950°C to render a Ag, Au and PGEs dore bead. The bead is then either digested with nitric and hydrochloric acids for instrumentation determination or weighed and parted with nitric acid to dissolve Ag leaving gold which is weighed directly. Ag is determined by difference of the dore bead from the gold in gravimetric analysis.

Element	Detection Limit	Upper Limit
<b>FA100 – ICP-MS</b>		
<b>Au</b>	1 ppb	1 ppm
<b>Pt</b>	0.1 ppb	1 ppm
<b>Pd</b>	0.5 ppb	1 ppm
<b>FA300 – ICP-ES</b>		
<b>Au</b>	2 ppb	10 ppm
<b>Pt</b>	3 ppb	10 ppm
<b>Pd</b>	2 ppb	10 ppm
<b>FA400 – AAS</b>		
<b>Au</b>	5 ppb	10 ppm
<b>FA500-Gravimetric</b>		
<b>Au</b>	0.9 ppm	
<b>Ag</b>	50 ppm	

### Note:

\*Sulphide-rich samples require a 15g or smaller sample for proper fusion.

**Appendix IV**

**4.1 - Rock Sample Locations and Descriptions**



**Appendix IV**

**4.2 - Soil Sample Locations and Descriptions**



#### Appendix 4.2- Dirt Sample Locations and Descriptions

Sample	Date	Sample		Location			Soil		
Number		Type	Purpose	Method	UTM X	UTM Y	Colour	Horizon	Notes
CDKMD001	09/09/2015	SOIL	ASSAY	GPS	511329	6065266	brown	B	Granite underlying

**Appendix V**  
**Analytical Certificates**



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA  
PHONE (604) 253-3158

**Client:** TerraLogic Exploration Inc.  
Suite 200, 44 - 12th Ave. S.  
Cranbrook BC V1C 2R7 CANADA

Submitted By: Jarrod Brown  
Receiving Lab: Canada-Vancouver  
Received: October 01, 2015  
Report Date: October 27, 2015  
Page: 1 of 2

## CERTIFICATE OF ANALYSIS

VAN15002601.1

### CLIENT JOB INFORMATION

Project: Kalum  
Shipment ID: KM2015-001  
P.O. Number: KM2015-01  
Number of Samples: 18

### SAMPLE DISPOSAL

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

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
BAT01	1	Batch charge of <20 samples			VAN
PRP70-250	18	Crush, split and pulverize 250 g rock to 200 mesh			VAN
FA330-Au	18	Fire assay fusion Au by ICP-ES	30	Completed	VAN
GEO05	18	MA250 + 7 elements AQ250	0.25	Completed	VAN
DRRJT	18	Warehouse handling / Disposition of reject			VAN
DRPLP	18	Warehouse handling / disposition of pulps			VAN

### ADDITIONAL COMMENTS

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

Invoice To: TerraLogic Exploration Inc.  
Suite 200, 44 - 12th Ave. S.  
Cranbrook BC V1C 2R7  
CANADA

CC: Tim Termuende



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. Bureau Veritas 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.



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA

PHONE (604) 253-3158

# CERTIFICATE OF ANALYSIS

## VAN15002601.1

Method	WGHT	FA330	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	
Analyte	Wgt	Au	As	U	Au	Sb	TI	Hg	Se	Te	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	
Unit	kg	ppb	ppm	ppm	ppb	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	
MDL	0.01	2	0.1	0.05	0.2	0.02	0.02	5	0.1	0.02	0.05	0.1	0.02	0.2	20	0.1	0.2	2	0.02	0.2	
TTKMR020	Rock	2.26	5	6.2	0.26	0.4	0.30	0.05	<5	<0.1	<0.02	0.35	29.5	14.16	95.3	107	100.7	16.3	658	4.19	7.7
TTKMR021	Rock	2.11	7	16.7	0.68	5.8	2.21	0.05	<5	0.3	<0.02	0.37	343.8	17.33	130.2	516	16.1	46.8	3366	10.12	18.0
TTKMR022	Rock	1.99	2	1.0	0.24	0.6	0.09	0.03	7	<0.1	0.03	0.15	21.6	16.98	79.2	98	88.6	16.5	393	3.22	2.0
TTKMR023	Rock	0.95	<2	1.1	0.15	<0.2	0.24	0.03	13	<0.1	<0.02	0.95	24.9	7.26	89.7	65	4.1	15.9	1271	5.01	1.8
TTKMR024	Rock	0.82	8	14.8	0.36	<0.2	0.20	0.05	7	0.1	0.05	1.31	77.6	13.38	142.9	182	118.9	27.8	828	5.54	17.8
TTKMR025	Rock	3.09	<2	0.3	0.11	<0.2	0.06	0.02	6	<0.1	<0.02	0.17	14.5	16.23	203.4	106	5.2	14.7	1743	5.07	1.6
TTKMR026	Rock	2.62	<2	0.3	0.09	<0.2	0.14	0.04	54	<0.1	<0.02	0.24	23.8	12.50	258.4	86	3.9	14.9	1957	5.06	2.3
TTKMR027	Rock	0.73	8	0.2	0.22	2.7	0.13	0.03	13	<0.1	<0.02	0.30	16.7	6.98	96.1	44	1.0	8.8	1367	4.00	0.4
TTKMR028	Rock	0.91	3	12.5	0.36	<0.2	0.55	0.33	14	0.3	<0.02	1.59	50.6	7.52	131.7	117	120.1	21.4	861	4.75	13.4
TTKMR029	Rock	0.85	<2	1.0	0.10	<0.2	0.12	0.09	<5	<0.1	<0.02	0.66	19.2	6.20	102.4	<20	7.9	16.4	1677	5.80	2.9
CDKMR001	Rock	0.52	10	39.3	0.71	8.7	7.74	0.05	<5	0.2	<0.02	25.86	157.2	10.34	59.8	463	116.9	13.6	556	4.08	37.0
CDKMR002	Rock	0.44	786	103.5	<0.05	653.5	29.95	<0.02	9	1.3	5.83	0.30	4.5	711.18	6.0	55990	2.0	3.2	38	1.90	101.3
CDKMR003	Rock	1.72	7	11.0	0.29	<0.2	0.44	0.04	<5	0.3	0.03	1.11	48.8	15.69	115.6	229	89.2	18.5	376	4.37	12.6
CDKMR004	Rock	1.03	3	19.9	0.28	0.3	0.20	0.03	<5	<0.1	0.06	<0.05	30.1	12.28	91.3	271	75.5	12.5	409	3.52	21.4
CDKMR005	Rock	1.63	2	19.9	0.24	<0.2	0.11	0.02	8	0.1	<0.02	0.06	12.3	5.56	65.2	98	56.6	14.3	600	2.76	20.6
CDKMR006	Rock	0.83	3	9.3	0.09	0.3	0.18	<0.02	13	0.1	<0.02	0.07	6.3	4.20	26.0	74	13.2	4.4	912	0.86	9.9
CDKMR007	Rock	0.39	3	4.9	0.07	<0.2	0.03	<0.02	<5	<0.1	<0.02	0.06	4.1	2.72	24.4	39	17.1	2.2	112	1.12	5.2
CDKMR008	Rock	0.88	4	10.2	0.29	<0.2	0.52	0.03	12	0.4	0.04	1.72	55.3	17.52	118.4	148	60.2	14.9	1816	3.66	11.2



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA

PHONE (604) 253-3158

Project: Kalum  
Report Date: October 27, 2015

Page: 2 of 2

Part: 2 of 4

# CERTIFICATE OF ANALYSIS

VAN15002601.1

Method	Analyte	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	
		U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Sn
Unit		ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	
MDL		0.1	0.1	1	0.02	0.02	0.04	1	0.02	0.001	0.1	1	0.02	1	0.001	0.02	0.002	0.02	0.1	0.2	0.1
TTKMR020	Rock	1.4	4.6	138	0.33	0.92	0.19	107	0.54	0.055	13.8	124	0.94	985	0.161	7.17	0.951	1.80	0.6	29.4	0.9
TTKMR021	Rock	3.4	8.0	443	0.38	4.51	0.12	488	5.81	0.713	50.0	4	1.45	933	0.646	7.48	0.772	1.54	0.8	79.1	1.8
TTKMR022	Rock	1.7	5.0	190	0.17	0.72	0.11	98	0.34	0.055	16.4	114	1.31	983	0.290	6.36	1.589	1.38	0.7	34.7	9.6
TTKMR023	Rock	1.0	1.8	553	0.17	0.82	<0.04	133	3.17	0.138	12.0	5	1.46	964	0.402	8.97	2.903	1.28	0.4	44.8	0.6
TTKMR024	Rock	2.6	6.1	85	0.56	1.19	0.23	157	0.32	0.077	20.0	184	1.53	1063	0.493	7.78	0.802	2.21	1.2	45.2	1.3
TTKMR025	Rock	1.1	1.8	777	0.37	1.20	0.05	113	4.32	0.137	10.6	6	1.31	1427	0.411	8.76	2.618	1.52	0.4	43.2	0.8
TTKMR026	Rock	1.0	1.7	722	0.63	2.31	0.09	116	4.01	0.132	11.1	4	1.39	1419	0.410	8.99	3.157	1.29	0.3	48.3	0.6
TTKMR027	Rock	0.8	2.0	685	0.14	0.65	0.11	73	5.20	0.132	6.5	2	0.82	2097	0.337	7.36	2.697	1.22	0.5	36.8	1.2
TTKMR028	Rock	1.7	5.3	235	0.48	1.02	0.18	171	1.20	0.091	16.6	157	2.08	664	0.512	7.49	1.777	1.77	1.1	33.8	1.2
TTKMR029	Rock	0.4	1.2	668	0.16	0.65	0.06	201	5.71	0.122	5.7	10	1.38	2327	0.555	7.53	2.581	1.25	0.5	21.2	0.7
CDKMR001	Rock	1.6	5.7	92	0.11	12.39	0.56	192	0.46	0.065	14.8	116	0.95	812	0.116	6.71	0.295	3.85	2.7	8.9	0.3
CDKMR002	Rock	<0.1	<0.1	5	0.12	17.73	104.38	3	<0.02	0.003	0.5	2	<0.02	66	0.005	0.38	0.015	0.13	0.5	0.4	<0.1
CDKMR003	Rock	2.2	5.9	127	0.56	1.09	0.36	160	0.11	0.046	19.8	135	1.31	1159	0.256	7.91	1.182	2.32	0.6	48.4	1.3
CDKMR004	Rock	1.7	6.1	120	0.22	0.50	0.31	115	0.30	0.047	22.4	127	1.01	825	0.206	6.10	1.163	1.52	0.5	32.4	1.0
CDKMR005	Rock	1.1	5.1	95	0.19	0.36	0.06	73	0.13	0.034	18.7	89	0.80	458	0.149	4.54	1.219	0.84	0.5	20.2	0.5
CDKMR006	Rock	0.2	0.9	88	0.11	0.50	0.06	16	0.51	0.009	3.9	14	0.14	80	0.028	1.10	0.319	0.10	0.2	4.8	0.2
CDKMR007	Rock	0.6	2.0	30	<0.02	0.32	<0.04	36	0.04	0.015	7.1	28	0.28	212	0.080	1.89	0.327	0.40	0.3	11.7	0.3
CDKMR008	Rock	1.1	3.8	61	1.02	0.90	0.14	83	0.10	0.055	16.6	82	0.57	610	0.140	5.15	0.575	1.10	0.3	25.6	0.7



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA

PHONE (604) 253-3158

# CERTIFICATE OF ANALYSIS

VAN15002601.1

Method	Analyte	Unit	MDL	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250		
				Be	Sc	S	Y	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Li	Rb
				ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
				1	0.1	0.04	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.02	0.1	0.1		
TTKMR020	Rock			1	12.7	<0.04	7.9	29.25	3.5	14.7	3.4	0.7	2.9	0.3	1.8	0.3	0.7	0.1	0.9	0.1	0.87	31.2	75.1
TTKMR021	Rock			3	35.3	0.43	19.9	100.23	12.6	52.9	11.6	3.3	7.5	1.0	4.7	0.7	1.9	0.3	1.5	0.3	2.23	25.7	63.0
TTKMR022	Rock			2	9.3	<0.04	9.4	32.18	3.9	14.5	2.7	0.6	2.3	0.3	2.1	0.3	1.0	0.2	1.2	0.2	1.02	16.9	50.2
TTKMR023	Rock			<1	10.8	0.08	13.2	23.93	3.1	12.3	3.4	0.9	3.3	0.3	2.3	0.5	1.5	0.2	1.4	0.2	1.43	19.7	36.5
TTKMR024	Rock			1	17.8	<0.04	13.6	43.10	5.5	21.1	4.3	0.9	4.1	0.4	2.3	0.5	1.6	0.2	1.5	0.3	1.25	38.5	62.2
TTKMR025	Rock			<1	10.7	<0.04	14.6	22.77	2.8	12.7	3.1	1.0	3.5	0.4	2.7	0.6	1.7	0.2	1.7	0.2	1.31	15.8	35.5
TTKMR026	Rock			1	10.1	<0.04	15.6	23.71	3.2	14.5	2.8	0.9	4.0	0.4	2.8	0.5	1.8	0.3	1.8	0.3	1.57	27.1	28.6
TTKMR027	Rock			1	4.3	<0.04	11.4	15.58	2.1	7.5	2.2	0.9	2.1	0.5	2.6	0.5	1.4	0.2	1.5	0.2	1.37	8.3	9.4
TTKMR028	Rock			2	16.2	<0.04	16.2	34.59	4.2	16.6	4.2	1.0	3.5	0.6	2.8	0.7	1.9	0.3	1.7	0.2	0.85	47.0	53.7
TTKMR029	Rock			<1	8.8	<0.04	11.0	13.43	1.7	7.3	1.7	0.7	2.0	0.4	2.7	0.5	1.3	0.2	1.2	0.2	0.73	15.8	10.7
CDKMR001	Rock			2	14.3	0.64	7.2	31.93	4.0	14.9	3.3	0.9	2.8	0.3	1.6	0.3	0.7	<0.1	0.6	<0.1	0.23	23.6	124.2
CDKMR002	Rock			<1	0.2	1.27	0.1	0.78	<0.1	0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.04	1.4	5.3
CDKMR003	Rock			1	16.8	0.07	7.9	42.45	5.1	19.2	3.6	0.6	2.9	0.3	1.6	0.3	0.9	0.2	1.2	0.2	1.46	31.7	87.1
CDKMR004	Rock			1	12.8	<0.04	6.9	43.57	5.1	19.3	3.8	0.7	2.5	0.3	1.5	0.3	0.8	<0.1	0.8	0.2	1.07	25.7	60.0
CDKMR005	Rock			1	7.9	<0.04	5.6	36.48	4.2	15.2	2.8	0.5	1.5	0.2	1.4	0.2	0.6	<0.1	0.6	<0.1	0.60	24.6	35.1
CDKMR006	Rock			<1	2.1	0.07	5.3	8.00	0.8	3.4	0.7	0.5	0.8	<0.1	0.9	0.1	0.5	<0.1	0.6	<0.1	0.13	18.7	4.5
CDKMR007	Rock			<1	3.1	<0.04	2.0	13.61	1.6	5.7	1.1	0.2	0.9	<0.1	0.5	<0.1	0.3	<0.1	0.2	<0.1	0.35	6.9	16.4
CDKMR008	Rock			<1	9.4	<0.04	7.6	35.78	4.0	16.1	2.9	1.0	2.5	0.3	1.6	0.3	0.7	0.1	0.9	<0.1	0.70	25.3	45.0



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA

PHONE (604) 253-3158

**Client:** TerraLogic Exploration Inc.  
Suite 200, 44 - 12th Ave. S.  
Cranbrook BC V1C 2R7 CANADA

Project: Kalum  
Report Date: October 27, 2015

Page: 2 of 2

Part: 4 of 4

# CERTIFICATE OF ANALYSIS

# VAN15002601.1

Method	Analyte	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	
		Ta	Nb	Cs	Ga	In	Re	Se	Te	Tl
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL		0.1	0.04	0.1	0.02	0.01	0.002	0.3	0.05	0.05
TTKMR020	Rock	0.2	3.00	3.7	16.16	0.04	<0.002	<0.3	0.12	0.64
TTKMR021	Rock	0.7	11.81	2.7	21.09	0.12	<0.002	0.8	0.42	0.56
TTKMR022	Rock	0.4	6.41	1.9	13.91	0.05	<0.002	<0.3	0.23	0.36
TTKMR023	Rock	0.2	3.21	1.6	17.99	0.06	<0.002	0.4	0.32	0.36
TTKMR024	Rock	0.6	9.25	2.7	19.67	0.10	<0.002	0.6	0.20	0.62
TTKMR025	Rock	0.2	3.64	1.0	20.23	0.06	<0.002	<0.3	0.13	0.50
TTKMR026	Rock	0.2	3.46	1.1	18.61	0.04	<0.002	<0.3	0.50	0.33
TTKMR027	Rock	0.2	3.80	0.5	20.72	0.11	<0.002	0.8	0.20	0.30
TTKMR028	Rock	0.6	9.41	4.9	17.52	0.11	<0.002	<0.3	<0.05	0.65
TTKMR029	Rock	0.2	3.33	2.6	20.93	0.09	0.002	<0.3	0.18	0.33
CDKMR001	Rock	0.1	1.86	3.7	22.04	0.03	<0.002	0.3	0.21	0.89
CDKMR002	Rock	<0.1	0.08	0.2	0.79	<0.01	<0.002	1.3	5.84	<0.05
CDKMR003	Rock	0.3	4.69	3.0	18.85	0.06	<0.002	0.5	0.07	0.75
CDKMR004	Rock	0.3	3.85	1.8	15.16	0.06	<0.002	<0.3	0.20	0.48
CDKMR005	Rock	0.2	3.24	1.1	10.32	0.03	<0.002	<0.3	<0.05	0.27
CDKMR006	Rock	<0.1	0.71	0.2	2.19	<0.01	<0.002	<0.3	0.18	<0.05
CDKMR007	Rock	<0.1	1.53	0.5	4.59	<0.01	<0.002	<0.3	0.08	0.12
CDKMR008	Rock	0.2	2.67	1.5	11.93	0.01	<0.002	0.8	0.07	0.37



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA  
PHONE (604) 253-3158

# QUALITY CONTROL REPORT

VAN15002601.1

Method	WGHT	FA330	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	
Analyte	Wgt	Au	As	U	Au	Sb	TI	Hg	Se	Te	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	
Unit	kg	ppb	ppm	ppm	ppb	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	
MDL	0.01	2	0.1	0.05	0.2	0.02	0.02	5	0.1	0.02	0.05	0.1	0.02	0.2	20	0.1	0.2	2	0.02	0.2	
Pulp Duplicates																					
TTKMR022	Rock	1.99	2	1.0	0.24	0.6	0.09	0.03	7	<0.1	0.03	0.15	21.6	16.98	79.2	98	88.6	16.5	393	3.22	2.0
REP TTKMR022	QC			1.0	0.24	<0.2	0.10	0.04	12	0.1	<0.02										
TTKMR027	Rock	0.73	8	0.2	0.22	2.7	0.13	0.03	13	<0.1	<0.02	0.30	16.7	6.98	96.1	44	1.0	8.8	1367	4.00	0.4
REP TTKMR027	QC		7																		
CDKMR008	Rock	0.88	4	10.2	0.29	<0.2	0.52	0.03	12	0.4	0.04	1.72	55.3	17.52	118.4	148	60.2	14.9	1816	3.66	11.2
REP CDKMR008	QC										1.71	53.9	18.42	112.6	146	60.7	15.1	1799	3.65	10.7	
Reference Materials																					
STD DS10	Standard			41.2	2.67	46.7	7.75	4.87	223	1.9	4.65										
STD OREAS25A-4A	Standard										2.22	33.3	22.96	43.0	83	43.7	7.5	491	6.56	8.9	
STD OREAS25A-4A	Standard										2.32	36.2	25.87	51.3	133	46.0	7.7	483	6.53	9.3	
STD OREAS45EA	Standard			8.8	1.84	50.5	0.37	0.06	20	0.5	0.07										
STD OREAS45E	Standard										2.27	810.2	18.45	51.5	324	490.8	61.9	600	25.83	15.7	
STD OREAS45E	Standard										2.39	736.6	19.11	48.4	344	447.2	55.7	567	24.15	16.2	
STD OXD108	Standard		421																		
STD OXI121	Standard		1810																		
STD OXD108 Expected			414																		
STD OXI121 Expected			1834																		
STD DS10 Expected			46.2	2.59	91.9	9	5.1	300	2.3	5.01											
STD OREAS45EA Expected			10.3	1.73	53	0.32	0.072	10	0.78	0.07											
STD OREAS45E Expected											2.4	780	18.2	46.7	311	454	57	570	24.12	16.3	
STD OREAS25A-4A											2.55	33.9	26.6	44.4	70	45.8	8.2	500	6.7	10.7	
BLK	Blank		<2																		
BLK	Blank			<0.1	<0.05	<0.2	<0.02	<0.02	8	<0.1	<0.02										
BLK	Blank										<0.05	<0.1	<0.02	0.4	<20	<0.1	<0.2	<2	<0.02	0.5	
Prep Wash																					
ROCK-VAN	Prep Blank		<2	0.8	0.41	0.9	0.03	<0.02	5	<0.1	<0.02	1.08	4.2	2.83	36.5	27	1.4	4.6	656	2.07	1.6
ROCK-VAN	Prep Blank		<2	0.7	0.36	0.9	<0.02	<0.02	6	<0.1	<0.02	0.77	3.7	2.76	36.3	32	1.1	4.2	653	2.06	1.2





Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA  
PHONE (604) 253-3158

# QUALITY CONTROL REPORT

VAN15002601.1

Method	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250		
Analyte	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Sn		
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm		
MDL	0.1	0.1	1	0.02	0.02	0.04	1	0.02	0.001	0.1	1	0.02	1	0.001	0.02	0.002	0.02	0.1	0.2	0.1		
Pulp Duplicates																						
TTKMR022	Rock	1.7	5.0	190	0.17	0.72	0.11	98	0.34	0.055	16.4	114	1.31	983	0.290	6.36	1.589	1.38	0.7	34.7	9.6	
REP TTKMR022	QC																					
TTKMR027	Rock	0.8	2.0	685	0.14	0.65	0.11	73	5.20	0.132	6.5	2	0.82	2097	0.337	7.36	2.697	1.22	0.5	36.8	1.2	
REP TTKMR027	QC																					
CDKMR008	Rock	1.1	3.8	61	1.02	0.90	0.14	83	0.10	0.055	16.6	82	0.57	610	0.140	5.15	0.575	1.10	0.3	25.6	0.7	
REP CDKMR008	QC	1.1	4.1	61	0.99	0.87	0.13	84	0.10	0.054	16.7	85	0.57	607	0.153	5.08	0.567	1.10	0.3	25.8	0.8	
Reference Materials																						
STD DS10	Standard																					
STD OREAS25A-4A	Standard	2.5	14.8	46	0.12	0.54	0.34	151	0.29	0.048	21.5	115	0.33	137	0.906	9.10	0.116	0.46	1.6	138.8	3.5	
STD OREAS25A-4A	Standard	3.0	15.1	41	0.16	0.61	0.36	153	0.28	0.045	18.4	112	0.32	140	0.950	8.51	0.121	0.48	1.8	147.7	3.8	
STD OREAS45EA	Standard																					
STD OREAS45E	Standard	2.4	13.1	17	0.05	1.00	0.26	321	0.07	0.034	11.3	1069	0.17	244	0.560	7.20	0.057	0.33	0.9	91.2	1.4	
STD OREAS45E	Standard	2.7	12.3	15	0.14	0.92	0.33	301	0.07	0.032	7.9	989	0.15	239	0.506	6.79	0.053	0.32	0.8	92.7	1.4	
STD OXD108	Standard																					
STD OXI121	Standard																					
STD OXD108 Expected																						
STD OXI121 Expected																						
STD DS10 Expected																						
STD OREAS45EA Expected																						
STD OREAS45E Expected		2.41	12.9	15.9	0.06	1	0.28	322	0.065	0.034	11	979	0.156	252	0.559	6.78	0.059	0.324	1.07	97	1.32	
STD OREAS25A-4A		2.94	15.8	48.5		0.67	0.35	163	0.283	0.0495	21.8	120	0.327	151	0.977	8.87	0.134	0.5	2	155	4.2	
BLK	Blank																					
BLK	Blank																					
BLK	Blank	<0.1	<0.1	<1	<0.02	<0.02	<0.04	<1	<0.02	<0.001	<0.1	<1	<0.02	<1	<0.001	<0.02	<0.002	<0.02	<0.1	<0.2	<0.1	
Prep Wash																						
ROCK-VAN	Prep Blank	1.3	2.9	227	0.05	0.07	0.16	35	1.64	0.039	12.6	2	0.51	831	0.224	6.80	3.392	1.71	0.3	53.5	0.7	
ROCK-VAN	Prep Blank	1.3	3.0	227	<0.02	0.05	0.10	34	1.62	0.042	12.3	2	0.51	815	0.224	6.83	3.529	1.72	0.3	53.6	0.8	



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA  
PHONE (604) 253-3158

# QUALITY CONTROL REPORT

VAN15002601.1

Method	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	
Analyte	Be	Sc	S	Y	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Li	Rb	
Unit	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	1	0.1	0.04	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.02	0.1	0.1	
Pulp Duplicates																					
TTKMR022	Rock	2	9.3	<0.04	9.4	32.18	3.9	14.5	2.7	0.6	2.3	0.3	2.1	0.3	1.0	0.2	1.2	0.2	1.02	16.9	50.2
REP TTKMR022	QC																				
TTKMR027	Rock	1	4.3	<0.04	11.4	15.58	2.1	7.5	2.2	0.9	2.1	0.5	2.6	0.5	1.4	0.2	1.5	0.2	1.37	8.3	9.4
REP TTKMR027	QC																				
CDKMR008	Rock	<1	9.4	<0.04	7.6	35.78	4.0	16.1	2.9	1.0	2.5	0.3	1.6	0.3	0.7	0.1	0.9	<0.1	0.70	25.3	45.0
REP CDKMR008	QC	1	9.9	<0.04	7.7	35.34	3.9	15.9	3.2	0.9	2.2	0.3	1.8	0.4	0.8	0.1	0.8	0.1	0.74	26.0	43.9
Reference Materials																					
STD DS10	Standard																				
STD OREAS25A-4A	Standard	1	11.3	<0.04	9.5	46.97	4.7	16.5	3.4	0.6	2.5	0.3	1.9	0.4	1.0	0.2	1.0	0.2	3.65	35.9	55.7
STD OREAS25A-4A	Standard	1	11.4	<0.04	9.2	41.59	4.2	16.1	3.1	0.5	2.2	0.3	2.1	0.4	1.1	0.2	1.2	0.2	4.10	38.6	51.4
STD OREAS45EA	Standard																				
STD OREAS45E	Standard	<1	90.1	<0.04	7.9	24.60	2.5	8.7	2.0	0.6	1.8	0.2	1.8	0.4	1.0	0.2	1.1	0.1	3.02	8.1	21.3
STD OREAS45E	Standard	<1	82.5	<0.04	6.5	18.81	1.9	7.3	1.9	0.5	2.0	0.2	1.9	0.3	1.0	0.1	1.0	0.1	2.89	7.2	19.0
STD OXD108	Standard																				
STD OXI121	Standard																				
STD OXD108 Expected																					
STD OXI121 Expected																					
STD DS10 Expected																					
STD OREAS45EA Expected																					
STD OREAS45E Expected			93	0.046	8.28	23.5	2.47	9.05	2.28	0.52	1.82	0.33	2.05	0.38	1.2	0.17	1.21	0.175	3.11	6.58	21.2
STD OREAS25A-4A		0.93	13.7	0.047	10.5	48.9	5.11	18.2	3.55	0.69	2.68	0.34	2.25	0.43	1.23	0.19	1.3	0.2	4.28	36.7	61
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<1	0.1	<0.04	<0.1	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.1	<0.1	
Prep Wash																					
ROCK-VAN	Prep Blank	1	7.0	<0.04	16.5	25.19	3.3	12.3	2.7	0.8	3.0	0.5	3.0	0.6	1.9	0.3	2.0	0.4	1.83	1.7	37.8
ROCK-VAN	Prep Blank	1	6.8	<0.04	16.8	25.09	2.9	10.9	2.6	0.6	2.6	0.4	2.9	0.6	1.8	0.3	2.2	0.3	1.76	2.1	38.7



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA  
PHONE (604) 253-3158

Project: Kalum  
Report Date: October 27, 2015

Page: 1 of 1

Part: 4 of 4

## QUALITY CONTROL REPORT

VAN15002601.1

Method Analyte Unit MDL	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250
	Ta ppm	Nb ppm	Cs ppm	Ga ppm	In ppm	Re ppm	Se ppm	Te ppm	Tl ppm
	0.1	0.04	0.1	0.02	0.01	0.002	0.3	0.05	0.05
Pulp Duplicates									
TTKMR022 Rock	0.4	6.41	1.9	13.91	0.05	<0.002	<0.3	0.23	0.36
REP TTKMR022 QC									
TTKMR027 Rock	0.2	3.80	0.5	20.72	0.11	<0.002	0.8	0.20	0.30
REP TTKMR027 QC									
CDKMR008 Rock	0.2	2.67	1.5	11.93	0.01	<0.002	0.8	0.07	0.37
REP CDKMR008 QC	0.2	2.84	1.6	11.01	0.07	<0.002	0.5	0.09	0.36
Reference Materials									
STD DS10 Standard									
STD OREAS25A-4A Standard	1.3	19.23	5.5	22.55	0.09	<0.002	2.4	0.09	0.33
STD OREAS25A-4A Standard	1.4	18.85	5.2	25.45	0.06	<0.002	2.2	<0.05	0.35
STD OREAS45EA Standard									
STD OREAS45E Standard	0.5	5.91	1.2	16.50	0.11	<0.002	2.3	0.25	0.16
STD OREAS45E Standard	0.5	5.90	1.2	17.33	0.07	0.003	2.4	0.13	0.15
STD OXD108 Standard									
STD OXI121 Standard									
STD OXD108 Expected									
STD OXI121 Expected									
STD DS10 Expected									
STD OREAS45EA Expected									
STD OREAS45E Expected	0.54	6.8	1.26	16.5	0.099		2.97	0.1	0.09
STD OREAS25A-4A	1.5	20.9	6	25.9	0.09		2.5		0.35
BLK Blank									
BLK Blank									
BLK Blank	<0.1	<0.04	<0.1	<0.02	<0.01	<0.002	0.8	<0.05	<0.05
Prep Wash									
ROCK-VAN Prep Blank	0.4	5.65	0.2	13.58	0.03	<0.002	<0.3	0.15	0.25
ROCK-VAN Prep Blank	0.4	5.63	0.2	13.56	0.02	<0.002	<0.3	0.07	0.22



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA  
PHONE (604) 253-3158

**Client:** TerraLogic Exploration Inc.  
Suite 200, 44 - 12th Ave. S.  
Cranbrook BC V1C 2R7 CANADA

Submitted By: Jarrod Brown  
Receiving Lab: Canada-Vancouver  
Received: October 01, 2015  
Report Date: October 15, 2015  
Page: 1 of 2

## CERTIFICATE OF ANALYSIS

VAN15002602.1

### CLIENT JOB INFORMATION

Project: Kalum  
Shipment ID: KM2015-001  
P.O. Number: KM2015-01  
Number of Samples: 1

### SAMPLE DISPOSAL

RTRN-PLP Return  
DISP-RJT-SOIL Immediate Disposal of Soil Reject

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
Dry at 60C	1	Dry at 60C			VAN
SS80	1	Dry at 60C sieve 100g to -80 mesh			VAN
FA330-Au	1	Fire assay fusion Au by ICP-ES	30	Completed	VAN
GEO05	1	MA250 + 7 elements AQ250	0.25	Completed	VAN
DRPLP	1	Warehouse handling / disposition of pulps			VAN

### ADDITIONAL COMMENTS

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

Invoice To: TerraLogic Exploration Inc.  
Suite 200, 44 - 12th Ave. S.  
Cranbrook BC V1C 2R7  
CANADA

CC: Tim Termuende



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. Bureau Veritas 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.



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA

PHONE (604) 253-3158

**Client:** TerraLogic Exploration Inc.

Suite 200, 44 - 12th Ave. S.

Cranbrook BC V1C 2R7 CANADA

Project: Kalum

Report Date: October 15, 2015

Page: 2 of 2

Part: 1 of 4

# CERTIFICATE OF ANALYSIS

## VAN15002602.1

Method	FA330	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	
Analyte	Au	As	U	Au	Sb	Tl	Hg	Se	Te	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	
Unit	ppb	ppm	ppm	ppb	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	
MDL	2	0.1	0.05	0.2	0.02	0.02	5	0.1	0.02	0.05	0.1	0.02	0.2	20	0.1	0.2	2	0.02	0.2	0.1	
CDKMD001	Soil	5	9.8	0.56	1.4	0.21	0.05	95	0.4	0.05	1.08	21.8	15.44	217.6	215	32.1	11.3	454	4.53	11.9	1.6



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA

PHONE (604) 253-3158

**Client:** TerraLogic Exploration Inc.

Suite 200, 44 - 12th Ave. S.

Cranbrook BC V1C 2R7 CANADA

Project: Kalum

Report Date: October 15, 2015

Page: 2 of 2

Part: 2 of 4

# CERTIFICATE OF ANALYSIS

## VAN15002602.1

Method	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	
Analyte	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Sn	Be	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	
MDL	0.1	1	0.02	0.02	0.04	1	0.02	0.001	0.1	1	0.02	1	0.001	0.02	0.002	0.02	0.1	0.2	0.1	1	
CDKMD001	Soil	5.0	296	0.79	0.57	0.22	114	1.13	0.114	16.7	54	0.63	662	0.347	7.99	1.714	1.06	0.8	40.5	1.3	1



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA

PHONE (604) 253-3158

**Client:** TerraLogic Exploration Inc.

Suite 200, 44 - 12th Ave. S.

Cranbrook BC V1C 2R7 CANADA

Project: Kalum

Report Date: October 15, 2015

Page: 2 of 2

Part: 3 of 4

# CERTIFICATE OF ANALYSIS

## VAN15002602.1

Method	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	
Analyte	Sc	S	Y	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Li	Rb	Ta	
Unit	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	0.1	0.04	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.02	0.1	0.1	0.1	
CDKMD001	Soil	9.3	<0.04	10.2	36.28	4.6	16.5	2.9	0.9	2.8	0.5	2.3	0.4	1.0	0.2	1.1	0.2	1.32	26.9	38.6	0.7



**BUREAU** MINERAL LABORATORIES  
**VERITAS** Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA

PHONE (604) 253-3158

**Client:** TerraLogic Exploration Inc.  
Suite 200, 44 - 12th Ave. S.  
Cranbrook BC V1C 2R7 CANADA

Project: Kalum  
Report Date: October 15, 2015

Page: 2 of 2

Part: 4 of 4

## CERTIFICATE OF ANALYSIS

VAN15002602.1

Method	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250
Analyte	Nb	Cs	Ga	In	Re	Se	Te	Tl
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.04	0.1	0.02	0.01	0.002	0.3	0.05	0.05
CDKMD001 Soil	10.83	2.2	17.17	0.10	<0.002	0.4	0.06	0.31





Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA  
PHONE (604) 253-3158

# QUALITY CONTROL REPORT

VAN15002602.1

Method	FA330	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	
Analyte	Au	As	U	Au	Sb	Tl	Hg	Se	Te	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	
Unit	ppb	ppm	ppm	ppb	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	
MDL	2	0.1	0.05	0.2	0.02	0.02	5	0.1	0.02	0.05	0.1	0.02	0.2	20	0.1	0.2	2	0.02	0.2	0.1	
Reference Materials																					
STD DS10 Standard		46.6	3.18	47.2	8.74	5.72	312	2.1	4.86												
STD OREAS25A-4A Standard										2.46	35.9	27.00	48.4	77	48.8	8.1	494	6.97	11.5	3.1	
STD OREAS45EA Standard		10.6	1.95	56.3	0.43	0.06	15	0.8	0.05												
STD OREAS45E Standard										2.47	800.2	19.65	50.4	325	499.9	60.3	565	26.07	18.5	2.7	
STD OXA71 Standard	78																				
STD OXA71 Expected	84.9																				
STD DS10 Expected		46.2	2.59	91.9	9	5.1	300	2.3	5.01												
STD OREAS45EA Expected		10.3	1.73	53	0.32	0.072	10	0.78	0.07												
STD OREAS45E Expected										2.4	780	18.2	46.7	311	454	57	570	24.12	16.3	2.41	
STD OREAS25A-4A										2.55	33.9	26.6	44.4	70	45.8	8.2	500	6.7	10.7	2.94	
BLK Blank	<2																				
BLK Blank		0.1	<0.05	<0.2	<0.02	<0.02	<5	<0.1	<0.02												
BLK Blank										<0.05	0.1	0.04	<0.2	<20	<0.1	<0.2	<2	<0.02	1.0	<0.1	



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA  
PHONE (604) 253-3158

**QUALITY CONTROL REPORT**

**VAN15002602.1**

Method	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250
Analyte	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Sn	Be
Unit	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm
MDL	0.1	1	0.02	0.02	0.04	1	0.02	0.001	0.1	1	0.02	1	0.001	0.02	0.002	0.02	0.1	0.2	0.1	1
Reference Materials																				
STD DS10 Standard																				
STD OREAS25A-4A Standard	16.7	51	0.07	0.72	0.42	166	0.29	0.054	22.6	120	0.33	154	0.954	9.54	0.131	0.54	2.2	161.8	4.8	<1
STD OREAS45EA Standard																				
STD OREAS45E Standard	13.6	18	0.05	1.07	0.33	345	0.07	0.036	11.4	1078	0.15	264	0.529	7.46	0.052	0.35	1.0	100.9	1.4	<1
STD OXA71 Standard																				
STD OXA71 Expected																				
STD DS10 Expected																				
STD OREAS45EA Expected																				
STD OREAS45E Expected	12.9	15.9	0.06	1	0.28	322	0.065	0.034	11	979	0.156	252	0.559	6.78	0.059	0.324	1.07	97	1.32	
STD OREAS25A-4A	15.8	48.5		0.67	0.35	163	0.283	0.0495	21.8	120	0.327	151	0.977	8.87	0.134	0.5	2	155	4.2	0.93
BLK Blank																				
BLK Blank																				
BLK Blank	<0.1	<1	<0.02	<0.02	<0.04	<1	<0.02	<0.001	<0.1	<1	<0.02	<1	<0.001	<0.02	<0.002	<0.02	<0.1	<0.2	<0.1	<1



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA  
PHONE (604) 253-3158

**QUALITY CONTROL REPORT**

**VAN15002602.1**

Method	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250
Analyte	Sc	S	Y	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Li	Rb	Ta
Unit	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.1	0.04	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.02	0.1	0.1	0.1
Reference Materials																				
STD DS10 Standard																				
STD OREAS25A-4A Standard	12.9	0.05	11.1	49.75	5.2	18.7	3.8	0.8	2.5	0.4	2.3	0.4	1.4	0.2	1.3	0.2	4.61	40.3	59.5	1.5
STD OREAS45EA Standard																				
STD OREAS45E Standard	94.0	0.04	8.4	25.22	2.7	9.3	2.4	0.5	1.9	0.3	2.1	0.4	1.3	0.2	1.4	0.2	2.95	6.5	22.1	0.5
STD OXA71 Standard																				
STD OXA71 Expected																				
STD DS10 Expected																				
STD OREAS45EA Expected																				
STD OREAS45E Expected	93	0.046	8.28	23.5	2.47	9.05	2.28	0.52	1.82	0.33	2.05	0.38	1.2	0.17	1.21	0.175	3.11	6.58	21.2	0.54
STD OREAS25A-4A	13.7	0.047	10.5	48.9	5.11	18.2	3.55	0.69	2.68	0.34	2.25	0.43	1.23	0.19	1.3	0.2	4.28	36.7	61	1.5
BLK Blank																				
BLK Blank																				
BLK Blank	<0.1	<0.04	<0.1	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.1	<0.1	<0.1



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA  
PHONE (604) 253-3158

**Client:** TerraLogic Exploration Inc.  
Suite 200, 44 - 12th Ave. S.  
Cranbrook BC V1C 2R7 CANADA

Project: Kalum  
Report Date: October 15, 2015

Page: 1 of 1

Part: 4 of 4

## QUALITY CONTROL REPORT

VAN15002602.1

Method	MA250	MA250	MA250	MA250	MA250	MA250	MA250	MA250
Analyte	Nb	Cs	Ga	In	Re	Se	Te	Tl
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.04	0.1	0.02	0.01	0.002	0.3	0.05	0.05
Reference Materials								
STD DS10 Standard								
STD OREAS25A-4A Standard	21.13	6.1	26.06	0.13	<0.002	2.8	<0.05	0.38
STD OREAS45EA Standard								
STD OREAS45E Standard	6.55	1.3	17.35	0.13	<0.002	2.8	0.15	0.19
STD OXA71 Standard								
STD OXA71 Expected								
STD DS10 Expected								
STD OREAS45EA Expected								
STD OREAS45E Expected	6.8	1.26	16.5	0.099		2.97	0.1	0.09
STD OREAS25A-4A	20.9	6	25.9	0.09		2.5		0.35
BLK Blank								
BLK Blank								
BLK Blank	<0.04	<0.1	<0.02	<0.01	<0.002	<0.3	<0.05	<0.05