

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
1016 – 510 West Hastings Street  
Vancouver, B.C. V6B 1L8

Telephone: 604-688-2568

Fax: 604-688-2578

**ASSESSMENT REPORT**

describing

**SOIL GEOCHEMICAL SAMPLING**

Field work performed from August 27 to 29, 2015

at the

**CLINT PROPERTY**

Clint 1-56	YE39481-YE39536
57-116	YF36887-YF36946

located at

NTS 116C/07  
Latitude 64°24'N; Longitude 140°50'W

in the

Dawson Mining District  
Yukon Territory

prepared by

Archer, Cathro & Associates (1981) Limited

for

**STRATEGIC METALS LTD.**

by

A. Mitchell, B.Sc. GIT

December 2015

## **CONTENTS**

INTRODUCTION	1
PROPERTY LOCATION, CLAIM DATA AND ACCESS	1
HISTORY AND PREVIOUS WORK	2
GEOMORPHOLOGY	3
REGIONAL GEOLOGY	3
PROPERTY GEOLOGY	5
MINERALIZATION	6
GEOCHEMISTRY	6
DISCUSSION AND CONCLUSIONS	7
REFERENCES	9

## **APPENDICES**

I	STATEMENT OF QUALIFICATIONS
II	STATEMENT OF EXPENDITURES
III	CERTIFICATES OF ANALYSIS

## **FIGURES**

<u>No.</u>	<u>Description</u>	<u>Follows Page</u>
1	Property Location	1
2	Claim Locations	1
3	Tectonic Setting	3
4	Regional Geology	4
5	Property Geology and Mineralization	5
6	Sample Locations	6
7	Gold Soil Geochemistry	6
8	Silver Soil Geochemistry	6
9	Copper Soil Geochemistry	6
10	Lead Soil Geochemistry	6
11	Zinc Soil Geochemistry	6
12	Nickel Soil Geochemistry	6
13	Molybdenum Soil Geochemistry	6

## **TABLES**

<u>No.</u>	<u>Description</u>	<u>Page</u>
I	Regional Stratigraphic Units	4
II	Soil Geochemical Thresholds and Peak Values	7

## INTRODUCTION

The Clint property covers hard-rock gold targets in the headwaters of Marten Creek, part of the Forty Mile Gold Camp in western Yukon. Strategic Metals Ltd. holds 100% interest of this property.

This report describes soil geochemical sampling conducted between August 27 and 29, 2015 by Archer, Cathro & Associates (1981) Limited on behalf of Strategic Metals. The author interpreted all results from this work, and his Statement of Qualifications is in Appendix I. A Statement of Expenditures is in Appendix II.

## PROPERTY LOCATION, CLAIM DATA AND ACCESS

The Clint property consists of 116 contiguous mineral claims located on NTS map sheet 116C/07 at latitude 64°24' north and longitude 140°50' west (Figure 1). The property covers an area of approximately 2410 ha (24.10 km<sup>2</sup>). The claims are registered with the Dawson Mining Recorder in the name of Archer Cathro which holds them in trust for Strategic Metals. Specifics concerning claim registration are tabulated below, while the locations of individual claims are shown on Figure 2.

<u>Claim Name</u>	<u>Grant Number</u>	<u>Expiry Date*</u>
Clint 1-56	YE39481-YE39536	May 09, 2023
57-116	YF36887-YF36946	May 09, 2021

\* Expiry dates include 2015 work that has been filed for assessment credit, but has not yet been accepted.

The property is located approximately 100 km by road northwest of the Dawson City, which is the closest community and supply centre. Access to the property from Dawson City is possible via the first 60 km of the Top of the World Highway, followed by 30 km along the Clinton Creek Road, and finally by a 13 km long four wheel drive road. Clinton Creek Road is a haulage road that serviced the former Clinton Creek asbestos mine, located northeast of the property. The Clinton Creek Road and Top of the World Highway are usually open from late spring until late fall, when the ferry across the Yukon River at Dawson City is in operation.

The 2015 work was done from a fly camp in a clearing off the side of Clinton Creek Road.

The Clint claims lie within the traditional territory of the Tr'ondëk Hwëh'in First Nation. Neither the property nor the access route overlie first nation's land.



Access Road

## **HISTORY AND PREVIOUS WORK**

Clinton Creek asbestos mine site is located five kilometres northeast of the Clint property. It was operated from 1967 to 1978 by the Cassiar Asbestos Corporation Limited (Yukon Energy, Mines and Resources, 2012). Claims adjoining the southwest side of the mine lease were staked as the Tartzhart claims in 1981 by Teslin Joint Venture (TJV) – a syndicate of Brinco Mining Ltd., Cominco Limited and Exploram Minerals Ltd. The northeast section of the current Clint claims covers a portion of the old Tartzhart claim area as shown on Figure 2. The Tartzhart property was explored for asbestos by a program that involved geochemical surveys and excavator trenching (Cathro and Murray, 1982). TJV also performed widely spaced geochemical sampling, which identified a large gold anomaly (up to 63 ppb) in an area that is near the northeastern part of the Clint property (Cathro et al, 1981).

Between 1976 and 1977, the Geological Survey of Canada (GSC) collected regional stream sediment samples from drainages across parts of west-central Yukon (NTS 116B, parts of 116C, 116F and 116G). Subsequent to that Open File release, the samples were reanalyzed for a wider suite of elements. Only two samples from the GSC program were collected within the current Clint property. They returned background values for silver, copper and gold. Lead and zinc analyses ranged from background to weakly anomalous, yielding 4 and 25 ppm lead and 104 and 192 ppm zinc (Friske et al, 1991).

Marten Creek is almost entirely staked with placer claims, many of which overlap with the Clint claims. No records were found relating to activity on these placer claims. Placer mining was conducted intermittently from 1987 to 2003 by W. Claxton and L. Chapman, downstream to the southeast of the Clint property along the banks of the Forty Mile River and at the mouth of Marten Creek (Yukon Geological Survey –YGS, 2012). Trenches were dug to bedrock in 1988, 1989 and 1990 by W. Claxton, one kilometre downstream from the mouth of Marten Creek. This trenching reportedly exposed six gold-bearing veins across a 100 m width. The veins cut graphitic schist and comprised quartz-siderite lenses up to 0.5 m wide within gouge- and breccia-filled fracture zones (YGS, 2012). No assays were recorded.

In 2011, the GSC published a map that shows compiled regional geophysical data for various surveys done from 1952 to 1962 and 1993 to 2010. Several small magnetic highs were identified in the northern part of the Clint property, which may represent ultramafic rocks or unmapped plutonic bodies (Hayward and Oneschuk, 2011).

In spring 2011, Strategic Metals staked the Clint 1-56 claims and collected 77 soil samples. This sampling returned a few moderately anomalous gold (20 to 23 ppb) and zinc (200 to 283 ppm) values and weakly to strongly anomalous silver (1 to 3.18 ppm) results. Other samples yielded moderately to strongly anomalous values for nickel (up to 565 ppm) and molybdenum (up to 10.25 ppm). Copper response was generally low with a peak of 94.8 ppm.

In summer 2012, Strategic Metals collected 114 samples from contour and grid lines. A few samples yielded moderately anomalous copper (up to 151.5 ppm), molybdenum (up to 6.27 ppm), zinc (up to 339 ppm) and nickel (up to 276 ppm) values, with moderately to strongly anomalous silver responses (up to 2.02 ppm).

In fall 2012, Strategic Metals expanded the property northeasterly towards the Clinton Creek mine site, to cover some of the gold anomalies identified by TJV.

In 2013, Strategic Metals collected a total of 22 rock, 410 soil and 17 silt samples from the property. Rock samples returned weakly elevated copper, molybdenum, nickel, lead and zinc values. Two significant multi-element soil geochemical anomalies were identified during the program, with the best target consisting of a 1000 m by 2000 m zone located in the northeastern part of the property. This zone contains 40 samples that yielded between 10.0 and 68.1 ppm molybdenum. It also includes scattered moderately to strongly anomalous gold (up to 109 ppb), silver (up to 3.7 ppm), copper (up to 279 ppm), zinc (up to 342 ppm) and nickel (up to 254 ppm) results.

### **GEOMORPHOLOGY**

The Clint claim block lies west of Porcupine Hill and north of the Forty Mile River. It covers the upper part of the Marten Creek drainage and some headwater tributaries of Clinton Creek, both of which ultimately connect to the Pacific Ocean via the Forty Mile and Yukon rivers. Elevations on the property range from 460 m to 914 m. Topography is typified by gentle south-facing and steep north-facing slopes. The property is entirely below treeline and features spruce bogs and mature forests of mixed spruce and poplar.

The claim area lies west of the Tintina Trench and escaped Pleistocene glaciation. Residual and colluvial overburden ranges from several centimetres to greater than five metres thick. Bedrock exposures are limited.

The climate at the Clint property is typical of northern continental regions with long, cold winters, truncated fall and spring seasons and short, mild summers. Although summers are relatively warm, snowfall can occur in any month. The property is mostly snow free from early May to mid-October.

### **REGIONAL GEOLOGY**

The Clint property is located in Yukon-Tanana Terrane (Figure 3), which underlies a vast area west of autochthonous North America in central Yukon and Alaska. Yukon-Tanana Terrane is geologically complex, recording the tectonic incorporation of a Paleozoic volcanic and magmatic arc with its basement sequence onto the outboard edge of ancestral North America. It consists of a series of highly strained metavolcanic, metasedimentary and metaplutonic packages that have undergone polyphase deformation. The metamorphic rocks are cut by numerous thrust faults and the Tintina Fault, a large transcurrent structure that produced 450 km of dextral offset in the Late Cretaceous and Early Tertiary.

Lithologies on the property belong to four main units: Prospector Mountain Suite intrusives; Anvil Assemblage intrusive, metavolcanic and metasedimentary rocks; Nasina Assemblage metasediments; and, Amphibolites. The following description of regional geology is based on the most recent published data (YGS, 2015).

**Table I – Regional Stratigraphic Units (YGS, 2015)**

Unit Name	Age	Map Name	Description
Prospector Mountain Suite	Late Cretaceous to Tertiary	LKgP	Grey, fine to coarse grained, massive, granitic rocks of felsic, intermediate, rarely mafic composition and related felsic dykes. Hornblende-biotite granodiorite, hornblende diorite, quartz diorite.
Anvil Assemblage	Triassic	uTrA	Weakly deformed, thin bedded argillite, fine grained quartz sandstone and argillaceous limestone.
Anvil Assemblage	Carboniferous and Permian	CPA	Dominantly oceanic assemblage of mafic volcanics, ultramafics, chert and pelite, limestone and gabbroic rocks.
		CPA1	Variably altered and foliated, locally augite-phyric basalt (local pillows), diorite and gabbro, chloritic greenstone, amphibolitic greenstone and amphibolite; minor metachert, siliceous argillite or siltstone, greywacke, tuff, and siliceous limestone.
		CPA4	Dunite, peridotite, gabbro, pyroxenite, harzburgite and minor diorite, hornblendite and diabase; serpentinite, orange weathering quartz carbonate rock with minor green chromian muscovite, talc-carbonate schist and carbonatized ultramafic rocks
Nasina Assemblage	Devonian, Mississippian and Older	DMN	Graphitic quartzite and muscovite quartz-rich schist, with interspersed marble and probable correlative successions.
		DMN1	Dark grey to black, fine grained graphitic and non-graphitic quartzite, grey micaceous quartzite and quartz muscovite ( $\pm$ chlorite; $\pm$ feldspar augen) schist, locally garnetiferous; minor graphitic stretched metaconglomerate and metagrit.
		DMN2	Marble.
Amphibolite	Proterozoic and Paleozoic	PPa	Metamorphosed mafic rocks including amphibolite and ultramafic rocks of unknown association; may belong in part of entirely to Nisling, Nasina, and Slide Mountain assemblages and mafic-ultramafic intrusions within Nasina Assemblage.

Regional-scale mapping features three distinct blocks (Southwest, Central and Northeast), which are separated by two northwest trending and southwest dipping regional-scale thrust faults (Figure 4). The southwestern-most fault (informally named the Clinton Thrust Fault for the purposes of this report) juxtaposes Nasina Assemblage quartzite and schist (Southwest block) to the south and Anvil Assemblage basalt, diorite and gabbro to the north (Central block). The northern-most block comprises Anvil Assemblage gabbro, pelite and chert. A 500 by 1000 m klippe of Nasina Assemblage, bordered by a thrust fault, lies within the central block.

## **PROPERTY GEOLOGY**

Detailed geological mapping was done in 2013 within the northeast corner of the property. Mapping was limited to creek beds, road cuts and hand pits, due to poor bedrock exposure. Figure 5 illustrates property geology, which has been adapted from regional mapping. Prospector Mountains Suite, Anvil Assemblage and Nasina Assemblage are subdivided in the following paragraphs.

### **Prospector Mountain Suite**

**Unit A** is a light grey, aphanitic, crystalline, siliceous intrusive (probably dyke) hosting fine-grained disseminated pyrite (1-3%).

### **Anvil Assemblage**

**Unit B** is composed of “salt and pepper” textured, fine grained, equigranular, non-magnetic, biotite-hornblende diorite.

**Unit C** consists of dark grey to black, aphanitic, vesicular basalt.

**Unit D** is medium grey to orange, well banded chert that is often cross cut by barren, grey, milky quartz veinlets.

### **Nasina Assemblage**

**Unit E** is composed of dark grey to black, finely laminated, variably fissile phyllite with locally occurring graphitic argillite and limonite and hematite laminations. It may host white, transparent, comb textured quartz veins (< 2 cm) with limonite blebs and coated fractures.

**Unit F** consists of medium grey, weakly foliated quartzite.

**Unit G** is blue to grey and white banded, biotite-sericite ( $\pm$  quartz) schist, with local gentle folds that exhibit a northeastern strike and dips to the northwest. Unit G has small limonite pits and may host white, transparent, comb textured quartz veins (< 2 cm) with limonite blebs and coated fractures. Foliation in Unit G strikes northeasterly and dips to the northwest.

To date, units B, C and D have only been observed as float in creek beds, while units E, F and G occur as outcrop and/or felsenmeener float.

The regional-scale thrust fault in the northern corner of the property separates phyllite and argillite of Unit E north of the fault and muscovite-quartz schist of Unit G to the south of it.



## **MINERALIZATION**

In 2013, Strategic Metals conducted prospecting in the northern part of the property (Figure 5). Results from this sampling were subdued; however, weakly elevated copper, molybdenum, nickel, lead and zinc values were returned from some samples (Montague, 2013). Unit A (felsic dyke) hosts fine grained disseminated pyrite and yielded elevated values of copper and zinc, Unit G (sericite altered schist) also hosts pyrite blebs and returned elevated amounts of nickel and zinc, and quartz vein float samples were slightly enriched in copper, molybdenum and zinc.

No rock samples were collected in 2015.

## **GEOCHEMISTRY**

Soil sampling completed between 2011 and 2013 comprised reconnaissance- and detailed-scale contour soil sampling in the southwestern and northeastern parts of the property. Silt sampling was also conducted in conjunction with these programs.

In 2015, a total of 236 soil samples were collected from the northwestern part of the property. A 50 by 50 m soil grid straddles the four wheel drive access road on the property. Locations for 2015 soil samples are plotted on Figure 6. Thematic results from historical and 2015 programs for gold, silver, copper, lead, zinc, nickel and molybdenum are plotted on Figures 7 to 13, respectively.

All soil sample locations were recorded using hand-held GPS units. Sample sites are marked by aluminum tags inscribed with the sample numbers and affixed to 50 cm wooden lath that were driven into the ground. Most of the soil samples were collected from 15 to 60 cm deep holes using hand-held augers. They were placed into individually pre-numbered Kraft paper bags. The soil samples were sent to ALS Minerals in Whitehorse, where they were dried and screened to -180 microns. The fine fractions were then shipped to ALS Minerals in North Vancouver, where they were dissolved in a four acid solution and analyzed for 48 elements using inductively coupled plasma-mass spectroscopy and inductively coupled plasma-atomic emission spectroscopy techniques (ME-MS61). An additional 30 g charge from each fine fraction was further analyzed for gold by fire assay with inductively coupled plasma-atomic emissions spectroscopy finish (Au-ICP21). Certificates of Analysis are provided in Appendix III.

Table II below lists anomalous thresholds and peak values used to describe the soil results from the property.

**Table II – Soil Geochemical Thresholds and Peak Values**

Element	Weak	Moderate	Strong	Peak Values
Gold (ppb)	$\geq 10 < 20$	$\geq 20 < 50$	$\geq 50$	109
Silver (ppm)	$\geq 0.5 < 1$	$\geq 1 < 2$	$\geq 2$	3.7
Copper (ppm)	$\geq 50 < 100$	$\geq 100 < 200$	$\geq 200$	279
Lead (ppm)	$\geq 50 < 100$	$\geq 100 < 200$	$\geq 200$	643
Zinc (ppm)	$\geq 50 < 100$	$\geq 100 < 200$	$\geq 200$	1160
Nickel (ppm)	$\geq 50 < 100$	$\geq 100 < 200$	$\geq 200$	565
Molybdenum (ppm)	$\geq 1 < 2$	$\geq 2 < 5$	$\geq 5$	68.1

Soil sampling completed in 2013 outlined two main geochemical anomalies. The larger anomaly is a 1000 by 2000 m area of strongly elevated molybdenum (10.0-68.1 ppm) values with scattered gold (up to 109 ppm), silver (up to 3.7 ppm) and zinc (up to 342 ppm) support. This anomaly lies within Anvil Assemblage aphanitic, vesicular basalts and well banded quartz-veined chert, north of the Clinton Thrust Fault. A string of seven weakly to strongly anomalous nickel results and a cluster of four moderately to strongly anomalous copper values also occur in this area.

The second anomaly identified in 2013 was followed up with more sampling in 2015. It lies south of the Clinton Thrust Fault, within Nasina Assemblage schists. Sampling has now outlined a 300 by 500 m area of moderately to strongly anomalous zinc (up to 1160 ppm) and lead (up to 643 ppm) response. A point anomaly with moderately anomalous gold (20 ppb), silver (1.05 ppm) and molybdenum (3.56 ppm) is located in the southwestern part of the lead-zinc anomaly within a cluster of scattered weakly to moderately anomalous nickel.

### **DISCUSSION AND CONCLUSIONS**

The Clint property covers two sizeable multi-element soil geochemical anomalies, north and south of the Clinton Thrust Fault.

The high molybdenum values in the anomaly north of the Clint Thrust Fault suggests the presence of a molybdenum porphyry system related to an unmapped Prospector Mountain Suite intrusion, either under overburden or at depth. However, the complex soil geochemical signature could also be due to vein or volcanogenic massive sulphide mineralization.

The lead- and zinc-in-soil anomaly that lies south of the Clinton Thrust Fault could represent distal vein mineralization associated with a porphyry system or volcanogenic massive sulphide mineralization.

The encouraging geochemical results warrant additional work on the Clint property. Road accessibility will facilitate future programs, which should include closer spaced soil sampling, detailed geological mapping and prospecting, and hand pitting to follow up the known geochemical anomalies. Geochemical coverage should also be extended to the central part of the property. Once the anomalous areas are fully defined, drilling or trenching will be required to determine the location, size and character of the related mineralization.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

A handwritten signature in blue ink, appearing to read "A. Mitchell". The signature is written in a cursive style with a large initial "A" and a long, sweeping underline.

A. Mitchell, B.Sc. GIT

## REFERENCES

- Cathro, R.J. and Murray J.S.  
 1982 Report on Geological Mapping and Soil Testing Survey on the Tartzhart 25 and 27-38 claims; Teslin Joint Venture, AR #091401.
- Cathro, R.J, Murray J.S. and Ryan J.  
 1981 Final Report 1981 Field Program; Teslin Joint Venture.
- Colpron, M. and Nelson, J. L.  
 2011 A digital atlas of terranes for the Northern Cordillera; Yukon Geological Survey and British Columbia Geology Survey, BCGS GeoFile 2011-11  
[http://www.geology.gov.yk.ca/pdf/CanCord\\_terranes\\_2011.pdf](http://www.geology.gov.yk.ca/pdf/CanCord_terranes_2011.pdf)
- Friske, P.W.B, Hornbrook, E.H.W., Lynch, J.J., McCurdy, M.W., Gross, H., Galletta, A.C., Durham, C.C.  
 1991 Regional stream sediment and water geochemical reconnaissance data, West Central Yukon; Geological Survey of Canada, Open File 2365.
- Hayward, N and Oneschuk, D.  
 2011 Geophysical Series: Regional Geophysical Compilation Project, Yukon Plateau, Yukon Parts of NTS 105, 106, 115, and 116; Geological Survey of Canada, Open File 6840; scale 1:1750,000.
- Montague, X.  
 2013 Assessment Report Describing Geochemical Sampling, Prospecting and Geological Mapping at the Clint Property
- Yukon Energy, Mines and Resources  
 2012 Abandoned Mines: Clinton Creek; Available at [www.emr.gov.yk.ca/aam](http://www.emr.gov.yk.ca/aam)
- Yukon Geological Survey  
 2012 Minfile occurrence details (116C 163); Available at <http://data.geology.gov.yk.ca>  
 2012 Minfile occurrence details (116C 122); Available at <http://data.geology.gov.yk.ca>  
 2012 Yukon Placer Database Operations Report: Fourtymile Placers; Available at <http://data.geology.gov.yk.ca>  
 2015 Yukon Bedrock Geology Map, 2015

**APPENDIX I**  
**STATEMENT OF QUALIFICATIONS**

## **STATEMENT OF QUALIFICATIONS**

I, Andrew Mitchell, geoscientist in training, with business addresses in Whitehorse, Yukon Territory and Vancouver, British Columbia and residential address in Vancouver, British Columbia, hereby certify that:

1. I graduated from the University of British Columbia in 2010 with a B.Sc. in Earth and Environmental Sciences.
2. From 2010 to present, I have been actively engaged in mineral exploration in Yukon Territory.
3. I am a Geoscientist in Training (GIT) with the Association of Professional Engineers and Geoscientists of British Columbia.
4. I have interpreted all data resulting from this work.

A handwritten signature in blue ink that reads "A. Mitchell".

A. Mitchell, B.Sc. GIT

**APPENDIX II**  
**STATEMENT OF EXPENDITURES**

**APPENDIX III**  
**CERTIFICATES OF ANALYSIS**