TECHNICAL REPORT

on the

HOPPER PROJECT

in the Dawson Range Copper-Gold Belt,

Aishihik Lake area,

YUKON TERRITORY, CANADA

(Hopper 1 – 168 & 170 – 342, Gal 1 – 8 and Guy 1 – 16 claims)

NTS: 115H/02 & 07

Latitude 61°17´N Longitude 136°52´W

Whitehorse Mining District

Site visits: July 30, 2017, September 16, 2016 June 9-12, 21-22 and July 21-25, 2015 September 16, 2014 and between June 22 and July 6, 2013

> FOR: STRATEGIC METALS LTD. 1016-510 West Hastings Street Vancouver, British Columbia Canada V6B 1L8

BY: Jean Pautler, P.Geo. JP Exploration Services Inc. #103-108 Elliott Street Whitehorse, Yukon Y1A 6C4

1.0 Executive Summary

The 7,400 hectare Hopper Project, NTS map sheets 115H/02 & 07, is located near Hopkins Lake, east of Aishihik Lake, within the southern Dawson Range copper-gold belt, southwestern Yukon. Access is by road, 180 km northwest of Whitehorse via the paved Alaska Highway, followed by the gravel Aishihik Lake road, which extends along the western property boundary. The Project is situated in the Whitehorse Mining District centered at a latitude of 61°17'N and a longitude of 136°52W. The Hopper Project covers the Hopper, Gal, and Guy claims, 100% owned by Strategic Metals Limited.

The Hopper Project is underlain by the 5 by 7 km early Late Cretaceous aged Hopper pluton, which intrudes Devonian and older metasedimentary rocks of the Snowcap assemblage of the Yukon-Tanana terrane. These are intruded by predominantly north trending feldspar-hornblende, ±biotite, ±quartz porphyritic dykes and lesser sills thought to be related to the Hopper pluton. Basalt and rare rhyolite dykes of probable Paleogene age also intrude the above units.

The property covers the Hopper Minfile occurrences as documented by the Yukon Geological Survey, which include a southern copper skarn drilled prospect and a northern copper porphyry showing. Mineralization is associated with the Hopper pluton, dated at approximately 78-76 Ma, placing it in the same metallogenic episode as the Patton Porphyry. The Patton Porphyry is associated with mineralization at the Casino porphyry copper-gold-molybdenum-silver deposit of Western Copper and Gold Corporation, situated 190 km to the north-northwest of the Hopper Project. The Casino deposit contains a NI 43-101 compliant proven and probable reserve of 965 million tonnes of mill ore grading, 0.204% Cu, 0.240 g/t Au, 0.0227% Mo and 1.74 g/t Ag, and 157 million tonnes grading 0.292 g/t Au, 0.036% Cu and 2.21 g/t Ag of heap leach ore (*Huss et al., 2013*). The above reserve information has not been independently verified by the author and is not necessarily indicative of the mineralization on the Hopper Project which is the subject of this report.

Skarn mineralization at the Hopper Project is similar to skarn deposits that were mined in the Whitehorse Copper belt, 120 km southeast of the Hopper Project, which produced at least 123,145,041 kg of copper, 7,062.4 kg of gold and 85,577 kg of silver from 1900 to 1981 (*Deklerk, 2009*). Grades generally ranged from 0.71% to 1.84% Cu, with about 0.7 g/t Au and 13 g/t Ag (*Deklerk, 2009*). The above production and grade information has not been independently verified by the author and is not necessarily indicative of the mineralization on the Hopper property, which is the subject of this report. Many of the skarns in the Whitehorse Copper belt are related to irregularities (embayments, pendants, screens, xenoliths) in the margin of the batholith, similar to the setting at the Hopper Project.

Mineralization on the Hopper Project occurs within two main zones, with potential for expansion and the delineation of additional zones. The Hopper South zone covers an 800m by 1.5 km area of skarn mineralization south of the Hopper pluton encompassing the JG, LV and Franklin Creek showings. At least 10 mineralized skarn horizons have

been identified within a 400m elevation difference. The Hopper North zone covers a 2.3 km by 650m zone of porphyry copper style mineralization, primarily open to the south and east, within the northwest portion of the Hopper pluton, and adjacent skarn mineralization to the north.

Previous exploration, prior to initial acquisition by Strategic Metals Limited in 2006, has included prospecting, mapping, minor hand and cat trenching, widely spaced soil and rock geochemistry, airborne electromagnetic, magnetic and radiometric geophysical surveys, ground magnetic, electromagnetic and induced polarization geophysics, 2,163m of diamond drilling in 20 holes and 2,490m of percussion drilling in 46 holes.

Work by Strategic Metals Limited, completed between 2006 and 2016, has included geological mapping and prospecting with concurrent geochemical sampling, petrography, grid and contour soil sampling, rock chip and channel sampling, hand and excavator trenching, a helicopter-borne versatile time domain electromagnetic (VTEM) and magnetic survey, an aerial photography and topographic survey, access and heritage studies, core re-logging and 5,833m of diamond drilling in 16 holes. In 2011 Bonaparte Resources Inc., under option from Strategic Metals Limited, completed soil and minor rock geochemistry, an airborne VTEM and magnetic geophysical survey, 1,731m of reverse circulation drilling in 58 holes and 1,309m of diamond drilling in 6 holes.

Airborne electromagnetic and magnetic surveys now cover the entire property; approximately 30% of the property has been covered by soil geochemistry and 20% by detailed mapping, with 13,526.5m of documented drilling in 146 holes (9,305m of diamond drilling in 42 holes and 4,221m of percussion drilling in 104 holes). The Hopper Project is at an early exploration stage.

The majority of the work on the Hopper property has been conducted on the southern skarn target (Hopper South), with prospect pits along Franklin Creek and on the escarpment (JG showing area) dating to 1907-08, unreported packsack drilling prior to 1977, and 11,255m of drilling in 97 holes documented between 1977 and 2016. The 97 drill holes include 8,473m of diamond drilling in 40 holes and 2,782m of percussion drilling in 57 vertical holes. Most of this work was concentrated over a 750m diameter area centred on the Franklin Creek showing. At least 4 mineralized skarn horizons were identified with significant true width intersections including 1.94% Cu, 0.87 g/t Au,14.6 g/t Ag over 13m in DDH TH77-2, 1.98% Cu, 0.67 g/t Au, 14.4 g/t Ag over 7.8m in DDH HA80-2, 1.62% Cu, 0.54 g/t Au, 9.3 g/t Ag over 8.5m in DDH HOP11-3 and 9.44 g/t Au over 2m in DDH HOP11-1.

In 2013 the thickness and continuity of significant grade mineralization at the JG showing, 1.1 km north of the Franklin Creek showing, and high gold values at the LV showing, 500m to the southwest of the JG, was recognized. At the JG showing significant true width intersections of 0.56% Cu, 1.571 g/t Au and 3.35 g/t Ag over 4.9m, and 0.36% Cu, 0.767 g/t Au and 2.18 g/t Ag over 9.6m were obtained from hand trenches TR-14-09 and TR-14-10, respectively, and significant chip sample results included 0.45% Cu, 0.33 g/t Au, 2.2 g/t Ag over 10.4m and 0.32% Cu, 1.31 g/t Au, 6.5 g/t Ag over 4.5m. The LV showing returned 0.18% Cu, 6.83 g/t Au, 2.8 g/t Ag over 3m, with 0.05% Cu, 1.64 g/t

Au, 0.84 g/t Ag over 16.15m and 0.22% Cu, 3.63 g/t Au, 1.8 g/t Ag over 2.4m from hand trenching in TR14-02 and TR14-01. Widths were generally limited by exposure.

The 2015-16 diamond drilling primarily tested the skarn horizons with widely spaced holes beyond the Franklin Creek showing returning 0.5% Cu with 0.5 g/t Au over 15m in DDH-15-02, 0.35% Cu with 1.01 g/t Au over 9.54m in DDH-15-03 and 0.6% Cu with 1.11 g/t Au over 14.43m in DDH-15-04, with significant high grade gold intercepts of 12.95 g/t Au over 2.65m and 43.6 g/t Au over 1m from DDH-15-01 and -08, respectively. At least 10 generally northerly trending, dipping 10-20°E, mineralized skarn horizons have now been identified across an 800m wide zone with a 400m elevation difference within the Hopper South zone, which can be intermittently traced 1.5 km to the south from the JG showing area near the southern contact of the Hopper pluton to just south of Franklin Creek, where PH80-10 returned 0.24% Cu over 15.3m.

Gold appears to be associated with chlorite-actinolite retrograde alteration that may be controlled by fault zones which would also control dyke emplacement; consequently an apparent association with some dykes would exist. Specific skarn horizons are probably not gold-enriched, but will vary along strike.

There is a 350m by 350m area of chalcopyrite mineralization associated with magnetite skarn and calc-silicate alteration (similar to the JG zone at the southern contact) within the embayment along the northern boundary of the Hopper pluton, adjacent to the porphyry copper mineralization and individual skarn horizons are evident 1.5 km further north. Values of 0.32% Cu over 5.1m, 0.36% Cu over 1.4m and 0.78% Cu over 2.75m were obtained from DDH 15-6, the only diamond drill hole to test the zone. Two (PDH 11-13 and -17) of the eight short percussion holes (271m), which tested but did not directly target mineralization within this zone, returned significant intervals of 0.54% Cu over 3.05m and 0.16% Cu over 16.76m, both ending in mineralization. Anomalous copper soil geochemistry and a favourable conductive, high chargeability induced polarization geophysical anomaly extends through the northern region with isolated anomalous rock samples, including 0.86% Cu, 0.7 g/t Au, 12.45 Ag across 1m.

At the Hopper North zone exploration has uncovered porphyry copper style mineralization within the Hopper pluton over a 2.3 km (east-west) by 650m area, primarily open to the south and east. Historical composite chip samples returned significant results including 0.52% Cu over 45.7m in the west (Mitsu West), 0.18% Cu over 61m in the east, and, 0.24% Cu over 45.72m from the central area (*Kikuchi, 1968*). Follow up by Strategic Metals Limited returned 0.43% Cu, 0.06 g/t Au and 1.83 g/t Ag across a 51.3m approximate true thickness in hand trench TR14-11 at Mitsu West, and 0.40% Cu over 13m from the central area. The porphyry mineralization here has only been tested by one diamond drill hole (DDH-15-05), which intersected 0.17% Cu over a 162.85m interval.

Several of the widely spaced short, vertical percussion holes through this area intersected significant porphyry copper mineralization including 0.36% Cu over 9.15m in PDH-11-19, and 0.24% Cu over the entire 39.62m in PDH-11-39, despite the unfavourable orientation to intersect the steep fracture sets controlling mineralization. Two additional holes (PDH-11-45 and -46) bottomed in 0.10% Cu over 1.52m in both holes. Dominant mineralized

fracture sets trend 010-040° and 320-350° with dips primarily steep east and west, which vary locally to moderate (60-75°) east and west. Additional mineralized fracture sets in the Mitsu West area include a $060^{\circ}/70^{\circ}$ S set.

Petrography and field mapping has indicated late quartz monzonite, monzonitic and gabbroic phases of the Hopper pluton which appear to be more copper rich. They occur within the central pond, Mitsu East and Mitsu West areas where exposure is more limited. Consequently, alteration is difficult to discern, and may be preferentially weathered. Conductive, high chargeability features, suggestive of the presence of sulphides, underlie the pond area (Hopper North porphyry zone), and further southeast, with a branch off this anomaly extending northerly into the Mitsu East area. Another similar feature occurs proximal to the southern margin of the pluton about 1 km northeast of the JG zone. The geophysical anomalies are coincident with anomalous copper in soil geochemistry. The central area of porphyry mineralization exhibits a lower anomalous copper in soil response probably due to thick overburden through this area, including glacial till.

South of Franklin Creek two to three narrow, northerly trending linear copper in soil \pm spot gold anomalies (including 1.84 g/t Au) are evident that may represent individual skarn horizons, one lying northerly along trend of a marble exposure. Gold-copper soil geochemical anomalies are evident to the south, and electromagnetic conductors to the south and southeast of the Hopper South zone, which remain unexplored. The eastern and western extents of the Hopper South zone are covered by glacial till.

Molybdenite is most evident in and proximal to the JG showing (skarn) and in the central pond area (porphyry). Gold is particularly enriched in the lower skarn horizons with 12.95 g/t Au over 2.65m in DDH-15-01, 43.6 g/t Au over 1m in DDH-15-08, 9.44 g/t Au over 2m in DDH HOP11-1, and 6.83 g/t Au over 3m from the LV showing.

The Hopper Project constitutes a property of merit based on the presence of: significant porphyry copper mineralization over a 2.3 km by 650m area (open to the south and east), which has only been tested by one diamond drill hole (0.17% Cu over 162.85m) and limited trenching (0.43% Cu, 0.06 g/t Au and 1.83 g/t Ag across an approximate true width of 51.3m); copper skarn mineralization intermittently exposed over an 800m by 1.5 km area and over 400m in elevation in the Hopper South zone (with zones of precious metal enrichment); additional skarn mineralization north of the Hopper pluton; a significant 3.6 km by 2.6 km \geq 100 ppm copper soil geochemical anomaly (with a 1 by 1 km donut low near the centre, possibly related to thicker overburden) ± elevated gold, silver and molybdenum values, and untested geophysical anomalies. In addition the Hopper pluton is the same age as the mineralizing pluton at the Casino porphyry deposit, and similarities exist to the skarn deposits of the Whitehorse Copper belt.

An exploration program with a budget of \$630,000 is recommended to carry out a program of 3,000 metres of diamond drilling in 7-8 holes, with minor road upgrade and extension, to test the porphyry style mineralization in the Hopper North zone on the Hopper Project.

Table of Contents

Page

	Title Page.	1						
1.0	Executive Summary	2						
	Table of Contents.	6						
	List of Illustrations	7						
	List of Tables	7						
2.0	Introduction	8						
	2.1 Terms, Definitions and Units	8						
	2.2 Source Documents	9						
3.0	Reliance on Other Experts	10						
4.0	Property Description and Location	10						
	4.1 Location	10						
	4.2 Land Tenure	11						
5.0	Accessibility, Climate, Local Resources, Infrastructure & Physiography	13						
6.0	History	15						
7.0	Geological Setting and Mineralization	18						
	7.1 Regional Geology	18						
	7.2 Property Geology	23						
	7.3 Mineralization	28						
8.0	Deposit Type	32						
9.0	Exploration	34						
	9.1 Geochemistry	35						
	9.1.1 Method	35						
	9.1.2 Results	36						
	9.2 Trenching	47						
	9.3 Geophysics	49						
	9.4 Access Management Plan and Heritage Surveys	55						
	9.5 Aerial Photography and Topographic Surveys	55						
10.0	Drilling	57						
	10.1 Diamond Drilling	58						
	10.2 Percussion Drilling	67						
11.0	Sample Preparation, Analyses and Security	73						
12.0	Data Verification7							
13.0	Mineral Processing and Metallurgical Testing76							
14.0	Mineral Resource Estimates	77						
23.0	Adjacent Properties	77						
24.0	Other Relevant Data and Information77							
25.0	Interpretation and Conclusions	77						
26.0	Recommendations	81						
	26.1 Budget	82						
	Signature Page							
27.0	References	84						
	Certificate, Date and Signature90							

List of Illustrations

Page

Location Map	10
Claim Map	12
Access Map	13
Tectonic Setting	19
Regional Geology	21
Property Geology and Compilation	22
Hopper North	26
Hopper South	27
Copper (Cu) Soil Geochemistry	38
Molybdenum Soil Geochemistry	39
Gold Soil Geochemistry	40
Silver Soil Geochemistry	41
Copper Soil Geochemistry Comparison with Casino	42
Rock Geochemistry (Cu)	43
Total Magnetic Intensity	51
Electromagnetic Map	52
Chargeability at 150m and Cu soils	53
Resistivity & Chargeability at 150m and Cu soils	54
Drill Hole Locations on Aerial Photograph	56
Hopper South 3D Drill Section with Cu	65
Hopper South 3D Drill Section with Au	66
Franklin Creek Drill Section A-A'	67
ections	68
	Location Map Claim Map Access Map Tectonic Setting Regional Geology Property Geology and Compilation Hopper North Hopper South Copper (Cu) Soil Geochemistry Molybdenum Soil Geochemistry Gold Soil Geochemistry Silver Soil Geochemistry Copper Soil Geochemistry Comparison with Casino Rock Geochemistry (Cu) Total Magnetic Intensity Electromagnetic Map Chargeability at 150m and Cu soils Resistivity & Chargeability at 150m and Cu soils Drill Hole Locations on Aerial Photograph Hopper South 3D Drill Section with Au Franklin Creek Drill Section A-A'

List of Tables

Table 1:	List of claims	11
Table 2:	1968 composite chip sample results	16
Table 3:	Geochemistry programs on Hopper	35
Table 4:	Anomalous Soil Geochemical Data	
Table 5:	Significant rock sample results from Hopper North zone	44
Table 6:	Significant rock sample results from Hopper South zone	46
Table 7:	2007 trench specifications and significant results	47
Table 8:	Significant 2007 trench results	47
Table 9:	2014-15 hand trench specifications and significant results	48
Table 10:	Drill programs on Hopper	57
Table 11:	Historical diamond drill hole specifications	59
Table 12:	Skarn horizons in 2011 diamond drill holes	60
Table 13:	2015-2016 diamond drill hole specifications	61
Table 14:	Significant diamond drill results	62
Table 15:	Percussion drill hole specifications	70
Table 16:	Significant percussion drill results	72
Table 17:	Proposed diamond drill hole specifications	81

2.0 INTRODUCTION

Ms. Jean M. Pautler, P.Geo. was commissioned by Strategic Metals Limited of Vancouver, British Columbia to evaluate the geology and mineral potential on the Hopper Project (consisting of the contiguous Hopper, Gal and Guy claims) and to make recommendations for the next phase of exploration work in order to test the economic potential of the property. The assignment included site visits, geological mapping and sampling, review of drill core and an examination of drill and trench sites, a compilation of regional and property scale geological data, a review of exploration procedures and results, and an interpretation of exploration results.

The report describes the property in accordance with the guidelines specified in National Instrument 43-101 and is based on a study of the historical work related to the property and surrounding area, a review of the work programs completed by Strategic Metals Limited, site visits on July 30, 2017, September 16, 2016 and September 16, 2014 and work conducted on, including an examination and evaluation of, the property by the author on June 9-12, 21-22 and July 21-25, 2015 and between June 22 and July 6, 2013. The author was assisted in the field in part by Mr. Andrew Mitchell of Archer, Cathro & Associates (1981) Limited, Vancouver, British Columbia in 2013 to 2016. Regional geological data and current exploration information have been reviewed to determine the geological setting of the mineralization and to obtain an indication of the level of industry activity in the area.

The author has relied in part upon work and reports completed by others in previous years in the preparation of this report as identified under section 2.2, "Source Documents" and section 27.0, "References". Thorough checks to confirm the results of such work and reports have not been done, but the author has no reason to doubt the correctness of such work and reports. All exploration assessment reports, listed in Section 27.0, "References", were completed by competent professionals and have been accepted by the Mining Recorder.

Based on the literature review and property work and examination recommendations are made for the next phase of exploration work. An estimate of costs has been made based on current rates for drilling, trenching, soil and geophysical surveys and professional fees in the Yukon Territory. All figures in this report except for Figures 3, 5 and 20 to 22 (prepared by the author) have been prepared by Archer, Cathro and Associates (1981) Limited and have been reviewed by the author for accuracy. Work on the Hopper Project from 2006 to the last program in 2016 has been completed by, or under the supervision of, Archer, Cathro & Associates (1981) Limited, a private mineral exploration consulting firm based in Vancouver, British Columbia and Whitehorse, Yukon Territory.

2.1 Terms, Definitions and Units

All costs contained in this report are denominated in Canadian dollars. Distances are reported in metres (m) and kilometres (km). GPS refers to global positioning system with co-ordinates reported in UTM grid, Zone 8, Nad 83 projection. Minfile refers to documented mineral occurrences on file with the Yukon Geological Survey. The

annotation 060°/70°SE refers to an azimuth of 060 degrees, dipping 70 degrees to the southeast, Ma refers to million years, and °C refers to temperature in degrees Celsius.

DDH refers to diamond drill hole, and PDH and PH refers to percussion (drill) hole. VTEM refers to versatile time domain electromagnetic, a type of airborne electromagnetic (EM) geophysical survey useful in detecting conductors. TMI refers to total magnetic intensity and CVG refers to calculated vertical gradient of the magnetic field. IP refers to an induced polarization type of geophysical survey useful in detecting disseminated sulphides.

The term ppm refers to parts per million, which is equivalent to grams per metric tonne (g/t) and ppb refers to parts per billion. The abbreviation oz/ton and oz/t refers to troy ounces per imperial short ton. The symbol % refers to weight percent unless otherwise stated.

Element abbreviations used in this report include gold (Au), silver (Ag), iron (Fe), copper (Cu), molybdenum (Mo), lead (Pb), zinc (Zn). Minerals found on the property include pyrite and pyrrhotite (iron sulphide), magnetite and hematite (iron oxides), chalcopyrite, and bornite (copper sulphides), malachite and azurite (hydrous copper carbonates), molybdenite (molybdenum sulphide) and sphalerite (zinc sulphide).

2.2 Source Documents

Sources of information are detailed below and include available public domain information and private company data. Individual reports and references are detailed under Section 27.0, "References".

- Research of the Minfile data available for the area at <u>http://data.geology.gov.yk.ca</u> on December 5, 2017.
- Research of mineral titles and claim locations at <u>http://www.yukonminingrecorder.ca</u>, <u>http://mapservices.gov.yk.ca/YGS/</u> and <u>http://apps.gov.yk.ca/ymcs</u> on December 5, 2017.
- Review of company reports and annual assessment reports filed with the government at http://virtua.gov.yk.ca:8080/?theme=emr.
- Review of publicly available data, including news releases, of Strategic Metals Limited and of other companies conducting work in the regional area.
- Company data and reports of Strategic Metals Limited.
- Review of geological maps and reports completed by the Yukon Geological Survey or its predecessors.
- Review of published scientific papers on the geology and mineral deposits of the region and on mineral deposit types.
- Discussions and property visits in the area with Dr. Steve Israel of the Yukon Geological Survey, who has considerable experience within the belt.
- The author has extensive independent experience and knowledge of the Dawson Range copper-gold belt having worked on various projects throughout the belt from 2005 to 2017, including the Big Creek area properties of Triumph Resources Ltd., and in the regional area for Teck Exploration Ltd. in 1998-2000 and for Kerr Addison Mines Ltd. in 1983-88.
- Site visits on July 30, 2017, September 16, 2016 and September 16, 2014 and work conducted on, including an examination and evaluation of, the property by the author on June 9-12, 21-22 and July 21-25, 2015 and between June 22 and July 6, 2013.

3.0 RELIANCE ON OTHER EXPERTS

While title documents and option agreements were reviewed for this study as identified under section 2.2, "Source Documents" and Section 27.0, "References", this report does not constitute nor is it intended to represent a legal, or any other, opinion as to the validity of the title. Data concerning the location and status of mineral claims was provided by the Whitehorse District Mining Recorder. The title information was relied upon to describe the ownership of the property and claim summary in Section 4.2, "Land Tenure".

4.0 PROPERTY DESCRIPTION AND LOCATION

4.1 Location (Figures 1 and 2)

The Hopper Project, NTS map sheets 115H/02 & 07, is located 70 kilometres northeast of Haines Junction and 115 kilometres northwest of Whitehorse, Yukon Territory (*Figure 1*). The Project is centered at a latitude of 61°17'N and a longitude of 136°52'W between Hopkins and Long Lakes, approximately 8 km east of Aishihik Lake within the southwestern Yukon (*Figure 2*). The Project lies 180 km by road northwest of Whitehorse via the paved Alaska Highway (Highway 1) (*Figure 1*) followed by the gravel Aishihik Lake road, which extends along the western property boundary (*Figure 2*).



4.2 Land Tenure (Figure 2)

The Hopper Project consists of 365 contiguous Yukon Quartz Mining claims covering an area of approximately 7,400 hectares in the Whitehorse Mining District (*Figure 2*). The area is approximate since claim boundaries have not been legally surveyed. The mineral claims were located by GPS and staked in accordance with the Yukon Quartz Mining Act on claim sheets 115H/02 & 07, available for viewing in the Whitehorse Mining Recorder's Office. The claim locations shown on Figure 2 are derived from government claim maps.

The registered owner of the claims comprising the Hopper Project is Archer, Cathro & Associates (1981) Limited, held in trust for Strategic Metals Limited. The Hopper Project is 100% owned by Strategic Metals Limited. A table summarizing pertinent claim data follows.

Claim Name	Grant Number	No.	Expiry Date
Hopper 1-20	YC41091-110	20	February 15, 2036
Hopper 21-162	YC47017-158	142	February 15, 2034
Hopper 163-168	YC65915-920	6	February 15, 2036
Hopper 170	YC47159	1	February 15, 2034
Hopper 171-266	YD123011-106	96	February 15, 2034
Hopper 267-342	YF28607-682	76	February 15, 2034
Gal 1-8	YC65907-914	8	February 15, 2036
Guy 1-16	YC19466-481	16	February 15, 2036
TOTAL		365	

 Table 1: List of claims comprising Hopper Project

The Hopper Project is located within the Traditional Territory of the Champagne and Aishihik First Nations. The First Nations have settled their land claims in the area with two blocks of surveyed Category A land (surface and subsurface rights) situated directly west of the Hopper Project (CAFN R-36A and R-3A). Three small parcels of First Nations Category B land (surface rights only) occur within the western edge of the Hopper Project (S-61B1, S-336B1 and CAFN S-61B on claims 295, 291-2 and 288 & Gal 2, respectively) and do not impact on the mineral potential of the Project, since no mineralization is known to occur, and no work will be conducted, on the parcels. The western border of claims was staked to cover access to the Project. The First Nations land is shown on Figure 2.

The land in which the Hopper Project is situated is Crown Land and the mineral claims fall under the jurisdiction of the Yukon Government. Surface rights would have to be obtained from the government if the property were to go into development.

A mineral claim holder is required to perform assessment work and is required to document this work to maintain the title as outlined in the Mining Land Use Regulations (MLUR) of the Yukon Quartz Mining Act. The amount of work required is equivalent to \$100.00 of assessment work per quartz claim unit per year. Alternatively, the claim holder may pay the equivalent amount per claim unit per year to the Yukon Government as "Cash in Lieu" to maintain title to the claims.



Preliminary exploration activities do not require permitting, but significant drilling, trenching, blasting, cut lines, and excavating may require a Mining Land Use Permit that must be approved under the Yukon Environmental Socioeconomic Assessment Act (YESSA). A class 3 permit, File Number LQ00355, is currently in place and valid to June 18, 2022. To the author's knowledge, the Hopper Project is not subject to any environmental liability. There are no known mineral resources or reserves or tailings ponds on the property. The author does not foresee any significant factors and risks that may affect access, title, or the right or ability to perform work on the property.

The locations of mineralized zones are shown on Figures 2 and 6. The streams and topography of the property are displayed on Figure 2.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The Hopper Project is situated along the eastern side of the gravel Aishihik Lake road, 51 kilometres north of the Otter Falls cutoff (at km 1546 on the paved Alaska Highway), which is 128 kilometres west of Whitehorse (Figure 3). The Aishihik Lake road is maintained from May to September to km 41 (the Yukon Electrical Company's hydrogeneration dam site at the outlet of Aishihik Lake), generally to two wheel drive standards. The road is periodically maintained beyond this point with four wheel drive recommended. A system of bush roads and bulldozer trails (Figure 2) extends from the Aishihik Lake



road onto the Hopper property. Suitable camp sites exist on the property, with a large site, utilized in 2013 to 2016 and in the 2011 drill program, situated at 397191mE, 6792745mN, Nad 83, zone 8 (*Figure 2*).

The main access road on the property is the Franklin Creek road, 1.4 km north of the camp, which accesses drill sites and the upland plateau *(Figure 2)*. Due to local steep grades, UTV access is recommended. An ATV/UTV trail generally heads southwesterly from the drill camp, then north, and accesses the southwestern property area. An old road, 6.5 km north of the drill camp, accesses the northern property area and is driveable for 600m, followed by ATV/UTV access.

Helicopter access can be chartered from a permanent helicopter base at Haines Junction, 70 kilometres southwest of the Hopper Project.

Haines Junction, with a population of approximately 800, is the closest town, approximately 83 km by road to the southwest of the Project and 35 km west of the Otter Falls cut-off (*Figure 3*). Facilities at the Otter Falls cutoff, open year round, include gas, diesel, showers, a restaurant, convenience store, motel and RV park. Facilities at Haines Junction include a grocery store, health centre, ambulance service, RCMP, service stations and restaurants. The town is on the power grid with diesel backup. Haines Junction is the gateway to Kluane National Park and lies 255 km via Highway 3 from the seaport of Haines, Alaska. More complete services are available in Whitehorse, a major center of supplies, communications with a skilled source of labour for construction and mining operations. At Whitehorse there is daily jet airplane service to Vancouver, British Columbia and other destinations.

Yukon Energy Corporation's Aishihik hydroelectric generation facility is located 25 kilometres south of the Hopper Project, with power extending to Otter Falls, 20 km south of the property.

The Hopper Project is situated between Hopkins and Long Lakes, approximately 8 km east of Aishihik Lake within the Kluane Plateau, which was glaciated during the Late Pleistocene. Glacial movement arced from south to north-northwest in the Aishihik Lake area *(Duk-Rodkin, 1999)*. From west to east the topography on the property consists of lowlands, escarpment, upland plateau and mountain peaks with elevations ranging from 3,300 feet along the Aishihik Lake road, just east of Hopkins Lake to just over 5,300 feet in the central property area *(Figure 2)*. Vegetation ranges from dense spruce, willow, poplar and birch forest in the lowlands to thick willow, buckbrush and surrounding scattered spruce and birch on the escarpment to buckbrush on the plateau. Tree line occurs at about 5,000 feet. Outcrop is limited to steep sides of meltwater channels in the lowlands to multiple stacked cliffs on the escarpment and glacially scoured knolls on the plateau, the latter mostly blanketed by glacial till deposits of varying thicknesses. Glacial features such as eskers, kames, kettles, melt-water channels and assorted till deposits are evident within the lowlands.

The property is drained by westerly and southwesterly flowing creeks that flow into Hopkins and Aishihik lakes, which connect to the Pacific Ocean via the Aishihik, Dezadeash and Alsek Rivers, and to a minor extent by creeks that flow into Long Lake, which connects to the Pacific Ocean via the Nordenskiold and Yukon Rivers. Although the Hopper area is arid and many creeks only flow during seasonal runoff, sufficient water is available for camp and drilling purposes throughout the summer and fall from numerous small lakes and ponds and the larger creeks, including Franklin Creek.

The climate is typical of northern continental regions, characterized by low precipitation and wide temperature variations with long, cold winters and short, mild summers. Temperatures range from -10° to -20°C (locally to -40°C) in the extreme cold of winter to 10° to 20°C in summer with an average annual precipitation of less than 30 cm. The seasonal window for exploration extends from early June to late September. Although there do not appear to be any topographic or physiographic impediments, and suitable lands appear to be available for a potential mine, including mill, tailings storage, heap leach and waste disposal sites, engineering studies have not been undertaken and there is no guarantee that such areas will be available within the subject property.

6.0 HISTORY (Figures 2 and 6)

The Hopper Project covers the Hopper South drilled prospect (Minfile Number 115H 019) and the Hopper North prospect (Minfile Number 115H 034), documented copper mineral occurrences by the Yukon Geological Survey (<u>http://data.geology.gov.yk.ca</u>) (*Figure 2*). Hopper South covers the copper skarn mineralization initially discovered along Franklin Creek and on the escarpment, 1 km further north (*Cairnes, 1909*) and Hopper North covers porphyry and associated skarn occurrences in the northwestern Hopper pluton. Hopper North was explored for porphyry copper, ±tungsten, ±uranium potential in the 1960's. The skarn mineralization in the Franklin Creek area is commonly referred to in the assessment records as Hopkins South and the copper porphyry and associated skarns further north as Hopkins North.

The Hopper South zone now covers an 800m by 1.5 km area of skarn mineralization south of the Hopper pluton encompassing the JG, LV and Franklin Creek showings. The Hopper North zone covers a 2.3 km by 650m zone of porphyry copper style mineralization within the northwest portion of the Hopper pluton and adjacent skarn mineralization to the north.

Previous exploration, prior to initial acquisition by Strategic Metals Limited in 2006, has generally been conducted separately for the two deposit types and has included prospecting, mapping, hand and minor cat trenching, soil and rock geochemistry, airborne electromagnetic, magnetic and radiometric geophysical surveys, ground magnetic, electromagnetic and induced polarization geophysics, 2,163m of diamond drilling in 20 holes and 2,490m of percussion drilling in 46 holes on the Hopper South zone. In 2011 Bonaparte Resources Inc., under option from Strategic, completed 1,731m of reverse circulation drilling in 58 holes and 1,309m of diamond drilling in 6 holes. Work conducted by Strategic Metals Limited will be discussed under section 9.0, "Exploration". All drill programs will be discussed in more detail under section 10.0, "Drilling".

The following is a summary of the known work history on the Hopper Project as documented in Yukon Minfile (*Deklerk, 2009 and <u>http://data.geology.gov.yk.ca</u>*), various government publications of the Yukon Geological Survey or its predecessor (*Mineral Industry Reports and Yukon Exploration and Geology*) and company publications (primarily available as assessment reports filed with the government).

1907-8⁺ Hand trenching was conducted on skarn mineralization across the escarpment and along Franklin Creek with Cairnes reporting 1.35% Cu from a 6 foot band along the cliffs and 9% Cu from a 3 foot streak along the creek, both with trace gold and silver

(*Cairnes, 1909*). Cairnes describes three prominent bands, averaging 6-10 feet wide, with one 20 feet wide of almost solid ore on the cliffs, and richer bands up Franklin Creek. These were originally referred to as part of the Giltana Lake showings but the names of Giltana and Hopkins Lakes have been erroneously reversed since then (*Findlay, 1969*).

- 1961-4 Hopper South was restaked in 1961 and 1963, with some hand trenching reported in 1963 (*Deklerk, 2009*). Kerr Addison Mines Limited acquired the surrounding area, including Hopper North, in 1962, evaluating the tungsten-copper potential (*Kavanagh, 1962*). Hopper North was restaked by others in 1964 (*Deklerk, 2009*).
- 1968-70 Airborne electromagnetic, magnetic and radiometric geophysical surveys, geological mapping, a 503 sample soil survey (150m intervals on lines spaced about 300m apart), 25 composite rock chip samples and unreported bulldozer trenching (recommended in 1968 report and 5 trenches were located by Strategic in 2006-7, which failed to reach bedrock) was conducted by Mitsubishi Metal Corporation on Hopper North (AD claims).

The program identified a large magnetic anomaly, strong copper-in-soil values (99 samples >100 ppm Cu to a maximum of 2250 ppm Cu) and 6 significant composite chip sample results, summarized below in Table 2 (*Kikuchi, 1968*). The locations were identified by the author in the field in 2013, and except for sample 8 (located in an area of complicated topography) closely correspond to locations plotted by Mitsubishi (*Figure 6*). The samples appear to have been collected as continuous chips where outcrop is exposed, otherwise as chips across boulders and subcrop. They should not be considered as continuous chip samples across the entire length specified and were collected as a general guide to enhanced areas of mineralization. It appears that only copper was analyzed in soils and rock, with a few rock samples analyzed for molybdenum. Molybdenite is reported between chip samples 4 and 13 in the pond area, 100m south hole PDH11-21 5, and 150m northeast of PDH11-03 near the JG showing.

Sample No.	% Cu	ppm Mo	Length (m)	Area
8	0.25	200	60.96	Mitsu West
7 0.52 170		45.72	Mitsu West	
4	0.10	30	30.48	West Pond
13	0.21	270	30.48	East Pond
12	0.24	160	45.72	East Pond
10 0.18 30		60.96	Mitsu East	

 Table 2: 1968 composite* chip sample results

N.B. listed from west to east across Hopper North porphyry

* should not be considered as continuous chip sample results across the specified length

A follow up 35.8 line km induced polarization survey by Geoterrex Ltd. for Mitsubishi identified a widespread area of polarized material likely due to pyrite, chalcopyrite and magnetite in the central pond area (*Norgaard, 1970*).

- 1969-75 Part of Hopper South was optioned by Arrow Inter-America Corp. Ltd. in 1969, partially restaked in 1975, and additional ground was acquired by another party in 1971-74. Packsack core was found on the property in 1977, which may have been drilled during this time (*Deklerk*, 2009).
- 1975-6 Geological mapping, prospecting radiometric and rock geochemical surveys were completed by Mitsubishi Metal Corporation on Hopper North (ML claims) following the discovery of a pegmatite returning 0.124% U₃O₈ (uranium oxide). Follow up did not produce significant results with rock samples returning <0.001% U₃O₈ (*Shimizu and Kashiwagi, 1976*).

- 1977-8 A ground magnetic survey, test induced polarization, minor geological mapping and 1786.8m of diamond drilling in 15 holes were conducted on Hopper South, by Whitehorse Copper Mines Ltd. under option, resulting in significant Cu, Au and Ag results from drilling, including 1.94% Cu, 0.87 g/t Au, 14.6 g/t Ag over 18.6m in DDH TH77-2 (*Tenney, 1977a and Hureau, 1978*). The best intersections were found to be associated with a magnetic high feature that becomes broader to the north (*Tenney, 1977a*).
- 1979-81 EM-16 and magnetometer surveys and 2490.2m of percussion drilling in 46 holes on Hopper South (Hop-Acme claims) in 1980 by New Ridge Resources Ltd. under option returned a best intersection of 1.52% Cu over 18.3m in hole PH80-1. Chips were not logged and only copper was analyzed and not in all holes (*Ashton, 1981*).
- 1985 Regional stream sediment sampling by the Geological Survey of Canada on map sheet 115H returned anomalous copper and lead values from three samples taken from creeks draining the Hopper property (values to 51 ppm and 68 ppm, respectively, which are 95th percentile for survey area) (Hornbrook, et al., 1985).
- 1985-8 Hopper South was restaked by D. Baird who conducted hand trenching in 1986 and 1988 (*Deklerk, 2009*).
- 1989 Program of geological mapping, magnetometer survey, 3 bulldozer trenches and 376.12m of diamond drilling in 5 holes was undertaken by Casau Exploration Limited on Hopper South (Hop-Acme claims) under option. Best drill intersections included 1.98% Cu, 0.67 g/t Au and 14.4 g/t Ag over 7.8m in hole HA89-2. Rock samples from trenches returned up to 0.32% Cu and 0.55 g/t Au (*Stephen and Feulgen, 1989b*). Significant grab sample results are shown on Figure 8 as historical samples.
- 1991-4 Blast trenching was conducted by Baird in 1992 and drilling and blasting (probably blast trenching) by Baird and partners in 1994 on Hopper South (*Deklerk, 2009*).
- 2002 Hopper South was restaked as Guy claims but no work was recorded. Northex Ventures Inc. (now Metallic Minerals Corp.) acquired the claims in 2008 (*Burrell, 2013b*).

The following is a summary of the work conducted over the area covered by the Hopper Project by, or under option from, Strategic Metals Limited (Strategic), the details and results of which will be discussed in more detail under section 9.0, "Exploration", with all drill programs discussed under section 10.0, "Drilling".

- 2006-7 Surrounding area of Guy claims, including Hopper North, was staked by Strategic Metals Limited, which conducted geological mapping, prospecting and soil sampling, chip and channel sampling, excavator trenching, and a helicopter-borne versatile time domain electromagnetic (VTEM) and magnetic survey (*Wengzynowski and Smith, 2007*). A 2300 by 400m area of strong copper soil geochemistry (to 2810 ppm) was outlined and rock sample values returned from 0.11 to 1.53% Cu with a peak value of 11.6 g/t Ag, and 0.4 % Cu over 13m from chip sampling.
- 2010 Strategic, under a joint venture agreement with Monster Mining Corp., performed grid soil sampling on Hopper South. Results were relatively subdued with values ranging from 1 to 109 ppb gold, 10 to 913 ppm copper and 1 to 27 ppm molybdenum *(Smith, 2011)*.

- A total of 1309m of diamond drilling in 6 holes, 1731m of reverse circulation (RC) percussion drilling in 58 holes, soil sampling, geological mapping, and a 951.5 line km helicopter-borne versatile time domain electromagnetic (VTEM) and magnetic survey were completed by Bonaparte Resources Inc. on Hopper North and South, under option from Strategic (*Eaton, 2012*). The best RC hole in the porphyry was 0.7% Cu, 0.195 g/t Au, 4.10 g/t Ag over 10.66m and the Hopper South skarn returned 1.62% Cu, 0.54 g/t Au and 9.30 g/t Ag over 8.5m in DDH 11-03, and 9.44 g/t Au over 2m in DDH 11-01.
- 2012 Monster Mining's interest in the joint venture was purchased by Strategic, which commissioned Condor Consulting, Inc. to perform detailed processing, interpretation and analysis of the 2007 and 2011 geophysical data *(Irvine and Woodhead, 2012)*. North-northwesterly trending electromagnetic conductors lie along the periphery and south of the Hopper pluton, interpreted as possible magnetite-rich skarn horizons.
- 2013 Soil grids and rock geochemical sampling, prospecting, geological mapping, aerial photography, topographic surveys, access and heritage studies, and core re-logging were completed by Strategic (*Burrell, 2013b*). Chip sampling across copper rich skarn exposures returned 0.45% Cu, 0.326 g/t Au, 2.17 g/t Ag and 2 ppm Mo over 10.4m, while gold rich skarn intervals included 0.18% Cu, 6.83 g/t Au, 2.83 g/t Ag and 12 ppm Mo over 3m.
- 2014 Program of geological mapping, prospecting, geochemical sampling, hand trenching, induced polarization (IP) surveys, petrographic studies and road construction was completed by Strategic (*Burrell, 2015*). Hand trenches returned 0.22% Cu, 3.63 g/t Au and 1.81 g/t Ag over 2.4m from the South zone and 0.38% Cu, 0.057 g/t Au and 1.55 g/t Ag over 37.7m (TR14-11) from the North zone. The IP survey outlined numerous chargeability anomalies within the Hopper pluton and surrounding metasedimentary rocks.
- 2015 Prospecting, hand trenching, 3,676.8m of diamond drilling in 9 holes and preliminary metallurgical test work were completed by Strategic, with drill results including 12.95 g/t Au over 2.65m and 43.0 g/t Au over 1.00m from the South zone and 0.17% Cu over 162.85m in the porphyry from the North zone *(Mitchell, 2016a)*. Extension of TR14-11 yielded a combined weighted average of 0.43% Cu, 0.06 g/t Au and 1.83 g/t Ag over an approximate true width of 51.3m.
- 2016 Heritage studies, road construction and 2,156.3m of diamond drilling in 7 holes on the South zone were completed by Strategic (*Mitchell, 2016b*).

7.0 GEOLOGICAL SETTING AND MINERALIZATION (Figures 4 to 8)

7.1 Regional Geology (Figures 4 and 5)

The Hopper Project lies within Yukon-Tanana terrane, a continental arc that developed along the ancient Pacific margin of North America from Late Devonian to Permian time, and is situated between the Tintina Fault, 200 km to the northeast, and the Denali Fault, 50 km to the southwest *(Figure 4)*. Both faults are steeply dipping transcurrent structures with hundreds of kilometres of dextral strike slip offset.



The regional geology of the Hopkins Lake map sheet (115H/7), including the Hopper property area, has been mapped at a 1:50,000 scale by Johnston and Timmerman (1997), the adjacent Ruby Range to the west at a 1:150,000 scale by Israel, Cobbett et al. (2011). Portions of map sheets 115H/7 and 115H/2 were mapped at a 1:50,000 scale by Israel and Borch (2015) due to recent age dating and geochemistry in the Aishihik Lake area, which provided new information along the eastern margin of the Ruby Range (*Morris et al., 2014*). Lithological units were correlated and updated in a Yukon-wide geological compilation by the Yukon Geological Survey (*Colpron et al., 2016*). The following discussion of the regional geology is summarized from the above references.

The oldest rocks in the regional area (*Figure 5*) consist of Mississippian and older Snowcap and lesser Finlayson assemblage metamorphic rocks of the Yukon-Tanana terrane, which occur as a northwest-trending belt along Aishihik Lake. They consist of metasedimentary and metavolcanic rocks, including quartz-muscovite ±garnet schist, carbonaceous biotite ±garnet schist and quartzite, garnet amphibolite and marble, as well as rare intermediate composition metaplutonic rocks (*Morris et al., 2014*).

Northeast of Aishihik Lake the above rocks are intruded by intermediate to felsic intrusions of the Early Jurassic Long Lake plutonic suite and by a number of smaller, calc-alkaline, intermediate plutons, stocks, dykes and sills of the early Late Cretaceous Casino plutonic suite (79 to 75 Ma), including the Sato and Hopper. These intrusions were previously assigned to the Ruby Range plutonic suite, but have now been assigned to the Casino suite based on recent age dating and composition (*Morris et al., 2014*). The Casino suite is intimately associated with porphyry copper deposits and many precious metal vein deposits throughout the Dawson Range.

Uranium-lead age dates on the Sato porphyry (Minfile Number 115H 021), are approximately 78 Ma (*Lewis and Mortensen, 1998*), and on the Hopper pluton (Minfile Number 115H 019) approximately 76 (*Blumenthal, 2010 and Morris et al., 2014*) and 78.51 ±0.03 Ma (*Burrell, 2015*). The predominantly north trending porphyritic dykes and lesser sills, thought to be related to the Hopper pluton, have also been dated at 78 Ma (*Steve Israel, personal communication*).

The above lithologies are overlain by a number of Late Cretaceous to Paleogene volcanic complexes (*Figure 5*). The Tlansanlin Formation volcanic complex, consisting of relatively primitive magmas that were emplaced in a continental arc setting, has been dated as early Late Cretaceous (75.8 ± 0.4 Ma to 77.3 ± 1.3 Ma), and shows similarities in age and composition to the Sato and Hopper plutons (*Morris et al., 2014*). Small intrusions and aerially extensive volcanic rocks of the Carmacks Group (exposed through the Dawson Range to the north and in the eastern Aishihik map area) are of late Late Cretaceous age (72-67 Ma) (*Allan et al., 2013*).

These are intruded by intermediate intrusive rocks of the Paleogene Ruby Range suite, primarily to the southwest of Aishihik Lake (*Figure 5*), and by the Paleogene Rhyolite Creek volcano-plutonic complex (*Israel and Borch, 2015*). The Rhyolite Creek complex primarily consists of felsic to intermediate volcanic rocks, and includes basal conglomerate and sedimentary rocks, felsic tuff, breccia, flows, and related sills and dykes of the Mount Creedon complex (*Colpron et al., 2016*).

Economically, there appears to be a significant early Late Cretaceous magmatic event associated with mineralization in the Aishihik area. The Sato and Hopper plutons and the Tlansanlin volcanic complex form part of an early Late Cretaceous magmatic event, active for approximately 3 million years (75.8 to 78.8 Ma) (*Morris et al., 2014*) and documented porphyry and skarn occurrences are associated with the Sato and Hopper plutons (*Deklerk, 2009*). This event was previously recognized through the Dawson Range to the north with such occurrences as the Casino porphyry copper deposit, the Cyprus porphyry copper drilled prospect (Nansen area), the Revenue-Nucleus deposits and the Sonora Gulch drilled prospect (porphyry copper, intrusion related gold, skarn), and others related to an early Late Cretaceous phase of magmatism (79-71 Ma) yielding compositions that are consistent with having formed in a continental magmatic arc (*Allan et al., 2013*). (Refer to Figure 4 for some of the locations, mentioned above.)

DMF N STIKINE TERRANE Early Jurassic PDS Paleogene LONG PRC5 and Late LAKE Cretaceous SUITE uKT Late Cretaceous (granodiorite) Late Cretaceous Tlansanlin DMF uKT Carmacks volcanic volcanic complex 115H11 115H10 complex 61°30'N Aishihik Lake 115H06 LK PRC5 Sato **Minfile location** 115H021 PALEOGÈNE Ruby Range plutonic suite PRC4: Rhyolite Creek complex YUKON-TANANA PRC5: Mt. Creedon complex **TERRANE** (YTT) LATE CRETACEOUS uKCv: Carmacks volcanic complex Paleogene uKT: Tlansanlin Formation volcanics DMF LKC: Casino plutonic suite PRC4 Early Jurassic JURASSIC EJgL: Long Lake plutonic suite LONG LAKE SUITE Hopper pluton **MISSISSIPIAN & OLDER** YTT: DMF: Finlayson Assemblage YTT: PDS: Snowcap Assemblage **HopperNorth** (quartz monzonite 115H034 DMF to granite) Units described in text LKC **Mount Creedon** Janisiw dykes 115H019 **FIGURE 5** Paleogene PRC4 115H08 Hopper South Hopkins Lake 115H07 HOPPER PROPERTY RUBY PDS **REGIONAL GEOLOGY** Aishihik 137°10'W 136°30'W 115H/06, 07, 10, 11 RANGE PDS 115H07 20 km after Morris et al., 2014, Israel & Borch, SUITE 61°10'N 2015, Colpron et al., 2016 PRC5 JPEx December, 2017

21



7.2 Property Geology (Figures 6 to 8)

The Hopper property and surrounding area was mapped by the Yukon Geological Survey and its predecessors at a 1:25,000 scale by Morin in 1980 and at a 1:50,000 scale by Johnston and Timmerman (1997). Mitsubishi Metal Corporation completed reconnaissance 1:12,192 mapping over Hopper North and South in 1968 (*Kikuchi, 1968*). In 1977-78 Whitehorse Copper Mines Ltd. completed 1:4,800 scale mapping on Hopper South (*Tenney, 1977a*) followed by 1:1,000 scale mapping by Casau Exploration Limited, covering a 0.7 by 1.2 km area from Franklin Creek north to the JG showing area, in 1989 (*Stephen, 1989a*). Casau, under a joint venture with Aurora Gold Ltd., also completed 1:1,000 scale mapping on a 600m diameter area north of the central ponds in 1990 (*Stephen, 1990b*).

Strategic Metals Limited (Strategic) mapped a 2 by 3 km area of the Hopper property, primarily covering the Hopper North porphyry target at a 1:10,000 reconnaissance scale in 2006 (*Wengzynowski and Smith, 2007*). In 2011 Archer, Cathro & Associates (1981) Limited completed 1:10,000 scale mapping over a similar area in the north and at a 1:5,000 scale over a 1 km by 500m area around Franklin Creek for Bonaparte Resources Inc. (*Smith, 2011*). Unfortunately details of this survey were lost with only regional contact maps produced. In 2013 Strategic completed mapping at a 1:2500 scale over a 4.5 by 2.5 km area encompassing Hopper North and South, with isolated traverses mapped at the same scale extending an additional 2.5 km to the south (*Pautler, 2013*). Data from previous surveys (particularly the 1989 survey, but also the more regional 1968 survey and Yukon Geological Survey maps) were integrated with the 2013 data to provide an overall property map (*Pautler, 2014*), and additional mapping was completed within the Hopper North and South zones at a 1:2500 scale in 2014 (*Burrell, 2015*), with select detailed mapping in 2015 (*Mitchell, 2016a*).

The property geology is displayed on Figure 6, with historical claim boundaries shown for integration purposes with historical data. Detailed mapping and mineralization of the Hopper North and South areas are shown in Figures 7 and 8. Thick glacial overburden on the property restricts mapping, especially in the western property area.

The Hopper Project is primarily underlain by the 5 by 7 km early Late Cretaceous aged Hopper pluton, which intrudes Devonian and older metasedimentary rocks of the Snowcap assemblage of the Yukon-Tanana terrane. The above units are intruded by predominantly north trending feldspar-hornblende, ±biotite, ±quartz porphyritic dykes and lesser sills thought to be related to the Hopper pluton (*Blumenthal, 2010 and Morris et al., 2014*). Basalt and rare felsic dykes of possible Paleogene age intrude the above units.

The Hopper pluton was assigned to the Ruby Range plutonic suite by Johnston and Timmerman (1997), considered Late Cretaceous to Eocene in age at that time. The Hopper pluton was dated at 76.0 \pm 1.1, 77.2 \pm 1.2 Ma and 83.7 \pm 1.9 Ma (Late Cretaceous) by Blumenthal (2010); the latter date being uncertain *(Morris et al., 2014)*. Work by Israel, Cobbett et al. (2011) indicates a Paleogene age for the Ruby Range plutonic suite and recent studies show that the Sato and Hopper plutons and the Tlansanlin volcanic complex form part of a distinct early Late Cretaceous magmatic event, active for approximately 3 million years (75.8 to 78.8 Ma) *(Morris et al., 2014)*.

uranium-lead zircon age date of 78.51 \pm 0.03 Ma was obtained from a sample collected from the Hopper pluton, and 78 Ma from the northerly trending porphyritic dykes and lesser sills, by Steve Israel of the Yukon Geological Survey in 2014 (Steve Israel, personal communication).

Only the western portion of the Hopper pluton has been mapped in detail due to extensive Quaternary cover through the eastern portion of the pluton, particularly along its margins. The approximate location of the contact through this area has been interpreted from airborne magnetic data (*Figure 6*). Consequently, the contact appears more complex and convoluted with dyke-like apophyses along the margins of the western portion of the Hopper pluton, with a well developed three sided embayment of metasedimentary rocks along the northern margin and a two sided embayment along the southern margin. Embayments with calcareous stratigraphy are favourable sites for skarn mineralization. A small satellite plug has been interpreted from aeromagnetic data in the southeast property area, approximately 1.5 km southeast of the Hopper pluton.

Petrographic analysis was completed on two specimens of each of the four intrusive phases identified in 2014 by Vancouver Petrographics Ltd., Langley, British Columbia *(Colombo, 2014)*. The main phase of the Hopper pluton, a sample of which was dated near the southwestern margin of the pluton, is a grey, medium to coarse grained, equigranular biotite-hornblende granodiorite with 5-15% mafic minerals and 0.5-3% magnetite. Subtle actinolite, chlorite, epidote and sericite alteration can be present. A pink coloured medium grained phase, with <5% mafics and trace magnetite, occurs at the Mitsu East showing to the eastern pond area, and locally just west of the ponds. Samples from the Mitsu East showing area were petrographically found to be a monzogranite. A local darker coloured phase within the pond area, which also occurs towards the Mitsu East showing, was petrographically found to be gabbro, with minor potassium feldspar alteration in foliation subparallel veinlets, and monzodiorite was evident in the Mitsu East area. Quartz monzonite was petrographically identified from the Mitsu West area, with weak iron-chlorite-actinolite alteration replacing the mafic minerals.

Metasedimentary xenoliths are locally abundant within the granodiorite at the contact with the metasedimentary country rocks, with large screens of the metasedimentary rocks present in the Mitsu West showing area, forming a complex contact zone. Overall the intrusive contact dips 55 to 70°E. A quartz diorite phase is reported to underlie a small knoll within the eastern Hopper pluton (*Hureau, 1978*) and syenodiorite or gabbro was noted just south of the 5398 foot peak in the central claim area (*Kikuchi, 1968*).

The feldspar-hornblende, ±biotite, ±quartz porphyritic (feldspar porphyry) dykes and sills are light grey to pinkish-grey in colour, commonly weather greenish-grey, dacite in composition (*Kikuchi, 1968*), persistent along strike (commonly traced for several kilometres) and range in thickness from 0.5 to 50m. The dykes generally trend northerly, with minor local variations to north-northwest. Dips are generally steep east, but also steep west to locally moderately east. Basalt dykes and sills (the latter observed along Franklin Creek) are dark green, grey to black in colour, massive to commonly feldspar porphyritic with amygdaloidal to vesicular margins, only 1-3m thick, but persistent in strike. They primarily trend northerly with steep dips, but locally trend easterly and crosscut the feldspar porphyry dykes.

The metasedimentary rocks of the Snowcap assemblage primarily consist of micaceous quartzite, which grades to biotite-quartz schist and locally gneiss, ±garnets in the Franklin Creek area. Locally, more hornblende rich schist interbeds occur in the northern property area. In the southern property area (primarily southeast of Hopkins Lake) more feldspathic schists and gneisses are exposed which contain biotite-quartz-feldspar, ±muscovite, with lesser intermediate to mafic (biotite-hornblende-quartz-feldspar) beds. The metasedimentary rocks generally trend northerly (but strike north-northeast in the northwestern property area and north-northwest in the southwestern property area and dip shallowly to the east, approximately 10-20°E, locally 30-35°E near the intrusive contact. In Franklin Creek the main zone trends east to east-northeast/10-15°N.

Numerous screens and xenoliths of the metasedimentary rocks occur within the Hopper pluton in the Mitsu West area in the northwest property area, forming a complex contact zone, and just northeast of the ponds. Calcareous stratigraphy within these zones are also favourable for skarn development.

A large cliff exposure approximately 1.5 km east of the south end of Hopkins Lake consists of a heavy biotite rich schist with elongate clasts of marble up to 0.5m long, which may be a dyke of the metamorphic Mississippian Simpson Range plutonic suite.

Greyish-white weathering, white marble beds, ranging from 0.5 to 30m thick, occur within the above metasedimentary unit. Thicker beds are fairly continuous and some thin beds are boudinaged, forming a horizon of discontinuous lenses. Adjacent limy beds within the metasedimentary rocks are commonly altered to calc-silicate and skarn. The Snowcap Assemblage is exposed over a 300m thick vertical section on the escarpment as shown on the section in Figure 8. Calcareous horizons appear to collectively comprise about two-thirds of the section with one-third mapped as skarn. This decreases away from the Hopper pluton.

A table of Formations follows:

Paleogene

PRC4: *Rhyolite Creek Complex*: basalt and rhyolite dykes and sills

LKC: *Casino plutonic suite:* Hopper pluton – granodiorite, minor granite, quartz diorite & related felsic feldspar-hornblende, ±biotite, ±quartz porphyritic porphyry dykes & sills Mississippian

MgSR: *Simpson Range plutonic suite*: granitic orthogneiss, granodiorite, monzogranite, gabbro

Devonian and older

PDS: *Snowcap assemblage*: micaceous quartzite, biotite-quartz schist & gneiss, ±garnets; **PDc**: marble, local calc-silicate and skarn

There is some evidence of primarily north to 345° trending fault and fracture zones, dipping steeply east and west. These zones probably control the emplacement of the felsic to mafic dykes, quartz-carbonate veinlets, veins and breccias and development of the embayments along the margins of the Hopper pluton. A secondary, roughly orthogonal fracture set trends northeasterly and is healed with quartz and/or carbonate veinlets and veins. Easterly trending (080-100°) cross folding is evident, generally dipping up to 60° southeast.





7.3 Mineralization (Figures 6 to 8, 14)

The property covers the Hopper Minfile occurrences (Figure 2) as documented by the Geological Survey Numbers 115H Yukon as Minfile 019 and 034 (http://data.geology.gov.yk.ca). Hopper South covers the copper skarn mineralization initially discovered at 397460mE, 6794579mN along the north side of Franklin Creek and approximately 1 km to the north along the escarpment at 397142mE, 6795549mN (Cairnes, 1909). Hopper North covers copper porphyry style mineralization, centred at approximately 397821mE, 6797191mN, initially documented by Mitsubishi Metal Corporation in 1968 (Kikuchi, 1968) and includes skarn mineralization within the northern metasedimentary embayment.

Copper is locally accompanied by significant gold, silver and molybdenum in both the skarn and porphyry styles of mineralization, with a good correlation between gold and molybdenum. Molybdenite is most evident in and proximal to the JG showing (skarn) and in the central pond area (porphyry). It has been observed as fracture fillings within both the granodiorite and metasedimentary rocks, in skarn, quartz ±carbonate veins and as disseminations and aggregates in the granodiorite. Gold is particularly enriched in the LV showing area (skarn) with 6.83 g/t Au over 3m (*Burrell, 2013b*). The LV showing appears to occur along the Franklin skarn horizon, originally exposed along Franklin Creek.

Mineralization appears to be related to the Hopper pluton, and although the feldspar porphyry dykes and sills appear to be a related, slightly later "last gasp" phase of the magmatic system, and locally contain disseminated pyrite and chalcopyrite, they appear to postdate skarn mineralization.

Other mineralization encountered on the property consists of chalcopyrite and pyrrhotite associated with amphibolite as encountered in DDH TH78-15, which returned 0.2% Cu over 3m. Fine disseminated pyrrhotite locally occurs within biotite hornfelsed metasedimentary rocks.

7.3.1 Skarn Mineralization

The skarn mineralization occurs near the contacts of the western portion of the Hopper pluton, possibly due to extensive Quaternary cover along the margins of the eastern portion of the pluton, obscuring the contact and the presence of favourable calcareous stratigraphy in the western area. More specifically, the skarn mineralization is primarily focussed in two embayments of calcareous metasedimentary rocks at the southwest and northwest margins of the pluton.

Mineralogy of the skarns proximal to the Hopper pluton generally consists of extensive magnetite and garnet–diopside with lesser actinolite, wollastonite, serpentine and talc. Magnetic pyrrhotite, rather than magnetite, is more prevalent further from the pluton (although magnetite concentrations are evident locally) and occurs with diopside-actinolite, lesser garnet, wollastonite, and occasional tremolite. Epidote is observed locally and minor fine disseminated pyrite. Serpentine and talc are commonly associated with the magnetite rich skarns. Potentially economic minerals include chalcopyrite, trace bornite, and locally molybdenum. Magnetite may be a byproduct. Oxidation of the copper minerals to

malachite and azurite occurs locally at surface, primarily if exposures are disturbed. Chalcopyrite is associated with magnetite, pyrrhotite, actinolite, wollastonite and occasionally pyrite with minor sphalerite, tungsten, and titanium reported. Little copper mineralization has been observed within the more garnet (proximal) and tremolite (lack of retrograde) rich skarns. A paragenetic study determined that magnetite and pyrite formed first, followed by pyrrhotite, then chalcopyrite and sphalerite, and finally bornite (*Hureau, 1978*).

The majority of the work on the Hopper property has been conducted on the southern skarn target (Hopper South), with prospect pits along Franklin Creek and on the escarpment (JG showing area) dating to 1907-08, unreported packsack drilling prior to 1977, and 11,255m of drilling in 97 holes documented between 1977 and 2016. The 97 drill holes include 8,473m of diamond drilling in 40 holes and 2,782m of percussion drilling in 57 vertical holes.

Most of this work has been conducted in the southeastern part of the zone over a 750m diameter area centred on the Franklin Creek skarn showing due to the exposure of rich skarn horizons here with easier access. At least 4 mineralized skarn horizons were identified in this area with significant true width intersections of 1.94% Cu, 0.87 g/t Au,14.6 g/t Ag over 13m in DDH TH77-2, 1.98% Cu, 0.67 g/t Au, 14.4 g/t Ag over 7.8m in DDH HA80-2, 1.62% Cu, 0.54 g/t Au, 9.3 g/t Ag over 8.5m in DDH HOP11-3 and 9.44 g/t Au over 2m in DDH HOP11-1.

Little work has completed along the escarpment (JG showing) since the original prospect pits from 1907-08. However, the thickness and continuity of significant grade mineralization at the JG showing and high gold values at the LV showing (approximately 500m to the southwest of JG) was recognized in 2013 and the area was chip sampled and hand trenched in 2013-2014 and targeted by 4,064m of diamond drilling in 8 holes in 2015-2016. The JG showing (named after soil sampler/prospector, Jesse, who found it) covers a 300m by 250m area of extensive actinolite-wollastonite-pyroxene-garnet-magnetite skarn with abundant chalcopyrite and locally molybdenite, 1.1 km north of the Franklin Creek showing, proximal to the southern margin of the Hopper pluton. The northern part of the zone was tested by two hand trenches, about 40m apart, which returned significant true width intersections of 0.56% Cu, 1.571 g/t Au and 3.35 g/t Ag over 4.9m from TR-14-09, and 0.36% Cu, 0.767 g/t Au and 2.18 g/t Ag over 9.6m from TR-14-10.

A precious metal enriched zone (LV showing, named after soil sampler/prospector, Laura, who found it) occurs approximately 500m to the southwest, returning 0.18% Cu, 6.83 g/t Au, 2.8 g/t Ag over 3m and appears to occur along the Franklin skarn horizon. Hand trenching returned 0.05% Cu, 1.64 g/t Au, 0.84 g/t Ag over 16.15m in TR14-02 and 0.22% Cu, 3.63 g/t Au, 1.8 g/t Ag over 2.4m in TR14-01.

At least 10 mineralized skarn horizons have been identified across an 800m wide zone with a 400m elevation difference within the Hopper South zone, which can be intermittently traced 1.5 km to the south from the JG showing area near the southern contact of the Hopper pluton to just south of Franklin Creek, where PH80-10 returned 0.24% Cu over 15.3m. These have now been tested by widely spaced drilling with results including 0.5% Cu with 0.5 g/t Au over 15m in DDH-15-02, 0.35% Cu with 1.01 g/t Au over 9.54m in

DDH-15-03 and 0.6% Cu with 1.11 g/t Au over 14.43m in DDH-15-04, with significant high grade gold intercepts of 12.95 g/t Au over 2.65m and 43.6 g/t Au over 1m from DDH-15-01 and -08, respectively.

Most gold rich intervals are spatially associated with late stage dykes, were thought to be responsible for localizing mineralization, but similar dykes cut the upper skarn horizons, without notable gold-enrichment. Gold appears to be associated with chloriteactinolite retrograde alteration that may be controlled by fault zones which would also control dyke emplacement; consequently an apparent association with some dykes exists. Specific skarn horizons are probably not gold-enriched, but will vary along strike.

Chalcopyrite mineralization also occurs within skarns to the north of the Hopper pluton, which range from 2 to 10m thick. This target was tested by eight of the short 2011 percussion holes (271m), but holes did not directly test known mineralization, and by DDH 15-6 (399.3m). Two of the percussion holes (PDH 11-13 and -17) returned significant intervals of 0.54% Cu over 3.05m and 0.16% Cu over 16.76m, both ending in mineralization *(Eaton, 2012)*. Values of 0.32% Cu over 5.1m, 0.36% Cu over 1.4m and 0.78% Cu over 2.75m were obtained from DDH 15-6. Although the skarns exposed in the northern property area are generally of lower average grade than those near Franklin Creek in the south, with low precious metal values, rock exposure is more limited here. There is a 350m by 350m area of chalcopyrite mineralization associated with magnetite skarn and calc-silicate alteration (similar to the JG zone at the southern contact) within the embayment along the northern boundary of the Hopper pluton, adjacent to the porphyry copper mineralization and individual skarn horizons are evident 1.5 km further north.

7.3.2 Porphyry Mineralization

The copper porphyry target potential of the Hopper pluton was originally documented by Mitsubishi in 1968 with composite chip samples returning significant results of 0.52% Cu over 45.72m (sample 7), 0.25% Cu over 60.96m (8), 0.24% Cu over 45.72m (12), 0.21% Cu over 30.48m (13), 0.18% Cu over 60.96m (#10) and 0.10% Cu over 30.48m (4) (*Kikuchi, 1968*). Subsequent excavator trenching by Strategic in the central pond area in 2007 had difficulty reaching bedrock due to permafrost and thick overburden, but returned 0.07% Cu over 35m in the vicinity of Mitsubishi's 0.24% Cu over 45.72m (12), with grab samples up to 2.25% Cu. An examination of the pond area by the author in 2017 resulted in the discovery of a monzogranite phase of the Hopper pluton which locally contained an estimated 3-5% fine disseminated chalcopyrite. The location occurs proximal to Mitsubishi's samples 12 and 13. A chip sample west of the ponds in 2007 returned 0.4% Cu over 13m (*Jessen, 2008*).

The Mitsu West zone primarily covers a contact zone with large screens and xenoliths of metasedimentary rocks within the Hopper pluton where two of the composite chip samples by Mitsubishi in 1968 returned 0.25% Cu over 60.96m (8) and 0.52% Cu over 45.72m (7) *(Kikuchi, 1968).* Hand trenching (Trench 14-11) in 2014-2015 over the area thought to correspond to the latter Mitsubishi sample returned 0.43% Cu, 0.06 g/t Au and 1.83 g/t Ag across a 51.3m approximate true thickness.

Mineralization within the porphyry consists of chalcopyrite, with lesser pyrite, pyrrhotite, magnetite and molybdenite as fracture fillings, disseminations and aggregates, and within

quartz ±carbonate veins hosted within a 2.3 km (east-west) by 650m area (open to the south and east) at the western edge of the Hopper pluton. Dominant controlling fracture sets measured in the 2013 detailed mapping by the author vary from 010-040° and 320-350° with dips primarily steep east and west, which vary locally to moderate dips (60-75°) east and west. Additional mineralized fracture sets in the Mitsu West area also include a $060^{\circ}/70^{\circ}S$ set.

In the petrographic analysis in 2014 by Vancouver Petrographics Ltd., Langley, British Columbia, rare disseminated pyrite and chalcopyrite were observed within gabbro and quartz monzonite phases of the Hopper pluton, replacing magnetite and or mafic minerals *(Colombo, 2014)*. Monzonitic phases occur within the Mitsu East showing to the eastern pond area, and locally just west of the ponds, and gabbro, with minor potassium feldspar alteration, occurs in the Mitsu East to pond area. Quartz monzonite was petrographically identified from the Mitsu West area. The monzogranite phase of the Hopper pluton, locally with an estimated 3-5% fine disseminated chalcopyrite, was observed by the author in the eastern pond area in 2017. The quartz monzonite and monzonitic phases appear to cut the main granodiorite phase of the Hopper pluton.

Only one diamond drill hole was drilled on the Hopper North porphyry target (432.81m in DDH-15-05) and 1,187.2m in 40 shallow (average 30m) vertical percussion holes targeted the porphyry target in 2011. Despite the unfavourable orientation of the percussion holes (to intersect the steep fracture sets controlling mineralization) several (PDH-11-19, -23, -39, -47) intersected significant porphyry copper mineralization grading 0.36% Cu over 9.15m, 0.33% Cu over 1.53m, 0.24% Cu over the entire 39.62m, and 0.18% Cu over 7.62m, respectively (*Eaton, 2012*). Two additional holes (PDH-11-45 and -46) bottomed in 0.10% Cu over 1.52m in both holes (*Eaton, 2012*). DDH-15-05 intersected 0.17% Cu over a 162.85m interval, consisting of propylitic and phyllic altered monzonite, which included a 30m wide strongly oxidized fault zone consisting of quartz±carbonate breccia and gougey monzonite with intermittent centimetre scale chalcopyrite and pyrite rich breccias.

Porphyry style mineralization was also intersected in DDH-15-04 on the southern flank of the Hopper pluton, intersecting a pervasive phyllic altered intense dyke swarm hosted by granodiorite with disseminated and fracture-hosted chalcopyrite and molybdenite, "B" veins (molybdenite with K-feldspar selvages) and "D" veins (quartz-carbonate with blebby chalcopyrite ±molybdenite with sericite altered halos). The interval averaged 158 ppm molybdenum over 173.67m and bottomed in mineralization.

Quartz ±carbonate veins, a few cm to 3m wide, occur primarily within the intrusion and probably represent "D" veins associated with the porphyry system. The veins parallel and occur orthogonal to the dominant north trending fracture orientation. The quartz is clear to white to smoky and occasionally chalcedonic, exhibits weak banding, drusy cavities and brecciation. The veins are commonly mineralized with isolated coarse blebs and clots of chalcopyrite ±molybdenite. Significant precious metals appear to occur in veins more distal to the Hopper pluton with a grab sample from the Franklin Creek area containing 2% Cu, 1 g/t Au and 63 g/t Ag (*Stephen and Feulgen, 1989a*).

8.0 DEPOSIT TYPE

The deposit models for the Hopper Project are bulk-mineable plutonic hosted, calcalkaline porphyry copper ±molybdenum ±gold ±silver, and precious metal enriched copper skarn; the latter commonly surround porphyry deposits where receptive calcareous stratigraphy is present. The characteristics discussed below are not necessarily indicative of the mineralization on the Hopper Project, which is the subject of this report.

The following characteristics of the calc-alkaline porphyry copper deposit model are primarily summarized from Panteleyev (1995). Examples include Casino in Yukon, Highland Valley Copper and Gibraltar in British Columbia and Chuquicamata, La Escondida and Quebrada Blanca in Chile. Commodities are copper, molybdenum and gold in varying quantities with minor silver in most deposits.

Mineralization typically occurs as sulphide bearing veinlets, fracture fillings and lesser disseminations in large hydrothermally altered zones (up to 100 ha in size) with quartz veinlets and stockworks, commonly wholly or partially coincident with intrusion or hydrothermal breccias and dyke swarms, hosted by porphyritic intrusions and related breccia bodies. Sulphide mineralogy includes pyrite, chalcopyrite, with lesser molybdenite, bornite and magnetite. Two main ages of mineralization are evident in the Canadian Cordillera, Triassic to Jurassic (210-180 Ma) and Cretaceous to Tertiary (85-45 Ma). The Hopper pluton has been dated at 78-76 Ma. Alteration generally consists of an early central potassic zone that can be variably overprinted by potassic (potassium feldspar and biotite), phyllic (quartz-sericite-pyrite), less commonly argillic and rarely, advanced argillic (kaolinite-pyrophyllite) in the uppermost zones.

Regional faults are important in localizing the porphyry stocks with fault and fracture sets (especially coincident and intersecting multiple sets), an important ore control. Other ore controls include internal and external igneous contacts, cupolas, dyke swarms and intrusive and hydrothermal breccias.

Porphyry deposits contain the largest reserves of copper, almost 50% of the gold reserves in British Columbia and significant molybdenum resources. Associated deposit types include skarn, porphyry gold, low and high sulphidation epithermal systems, polymetallic veins and sulphide mantos and replacements. The author has not been able to independently verify the above information which is not necessarily indicative of the mineralization on the Hopper Project, the subject of this report.

Age dating by Blumenthal (2010) and recent work by Morris et al. (2014) and the Yukon Geological Survey (*Steve Israel, personal communication*) indicate an early Late Cretaceous age around 78 to 76 Ma for the Hopper pluton, placing it in the same metallogenic episode as the Patton Porphyry at the Casino deposit, 190 km to the north-northwest (*Figure 4*). Both occur within the Dawson Range copper-gold belt.

The Casino porphyry copper-gold-molybdenum deposit of Western Copper and Gold Corporation (Minfile 115J 028) contains a NI 43-101 compliant proven and probable reserve of 965 million tonnes of mill ore grading, 0.204% Cu, 0.240 g/t Au, 0.0227% Mo

and 1.74 g/t Ag, and 157 million tonnes grading 0.292 g/t Au, 0.036% Cu and 2.21 g/t Ag of heap leach ore (*Huss et al., 2013*). The above reserve information has not been independently verified by the author and is not necessarily indicative of the mineralization on the Hopper property which is the subject of this report. Mineralization at Casino occurs in breccia pipes, plugs and dykes associated with the Patton Porphyry, an early Late Cretaceous aged stock of the Casino plutonic suite. The stock intrudes granitic rocks of the Mid Cretaceous Dawson Range Batholith of the Whitehorse plutonic suite. The Casino deposit is unglaciated and deeply weathered with ore grade values reported within leached cap, supergene oxide, supergene sulphide and hypogene zones. The Hopper Project occurs within glaciated terrain, so a leached cap is not present.

Skarn deposits are metasomatic deposits formed in limestone or other calcareous rocks at or near the contact of plutonic rocks. The best developed skarn deposits occur within embayments of the pluton where heat and fluid sources can circulate mineralizing solutions through the sedimentary rocks over extended periods. Two such embayments occur on the Hopper Project, and it is possible that additional ones may occur under the extensive Quaternary cover to the east.

The following characteristics of the copper skarn deposit model are primarily summarized from Fonseca (2005). Examples include the Whitehorse Copper belt in Yukon, Craigmont in British Columbia and Ok Tedi in Papua New Guinea. Commodities are copper with varying quantities of gold, silver, molybdenum and tungsten.

Copper mineralization, generally chalcopyrite, occurs as stockwork veining and disseminations within both endoskarn (within the igneous rocks) and exoskarn (within the metasedimentary rocks) as irregular or tabular orebodies in carbonate rocks, and/or calcareous volcanics or tuffs, and adjacent intrusion, near igneous contacts. Pendants within igneous stocks can be important. Mineral zoning from stock out to marble is commonly diopside and andradite garnet to wollastonite ±tremolite ±garnet ±diopside ±vesuvianite. Serpentine occurs in more magnesian skarns. Exoskarn alteration contains high garnet to pyroxene ratios. Mineralization commonly accompanies retrograde alteration (commonly actinolite, chlorite and montmorillonite). Age of mineralization is primarily Mesozoic, but can be any age.

Copper skarn deposits related to mineralized copper porphyry intrusions tend to be larger, lower grade, and emplaced at higher structural levels than those associated with barren stocks. Geochemical zonation may show copper-gold-silver rich inner zones grading outward through gold-silver zones with high gold to silver ratios to an outer lead-zinc-silver zone.

Skarn mineralization at the Hopper property is similar to skarn deposits that were mined in the Whitehorse Copper belt, 120 km southeast of the Hopper Project (*Figure 4*), which were developed during the emplacement, and along the western contact, of the Whitehorse Batholith, of the Mid Cretaceous Whitehorse plutonic suite.

The Whitehorse Copper belt (Minfile 105D 053) hosts multiple copper-gold skarn deposits along a 30 km trend which produced at least 123,145,041 kg of copper, 7,062.4 kg of gold and 85,577 kg of silver from 1900 to 1981 (*Deklerk, 2009*). Grades

generally ranged from 0.71% to 1.84% Cu, with about 0.7 g/t Au and 13 g/t Ag (*Deklerk, 2009*). The above production and grade information has not been independently verified by the author and is not necessarily indicative of the mineralization on the Hopper property, which is the subject of this report. Many of the skarns are related to irregularities (embayments, pendants, screens, xenoliths) in the margin of the batholith, similar to the setting at the Hopper Project. The best ore zones have a limestone hanging wall and a quartzite or silicate skarn footwall. Both iron rich (magnetite, serpentine, specularite, talc, chlorite and occasional pyrrhotite and pyrite and iron poor or silicate (garnet, diopside, wollastonite, tremolite, epidote, chlorite, calcite and quartz) skarn deposits are evident within the belt; both are evident at Hopper.

Although the author makes general comparisons to the above mentioned deposit types, the reader is cautioned that the author cannot verify that these deposits are directly comparable with the mineralization at the Hopper property, which is the subject of this technical report.

9.0 EXPLORATION (Figures 6 to 18)

Work by Strategic Metals Limited, completed between 2006 and 2016, has included geological mapping and prospecting with concurrent geochemical sampling, petrography, grid and contour soil sampling, rock chip and channel sampling, hand and excavator trenching, helicopter-borne versatile time domain electromagnetic (VTEM) and magnetic surveys, aerial photography and topographic survey, access and heritage studies, core re-logging and 5,833m of diamond drilling in 16 holes in 2015-16. No work was conducted in 2017 except for a property examination by the author.

The geochemistry, trenching and geophysics completed by, or under the supervision of, Archer, Cathro & Associates (1981) Limited between 2006 and 2016 are discussed in more detail under their respective sections below. Mapping and petrography is discussed under section 7.2, "Property Geology" and 7.3, "Mineralization" and the diamond drilling and core re-logging are discussed under section 10.0, "Drilling". Drilling, geochemistry and geophysics undertaken in 2011 was conducted by Bonaparte Resources Inc. under option from Strategic Metals Limited. The 2011 geochemistry and geophysics completed by Bonaparte will be discussed in this section for completeness and integration purposes and the drilling is included under section 10.0, "Drilling". The exploration programs from 2006 to 2016, including the 2011 program, were managed by Archer, Cathro and Associates (1981) Limited.

Airborne electromagnetic and magnetic surveys now cover the entire property; approximately 30% of the property has been covered by soil geochemistry and 20% by detailed mapping, with 13,526.5m of documented drilling in 146 holes (9,305m of diamond drilling in 42 holes and 4,221m of percussion drilling in 104 holes). The Hopper Project is at an early exploration stage.

9.1 Geochemistry (Figures 9 to 14)

A total of 2,445 soil, 276 rock and four stream sediment samples were collected by Strategic Metals Limited since 2006. An additional 714 soil and 10 rock samples were collected in 2011 by Bonaparte Resources Inc. under option from Strategic Metals Limited. The programs are summarized in Table 3, below.

Voor	Soils	Rocks		Silta	Commente	
rear		North	South	Silts	Comments	
2006	483	23	0	4	2 grids, 8 soil lines Hopper N.	
2007	165	95	0		infill soil lines Hopper N.	
2010	195	0	0		Guy claims Hopper S.	
2013	1312	19	33		west, south, north	
2014	290	53	2		infill soil lines	
2015	0	35	16			
Subtotal	2445	225	51	4	Strategic Metals Limited	
2011	714	10	0		Bonaparte Res. under option from Strategic	
TOTAL	3159	235	51	4	between 2006 and 2017	

 Table 3: Geochemistry programs on Hopper

9.1.1 Method

All 2010, 2011, 2013 and 2014 soil sample locations and 2006-7 endpoints were recorded using hand-held GPS units. Sample sites were marked by aluminum tags inscribed with the sample number and affixed to 0.5m wooden lath, driven into the ground. Soil samples were collected from the B-C horizons with hand-held augers in 2010, 2011, 2013 and 2014 and mattocks in 2006-7, generally at depths of 20 to 60 cm, and placed into individually pre-numbered Kraft paper bags.

In 2006 the soil samples were collected from two grids within the upland plateau and along one reconnaissance and seven contour lines (two contour and 1 reconnaissance in the central property area, around the 5300' hill and five contouring the escarpment on the western edge of the plateau) in the general area of Hopper North. Grid samples were collected at 100m intervals along north trending lines spaced 100m apart. The contour samples were collected at 50m intervals along lines spaced between 100 and 200m apart. Infill sampling was completed in 2007 between the two 2006 grids and contour lines were extended in the northwest, using the same sample spacings. Fortynine soil samples were also collected along the floors of the 2007 excavator trenches where bedrock was not exposed, which will be discussed under section 9.2, "Trenching". Under a joint venture with Monster Mining in 2010, Strategic completed a grid over the Franklin Creek area within the Hopper South zone with samples collected at 50m intervals along 060° trending lines spaced 100m apart.

In 2011 Bonaparte Resources Inc. completed infill and additional contour soil sampling in the Hopper North area, between Hopper North and South, west and south of the Guy claims with additional samples further east and another contour line around the 5300' hill.

In 2013 Strategic completed one grid in the southwest property area (Bear Grid), another across the lowlands in the western property area, additional and infill contour sampling along the escarpment, and a few isolated lines over electromagnetic and magnetic anomalies. Grid samples were collected at a 50m sample spacing on lines spaced 200m apart. Contour samples were collected at a 50m sample spacing on lines primarily spaced 50m apart, but locally at a larger spacing. In 2014 Strategic collected 290 grid and contour infill soil samples from five areas within the western property area, generally at a 50m sample spacing on lines spaced 100m apart.

Anomalous thresholds and peak values for copper, gold, silver and molybdenum in soil samples collected from 2006 to 2014 are listed in Table 4, below. Results are shown on Figures 9 to 12.

0						
Element	Weak	Moderate	Strong	Very Strong	Peak	
Cu (ppm)	≥50 to <100	≥100 to <200	≥200 to <500	≥500	26,100	
Au (ppb)	≥10 to <20	≥20 to <50	≥50 to <100	≥100	1,835	
Ag (ppm)	≥0.2 to <0.5	≥0.5 to <1	≥1 to <2.00	≥2	5.5	
Mo (ppm)	≥5 to <10	≥10 to <20	≥20 to <50	≥50	142	

 Table 4: Anomalous soil geochemical data

Rock and silt geochemical sample sites were marked with orange flagging tape labelled with the sample number and locations recorded using hand-held GPS units. Rock samples were placed in clear plastic sample bags and primarily consisted of grab samples of subcrop, float and isolated outcrop exposures or as initial prospecting samples to evaluate the potential. Chip and channel samples were collected across significantly mineralized outcrop exposures. Trench samples will be discussed under section 9.2, "Trenching". Significant results are shown on Figures 7, 8 and 14.

All samples were reportedly assayed for gold and multi-element analyses as discussed under section 11.0, "Sample Preparation, Analyses and Security". However, gold results could not be located for the 2007 soils and results for the silt samples were not located.

9.1.2 Results

9.1.2.1 Soil Results

Soil sampling has outlined a 3.6 km long by 1 km wide mostly \geq 100 ppm copper in soil anomaly encompassing the Hopper North and South zones and scattered to well clustered, moderately to strongly elevated gold, silver and molybdenum values (*Figures 9-12*). The anomalous area, which covers part of the Hopper pluton and adjacent metasedimentary rocks, is open to the north and tendrils extend a further 600m to the south through the Franklin Creek area. At the northern contact of the Hopper pluton a 600m by 2 km branch extends eastwards across the pond area, past the Mitsu East showing through the pluton. Another 500m by 500m branch extends eastwards from the
main anomaly at the southern boundary of the Hopper pluton. A 1 km² area between the two anomalous branches contains copper values \leq 50 ppm Cu probably due to the increased thickness of glacial till through the pond area in the upland plateau. Effectively anomalous copper in soil, mostly \geq 100 ppm, covers a 3.6 km by 2.6 km area, with a 1 by 1 km donut low near the centre *(Figure 6)*. A comparison of the copper soil anomaly on the Hopper Project to that at the Casino deposit is shown in Figure 13.

In the Hopper South zone a 550m by 900m core of \geq 200 ppm copper in soils, with a maximum value of 2.6% Cu and many >1000 ppm Cu values, extends from the northern boundary of the Franklin Creek zone through the LV and JG zones (*Figure 9*).

The strongest copper, gold, silver and molybdenum geochemical values occur along the escarpment due to the predominance of residual soil. Although most of the lowland area is not anomalous, part of the main copper in soil anomaly persists through the extensive Quaternary cover over the lowland in the west-central property area. Thick overburden cover, including glacial till, in the Franklin Creek area presumably also subdues the geochemical signature through here. The soil geochemical response is relatively weak near the Franklin Creek showing.

South of Franklin Creek two to three narrow, northerly trending linear copper in soil anomalies are evident that may represent individual skarn horizons. One lies northerly along trend of a marble exposure. A number of anomalous gold in soil values, including a spot high of 1.84 g/t Au (highest on the property), occur in this area.

Moderately to very strongly anomalous gold and silver in soil values occur within the main copper anomaly, proximal to the southern and northern margins of the Hopper pluton in areas primarily underlain by metasedimentary rocks. The strongest gold-silver anomaly occurs within a 500m by 500m area just south of the Hopper pluton in the JG to LV showing area. A less cohesive gold-silver anomaly occurs just north of the Hopper pluton, northeast of Mitsu West. Moderately to strongly anomalous molybdenum in soils occur just north of the JG showing and at Mitsu West, proximal to the gold-silver anomalies, with some anomalous molybdenum extending between the two.

The eastern part of the Hopper North zone, near Mitsu East, hosts a few samples with coincident, moderately to strongly elevated gold, silver and molybdenum soil values, which are underlain by the Hopper pluton.

Although a direct correlation is not evident, high gold in soil values are often associated with high copper (*Figures 9 and 11*).



Soil Mo (ppm) ≥50 <172
 ≥20 <50
 ≥10 <20
 ≥5 <10
 ≥5 <10
 ≥2 <5
 ≥0 <2 2011, 2015 and 2016
 Diamond drill hole 0 0 2011 Percussion drill hole Hopper Pluton Aishihik Lake Road - Hopper Main Road Trail 0 1 6/2/1 --. 0.0.0 vo. . -----... 1 Alle ... A CONTRACTOR OF THE OWNER OF THE the second . . HOPKINS 1. 10 LAKE 1/10 ******** 17 (1) print to 11"x17" Figure 10 STRATEGIC METALS LTD. T.N. ARCHER, CATHRO & ASSOCIATES (1981) LIMITED MOLYBDENUM GEOCHEMISTRY Getci north HOPPER PROPERTY 1 UTM ZONE 8, NAD 83, 115H/07, Con









9.1.2.2 Rock Results (Figures 7-8 and 14)

A total of 235 rock samples, excluding trench samples, were collected from the Hopper North zone between 2006 and 2015. Significant results are plotted on Figure 7 (with gradational values and samples shown on Figure 14) and include, but are not limited to, those tabulated below.

Sample	Year	Width (m)	Cu (%)	Au (g/t)	Ag (g/t)	Mo (ppm)	Lithology	Location
M898286	2014	2	0.80	0.279	16.75	3.54	Skarn	North
L865804	2013	1	0.86	0.7	12.45	1	Skarn	North
L865805	2013	grab	2.67	0.021	18.75	25	Granodiorite	Mitsu East
M898291	2014	grab	2.08	0.508	16.75	966	quartz vein	Mitsu East
L865809	2013	grab	2.27	0.4	18.00	2	Skarn	Mitsu West
L865815	2013	grab	1.51	0.052	9.82	24	Metabasite	Mitsu West
CI03404	2006	grab	1.75	0.163	7.4	109	Metabasite	Mitsu West
C103417	2006	grab	0.92	0.373	12.2	6	Metabasite	NE Mitsu West
B376027	2007	3	0.22	0.01	1.6	5	Granodiorite	W. pond area
B376020-3	2007	13	0.40	0.055	1.9	47	Granodiorite	W. of ponds
C103416	2006	2	0.93	0.096	15.1	155	Skarn	W. of ponds
CI03407	2006	grab	1.37	0.084	11.3	99	Diorite	W. of ponds
B376056	2007	3	0.32	0.004	1.2	23	Granodiorite	SW of pond
B376058	2007	3	0.54	0.005	1.1	26	Granodiorite	SW of ponds
J981401	2011	5	0.10	0.006	0.5	6	Gouge	SW of ponds
K270703	2011	grab	1.13	0.054	4.7	22	Granodiorite	SW pond area
K270704	2011	grab	0.08	1.06	0.7	<1	Granodiorite	SW of ponds
CI03411	2006	grab	1.53	0.061	11.6	27	Granodiorite	W. pond area
CI03401	2006	grab	0.46	0.019	3.0	18	Granodiorite	centre escarpment

Table 5: Significant rock sample results from Hopper North zone

In 2007 an attempt was made to replicate some of the anomalous 1968 Mitsubishi composite samples, but locations actually sampled do not correspond to the 1968 locations. The sites were visited by the author in 2013 and the presence of chalcopyrite mineralization was confirmed. Two grab samples collected from the Mitsu East showing (0.18% Cu over 61m) returned 2.67% Cu with 18.75 g/t Ag, and 0.12% Cu. The Mitsu West showings were relocated but not re-sampled. Other samples collected in the area returned 2.27% Cu with 0.4 g/t Au, 18 g/t Ag, and 1.51% Cu with 9.82 g/t Ag in 2013, and 1.75% Cu with 0.16 g/t Au, 7.4 g/t Ag and 109 ppm Mo in 2006 from skarn and metabasite. Another 2006 sample further northwest returned 0.92% Cu with 0.37 g/t Au, 12.2 g/t Ag from metabasite. The area of composite chip sample #7 in the Mitsu West area by Mitsubishi in 1968, which returned 0.52% Cu and 170 ppm Mo over 45.72m (*Kikuchi, 1968*), was trenched in 2014 and 2015, as discussed in section 9.2, "Trenching".

The Mitsubishi composite samples from the east pond area were not re-sampled due to the proximity to 2007 trenches, but chalcopyrite mineralization was observed. Samples from the west pond area composite sample #4 (0.10% Cu over 30.5m) returned 1.53% Cu with 11.6 g/t Ag and 0.22% Cu over 3m from granodiorite in 2006-7.

Other significant results from granodiorite, unless specified, just west of the ponds include 0.40% Cu over 13m, approximately 300m further west of the west pond composite sample, with grab samples containing 1.37% Cu with 11.3 g/t Ag, 99 ppm Mo, and 0.93% Cu with 15.1 g/t Ag, 155 ppm Mo from skarn, and about 100m south 0.32% Cu over 3m. Results of 0.54% Cu over 3m was obtained from an undocumented trench further south and gouge near the north end of the trench returned 0.10% Cu over 5m. Significant grab samples in this area include 1.13% Cu, and 0.08% Cu with 1.06 g/t Au (*Figure 14*).

Extensive quartz-carbonate veins with chalcopyrite occur just west of the northern ponds, about 200m southeast of Mitsu West. Results include 0.55 % Cu, 12.9 g/t Ag over 3m. The granodiorite through the area is also mineralized (0.998 % Cu with 94.2 ppm Mo in a grab sample), but exposure is poor.

Approximately 400m to the south grab samples of granodiorite have returned 0.46% and 0.37% Cu; 0.27% Cu with 173 ppm Mo from a vein 150m further southwest; and 0.28% Cu from diorite another 250m southwest (*Figure 14*). This area has seen little work as it is situated between the Hopper North and South zones in an area of thicker overburden, including glacial till.

Little exploration has been conducted on skarn horizons extending north of the Hopper pluton, despite anomalous copper soil geochemistry, probably due to thick vegetation and lack of exposure. One sample of skarn in 2013 returned 0.86% Cu, 0.7 g/t Au, 12.45 g/t Ag across 1m. Follow up in 2014, uncovered mineralization 30m to the north, which returned 0.80% Cu, 0.279 g/t Au, 16.75 g/t Ag across 1m and almost 300m to the southwest, which returned 0.69% Cu, 0.1 g/t Au, 15.5 g/t Ag from a grab sample (*Figure 14*).

Only 51 rock samples were collected from the Hopper South zone by Strategic, primarily in 2013 since the Guy claims were only acquired by joint venture in 2010, and purchased in 2012. Most of the samples were collected along the escarpment from the JG to the LV showings since very little work, and none recently, had been conducted since the original discovery along the escarpment in 1907-08. Significant copper results, commonly accompanied by significant gold, and elevated silver and locally molybdenum, were obtained in chip samples, generally limited by exposure.

Most samples were collected from small, isolated skarn exposures in which the upper and lower contacts are not exposed and strike projections are covered by overburden and vegetation. Thus, the size and continuity of the skarn horizons is uncertain. Most of the mineralized skarn exposures have not been tested by mechanized trenching and only limited drilling.

Significant results are plotted on Figure 8 (with gradational values on Figure 14) and include, but are not limited to, those tabulated below, generally listed from north to south.

Sample	Year	Width (m)	Cu (%)	Au (g/t)	Ag (g/t)	Mo (ppm)	Lithology	Location
L865817	2013	grab	0.14	0.011	0.33	466	Quartzite	NW JG
L865590-92	2013	8.1	0.23	0.06	2.06	278	sub JG skarn	JG
L865585	2013	1.7	0.13	0.031	2.5	13	Fp dyke	JG
L865812	2013	3	0.96	0.7	5.51	1	JG skarn	JG
L865575-78	2013	10.4	0.45	0.326	2.17	2	sub JG skarn	JG
L865813	2013	1.2	0.66	0.2	5.46	7	Franklin skarn	JG
L865593-95	2013	4.5	0.32	1.31	6.47	5	subFranklin	JG
L865596	2013	1	0.36	0.179	4.92	16	Calc-silicate	JG
L865579-80	2013	3.4	0.51	0.52	6.79	9	sub JG skarn?	South JG
L865581-2	2013	4.2	0.33	0.30	5.87	12	JG? skarn	South JG
L865583	2013	1.9	0.42	0.306	2.56	1	JG? skarn	South JG
L865598	2013	3	0.18	6.83	2.83	12	Franklin skarn	LV
L865572	2013	1	0.14	0.847	1.13	2	#2 skarn	South
L865574	2013	0.7	0.38	0.004	2.27	25	#3 skarn	South
R608434	2015	1.4	0.97	0.126	12.5	1	skarn	

 Table 6: Significant rock sample results from Hopper South zone

An upper skarn horizon (JG), from what appears to be the original discovery outcrop, returned 0.96% Cu, 0.7 g/t Au, 5.5 g/t Ag over 3m. Just below this, another skarn horizon (sub JG) returned 0.45% Cu, 0.33 g/t Au, 2.2 g/t Ag over 10.4m. Approximately 100m to the north what may be this same horizon returned 0.23% Cu, only 0.06 g/t Au, 2.1 g/t Ag, but with 278 ppm Mo, over 8.1m. Molybdenum appears to be more common proximal to the Hopper pluton. A grab sample further northwest of micaceous quartzite with molybdenum fracture fillings returned 0.14% Cu with 466 ppm Mo. Approximately 300m to the south, what may be the JG and sub JG skarn horizons were found to contain 0.33% Cu, 0.30 g/t Au, 5.9 g/t Ag over 4.2m and 0.51% Cu, 0.52 g/t Au, 6.8 g/t Ag over 3.4m, respectively.

Another horizon (Franklin), possibly two, occurs 150m below the upper skarn horizon with one outcrop containing 0.66% Cu, 0.20 g/t Au, 5.5 g/t Ag over 1.2m and an outcrop just below (subFranklin) with similar values but higher gold (0.32% Cu, 1.31 g/t Au, 6.5 g/t Ag over 4.5m). About 450m along trend to the south a sample of what is probably this horizon, based on the elevation and gold enrichment, returned 0.18% Cu, 6.83 g/t Au, 2.8 g/t Ag over 3m at the LV showing. This horizon probably correlates with the Franklin horizon.

Another horizon (#3) may be indicated by calc-silicate alteration, which contained 0.36% Cu, 0.18 g/t Au, 4.9 g/t Ag over 1m. This horizon lies along trend of mineralized exposures sampled in 1989. Two lower horizons (#4 and #5) were sampled closer to Franklin Creek, returning 0.41% Cu, 0.85 g/t Au, 1.1 g/t Ag over 1m and 0.38% Cu, 0.004 g/t Au, 2.3 g/t Ag over 0.7m, respectively.

9.2 Trenching (Figure 14)

Approximately 708m in five trenches were excavated in the pond area of Hopper North with a Hitachi EX200 Excavator by 15317 Yukon Inc. for Strategic Metals Limited in 2007. Trenches TR07-1 and -2 targeted a >1,000 ppm copper soil anomaly from 2006 and trenches TR07-3 to TR07-5 deepened 1969 Mitsubishi trenches that had not reached bedrock. Difficulty was encountered in reaching bedrock in all of the trenches due to permafrost and deep overburden. Chip samples were collected from exposed bedrock, otherwise soil and/or float were sampled from the floors of the trenches. Trenches were reclaimed but all trench lines were examined by the author. Trench specifications are tabulated below and shown in Figures 7 and 14.

Trench	Nad 83	Zone 8	Az.	Length	No. of Samples		Bedrock
Number	Easting	Northing	(°)	(m)	Rock	Soil	Exposure (m)
TR07-01	397943	6797122	225	80	0	0	0
TR07-02	397914	6797093	322	120	7	16	35
TR07-03	397833	6797184	305	205(35*)	30	8	35?
TR07-04	397655	6797261	250	165	9	7	33
TR07-05	397252	6797223	078	173	27	18	44
TOTAL				708	73	49	147

Table 7: 2007 trench specifications

*35m gap not excavated

Trenches consisted of granodiorite with minor mafic dykes, an aplite dyke in TR07-4, minor magnetite skarn in TR07-5 and occasional quartz and quartz-carbonate veins ±sulphide. Mineralization consisted of fracture controlled and disseminated to blebby chalcopyrite in the granodiorite, and blebby chalcopyrite and molybdenite in the quartz and quartz-carbonate veins. The veins appear to be "D" veins related to the porphyry system and returned the highest results with grab samples containing 2.25% Cu in TR07-3, 1.08% Cu, 937 ppm Mo in TR07-4 and 0.205% Cu, 805 ppm Mo in TR07-5. Results from the poorly exposed trenches are summarized below.

Trench	Cu	in Soils (resu	lts in ppm)		Rock Results					
Number	range	average	Samples	Interval	%Cu, ppm Mo, Ag	Location				
TR07-02	1430-2650	1936	8	40m	0.07% Cu /35m incl. 0.10 /15m	65-100m 80-95m				
TR07-03	605-1570	1125	8	40m	0.092, 584, 0.7 /2m 2.25, 19,12.7 0.19% Cu /3m	106-108m grab @ 182m 190-193m				
TR07-04	164-1870	327	7	105m	1.08, 937, 10.8	grab @ 55m				
TR07-05	26-1030	383	18	100m	0.205, 876, 1.2 0.071% Cu /4m	grab @ 107m 90-94m				

Table 8: Significant 2007 trench results

Two hand trenches were also excavated in 2007, one of which was sampled, but no significant results were obtained.

Eleven hand trenches were excavated in 2014 on the Hopper property in, or along strike of, areas where skarn mineralization had previously been identified (*Figures 8 and 14*), with 83 chip samples collected from the trenches. TR-14-11 was extended a total of 27.6m in 2015, to the east and west, with an additional 9 samples collected. Trench specifications and results are summarized below.

Trench	Nad 83	Zone 8	Az.	Length	No. of	Torget	Cu, Au, Ag
Number	Easting	Northing	(°)	(m)	Samples	Target	Cu in %, rest in ppm
TR14-01*	396952	6795099	072	14.3	5	LV zone	0.22, 3.63, 1.81 / 2.4m
TR14-02*	396947	6795091	263	16.15	7	LV zone	0.05, 1.64, 0.84 /16.15m
TR14-03*	396947	6795074	082	20.6	7	LV zone	0.13, 1.63,1.31 / 2.9m
TR14-04*	396963	6795061	300	17.5	6	LV zone	0.01, 0.11, 0.06 / 2.5m
TR14-05*	396953	6795038	060	13	4	LV zone	0.18, 0.083, 0.29 / 4m
TR14-06*	396968	6795007	262	19	11	LV zone	0.13, 0.712, 4.28 / 1.5m
TR14-07*	397138	6795769	090	6.5	4	Moly vein	8670 Mo / 1m
TR14-08*	397121	6795753	090	6	3	Moly vein	0.2% Cu, 242 Mo / 2.5m
TR14-09*	397115	6795665	225	24	8	N of JG zone	0.56, 1.571, 3.35 / 19m
TR14-10*	397137	6795650	250	40	13	N of JG zone	0.36, 0.767, 2.18 / 37m
TR14-11°	396480	6797451	257	65.3	24	Mitsu West	0.43, 0.06, 1.83 / 51.3m
TOTAL				230.45	92		

Table 9: 2014 and 2015 hand trench specifications and significant results

* denotes hole GPSed by author in 2014-2016;

N.B. TR14-04 & -05 are marked as TR14-05 & -04 in field and reversed in Burrell 2015 figures;

° TR14-11 was extended 27.6m in 2015

Six westerly trending trenches TR-14-01 to -06 were excavated across the LV zone over a 110m strike length (from north to south), but difficulty was encountered with large trees, thick vegetation and frozen organics. The best results from each trench are tabulated above. Two small trenches (TR-14-07 and TR-14-08) tested molybdenite bearing quartz veins within the Hopper pluton near its southern contact, intersecting molybdenite vein mineralization and chalcopyrite and molybdenite bearing granodiorite, respectively. Trenches TR-14-09 and TR-14-10 lie about 40m apart north of the JG zone within the metasedimentary package about 30m south of the Hopper pluton. TR-14-09 returned 0.56% Cu, 1.571 g/t Au and 3.35 g/t Ag over 19m (approximate true width of 4.9m), while TR-14-10 yielded 0.36% Cu, 0.767 g/t Au and 2.18 g/t Ag over 37m (approximate true width of about 9.6m). The mineralized intervals remain open to extension at both ends of both trenches and along strike. The LV and JG zone were targeted by DDH 15-01 to -04 and -07 and 16-14 to -16, which are discussed under section 10.0, "Drilling".

TR-14-11 was excavated across a knoll in the Mitsu West zone to test a large screen/xenolith comprised of alternating vertical bands of mineralized diopside skarn and quartz-carbonate veining. Results of 0.43% Cu, 0.06 g/t Au and 1.83 g/t Ag were obtained across a 51.3m approximate true thickness. This appears to correspond to composite chip sample 7 in the Mitsu West area by Mitsubishi in 1968, which returned 0.52% Cu and 170 ppm Mo over 45.72m (*Kikuchi, 1968*). This showing has not been drilled and an access trail was constructed into the area in 2016.

9.3 Geophysics (Figures 14 to 18)

Geotech Ltd. of Aurora, Ontario completed a 245 line kilometre airborne magnetic and versatile time domain electromagnetic (VTEM) geophysical survey in July, 2007 for Strategic Metals Limited across a 6 by 6 km grid across the then existing Hopper property (now central property area), to delineate the Hopper pluton and any additional intrusions, and help identify regional scale structures, lithological contacts, and magnetic and/or conductive skarn horizons (*Venter, 2007*). The survey was expanded (an additional 951.5 line kilometres) by Geotech Ltd. for Bonaparte Resources Inc. in December, 2011 (subsequent to drilling) to cover the larger property area and approximately 1 km to the north and south (*Schein et al., 2012*). Both surveys were flown in a 070° direction with 340° tie lines. The 2007 survey used a 200m line spacing, with tie lines at a 2 km line spacing and the 2011 survey covers an almost 9 km by 13 km area.

The VTEM system measures the electromagnetic induction field (B-field) and the vertical component of its time derivative (dB/dt), utilizing a proprietary receiver design using modern digital electronics and signal processing delivering low noise levels. Coupled with a high dipole moment transmitter the system delivers high resolution and depth penetration in precise electromagnetic measurements. The system is capable of penetrating to depths of 800m, has a low base frequency for penetration of conductive cover, has a spatial resolution of two to three metres, determines resistivity, and detects weak anomalies that are relatively easy to interpret and can be used directly to locate drill holes. The aeromagnetic survey used a high resolution cesium magnetometer to measure the Earth's magnetic field intensity. Ancillary equipment included a GPS navigation system (with accuracy of less than 3m) and a radar altimeter.

In December, 2012 Strategic Metals Limited contracted Condor Consulting Inc. to integrate and perform detailed processing, interpretation and analysis of the entire data set *(Irvine and Woodhead, 2013)*. The magnetic data from both surveys was reduced to pole and filtered, and despite disparities between the 2007 and 2011 VTEM data, a suitable merged electromagnetic data set was produced. The locations of the claim boundary, Hopper pluton and mineralized zones on the property are shown with respect to the combined results of the magnetic survey in Figure 15 and with respect to the VTEM survey in Figure 16.

The total magnetic intensity (TMI) roughly outlines the Hopper pluton as a 4 by 6 km, easterly oriented, very strong magnetic high. A 2 km northwest oriented elongate magnetic high in the southeast property area may represent a satellite intrusion. Southeast of the Hopper South zone there are two small circular magnetic highs thought to represent similar intrusive plugs, but an investigation of the area in 2013 by the author uncovered a foliated hornblendite, thought to represent a mafic meta-intrusion, possibly of the Mississippian Simpson Range plutonic suite. Moderate magnetic responses northeast and east of the property are probably related to the Early Jurassic Long Lake plutonic suite.

The magnetic signature is low immediately north of the Hopper pluton with the exception of two small moderately anomalous magnetic features, which appear to represent skarn horizons based on 2013 mapping in the vicinity of the eastern feature. A number of linear northwesterly trending moderate magnetic highs south of the Hopper pluton may represent magnetite rich horizons within the metasedimentary package. A strong magnetic signature that blends into the main Hopper pluton magnetic anomaly surrounds the southern, western and, to a lesser extent, the northern margins of the pluton and appears to correlate with magnetic skarn horizons evident in these areas.

The Hopper pluton exhibits a low electromagnetic response in the VTEM survey and a subdued response coincides with the 2 km northwest oriented elongate magnetic high in the southeast property area, supporting the interpretation of a possible satellite intrusion. The moderately magnetic Early Jurassic Long Lake plutonic suite exhibits a subdued electromagnetic signature.

A number of large scale, well defined north-northwesterly trending strong electromagnetic conductors surround the Hopper pluton. In most cases these features are associated with single and/or double peak responses identified by Condor and are thought to be related to stratigraphy and not mineralization. The drilled area at the Franklin Creek showing underlies one of three irregularly shaped strong electromagnetic conductors peripheral to the south side of the Hopper pluton, and displays a strong double peak response signature and numerous weaker single and double peak response features. The other two irregularly shaped electromagnetic conductors lie two and four kilometres east of this zone and exhibit similar signatures.

About two kilometres south of the Hopper South zone there is a strong linear electromagnetic anomaly with a subtle moderate electromagnetic conductor immediately to the west. This smaller anomaly is highly prospective for skarn mineralization because it is a strong, double peak conductor.

SJ Geophysics Ltd. of Delta, British Columbia conducted a 21 line kilometre inline and 7.2 line kilometre cross line Volterra Distributed Acquisition System 3D induced polarization survey in 2014 over the central part of the Hopper plateau (*Figure 14*). The survey was completed on seven 3 km long lines, oriented at 000° and spaced 400m apart, with cross-dipoles spaced every 400m along receiver lines and stations positioned every 100m (inline) and 250m (diamond). Survey data was collected using handheld Garmin GPSMAP 62s units in UTM projection NAD 83, Zone 8N (*Chen, 2014*).

The distributed nature of the Volterra 3D induced polarization system allows for highly customizable array and survey configurations. The 3D system is superior to 2D since it allows current injections to be performed sequentially at fixed increments (25, 50, 100 or 200m) along current lines. By injecting current at multiple locations along the current lines adjacent to receiver arrays, data acquisition rates are significantly improved over conventional surveys and use of cross-line receiver dipoles increases near-surface resolution *(Chen, 2014)*. Figures 17 and 18 illustrate thematic copper soil geochemistry underlain by chargeability and resistivity at a 150m depth.









Unfortunately the survey was run parallel to the trend of skarn mineralization and the dominant mineralized fracture orientations within the porphyry due to topographic concerns, despite recommendations for east-west trending lines. Despite this the survey did identify several conductive (low resisitivity), high chargeability zones, suggestive of the presence of sulphides. One conductive, high chargeability feature occurs in the northern embayment of the Hopper pluton (Hopper North skarn zone), extending southeasterly through the ponds area (Hopper North porphyry zone), and further southeast (A). A branch off this anomaly extends northerly into the Mitsu East area forming a significant conductive, high chargeability feature (B). Another one occurs about 2 km to the south (C). All of these are associated with anomalous copper soil geochemistry. A linear, north trending conductive zone at the eastern end of the survey, with chargeability zones at either end, is suggestive of a fault.

9.4 Access Management Plan and Heritage Surveys

Access management plans (AMP) have been drafted in 2013 and 2016, as a Mining Land Use requirement prior to allowing mechanized equipment on the property. They were created using field survey data to ensure the best access routes with careful consideration to local vegetation, soil development, topography, and slope angles. Preliminary field reconnaissance and heritage resource impact assessments were performed by Matrix Research Ltd. of Whitehorse in October, 2013 and by Stantec Inc. of Whitehorse on July 12, 2016, accompanied by representatives of the Champagne and Aishihik First Nations, in conjunction with the AMP's.

Overall the study area was assessed as having low potential for heritage resources based on field observations and examinations (Young, 2017). Previously recorded heritage sites occur just east of Hopkins Lake in the western Hopper property area, where no mineralization is anticipated and no work is planned. Five additional precontact heritage sites, consisting of short term camps, were identified by the surveys, but can be readily avoided and are not considered a risk (Heffner, 2013 and Young, 2017).

9.5 Aerial Photography and Topographic Surveys Figure 19

Aerial photography was undertaken over the Hopper property in 2013 by Underhill Geomatics Ltd. of Whitehorse for Strategic Metals Limited to facilitate detailed plotting of mapping, trenching, drill holes and access routes. Once the photographs were finalized, survey points were established on the property and a differential GPS was used to orthoreference the photographs. A detailed (two metre contour) topography map was created using the orthoreferenced images, which is used as a base for the drill hole locations (*Figure 19*).



10.0 DRILLING (Figures 8 and 19-22)

A total of 13,526.5m of drilling in 146 holes has been completed on the Hopper Project between 1977 and 2016 in six programs, which includes 9,305m of diamond drilling in 42 holes and 4,221m of percussion drilling in 104 holes. Strategic Metals Limited (Strategic) completed 5,833m of diamond drilling in 16 holes in 2015 and 2016 and the 2011 program by Bonaparte Resources Inc. (Bonaparte), consisting of 1309.1m of diamond drilling in 6 holes and 1731.26m of percussion drilling in 58 holes, was carried out under option from Strategic. The 2015 and 2016 programs by Strategic and the 2011 program by Bonaparte were managed by Archer, Cathro & Associates (1981) Limited. EOH refers to end of hole in reference to drill holes and in the drill tables "Elev." denotes elevation and "Az." azimuth.

The Hopper South zone was tested by most of the diamond drilling (8,473m in 40 holes), and 2,783m of percussion drilling in 57 holes and the Hopper North zone was tested by 1,439m of reverse circulation percussion drilling in 47 holes and 832m in two diamond drill holes (DDH-15-05 and -06). There is evidence of another diamond drill program on the Hopper South zone undertaken prior to 1977 as packsack core was found on the property in 1977 (*Deklerk, 2009*). This drilling may have been undertaken by Arrow Inter-America Corp. Ltd., which optioned the property in 1969 (*Deklerk, 2009*). Table 10 below summarizes the drill programs.

Year	Company	Holes	Туре	Size	Depth (m)
1969?	Arrow Inter-America Corp.?	?	diamond	X-ray	unknown
1977-8	Whitehorse Copper Mines Ltd.	15	diamond	BQ	1786.8
1980	New Ridge Resources Ltd.	46	percussion	2 inch	2490.2
1989	Casau Exploration Limited	5	diamond	BQ	376.12
2011	Ronanarto Rosquireos Inc	6	diamond	BTW	1309.09
2011	Boliapaite Resources life.	58	percussion		1731.26
2015	Strategic Metals Limited	9	diamond	BTW	3676.8
2016	Strategic Metals Limited	7	diamond	BTW	2156.26
TOTAL		146			13,526.53

 Table 10: Drill programs on Hopper

The 2015 diamond drill program was conducted by Beaudoin Diamond Drilling Ltd. of Courtenay, British Columbia with a skid-mounted, diesel-powered JKS-300 drill using BTW wireline equipment, and the 2016 program by Platinum Diamond Drilling Inc. from Winnipegosis, Manitoba with a skid-mounted Zinex A-5 drill. The 2015 and 2016 core is stored near the start of the Franklin Creek road at 396830mE, 6794250mN, Nad 83, Zone 8.

In the 2011 drill program, the diamond drilling was conducted by Elite Drilling Inc. of Vernon, British Columbia using a skid-mounted, diesel-powered JKS-300 drill with BTW equipment, and the reverse circulation drill program was conducted by Thorman Drilling Ltd. of Nelson, British Columbia with a self-propelled, track mounted reverse circulation percussion drill. The 1989 diamond drill program was completed with a BBS-1 drill by Kluane Drilling Ltd. of Whitehorse, Yukon Territory. Drill company and equipment data is

not available for the preceding programs. The 2011 core is stored on the Hopper property at DDH HOP11-03 at 397497mE, 6794708mN, Nad 83, zone 8 and the 1989 core is stored at the Bostock Core Library, Yukon Geological Survey, Whitehorse.

The historical diamond (2011 and earlier) and 1980 percussion drill holes targeted magnetic anomalies and depth and strike extent of skarn mineralization over a 750m diameter area at the Franklin Creek showing within the southern Hopper South zone, except for 2 holes (TH78-14, -15), about 300m further northeast, and 3 holes (HOP11-6, TH78-12 and -13), further north (*Figure 8*).

The diamond and percussion drilling are discussed separately under their respective sections below. Drill hole locations are shown on Figure 19, with detail of the Franklin Creek holes on Figure 8, and cross-sections are shown in Figures 20-22.

10.1 Diamond Drilling (Figures 6 to 8 and 19-22)

Almost all of the diamond drilling tested the Hopper South zone (8,473m in 40 holes), with only 832m in two diamond drill holes (DDH-15-05 and -06) completed on the Hopper North zone.

Most of the diamond drill holes were drilled west-southwesterly at fairly steep angles, the optimal orientation to test the shallow, east-northeasterly dipping skarn horizons and associated geophysical anomalies. Intervals were selectively sampled based on visible mineralization. The mineralization is generally recognizable and sulphide content is reflected in assay grades, but higher gold and molybdenum grades are not necessarily associated with higher sulphide content. Less than 15% of the core was sampled in the 1977-78 and 1989 programs with 39% sampling in the 2011 program and 66% sampling in the 2015-16 programs. Number of samples analyzed were 115 in the 1977-78 program, 69 in 1989, 283 in 2011 and 1521 in 2015-16.

The 1977-78 samples were analyzed for copper with most samples also analyzed for gold, silver, and some samples analyzed for tungsten and nickel. The 1989 samples were analyzed for gold, silver and copper, with only two results listed for molybdenum. It is possible that gold and molybdenum bearing intervals, and less likely lower grade copper intervals, were overlooked. The 2011 and 2015-16 samples were analyzed for gold and 51 element ICP, which includes gold, silver and molybdenum.

Core recovery appears to be good; it effectively averaged 98% in the 2015-16 programs (with low recoveries in the first interval or two at the top of the holes reducing it to about 90%), averaged >95% in the 2011 program, is not reported for the 1989 program (but appears to be good overall), and averaged 99% for sampled intervals in the 1977 to 1978 programs. Only a few poor recoveries (generally related to fault zones) through or adjoining mineralized intervals were noted; 65% recovery for a 3.05m interval starting at 188.98m in 15-06, 66% recovery for a 9.14m interval starting at 89.92m in 16-14, 72% recovery for a 6m interval in HOP11-6 and 30% recovery for a 1.5m interval in TH77-6. Although overall not significant due to the loss of only small zones, assays may be slightly lower here due to loss of soft sulphide bearing intervals.

The Hopper South holes intersected metasedimentary units (schist-gneiss, marble and quartzite), and feldspar porphyry and mafic dykes and sills. Holes TH-3, TH-10 and TH-14 were abandoned since they were drilled entirely in dykes and TH-4 and TH-9 cut dykes where mineralization was expected *(Tenney, 1977a)*. Hole TH-5 was lost prematurely in a fault zone. Minor chalcopyrite was observed in schist and skarn in holes TH-11 and but no significant results were obtained. Minor tungsten was reported from 71-72.8m in TH-8. Most of the holes intersected stacked, variably mineralized skarn horizons of variable widths.

The primary gangue skarn minerals include actinolite, diopside, tremolite and rare garnet, while metallic minerals consist of massive to disseminated magnetite, pyrrhotite, with lesser disseminated to blebby chalcopyrite (typically associated with the magnetite and pyrrhotite). Minor fine disseminated pyrite and relatively rare sphalerite and bornite are associated with chalcopyrite. In most skarn horizons, magnetite is wholly or partially replaced by sulphide minerals, but semi-massive coarse grained, unaltered magnetite was intersected particularly in HOP-11-06 and TH13, which are located close together approximately 500m north of the main drill area, more proximal to the Hopper pluton.

Hole No	Easting	Northing	Elev.	Δ7 (0)	Dip	Length				
	(m)	(m)	(m)	A2.()	(°)	(m)				
TH77-1*	397445	6794600	1158	060	-65	215.5				
TH77-2*	397487	6794611	1155	060	-60	77.1				
TH77-3*	397600	6794696	1155	240	-70	62.8				
TH77-4*	397505	6794727	1186	060	-70	77.1				
TH77-5	397516	6794493	1162	060	-80	46.3				
TH77-6*	397624	6794769	1177	240	-80	97.5				
TH77-7	397727	6794845	1183	240	-80	107.0				
TH77-8	397678	6794690	1169	240	-80	96.9				
TH77-9	397628	6794543	1172	240	-80	88.4				
TH77-10	397839	6794567	1210	240	-80	32.3				
TH77-11	397902	6794604	1219	240	-80	188.1				
TH78-12	397635	6795341	1275	-	-90	194.5				
TH78-13	397811	6795168	1270	-	-90	206.3				
TH78-14	398080	6794953	1213	-	-90	21.9				
TH78-15	398170	6794974	1228	-	-90	274.9				
HA89-1	397640	6794669	1158	240	-70	105.16				
HA89-2	397570	6794575	1140	240	-70	72.54				
HA89-3*	397519	6794543	1135	240	-70	65.22				
HA89-4*	397446	6794616	1166	240	-60	72.24				
HA89-5*	397446	6794615	1166	-	-90	60.96				
HOP-11-01*	397455	6794600	1179	250	-70	175.87				
HOP-11-02*	397450	6794650	1189	250	-70	160.63				
HOP-11-03*	397497	6794708	1200	250	-70	224.63				
HOP-11-04	397618	6794768	1189	250	-70	258.16				
HOP-11-05	397297	6794790	1222	250	-70	192.02				
HOP-11-06	397710	6795100	1270	250	-70	297.78				
TOTAL						3471.81				

Historical drill hole specifications are summarized below.

Table 11: Historical diamond drill hole specifications

* denotes hole GPSed by author in 2013

The 2011 drill core was quick logged in August, 2013 to integrate geological data from the drill holes with the 2013 surface mapping (*Burrell, 2013b*). The number and percentage of variably mineralized skarn horizons encountered within each 2011 diamond drill hole are shown in Table 12, below.

Hole No.	Skarn Horizons	% Skarn
DDH-11-01	11	18
DDH-11-02	4	4
DDH-11-03	12	14
DDH-11-04	25	20
DDH-11-05	21	17
DDH-11-06	22	19

Table 12: Skarn horizons in 2011 diamond drill holes

The 2013 core re-logging indicated that the highest gold assay from the drill program (9.44 g/t over 2.0m in DDH-11-01) was hosted by retrograde chlorite-actinolite skarn with disseminated black "pock-marks", rarely filled with pyrite (*Burrell, 2013b*). The interval occurs within a mineralized zone preceding semi-massive to massive magnetite-pyrrhotite skarn with chalcopyrite and pyrite (*Burrell, 2013b*).

The 2015 drill program primarily targeted the Hopper South zone to delineate the extent of the copper-gold skarn mineralization and to test for deeper, more gold-rich skarn horizons. DDH HOP-15-005 targeted porphyry style mineralization encountered in PDH-11-39 (0.24% Cu over the entire 39.62m) proximal to Mitsubishi's composite chip sample 13, which returned 0.21% Cu and 270 ppm Mo over 30.5m (*Kikuchi, 1968*), with a chargeability anomaly and Mitsubishi's composite chip sample 12 (0.24% Cu over 45.72m) further east. DDH HOP-15-006 targeted skarn horizons in the Hopper North zone. The 2016 program was designed to test the strike and dip continuity of the numerous skarn horizons, particularly precious metal enriched horizons, within the Hopper South zone. Drill hole specifications are summarized below.

Hole No.	Easting (m)	Northing (m)	Elev. (m)	Az. (º)	Dip (º)	Length (m)
HOP-15-001*	397113	6795109	1235	270	-70	445.31
HOP-15-002*	397355	6795484	1296	270	-60	326.14
HOP-15-003*	397351	6795656	1326	270	-60	288.95
HOP-15-004*	397215	6795661	1283	270	-60	501.7
HOP-15-005*	397405	6797407	1362	090	-50	432.81
HOP-15-006	397127	6797527	1377	270	-70	399.29
HOP-15-007	397317	6795108	1269	270	-70	465.12
HOP-15-008*ŧ	397297	6794790	1244	250	-70	402.34
HOP-15-009 #	397618	6794768	1195	250	-70	415.14
HOP-16-010*	397125	6794394	1096	270	-70	266.7
HOP-16-011*	397039	6794599	1120	270	-70	291.08
HOP-16-012*	396985	6794771	1135	270	-70	163.07
HOP-16-013*	396978	6794771	1135	090	-65	216.22
HOP-16-014*	397339	6795311	1280	270	-70	443.48
HOP-16-015	397226	6795491	1284	270	-60	402.33
HOP-16-016	397310	6794931	1240	270	-70	373.38
TOTAL						3471.81

 Table 13: 2015-16 diamond drill hole specifications

* denotes hole GPSed by author in 2015-2016;

t and # denotes deepening of DDH-11-05 and DDH-11-04, respectively

Significant diamond drill results are tabulated on the following page. The interval represents the downhole intersection length and, based on the interpreted shallowly dipping skarn horizons, true widths are estimated to represent 95 to 100% of the interval for the southwest (240-270°) oriented holes with -60 to -80° dips, and for the vertical holes, and about 70%, 77%, 83% and 90% of the interval for the 060-090° oriented holes, dipping -60°, -65°, -70°, and -80°, respectively. Units for the gold and silver assays are not reported in the 1977 drill report, but are reported as ounces per ton in the 1978 drill report, so are assumed to be in ounces per ton in 1977 since both programs were conducted by Whitehorse Copper Mines Ltd. and gold and silver assays were reported as such in this time period. Intercepts from the 2011 drilling which twinned some of the 1977 intersections confirm this assumption.

The 1977 drill program was successful in intersecting the Franklin Creek skarn horizon at depth with significant intersections including 1.94% Cu, 0.87 g/t Au,14.6 g/t Ag over 18.6m (about 13m true width) in DDH TH77-2, 1.25% Cu, 0.65 g/t Au, 9.7 g/t Ag over 10.4m (about 8.6m true width) in DDH TH77-4, 1.05% Cu over 12.7m (about 12.5m true width) in DDH TH77-6 and 1.25% Cu, 0.81 g/t Au, 10.6 g/t Ag over 4.3m (true width) in DDH TH77-8. The 1989 drill program was successful in extending the mineralization to the south and east with approximate true width intersections of 1.98% Cu, 0.67 g/t Au, 14.4 g/t Ag over 7.8m in DDH HA80-2 and 1.29% Cu, 0.35 g/t Au, 10.5 g/t Ag over 2.3m in DDH HA80-4, and confirmed significant mineralization to the east in DDH HA80-1 (near TH-8).

The 2011 drilling confirmed and intersected additional mineralization in the TH-4 to -6 area with approximate true width intersections of 1.62% Cu, 0.54 g/t Au, 9.3 g/t Ag over 8.5m in DDH HOP11-3 (compared to 1.25% Cu, 0.65 g/t Au, 9.7 g/t Ag over 8.6m true width in DDH TH77-4) and 0.63% Cu, 0.46 g/t Au, 4.11 g/t Ag over 10m in DDH HOP11-4 (compared to 1.05% Cu over 12.5m true width in DDH TH77-6). DDH HOP11-1 confirmed the mineralized horizon encountered in DDH-HA89-4 and intersected a lower significant horizon (#3), which contained 9.44 g/t Au over a 2m true width.

Following the 2011 drilling four main stacked mineralized skarn horizons (Franklin, sub-Franklin, #2 and #3 horizons) were recognized within the Franklin Creek area, generally tested over a 500 by 300m area and to a depth of 250m. The Franklin horizon was intersected 200m further south than previous and the horizons remained open in all directions.

The 2015 drilling on the Hopper South zone intersected open ended stacked mineralized skarn horizons over a 1 km strike length and 460m down dip extent. Deeper, gold-rich skarns were intersected in DDH-15-01 and DDH-15-08, including 12.95 g/t Au over 2.65m in pyroxene and semi-massive magnetite (magnetite retrograding to hematite) skarn and 43.6 g/t Au over 1m from chlorite-actinolite-pyrrhotite skarn, respectively. DDH-15-08 and -09, which deepened DDH-15-05 and 15-04, respectively, intersected two additional mineralized skarn horizons below the #3 horizon.

	_	-						
Hole	From	10	Interval	Cu	Au	Ag	Mo	Horizon
No.	(m)	(m)	(m)	(%)	(g/t)	(g/t)	(ppm)	
TH77-1	15.54	21.00	5.46	0.14	0.14	3.0		Franklin
TH77-1	115.82	119.18	3.35	0.30	0.30	5.80		#2
TH77-2	23.53	42.12	18.59	1.94	0.87	14.6		Franklin
TH77-4	54.89	65.32	10.43	1.25	0.65	9.7		Franklin
TH77-6	57.36	70.10	12.74	1.05	NR	NR		Franklin
TH77-7	91.84	97.72	5.88	0.17	0.15	3.7		Franklin
TH77-8	60.81	69.28	8.47	0.76	0.71	7.3		Franklin
including	62.79	67.09	4.30	1.27	0.81	10.6		Franklin
TH77-9	53.34	66.96	13.62	0.42	0.30	4.8		Franklin
including	64.07	65.01	0.94	3.06	0.86	20.2		Franklin
TH78-12	143.65	143.86	0.21	2.42	3.0	16.1		Franklin?
TH78-12	169.62	170.08	0.46	1.38	1.8	0.8		Franklin?
TH78-13	170.08	171.36	1.28	0.36	0.08	NR		sub-Fr.?
TH78-15	111.80	114.79	2.99	0.20	0.19	3.4		Franklin
HA89-1	47.49	53.69	6.20	0.70	0.24	8.48		Franklin
including	52.38	53.69	1.31	2.70	0.86	35.7		Franklin
and	59.61	60.71	1.10	3.72	0.80	18.7		Franklin
HA89-1	101.24	104.18	2.94	0.45	0.32	4.4		#2?
HA89-2	23.09	30.88	7.79	1.98	0.67	14.4		Franklin
HA89-3	14.63	17.51	2.88	0.56	0.20	7.0		Franklin
HA89-4	19.28	20.61	2.29	1.29	0.35	10.5		Franklin
HA89-4	24.95	29.96	5.01	0.62	0.33	13.6		sub-Fr.
HA89-5	22.97	25.08	2.11	0.54	0.23	4 7		Franklin
HOP-11-01	2.95	16 65	13 70	0.41	0.25	3.84		Franklin
including	9.69	12.02	2.33	1 24	0.87	12.95		Franklin
and	125.67	142.60	16.93	0.22	1 76	1 75		#3
including	125.67	133 17	7.50	0.43	3.35	3.55		#3
including	125.67	127.67	2 00	0.01	9 44	1.04		#3
HOP-11-02	28.01	30.45	2 44	0.52	0.72	4 15		Franklin
and	36.58	39.25	2.67	1 18	0.56	11 62		Franklin
HOP-11-03	58.28	66 78	8.50	1.62	0.54	9.30		Franklin
and	88.28	90.70	2.42	1.87	0.64	17.74		sub-Fr.
and	130.00	132.45	2.45	0.72	0.18	6.79		#2
HOP-11-04	57.39	67.43	10.04	0.63	0.46	4 11		Franklin
including	57.39	62.53	5.15	0.95	0.84	5.64		Franklin
and	174.86	182.87	8.01	1.58	0.84	14.82		#2
HOP-11-05	126.93	128.05	1.12	0.46	1.83	1.74		#2
HOP-11-06	131.80	136.80	5.00	0.50	0.29	2.35		Franklin?
and	276.35	278.01	1.66	0.63	0.40	5.21		#2 (=AM)
and	279.10	282.93	5.49	0.73	0.59	14.97		#2
DDH-15-01	90.59	92.26	1 67	0.57	0.12	4 44	0.31	#2?
and	284 29	286.94	2 65	0.95	12 15	5 45	3.24	#4
DDH-15-02	82.07	91.09	9.02	0.24	0.12	1.55	32 15	upper?
and	113.13	128 14	15.01	0.50	0.50	1.64	3.59	JG
including	121 70	128 14	6.44	1.00	1.01	3.86	3,99	JG
and	136.60	138.60	2 00	0.70	0.14	4 44	2 11	JG
and	150.85	151.85	1 00	0.45	1 00	2 08	5.54	sub.IG
and	204.90	205.90	1 00	0.79	0 723	4 24	3 78	Franklin?
DDH-15-03	26 92	28 91	1 99	0.31	0.11	1.37	80.70	upper
and	125.30	128 29	2,99	0.28	0.34	1.65	135.00	JG
and	266 61	276 15	9.54	0.35	1.01	1.79	45 43	Franklin
	200.01	2.0.10	0.01	0.00			10110	

Table 14: Significant diamond drill results

	Table 14: Significant diamond drill results (Continued)										
Hole	From	То	Interval	Cu	Au	Ag	Мо				
No.	(m)	(m)	(m)	(%)	(g/t)	(g/t)	(ppm)	Horizon			
DDH-15-04	39.09	52.10	13.01	0.41	0.33	1.70	6.53	JG			
and	196.97	211.40	14.43	0.60	1.11	2.86	183.88	Franklin			
including	202.52	207.44	4.48	1.03	2.40	3.98	253.12	Franklin			
and	325.24	498.91	173.67	0.01	0.00	0.09	157.57	granodiorite			
DDH-15-05	113.88	276.73	162.85	0.17	0.02	2.08	34.26	granodiorite			
including	149.74	150.74	1.00	5.00	0.26	17.10	2730.00	granodiorite			
and	275.73	276.73	1.00	2.40	0.06	17.45	61.30	granodiorite			
DDH-15-06	79.14	84.25	5.11	0.32	0.00	4.35	8.41	N skarn			
and	110.73	112.15	1.42	0.36	0.02	4.08	3.44	N skarn			
and	186.23	188.98	2.75	0.78	0.03	3.68	63.96	N skarn			
DDH-15-07	48.07	58.64	10.57	0.49	0.20	3.32	6.91	Franklin			
including	54.07	55.64	1.57	1.39	0.65	9.28	23.80	Franklin			
and	60.96	70.42	9.46	0.12	0.01	2.21	3172.00	subFr?			
and	349.17	351.98	2.81	1.25	0.08	0.23	1.76	#4			
and	369.35	370.71	1.36	0.46	0.29	1.56	2.57	#4			
DDH-15-08°	336.66	337.66	1.00	0.06	43.6	1.07	53.30	#5			
	341.49	342.63	1.14	0.31	0.20	1.91	45.40	#5			
DDH-15-09°	339.33	340.33	1.00	0.67	0.17	3.93	83.70	#4			
DDH-16-10	123.00	124.80	1.80	0.01	1.02	0.23	30.00	#6			
and	180.52	190.98	10.46	0.21	0.09	1.53	5.70	#7			
and	204.84	214.41	9.37	0.27	0.09	1.94	2.63	#7			
DDH-16-11	119.95	125.18	5.23	0.41	0.15	2.57	1013.39	#5			
DDH-16-14	94.90	99.49	4.59	0.41	0.54	2.77	42.04	upper			
and	135.64	138.84	3.20	0.34	0.05	3.89	57.44	JG			
and	183.64	189.41	5.77	0.57	0.47	2.37	39.27	subJG			
and	213.70	217.93	4.23	0.37	0.17	2.54	16.71	?			
and	226.00	229.00	3.00	0.61	0.12	8.01	10.05	Franklin			
and	264.39	267.31	2.92	0.39	0.11	3.01	2.67	Franklin			
and	316.76	322.90	6.14	0.27	0.07	1.37	35.93	subFr?			
including	321.30	322.90	1.60	0.97	0.27	5.06	135.50	#2			
and	343.64	347.18	3.54	0.25	0.10	1.55	5.23	#2			
and	362.48	367.13	4.65	0.15	0.04	0.91	0.70	#2?			
and	377.53	386.34	8.81	0.40	0.14	1.96	14.78	#3?			
DDH-16-15	99.10	101.07	1.97	0.71	0.17	5.06	4.54	upper			
and	154.24	159.81	5.57	0.27	0.13	1.53	89.18	JG			
and	180.05	191.03	10.98	0.27	0.10	1.86	56.39	Franklin			
and	359.52	376.66	17.14	0.04	0.01	0.20	329.80	#4 or 5			
DDH-16-16	60.89	66.13	5.24	0.44	0.27	3.16	1.45	Franklin			
and	301.46	306.12	4.66	0.27	0.19	1.68	8.12	#4			
and	354.02	356.20	2.18	0.04	2.33	1.14	1.75	#5			
and	360.79	362.01	1.22	0.94	1.17	5.77	4.61	#5			

NR denotes not reported; °Re-entered and deepened holes DDH-11-05 and 04, respectively

In the 2015 drilling the upper mineralized horizons (Franklin, JG or Discovery showing and upper) are generally characterized by copper-gold ratios between 1:0.5 and 1:1 with thicknesses ranging from 3 to 12m. The deeper skarn horizons (below Franklin) have higher gold to copper ratios, contain elevated bismuth and tellurium, and range between 1 and 7m thick.

Skarn and porphyry style mineralization were intersected in drill holes DDH-15-04 and -05 on the south and north flanks of the Hopper pluton, respectively. The porphyry style mineralization includes a pervasive phyllic altered intense dyke swarm hosted by granodiorite in the bottom of DDH-15-04 with disseminated and fracture-hosted chalcopyrite and molybdenite, B veins (molybdenite with K-feldspar selvages) and D veins (quartz-carbonate with blebby chalcopyrite ±molybdenite with sericite altered halos). The interval averaged 158 ppm molybdenum over 173.67m and bottomed in mineralization. DDH-15-05 intersected 0.17% Cu over a 162.85m interval, consisting of propylitic and phyllic altered monzonite, which included a 30m wide strongly oxidized fault zone consisting of quartz±carbonate breccia and gougey monzonite with intermittent centimetre scale chalcopyrite and pyrite rich breccias. A high grade interval from this fault zone graded 5.0% Cu, 0.257 g/t Au, 17.1 g/t Ag and 2730 ppm Mo over 1m.

Drilling carried out in 2016 expanded the area of known mineralization in the Hopper South zone to approximately 1500m of strike length for both the upper and lower skarn horizons. The lower skarn horizons have been drill tested up to 460m down dip, while the upper skarn horizons have been widely tested up to 700m down dip. At least 10 mineralized skarn horizons have been defined which include from top to bottom: the upper, JG (Discovery) and associated sub-JG, Franklin, sub-Franklin, #2 (AM), #3, #4, #5, #6 and #7 horizons. Correlation is tentative and requires a 3D analysis and structural interpretation.

The high grade gold results obtained in 2015 from the lower skarn horizons were not replicated in 2016, but bismuth and tellurium contents were elevated, similar to those in the gold-rich horizons. However, the large distances between drill holes and faults make correlations between holes difficult. The best gold grades were obtained from DDH-16-16 (2.33 g/t Au over 2.18m), which lies 150m north of DDH-15-01 (12.95 g/t Au over 2.65m) and 260m southeast of DDH-15-08 (43.6 g/t Au over 1m). The gold enriched skarn in DDH-16-16 consisted of ankerite-chlorite skarn ±breccia with schist and skarn clasts in a calcite matrix.

High molybdenum values from DDH-16-11 are due to molybdenite-filled fractures within massive a lower diopside-pyrrhotite-magnetite skarn. Hornblende-biotite granodiorite was intersected at the bottom of holes DDH-16-10 and -12, in the southwestern Hopper South zone, which may be an apophysis of the Hopper pluton. DDH-16-10, the southernmost hole intersected extensive marble and less skarn.

Most gold-rich intervals are spatially associated with late stage dykes, which may be responsible for localizing mineralization, but similar dykes cut the upper skarn horizons, without notable gold-enrichment. Gold appears to be associated with chlorite-actinolite retrograde alteration, that may be controlled by fault zones which would also control dyke emplacement. Specific skarn horizons are probably not gold-enriched, but will vary along strike.

Drill sampling methods are discussed under Section 11.0, "Sample Preparation, Analyses And Security".









LEGEND for Drill Sections (Figures 20-22)

10.2 Percussion Drilling (Figures 6 to 8 and Figures 19 to 22)

The 1980 percussion drilling was undertaken on the Franklin Creek skarn showing within the Hopper South zone over a 700 by 300m area to follow up mineralization encountered in the 1977 diamond drill program and to test electromagnetic anomalies along trend *(Ashton, 1981)*. It is reported that no logging of the chips was conducted. The actual report on the program may be Campbell (1980), which could not be located by the author, but the program is briefly described by Ashton (1981).

The 2011 percussion drill program targeted near surface areas with potential for coppergold porphyry mineralization within and adjacent to the Hopper North zone, which encompasses known surface showings and geochemical anomalies that were never drill tested *(Eaton, 2012)*. The holes are all vertical, and located along seven parallel north trending section lines spaced generally 200m apart, testing depths between 17 and 61m below surface. However, the porphyry mineralization is controlled by 010-040° and 320-350 fracture sets, primarily dipping steep east and west, so cannot be properly tested by vertical holes.

All 2011 percussion holes were sampled continuously from top to bottom. Pulverized cuttings from the holes were automatically split at the collar, resulting in samples containing 12.5% of the cuttings from each 1.52m interval. The entire sample was sent for analysis, and representative chips from intervals were collected for logging purposes. The drill hole chips were examined under a hand lens and optical microscope *(Eaton, 2012)* and found to consist of intrusive units (magnetic granodiorite, feldspar porphyry and minor diorite), metasedimentary units (primarily quartz-biotite schist and phyllitic quartzite), and skarn horizons (including diopside, epidote and actinolite with trace to minor pyrite and chalcopyrite). The granodiorite locally exhibits weak to moderate argillic and propylitic alteration. The observed lithologies within the percussion holes generally support the 2013-2015 surface geological mapping.

The 1980 holes were only analyzed for copper, with select samples analyzed for gold, silver and molybdenum *(Ashton, 1981)*. Not all of the holes were analyzed and it is unclear if the entire hole was analyzed in those with reported intersections. The 2011 holes were analyzed for gold and 35 element ICP, which includes gold, silver and molybdenum.

Of the 46 holes drilled in the 1980 program, 26 were not analyzed, 9 of which intersected dykes and 3 otherwise re-drilled (possibly lost in faults or overburden). So, it is possible that the remaining 14 holes that were not sampled did not intersect significant visible mineralization. Since the chips were not logged, it is unknown if skarn horizons were intersected. It should be noted that the highest gold intercept in the diamond drilling program is not associated with chalcopyrite, but it does occur within a chalcopyrite bearing section.

Percussion drill hole specifications are tabulated below.

	Easting	Northing	Elev.	Az.	Dip	Length	0
Hole	(m) Ŭ	(m)	(m)	(°)	(°)	(m)	Comments
PH80-1*	397487	6794611	1158	-	-90	39.6	mineralized
PH80-1a	397503	6794628	1159	-	-90	15	NA
PH80-2	397465	6794675	1194	-	-90	18	Dyke, NA
PH80-3	397441	6794665	1195	-	-90	52	Dvke, NA
PH80-4	397421	6794704	1206	-	-90	37	Dvke, NA
PH80-5*	397403	6794661	1198	-	-90	61	mineralized
PH80-6	397503	6794140	1147	-	-90	9	NA
PH80-6a	397508	6794144	1158	-	-90	76	<0.1% Cu
PH80-7	397530	6794157	1158	-	-90	12	<0.1% Cu
PH80-7a	397536	6794158	1158	-	-90	76	NA
PH80-8	397519	6794096	1158	-	-90	61	<0.1% Cu
PH80-9	397521	6794226	1158	-	-90	61	<0.1% Cu
PH80-10	397518	6794296	1159	-	-90	61	mineralized
PH80-11	397499	6794330	1159	-	-90	82	NA
PH80-12	397539	6794285	1162	-	-90	82	NA
PH80-13	397490	6794284	1155	-	-90	85	NA
PH80-14	397548	6794372	1166	-	-90	55	NA
PH80-15	397541	6794553	1140	-	-90	40	NA
PH80-16	397595	6794678	1167	-	-90	82	Dvke, NA
PH80-17*	397495	6794651	1167	-	-90	61	mineralized
PH80-18	397593	6794756	1196	-	-90	82	mineralized
PH80-18a	397528	6794685	1183	-	-90	15	Dyke, NA
PH80-18b*	397501	6794668	1183	-	-90	15	Dyke, NA
PH80-19*	397658	6794804	1201	-	-90	85	NA
PH80-20	397578	6794765	1200	-	-90	15	Dvke, NA
PH80-21	397586	6794767	1200	-	-90	15	Dyke, NA
PH80-22	397633	6794765	1193	-	-90	27	NA
PH80-23	397616	6794754	1192	-	-90	15	Dvke. NA
PH80-24	397449	6794644	1196	-	-90	73	mineralized
PH80-25*	397472	6794692	1196	-	-90	64	mineralized
PH80-26*	397441	6794729	1208	-	-90	61	NA
PH80-27*	397358	6794716	1210	-	-90	67	mineralized
PH80-28	397333	6794764	1220	-	-90	85	<0.1% Cu
PH80-29*	397231	6794771	939	-	-90	85	NA
PH80-30*	397206	6794800	1219	-	-90	79	NA
PH80-31	397280	6794803	1226	-	-90	58	mineralized
PH80-32	397312	6794822	1232	-	-90	76	mineralized
PH80-33	397326	6794851	1244	-	-90	52	NA
PH80-34	397305	6794855	1238	-	-90	67	mineralized
PH80-35	397358	6794848	1244	-	-90	73	NA
PH80-36a	397332	6794806	1230	-	-90	49	mineralized
PH80-37	397628	6794662	1162	-	-90	27	NA
PH80-38	397615	6794716	1178	-	-90	61	mineralized
PH80-39*	397621	6794734	1185	-	-90	61	mineralized
PH80-40*?	397472	6794719	1202	-	-90	64	mineralized
PH80-41	unknown			?	-70	49	NA
PDH-11-01*	397303	6795300	1280	-	-90	30.48	S. metaseds
PDH-11-02	397301	6795501	1312	-	-90	32.00	S. metaseds
PDH-11-03	397299	6795700	1308	-	-90	30.48	S. metaseds
PDH-11-04	397298	6795899	1325	-	-90	19.81	S. msds, gdi
PDH-11-05	397303	6796101	1356	-	-90	22.86	granodiorite (gdi)
PDH-11-06	397302	6796301	1374	-	-90	16.76	granodiorite
PDH-11-07	397312	6796496	1371	-	-90	30.48	granodiorite
PDH-11-08	397301	6796701	1366	-	-90	15.24	granodiorite
PDH-11-09	397298	6796900	1358	-	-90	16.76	granodiorite
PDH-11-10*	397297	6797099	1357	-	-90	25.91	granodiorite

Table 15: Percussion drill hole specifications

Table 15: Percussion drill hole specifications (Continued)											
Holo	Easting	Northing	Elev.	Az.	Dip	Length	Commonto				
поте	(m)	(m)	(m)	(°)	(°)	(m)	Comments				
PDH-11-11	397299	6797301	1355	-	-90	30.48	N. metaseds				
PDH-11-12	397304	6797502	1350	-	-90	39.62	N. metaseds				
PDH-11-13	397298	6797699	1341	-	-90	36.58	N. metaseds				
PDH-11-14	397302	6797900	1329	-	-90	30.48	N. metaseds				
PDH-11-15*	397102	6797905	1330	-	-90	50.29	granodiorite				
PDH-11-16*	397101	6797699	1341	-	-90	35.05	N. metaseds				
PDH-11-17	397132	6797503	1386	-	-90	38.10	N. metaseds				
PDH-11-18	397099	6797290	1374	-	-90	42.67	granodiorite				
PDH-11-19	397094	6797103	1371	-	-90	33.53	granodiorite				
PDH-11-20	397104	6796898	1353	-	-90	41.15	granodiorite				
PDH-11-21	396912	6796695	1335	-	-90	48.77	granodiorite				
PDH-11-22	396937	6796905	1341	-	-90	60.96	granodiorite				
PDH-11-23	396922	6797063	1332	-	-90	60.96	granodiorite				
PDH-11-24*	397098	6796698	1343	-	-90	24.38	granodiorite				
PDH-11-25	397097	6796501	1342	-	-90	19.81	granodiorite				
PDH-11-26*	397097	6796298	1352	-	-90	21.34	granodiorite				
PDH-11-27*	397105	6796097	1338	-	-90	28.96	granodiorite				
PDH-11-28	397502	6795099	1280	-	-90	24.38	S metaseds				
PDH-11-29	397503	6795301	1289	-	-90	24.38	S metaseds				
PDH-11-30	397498	6795502	1301	-	-90	18 29	S metaseds				
PDH-11-31	397502	6795699	1313	_	-90	21.34	S msds adi				
PDH-11-32	397498	6795904	1314	_	-90	19.81	aranodiorite				
PDH-11-33*	397500	6796104	13/2		-90	18.20	granodiorite				
PDH-11-3/	397300	6796302	1365		-90	21.34	granodiorite				
PDH-11-35	397490	6796504	1303	_	-90	18 20	granodiorite				
PDH-11-36	397502	6796703	1365	_	-90	21.34	granodiorite				
PDH-11-37	397502	6796901	1353		-90	18 20	granodiorite				
PDH-11-38	397504	6797102	13/1	_	-90	30.48	granodiorite				
PDH-11-30	397502	6797304	1341		-90	30.40	granodiorite				
PDH-11-40	397502	6797503	1347		-90	30.48	granodiorite				
PDH-11-40	397301	6797702	1347	-	-90	22.86	granodiorite				
	207702	6707704	1340	-	-90	22.00	M motocodo				
	397702	6707502	1330	-	-90	20.48	N. metaseus				
	397099	6707504	1341	-	-90	20.49	aranodiorito				
	209102	6707504	1402	-	-90	20.49	granodiorite				
	202000	6707202	1402	-	-90	20.40	granodiorite				
	208102	6707101	1435	-	-90	20.48	granodiorite				
PDH-11-47	207702	6707101	1432	-	-90	30.40	granodiorite				
PDH-11-40	207600	6706002	1309	-	-90	30.40	granodiorite				
PDH-11-49	397099	6706704	1400	-	-90	30.40	granodiorite				
	207600	6706500	1375	-	-90	30.40	granodiorite				
PDH-11-31	397699	6796300	1347	-	-90	30.46	granouionite				
PDH-11-52	397090	6796302	1330	-	-90	30.46	gui, S. msus				
PDH 44 54	391703	6705004	104/	-	-90	30.48	granodiorite				
	39/702	6705700	1323	-	-90	30.48	granodiorite				
PDH 11-55	397701	6705400	1303	-	-90	30.48	granodiorite				
PDH 44 57	39/090	0795499	1310	-	-90	30.48	S. metaseus				
PDH-11-57	397701	6795302	1295	-	-90	30.48	5. metaseds				
PUH-11-58	397702	0795104	1278	-	-90	30.48	ауке				
TOTAL						4216.86					
* denotes hole GPSed in 2013 NA denotes not analyzed N. is north and S. is so							and S. is south				

Sample details and individual assays are not available for the 1980 program, but Ashton (1981) reports that composite samples from 12 holes were assayed for gold, with the highest value being 4.8 g/t Au for PH80-17, and the average value was 0.62 g/t Au; seven composite samples were assayed for silver with the highest value being 19.0 g/t

Ag for PH80-32, and the average value was 4.3 g/t Ag; material from three holes was analyzed for molybdenum with results of 2-4 ppm Mo similar to that of average rocks. Significant results from the percussion drilling are tabulated below.

Hole	From	То	Interval	Copper	Gold	Silver
No.	(m)	(m)	(m)	(%)	(g/t)	(g/t)
PH80-1	21.3	EOH	18.3	1.52	NA	NA
PH80-5	42.7	45.7	3.0	0.23	NA	NA
PH80-10	12.2	15.2	3.0	0.16	NA	NA
PH80-10	21.3	36.6	15.3	0.24	NA	NA
PH80-17	33.5	48.8	15.3	0.61	NA	NA
PH80-18	48.8	70.1	21.3	0.73	NA	NA
PH80-24	45.7	51.8	6.1	0.60	NA	NA
PH80-25	51.8	54.8	3.0	0.29	NA	NA
PH80-27	39.6	45.7	6.1	0.21	NA	NA
PH80-31	27.4	30.5	3.1	0.10	NA	NA
PH80-32	39.6	48.8	9.2	0.61	NA	NA
PH80-34	42.7	48.8	6.1	0.20	NA	NA
PH80-36a	42.7	45.7	3.0	1.49	NA	NA
PH80-38	36.6	57.9	21.3	0.66	NA	NA
PH80-39	45.7	54.9	9.2	1.44	NA	NA
PH80-40	57.9	EOH	6.1	0.84	NA	NA
PDH-11-13	33.53	EOH	3.05	0.54	0.278	3.85
PDH-11-17	21.34	EOH	16.76	0.16	0.009	1.27
PDH-11-19	19.81	28.96	9.15	0.36	0.007	2.32
PDH-11-23	42.67	44.20	1.53	0.33	0.005	0.70
PDH-11-39	0	EOH	39.62	0.24	0.055	1.37
Including	28.96	EOH	10.66	0.70	0.195	4.10
PDH-11-47	0	7.62	7.62	0.18	0.018	2.04

Table 16: Significant percussion drill results

*Interval represents the downhole intersection length and true widths are unknown. NA is not analyzed and EOH is end of hole

The 1980 percussion drilling confirmed and extended the 40m long known mineralized zone at the Franklin Creek showing between DDH TH77-2 and -4 and intersected additional mineralization in the DDH TH77-6 area. The following reported widths represent approximate true widths. PH80-1 confirmed the intersection of 1.94% Cu over 13m in TH-2 with 1.52% Cu over 18.3m, ending in mineralization. PH80-40 confirmed the intersection of 1.25% Cu over 8.6m in TH-4 with 0.84% Cu over 6.1m, ending in mineralization. PH80-32 returned 0.61% Cu over 9.2m and PH80-36a returned 1.49% Cu over 3m, approximately 225m northwest of TH-4. PH80-10 returned 0.24% Cu over 15.3m (the southernmost intersection of mineralization at Franklin Creek), approximately 335m south of TH-2. In the TH77-6 area PH80-38 returned 0.66% Cu over 21.3m, 60m south of TH-6 and PH80-18 returned 0.73% Cu over 21.3m, 35m to the east.

Only 292m in eleven of the percussion holes in 2011 were drilled between the JG and Franklin Creek showings, but did not directly test known skarn targets and did not intersect significant copper mineralization. Five percussion holes (PDH-11-02, -03, -31, -32 and -55) drilled within this area (corresponding to the molybdenum soil anomaly
along the southwestern contact of the Hopper pluton) yielded elevated molybdenum values compared to the surrounding holes. The best interval averaged 93.6 ppm Mo over 10.67m between 15.24 and 25.91m in PDH-11-03, hosted by metasedimentary rocks.

Most of the 40 percussion holes drilled into the Hopper pluton returned background values or sporadic, short intervals of weakly elevated copper, gold and/or silver values. As previously mentioned vertical holes are not adequate to test mineralization controlled by steeply dipping fracture sets. Despite this, several holes (PDH-11-39, -19, -47, -23) intersected significant copper mineralization of 0.24% Cu over 39.62m (entirely in mineralization), 0.36% Cu over 9.15m, 0.18% Cu over 7.62m and 0.33% Cu over 1.53m respectively. Two additional holes (PDH-11-45 and -46), bottomed in 0.10% Cu over 1.52m in both holes.

Chalcopyrite bearing skarns to the north of the Hopper pluton were tested by eight of the short 2011 percussion holes (271m), but holes did not directly test known mineralization. Two of the holes returned significant intervals of 0.54% Cu, 0.278 g/t Au and 3.85 g/t Ag over 3.05m in PDH 11-13 and 0.16% Cu over 16.76m in PDH 11-13 (both ending in mineralization) from weak magnetite, pyrite and chalcopyrite bearing skarn.

Drill sampling methods are discussed under Section 11.0, "Sample Preparation, Analyses And Security", below.

11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

All samples collected from the Hopper project from 2006 to 2016 were controlled by employees of Archer, Cathro and Associates (1981) Limited, which managed the exploration programs during this time. Sources for the sample information below are Mitchell, (2016 a & b) for the 2015 and 2016 diamond drill programs, Eaton (2012) for the 2011 drill program, and Burrell (2015), Burrell (2013b), Eaton (2012), Jessen (2008) and Wengzynowski and Smith (2007) for the rock and soil geochemical data.

The diamond drill core from 2011 and 2015-2016 was delivered to the core processing site on the Hopper property where core markers were converted from feet to metres. Core was then washed and brushed to remove drill additives and mud. Each core box was measured and marked with core box start and core box finish at the upper left (start) and lower right (finish) of each box. Core was measured for recovery and rock-quality designation (RQD). Geologists measured out sample intervals and then logged core. Sample intervals were generally 1 to 3m, based on mineralized intercepts and significant lithological boundaries. Core was split in half with a mechanical core splitter in 2011 and a diamond saw in 2015-16, and half sent to the laboratory for assay and the remaining half put back in the core box as a record.

The drill core was logged by geologists, with all of the 2016 and most of the 2015 core, except for two logged by E. Flavelle, logged by Andy Mitchell. The 2011 drill core was logged by R. Phillips.

Quality control samples were inserted in the 2015-16 and 2011 diamond drill programs, with two standards and two blanks in every 36 sample shipment batch, for a total of 86 standards and 87 blanks in 2015-16, and 18 standards and 17 blanks in 2011. Two standards, 43 of CDN-ME-15 ($1.386 \pm 0.102 \text{ g/t}$ Au, $34.0 \pm 3.7 \text{ g/t}$ Ag) and 43 of CDN-ME-16 ($1.48 \pm 0.14 \text{ g/t}$ Au, $30.8 \text{ g/t} \pm 2.2 \text{ g/t}$ Ag) were utilized in 2015-16, and two standards, 15 of CDN-CM-7 ($0.445 \pm 0.027 \%$ Cu, $0.427 \pm 0.042 \text{ g/t}$ Au, $0.027 \pm 0.002\%$ Mo) and 3 of CDN-CGS-20 ($3.36 \pm 0.17 \%$ Cu, $7.75 \pm 0.47 \text{ g/t}$ Au) were utilized in 2011. Blanks used in the 2011, 2015 and 2016 drill programs consisted of commercially available marble and were stored in bags in the core shack, away from any possible sources of contamination.

A review of the results indicates good reproducibility on the standards and blanks. Overall drill core sampling appears reliable and representative of the mineralization.

All 2011 percussion holes were sampled continuously from top to bottom. Pulverized cuttings from the holes were automatically split at the collar, resulting in samples containing 12.5% of the cuttings from each 1.52m interval. The entire sample was sent for analysis, and representative chips from intervals were collected for logging purposes.

All samples from 2006 to 2016 were packed in rice bags, sealed and delivered by Archer, Cathro and Associates (1981) Ltd. personnel to a commercial carrier for delivery to ALS Chemex (name change to ALS Canada in 2010), North Vancouver, British Columbia, or direct to their sample preparation facilities in Whitehorse, Yukon Territory. In 2006-7 the samples were delivered to the North Vancouver, British Columbia laboratory for sample preparation and analysis, but in 2010 to 2016 they were delivered to the Whitehorse facility for sample preparation then internally sent to the North Vancouver laboratory for analysis.

Soil preparation involved drying at 60°C and sieving to -180 microns. Rock and core samples were dried, fine crushed to better than 70% passing -2 millimetres and then a 250 gram split was pulverized to better than 85% passing -70 to -75 microns, reserving the fines for analysis.

The 2015-16 drill core was analyzed by four acid digestion followed by inductively coupled plasma-mass spectroscopy for 48 elements (ME-MS61). An additional 30g charge was analyzed for gold by fire assay with inductively coupled plasma-atomic emission spectroscopy finish (Au-ICP21). The 2011 drill core was analyzed for 51 elements by aqua regia digestion and mass spectrometry finish (ME-MS41) and for gold by fire assay followed by atomic absorption (Au-AA24) on a 50g charge. The 2011 percussion drill samples were analyzed for 35 elements using an aqua regia digestion followed by inductively coupled plasma-atomic emission spectroscopy (ME-ICP41) and for gold by fire assay followed by atomic absorption (Au-AA24) on a 50g charge.

All soil and 2006 to 2011 rock samples, and select 2013 rock samples were analyzed for 35 elements using an aqua regia digestion followed by inductively coupled plasmaatomic emission spectroscopy (ME-ICP41). An additional 30g charge was analyzed for gold by fire assay with inductively coupled plasma-atomic emission spectroscopy finish (Au-ICP21) in 2013-2014 soil and 2014-2015 rock samples. Gold does not appear to have been analyzed in the 2007 soils. In the 2006 soil and rock samples gold was analyzed by fire assay followed by atomic absorption (Au-AA23). In addition, all 2011 rock samples were analyzed for gold by fire assay followed by atomic absorption on a 50g charge (Au-AA24), and 2013 to 2015 rock samples for 51 other elements by aqua regia digestion and mass spectrometry (ME-MS41).

All over limit copper values were determined using aqua regia digestion with inductively coupled plasma and either atomic emission spectroscopy or atomic absorption spectroscopy (Cu-OG46 or Cu-AA46). Over limit samples for gold were analyzed using Au-GRA21, a gravimetric finish.

The ALS Canada's Minerals Laboratory and ALS Chemex in North Vancouver is and was ISO 9001:2000 certified and accredited to ISO 17025 by Standards Council of Canada for a number of specific test procedures including fire assay Au by atomic absorption (AA), ICP and gravimetric finish, and multi-element ICP and AA assays for silver, copper, lead and zinc. Their Whitehorse facility is and was ISO 9001:2000 certified for the sample preparation procedures performed.

Quality control procedures were also implemented at the laboratory, involving the regular insertion of blanks and standards and check repeat analyses and resplits (re-analyses on the original sample prior to splitting). There is no evidence of any tampering with or contamination of the samples during collection, shipping, analytical preparation or analysis. All sample preparation was conducted by the laboratory. The laboratory is entirely independent from the issuer. The soil, silt, rock, trench and drill samples were analyzed by ALS Canada and ALS Chemex (former name) of North Vancouver, British Columbia, an ISO 9001:2000 accredited facility.

In the author's opinion, sample preparation, security and analytical procedures are adequately reliable for the purpose of this report. In future exploration programs standards and blanks are recommended on trenching and percussion drilling, in addition to diamond drilling (1 standard and 1 blank per 20-25 samples is adequate), and select field duplicates sent to the primary laboratory and re-assaying of selected mineralized pulps at a second independent laboratory is suggested.

12.0 DATA VERIFICATION

The geochemical data was verified by sourcing original analytical certificates and digital data, where available, and original assessment and company reports. Analytical data quality assurance and quality control was indicated by the favourable reproducibility obtained in laboratory and company inserted standards and blanks and laboratory

duplicates (repeats). There does not appear to have been any tampering with or contamination of the samples during collection, shipping, analytical preparation or analysis. All drill and trench intersections were verified by sourcing the original data. Geological mapping is adequately reliable for the purposes of this report based on consistency in successive phases of property mapping and comparison to regional government mapping (*Israel and Borch, 2015, Morris et al., 2014, Israel, Cobbett et al., 2011, and Johnston and Timmerman, 1997*).

Recent surface sampling from mineralized exposures, including by the author in 2013 and 2015 has yielded values similar to those reported in historical reports indicating consistency in sampling and analysis. The 2011 diamond drill program twinned significant historical drill intersections in the Franklin Creek area, verifying the results. Details are discussed in section 10.0, "Drilling". Sample data has proven to be reproducible and appears to be representative of the mineralization.

In the author's opinion, the data provided in this technical report is adequately reliable for its purposes.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

Preliminary metallurgical testwork was conducted by Blue Coast Research for Strategic Metals Ltd. on ten coarse assay reject samples of drill core consisting of mineralized skarn, which were combined into a single Master Composite, which assayed 0.86% Cu and 1.02 g/t Au, at the metallurgical testwork facility (*Middleditch, 2016*). The metallurgical process focused on conventional froth flotation to produce a saleable copper concentrate at economic metal recoveries, followed by cyanidation of the flotation tails as a means to increase overall gold recovery. The following results of the testwork are summarized from Middleditch (2016).

The Master Composite produced a copper concentrate grading 29% Cu and 26 g/t Au with recoveries of 84% and 49%, respectively, with a higher copper concentrate grading 32% Cu and 26 g/t Au yielding recoveries of 81% and 44.5%, respectively. A 24 hour bottle roll test of the combined flotation tailings yielded an additional recovery of 32% for gold, which suggests that cyanidation of the flotation tails may be an economically viable option of increasing overall gold recovery to about 76-81%. Reagent dosages, although not fully optimized, were considered to be normal for this type of orebody. About 280 g/t of talc/MgO depressant was required in flotation to obtain higher copper grades. No significant quantities of deleterious elements such as mercury, arsenic, antimony, lead, zinc or cadmium, which may affect saleability of the concentrate, were detected from ICP scans of the final copper concentrate.

Preliminary magnetic separation testwork produced a magnetic concentrate grading 50% iron with a recovery of 73%. Although 50% iron grade is below the target for a saleable magnetite concentrate, the flowsheet used in this preliminary test was relatively simple and may be upgraded with a more robust flowsheet design.

The Hopper Project is at an early exploration stage and no mineral processing or detailed metallurgical testing of mineralization has been carried out.

14.0 MINERAL RESOURCE ESTIMATES

There has not been sufficient work on the Hopper property to undertake a mineral resource estimate.

23.0 ADJACENT PROPERTIES

There are no mineral properties adjacent to the Hopper Project.

24.0 OTHER RELEVANT DATA AND INFORMATION

To the author's knowledge, there is no additional information or explanation necessary to make this technical report understandable and not misleading.

25.0 INTERPRETATIONS AND CONCLUSIONS

The Hopper Project constitutes a property of merit based on the presence of: significant porphyry copper mineralization over a 2.3 km by 650m area (open to the south and east), which has only been tested by one diamond drill hole (0.17% Cu over 162.85m) and limited trenching (0.43% Cu, 0.06 g/t Au and 1.83 g/t Ag across an approximate true width of 51.3m); copper skarn mineralization intermittently exposed over an 800m by 1.5 km area and over 400m in elevation in the Hopper South zone (with zones of precious metal enrichment); additional skarn mineralization north of the Hopper pluton; a significant 3.6 km by 2.6 km \geq 100 ppm copper soil geochemical anomaly (with a 1 by 1 km donut low near the centre, possibly related to thicker overburden) ± elevated gold, silver and molybdenum values, and untested geophysical anomalies. In addition the Hopper pluton is the same age as the mineralizing pluton at the Casino porphyry deposit in the Dawson Range copper-gold belt, and similarities exist to the skarn deposits of the Whitehorse Copper belt.

The property covers the Hopper Minfile occurrences as documented by the Yukon Geological Survey, which include a southern copper skarn drilled prospect and a northern copper porphyry showing. Mineralization is associated with the Hopper pluton dated at approximately 78-76 Ma placing it in the same metallogenic episode as the Patton Porphyry, which is associated with mineralization at the Casino porphyry copper-gold-molybdenum deposit of Western Copper and Gold Corporation, 190 km to the north-northwest. The Casino deposit contains a NI 43-101 compliant proven and probable

reserve of 965 million tonnes of mill ore grading, 0.204% Cu, 0.240 g/t Au, 0.0227% Mo and 1.74 g/t Ag, and 157 million tonnes grading 0.292 g/t Au, 0.036% Cu and 2.21 g/t Ag of heap leach ore (*Huss et al., 2013*). The above reserve information has not been independently verified by the author and is not necessarily indicative of the mineralization on the Hopper Project which is the subject of this report. The Casino suite is intimately associated with porphyry copper deposits and many precious metal vein deposits throughout the Dawson Range.

Skarn mineralization at the Hopper property is similar to skarn deposits that were mined in the Whitehorse Copper belt, 120 km southeast of the Hopper Project, which produced at least 123,145,041 kg of copper, 7,062.4 kg of gold and 85,577 kg of silver from 1900 to 1981 (*Deklerk, 2009*). Grades generally ranged from 0.71% to 1.84% Cu, with about 0.7 g/t Au and 13 g/t Ag (*Deklerk, 2009*). The above production and grade information has not been independently verified by the author and is not necessarily indicative of the mineralization on the Hopper Project, which is the subject of this report. Many of the skarns in the Whitehorse Copper belt are related to irregularities (embayments, pendants, screens, xenoliths) in the margin of the batholith, similar to the setting at the Hopper Project.

Exploration has included prospecting, geological mapping (over 20% of the property), minor hand and mechanized trenching, grid and contour soil geochemistry (covering 30% of the property), rock geochemistry, airborne electromagnetic and magnetic surveys (covering the entire property) and a radiometric geophysical survey, ground magnetic, electromagnetic and induced polarization geophysics, aerial photography and a topographic survey, access and heritage studies, and 13,526.5m of drilling in 146 holes (9,305m of diamond drilling in 42 holes and 4,221m of percussion drilling in 104 holes). The Hopper Project is at an early exploration stage.

Mineralization on the Hopper Project occurs within two main zones, with potential for expansion and the delineation of additional zones. The Hopper South zone covers an 800m by 1.5 km area of skarn mineralization south of the Hopper pluton encompassing the JG, LV and Franklin Creek showings. At least 10 mineralized skarn horizons have been identified within a 400m elevation difference. The Hopper North zone covers a 2.3 km by 650m zone of porphyry copper style mineralization, primarily open to the south and east, within the northwest portion of the Hopper pluton, and adjacent skarn mineralization to the north.

The majority of the work on the Hopper property has been conducted on the southern skarn target (Hopper South), with prospect pits along Franklin Creek and on the escarpment (JG showing area) dating to 1907-08, unreported packsack drilling prior to 1977, and 11,255m of drilling in 97 holes documented between 1977 and 2016. The 97 drill holes include 8,473m of diamond drilling in 40 holes and 2,782m of percussion drilling in 57 vertical holes. Most of this work was concentrated over a 750m diameter area centred on the Franklin Creek showing. At least 4 mineralized skarn horizons were identified with significant true width intersections including 1.94% Cu, 0.87 g/t Au,14.6 g/t Ag over 13m in DDH TH77-2, 1.98% Cu, 0.67 g/t Au, 14.4 g/t Ag over 7.8m in DDH

HA80-2, 1.62% Cu, 0.54 g/t Au, 9.3 g/t Ag over 8.5m in DDH HOP11-3 and 9.44 g/t Au over 2m in DDH HOP11-1.

In 2013 the thickness and continuity of significant grade mineralization at the JG showing, 1.1 km north of the Franklin Creek showing, and high gold values at the LV showing, 500m to the southwest of the JG, was recognized. At the JG showing significant true width intersections of 0.56% Cu, 1.571 g/t Au and 3.35 g/t Ag over 4.9m, and 0.36% Cu, 0.767 g/t Au and 2.18 g/t Ag over 9.6m were obtained from hand trenches TR-14-09 and TR-14-10, respectively, and significant chip sample results included 0.45% Cu, 0.33 g/t Au, 2.2 g/t Ag over 10.4m and 0.32% Cu, 1.31 g/t Au, 6.5 g/t Ag over 4.5m. The LV showing returned 0.18% Cu, 6.83 g/t Au, 2.8 g/t Ag over 3m, with 0.05% Cu, 1.64 g/t Au, 0.84 g/t Ag over 16.15m and 0.22% Cu, 3.63 g/t Au, 1.8 g/t Ag over 2.4m from hand trenching in TR14-02 and TR14-01. Widths were generally limited by exposure.

The 2015-16 diamond drilling primarily tested the skarn horizons with widely spaced holes beyond the Franklin Creek showing returning 0.5% Cu with 0.5 g/t Au over 15m in DDH-15-02, 0.35% Cu with 1.01 g/t Au over 9.54m in DDH-15-03 and 0.6% Cu with 1.11 g/t Au over 14.43m in DDH-15-04, with significant high grade gold intercepts of 12.95 g/t Au over 2.65m and 43.6 g/t Au over 1m from DDH-15-01 and -08, respectively. At least 10 generally northerly trending, dipping 10-20°E, mineralized skarn horizons have now been identified across an 800m wide zone with a 400m elevation difference within the Hopper South zone, which can be intermittently traced 1.5 km to the south from the JG showing area near the southern contact of the Hopper pluton to just south of Franklin Creek, where PH80-10 returned 0.24% Cu over 15.3m.

South of Franklin Creek two to three narrow, northerly trending linear copper in soil \pm spot gold anomalies (including 1.84 g/t Au) are evident that may represent individual skarn horizons, one lying northerly along trend of a marble exposure. Gold-copper soil geochemical anomalies are evident to the south, and electromagnetic conductors to the south and southeast of the Hopper South zone, which remain unexplored. The eastern and western extents of the Hopper South zone are covered by glacial till. About two kilometres south of the Hopper South zone there is a strong linear electromagnetic anomaly with a subtle moderate electromagnetic conductor immediately to the west. This smaller anomaly is highly prospective for skarn mineralization because it is a strong, double peak conductor, similar to the conductor at the Franklin Creek showing *(Burrell, 2013a)*.

Most gold-rich intervals are spatially associated with late stage dykes, thought to be responsible for localizing mineralization, but similar dykes cut the upper skarn horizons, without notable gold-enrichment. Gold appears to be associated with retrograde alteration associated with fault zones, which would also control dyke emplacement.

There is a 350m by 350m area of chalcopyrite mineralization associated with magnetite skarn and calc-silicate alteration (similar to the JG zone at the southern contact) within the embayment along the northern boundary of the Hopper pluton, adjacent to the porphyry copper mineralization and individual skarn horizons are evident 1.5 km further north. Values of 0.32% Cu over 5.1m, 0.36% Cu over 1.4m and 0.78% Cu over 2.75m were

obtained from DDH 15-6, the only diamond drill hole to test the zone. Two (PDH 11-13 and -17) of the eight short percussion holes (271m), which tested but did not directly target mineralization within this zone, returned significant intervals of 0.54% Cu over 3.05m and 0.16% Cu over 16.76m, both ending in mineralization. Anomalous copper soil geochemistry and a favourable conductive, high chargeability induced polarization geophysical anomaly extends through the northern region with isolated anomalous rock samples, including 0.86% Cu, 0.7 g/t Au, 12.45 Ag across 1m.

At the Hopper North zone exploration has uncovered porphyry copper style mineralization within the Hopper pluton over a 2.3 km (east-west) by 650m area, primarily open to the south and east. Historical composite chip samples returned significant results including 0.52% Cu over 45.7m in the west (Mitsu West), 0.18% Cu over 61m in the east, and, 0.24% Cu over 45.72m from the central area (*Kikuchi, 1968*). Follow up by Strategic Metals Limited returned 0.43% Cu, 0.06 g/t Au and 1.83 g/t Ag across a 51.3m approximate true thickness in hand trench TR14-11 at Mitsu West, and 0.40% Cu over 13m from the central area. The porphyry mineralization here has only been tested by one diamond drill hole (DDH-15-05), which intersected 0.17% Cu over a 162.85m interval.

Several of the widely spaced short, vertical percussion holes through this area intersected significant porphyry copper mineralization including 0.36% Cu over 9.15m in PDH-11-19, and 0.24% Cu over the entire 39.62m in PDH-11-39, despite the unfavourable orientation to intersect the steep fracture sets controlling mineralization. Two additional holes (PDH-11-45 and -46) bottomed in 0.10% Cu over 1.52m in both holes. Dominant mineralized fracture sets trend 010-040° and 320-350° with dips primarily steep east and west, which vary locally to moderate (60-75°) east and west. Additional mineralized fracture sets in the Mitsu West area include a 060°/70°S set.

Petrography and field mapping has indicated late quartz monzonite, monzonitic and gabbroic phases of the Hopper pluton which appear to be more copper rich. They occur within the central pond, Mitsu East and Mitsu West areas where exposure is more limited. Consequently, alteration is difficult to discern, and may be preferentially weathered. Conductive, high chargeability features, suggestive of the presence of sulphides, underlie the pond area (Hopper North porphyry zone), and further southeast, with a branch off this anomaly extending northerly into the Mitsu East area. Another similar feature occurs proximal to the southern margin of the pluton about 1 km northeast of the JG zone. The geophysical anomalies are coincident with anomalous copper in soil geochemistry. The central area of porphyry mineralization exhibits a lower anomalous copper in soil response probably due to thick overburden through this area, including glacial till.

Molybdenite is most evident in and proximal to the JG showing (skarn) and in the central pond area (porphyry). Gold is particularly enriched in the lower skarn horizons with 12.95 g/t Au over 2.65m in DDH-15-01, 43.6 g/t Au over 1m in DDH-15-08, 9.44 g/t Au over 2m in DDH HOP11-1, and 6.83 g/t Au over 3m from the LV showing.

The Hopper Project is at an early stage of exploration, and as such considered a high risk. The above interpretations and the following recommendations for work are based on the results of geochemical and geophysical surveys, which are subject to a wide range of interpretation, with limited trenching and drilling. There are no specific risks the author foresees that would impact continued exploration and development of the property. Although the author believes the surveys on the property are scientifically valid, evaluating the geological controls on mineralization is hampered by a lack of rock exposure.

26.0 **RECOMMENDATIONS**

There is good potential for a bulk tonnage copper-molybdenum-silver-gold deposit on the Hopper Project. The northern copper porphyry target has essentially not been tested and it includes the higher grade Mitsu West showing and untested geophysical, and soil and rock geochemical anomalies. There is also good potential to delineate zones of precious metal enrichment related to retrograde alteration within the Hopper South skarn zone.

A program of 3,000 metres of diamond drilling in 7-8 holes is recommended to test the porphyry style mineralization within the Hopper pluton in the Hopper North zone, with road upgrade and extension to facilitate it.

The 3,000m of recommended diamond drilling should be drilled as a partial irregular fence across the northern part of the zone to test the higher grade composite samples obtained by Mitsubishi and confirmed by subsequent sampling and trenching by Strategic and coincident with induced polarization geophysical anomalies. Holes should be directed east and west, dipping -50°, to intersect the main fracture sets in most areas. Proposed drill hole specifications are tabulated below and shown on Figure 14. Exact drill co-ordinates are dependent on road locations and groundtruthing of sites prior to drilling. The sites use existing 2011 percussion hole sites where possible, but additional road building and upgrading of existing roads to access the sites may be necessary.

Trench No.	Easting*	Northing*	Az. (°)	Dip (°)	Length (m)	Target (Cu in %)	
P DDH HOP-A	396530	6797450	270	-50	400	TR14-11 Mitsu West	
P DDH HOP -B	396530	6797450	090	-50	400	E of TR14-11 Mitsu West	
P DDH HOP -C	396930	6797063	270	-50	400	0.4 Cu/13m, 0.54/3m	
P DDH HOP -D	396920	6797063	090	-50	400	1.13 &1.53 Cu, 11.6Ag, 0.2Cu/3m	
P DDH HOP -E	397300	6797100	090	-50	400	Central pond area Mitsu #13	
P DDH HOP -F	397710	6797105	270	-50	400	Mitsu Central #13	
P DDH HOP -G	397700	6797105	090	-50	400	Mitsu Central #12	
P DDH HOP -H	398200	6797300	090	-50	200+*	Mitsu East	
TOTAL	*NAD 83,	UTM zone 8			3000m		

 Table 17: Proposed diamond drill hole specifications

* if additional footage available, or use for continuation of select holes when drilling A-G based on visible mineralization

26.1 Budget:

Based on the above recommendations, the following exploration program with corresponding budget is proposed.

camp, accommodation, food	\$ 20,000
road upgrade, extension and maintenance	15,000
• drilling (3,000m @ \$150/m, includes fuel, core boxes, mob/demob)	450,000
• assay costs 700 rock samples @ \$40/sample, shipping, QAQC	30,000
personnel – geologists, core splitter, supervision	28,000
transportation, fuel, communication	7,000
field equipment and supplies	5,000
• preparation, administration, independent reporting	15,000
contingency	<u>60,000</u>
Total estimated cost (excluding GST)	\$630,000

SIGNATURE PAGE

Respectfully submitted,

Effective Date: December 27, 2017

"Jean Pautler"

Signing Date: December 27, 2017

Jean Pautler, P.Geo.

The signed and sealed copy of this Signature page has been delivered to Strategic Metals Limited

27.0 REFERENCES

- Allan, M.M., Mortensen, J.K., Hart, C.J.R., Bailey, L.A., Sanchez, M.G., Ciolkiewicz, W., McKenzie, G.G. and Creaser, R.A., 2013. Magmatic and metallogenic framework of west-central Yukon and eastern Alaska. Society of Economic Geologists, Special Publication 17, p. 111–168.
- Ashton, A.S., 1981. Report on the Hop-Acme claims. Report prepared for New Ridge Resources Ltd. Yukon Assessment Report #062147.
- Blumenthal, V.H., 2010. A geochemical study of the mineralization at the Hopper Property, Yukon: A case study of an atypical copper occurrence. Strategic Metals Ltd. in conjunction with University of Waterloo. Unpublished M.Sc. thesis, University of Waterloo, 119 p. Available at (<u>https://uwspace.uwaterloo.ca/handle/ 10012/5299</u>).
- Burrell, H., 2015. Assessment report describing geological mapping, prospecting, geochemical sampling, hand trenching, induced polarization surveys, petrographic studies and road construction at the Hopper property. Report prepared for Strategic Metals Ltd. by Archer, Cathro & Associates (1981) Limited. Yukon Assessment Report #096768.

2013b. Assessment report describing air photos, access and heritage studies, geochemical sampling, prospecting, geological mapping and core re-logging. Report prepared for Strategic Metals Ltd. by Archer, Cathro & Associates (1981) Limited. Yukon Assessment Report #096583.

2013a. Assessment report describing geophysical survey interpretation at the Hopper property, Whitehorse Mining District; Report prepared for Strategic Metals Ltd. by Archer, Cathro & Associates (1981) Limited. Yukon Assessment Report #096478.

Cairnes, D.D., 1910. Preliminary memoir on the Lewes and Nordenskiold Rivers coal district. Geological Survey of Canada, Memoir 5, p. 57-58.

1909. Preliminary report on a portion of the Yukon Territory, west of the Lewes River and between the latitudes of Whitehorse and Tantalus. In: Geological Survey of Canada Memoir 284, 1957, H.S. Bostock (compiler), Department of Mines and Technical Surveys, p 276-282.

- Campbell, K.V., 1980. Drill report on the Hop-Acme claims (?) Prepared for New Ridge Resources Ltd. (*Not found.*)
- Chen, B., 2014. Volterra 3DIP survey on the Hopper property. Logistics report prepared for Archer, Cathro & Associates (1981) Limited, conducted by SJ Geophysics Ltd. *In:* Burrell, 2015.

- Cockfield, W.E., 1927. Aishihik Lake District, Yukon. Geological Survey of Canada, Summary Report, 1926, part A, p. 1-13.
- Colombo, F., 2014. Petrographics report on eight rock samples for the Hopper project. Report prepared by Vancouver Petrographics Ltd. for Archer, Cathro & Associates (1981) Limited. *In:* Burrell, 2015.
- Colpron, M., Israel, S., Murphy, D.C., Pigage, L.C. and Moynihan, D., 2016. Yukon Bedrock Geology Map 2016. Yukon Geological Survey, Open File 2016-1, scale 1:1 000 000.
- 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. Available at <u>www.geology.gov.yk.ca/pdf/CanCord</u> <u>terranes_2011.pdf</u>.
- Deklerk, R., 2009. The MINFILE Manual. Yukon Geological Survey, CD-ROM.
- Duk-Rodkin, A., 1999 Glacial limits map of Yukon Territory; Geological Survey of Canada Geoscience Map 1999-2.
- Eaton, S., 2012. Geochemical sampling, prospecting, geological mapping, RC drilling, diamond drilling and geophysical surveying at the Hopper property. Report prepared for Bonaparte Resources Inc. and Strategic Metals Limited. Yukon Assessment Report #095817.
- Findlay, D.C., 1969. Mineral Industry of Yukon Territory and Southwest District of MacKenzie, 1968. Geological Survey of Canada, Paper 69-55, p. 28.
- Fonseca, A., 2005. 1995. Cu skarns. (Modified for Yukon from Ray, 1995). In: Yukon Mineral Deposits Profiles, Fonseca A. and Bradshaw, G. (compilers). YGS Open File 2005-5.
- Gordey, S.P. and Makepeace, A.J., 2003. Yukon Digital Geology, version 2.0, S.P. Gordey and A.J. Makepeace (comp). Geological Survey of Canada, Open File 1749 and Yukon Geological Survey, Open File 2003-9 (D).
- Heffner, T., 2013. Heritage resource impact assessment interim report, Hopper property. Report prepared for Strategic Metals Limited by Matrix Research Ltd. *In:* Burrell, 2013b.
- Hornbrook, E.H.W., Friske, P.W.B., Lynch, J.J., Schmitt, H.R., Lund, N.G, Elliot, B.E., Yelle, J. 1985. Regional stream sediment and water geochemical reconnaissance data (NTS 115H), Yukon. GSC Open File 1219.
- Hureau, A., 1978. Report on ground magnetic survey, test IP survey, geological mapping and diamond drilling on the Hop claims, Aishihik map sheet 115H/7. Report for Whitehorse Copper Mines Ltd. Yukon Assessment Report #090238.

- Huss, C., Drielick, T., Austin, J., Giroux, G., Casselman, S., Greenaway, G., Hester, F., Duke, J., 2013. Casino Project Form 43-101F1 technical report feasibility study. Available at <u>www.westerncopperandgold.com/casino-project/technical-reports/</u>.
- Irvine, R. and Woodhead, J., 2013. Report on processing and interpretation of VTEM EM & magnetic surveys, Hopper property, Yukon, Canada. Report for Strategic Metals Limited by Condor Consulting Inc. *In:* Burrell, 2013a.
- Israel, S., 2004. Geology of southwestern Yukon (1:250,000 scale). Yukon Geological Survey, Open File 2004-16.
- Israel, S. and Borch, A., 2015. Preliminary geological map of the Long Lake area, parts of NTS 115H/2 and 115H/7 (1:50,000 scale); Yukon Geological Survey, Open File 2015-32.
- Israel, S., Cobbett, R., Westberg, E., Stanley, B., and Hayward, N., 2011. Preliminary bedrock geology of the Ruby Ranges, southwest Yukon, (Parts of NTS 115G, 115H, 115A and 115B) (1:50,000 scale). Yukon Geological Survey, Open File 2011-2.
- Israel, S., Murphy, D., Bennett, V., Mortensen, J. and Crowley, J., 2011. New insights into the geology and mineral potential of the Coast Belt in southwestern Yukon. *In:* Yukon Exploration and Geology 2010, K.E. MacFarlane, L.H. Weston and C. Relf (eds.), Yukon Geological Survey, p. 101-123.
- Jessen, K., 2008. Assessment report describing excavator trenching, soil geochemical sampling and geophysical surveys at the Hopper property, Whitehorse Mining District. Report prepared for Strategic Metals Limited by Archer, Cathro & Associates (1981) Limited. Yukon Assessment Report #094997.
- Johnston, S.T., Mortensen, J. K., and Erdmer, P., 1996: Igneous and metaigneous age constraints for the Aishihik metamorphic suite, southwest Yukon, Canadian Journal of Earth Sciences, v. 33, p. 1543-1555.
- Johnston, S. and Timmerman, J., 1997. Geology of Hopkins Lake map area, Yukon, NTS 115H/7. Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada. Geoscience Map 1997-9, 1:50,000 scale map.

1994b. Geological map of the Hopkins Lake map area, southwest Yukon (115H/7). Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Open File 1994-2(G).

1994a. Geology of the Aishihik Lake and Hopkins Lake areas (115H/6, 7), southwest Yukon. *In:* Yukon Exploration and Geology 1993, S.R. Morison (ed.), Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, p. 93-110.

- Kavanagh, P.M., 1962. Correspondence re: Hopkins Lake. Energy, Mines and Resources Property File Collection, ARMC006613.
- Kikuchi, T., 1968. Geological, geochemical and airborne geophysical report as representation work on the AD claim group (1-64 inclusive). Yukon Assessment Report #019089.
- Kiss, F., 2010. Residual total magnetic field, Kluane area aeromagnetic survey, Parts of NTS 115A, 115B, 115G and 115H, Yukon. Geological Survey of Canada, Open Files 6584 to 6591; Yukon Geological Survey Open Files 2010-21 to 2010-28.
- Lewis, J. and Mortensen, J.K., 1998. Geology, alteration, and mineralization of the Sato porphyry copper prospect, southwestern Yukon. *In:* Yukon Exploration and Geology 1997, Roots, C.F. (ed.), Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division, pp 153-160.
- Middleditch, D., 2016. Hopper Project preliminary metallurgical testwork report. Report prepared for Strategic Metals Ltd. by Blue Coast Research. *In:* Mitchell, 2016a.
- Miskovic, A. and Francis. D., 2004. The Early Tertiary Sifton Range volcanic complex, southwestern Yukon. *In:* Yukon Exploration and Geology 2003, D.S. Edmond and L.L. Lewis (eds.), Yukon Geological Survey, pp 143-155.
- Mitchell, A., 2016b. Assessment report describing heritage studies, road construction and diamond drilling at the Hopper property. Report prepared for Strategic Metals Ltd. by Archer, Cathro & Associates (1981) Limited. Yukon Assessment Report #096980.

2016a. Assessment report describing prospecting, hand trenching, diamond drilling and preliminary metallurgical testwork at the Hopper property. Report prepared for Strategic Metals Ltd. by Archer, Cathro & Associates (1981) Limited. Yukon Assessment Report #096862.

- Morin, J.A., 1981. Geology and mineralization of the Hopkins Lake area, 115H/2, 3, 6,
 7. *In:* Yukon Geology and Exploration 1979-80, Geology Section, Department of Indian and Northern Affairs Canada, pp 98-102.
- Morin, J.A., Marchand, M., Craig, D.B., Debicki, R.L., 1979. Mineral Industry Report 1977. Indian and Northern Affairs Canada, Northern Affairs Program, Geology Section.
- Morris, G.A., Mortensen, J.K. and Israel, S., 2014. U-Pb age, whole rock geochemistry and radiogenic isotopic compositions of Late Cretaceous volcanic rocks in the central Aishihik Lake area, Yukon (NTS 115 H). *In:* Yukon Exploration and Geology 2013, 2013, K.E. MacFarlane, M.G. Nordling, and P.J. Sack (eds.), Yukon Geological Survey, pp 133-145.

- Norgaard, P., 1970. Report on induced polarization surveys for Mitsubishi Metal Mining Company on AD mineral claim group. Report by Geoterrex Ltd. Yukon Assessment Report #060993.
- Ogilvy, A.C., 1980. Geological report on the Hop Acme claim group. Report for New Ridge Resources Ltd. EMR Library, TN27.Y8.S395 no. 1980.
- Oliver T.S., Borntraeger, B., Drielick, T.L., Duke, J.L., Giroux, G.H., Hanks, J.T., Hester, M., Rebagliati, M., 2008. Technical report Casino Project pre-feasibility study Yukon Territory, Canada. Prepared for Western Copper Corporation by M3 Engineering and Technology Corp. Website at <u>www.sedar.com/</u>.
- Panteleyev, A., 1995. Porphyry Cu±Mo±Au. *In:* Selected British Columbia Mineral Deposit Profiles, Volume 1 Metallic and Coal, Lefebure, D.V. and Ray, G.E., editors, British Columbia Ministry of Employment and Investment, Open File 1995-20, pp 87-92.
- Pautler, J.M., 2014. Technical report on the Hopper Project, Aishihik Lake area, Yukon Territory, Canada. Report for Strategic Metals Limited.

2013. Hopper property evaluation and recommendations. Memo for Strategic Metals Limited.

- Ray, G.E., 1995. Cu skarns. *In:* Selected British Columbia Mineral Deposit Profiles, Volume 1 - Metallics and Coal, Lefebure, D.V. and Ray, G.E., Editors, British Columbia Ministry of Energy of Employment and Investment, Open File 1995-20, pp 59-60.
- Schein, E., Han, Z. and Prikhodko, A., 2012. Report on a helicopter-borne versatile time domain electromagnetic (VTEM) and aeromagnetic geophysical survey, Hopper and Hooch properties, Haines Junction, Yukon. Report for Bonaparte Resources Inc. by Geotech Ltd.
- Shimizu, H. and Kashiwagi, T., 1976. Report on the geological survey for Mitsubishi Metal Corporation on ML claims, Hopkins Lake area, Yukon Territory. Yukon Assessment Report #090147.
- Smith, H., 2011. Assessment report describing soil geochemistry at the Hopper property, Whitehorse Mining District. Report prepared for Strategic Metals Limited by Archer, Cathro & Associates (1981) Limited. Yukon Assessment Report #095314.
- Stephen, J.C., 1997. Data compilation for the Hop-Acme claim group, Aishihik Lake area, Yukon. Report prepared for J.C. Stephen Explorations Ltd. EMR Library, TN27.Y8.S392 no.1997.

1990b. Report on the geological mapping and preliminary magnetometer survey, Hop 75-102 quartz claims. Report prepared for Aurora Gold Ltd.

1990a. Preliminary geological report on the Hop 75-102 quartz claims. Report prepared for Aurora Gold Ltd. EMR Library, TN27.Y8.S393 no.1990.

Stephen, J.C. and Feulgen, S., 1989b. Report on diamond drilling on the Hop-Acme claims. Report prepared for Casau Explorations Ltd. Yukon Assessment Report #092776.

1989a. Geological, geophysical, diamond drilling report on the Hop-Acme claims. Report prepared for Casau Explorations Ltd.

- Stroshein, R., 2011. Technical report using British Columbia securities commission National Instrument 43-101 guidelines on the geology, mineralization and geochemical surveys on the Hopper property, Yukon Territory. Report prepared for Bonaparte Resources Inc. by Protore Geological Services.
- Tempelman-Kluit, D.J., 1974. Reconnaissance geology of Aishihik Lake, Snag, and part of Stewart River Map Areas, west-central Yukon; GSC Paper 73-41.
- Tenney, D., 1977b. Drill logs, TH 5-11 for Hop claims, Aishihik Lake, 115H/7 Report for Whitehorse Copper Mines Ltd. Yukon Assessment Report #091325.

1977a. Report on Hop claims, 115H/7. Report for Whitehorse Copper Mines Ltd. Yukon Assessment Report #092027.

- Tully D., 1979. Report on the Hop Acme claim group. Hopkins Lake, Aishihik Lake area, Whitehorse Mining District, Yukon Territory. Report for New Ridge Resources Ltd. EMR Library, TN27.Y8.S399 1979.
- Venter, N., 2007. Report on a helicopter-borne versatile time domain electromagnetic (VTEM) geophysical survey, Hopper property, Yukon, Canada. Report for Strategic Metals Limited by Geotech Ltd.
- Watson, P., 1984. The Whitehorse Copper belt a compilation. Indian and Northern Affairs Canada, Open File 1984-1.
- Wengzynowski, W.A. and Smith, H., 2007. Assessment report describing prospecting, geological mapping and soil geochemistry at the Hopper property. Report prepared for Strategic Metals Limited by Archer, Cathro & Associates (1981) Limited. Yukon Assessment Report #094628.
- Young, Mark, 2017. Heritage resource impact assessment for proposed trails and camp locations at the Hopper property. Report prepared for Strategic Metals Limited by Stantec Consulting Ltd.

CERTIFICATE, DATE AND SIGNATURE

- 1) I, Jean Marie Pautler of 103-108 Elliott Street, Whitehorse, Yukon Territory, self-employed as a consulting geologist, authored and am responsible for this report entitled "Technical report on the Hopper Project, in the Dawson Range copper-gold belt, Aishihik Lake area, Yukon Territory, Canada", dated December 27, 2017.
- 2) I am a graduate of Laurentian University, Sudbury, Ontario with an Honours B.Sc. degree in geology (May, 1980) with over 35 years mineral exploration experience in the North American Cordillera. Pertinent experience includes extensive exploration throughout Yukon and Alaska, including the Casino deposit area, Coffee and Klaza deposits, the Big Creek area properties of Triumph Resources Ltd. (including the Nucleus and Revenue deposits), Sonora Gulch, and others throughout the Dawson Range copper-gold belt. Experience in the northern Kluane area includes exploration on the Kluane properties of Ryan Gold Corp. in 2011 and in the regional area for Teck Exploration Ltd. in 1998-2000 and for Kerr Addison Mines Ltd. in 1983-85.
- 3) I am a registered member of the Association of Professional Engineers and Geoscientists of British Columbia, registration number 19804.
- 4) I have visited the subject mining property of this report and am a "Qualified Person" in the context of and have read and understand National Instrument 43-101 and the Companion Policy to NI 43-101. This report was prepared in compliance with NI 43-101.
- 5) This report is based on site visits on July 30, 2017, September 16, 2016 and September 16, 2014 and work conducted on, including an examination and evaluation of, the property by the author on June 9-12, 21-22 and July 21-25, 2015 and between June 22 and July 6, 2013, and a review of pertinent data. I do not have any prior involvement on the Hopper Project.
- 6) As stated in this report, in my professional opinion the property is of potential merit and further exploration work is justified.
- 7) At the effective date of the technical report, to the best of my knowledge, information, and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
- 8) I am entirely independent, as defined in section 1.5 of National Instrument 43-101, of Strategic Metals Ltd. and any associated companies, Archer, Cathro and Associates (1981) Limited and the Hopper property. I do not have any agreement, arrangement or understanding with Strategic Metals Ltd. or any affiliated company to be or become an insider, associate or employee. I do not own securities in Strategic Metals Ltd. or any affiliated companies and my professional relationship is at arm's length as an independent consultant, and I have no expectation that the relationship will change.

Dated at Carcross, Yukon Territory this 27th day of December, 2017,

"Signed and Sealed"

"Jean Pautler"

Jean Pautler, P.Geo. (APEGBC Reg. No. 19804) JP Exploration Services Inc. #103-108 Elliott St. Whitehorse, Yukon Y1A 6C4

The signed and sealed copy of this Certificate, Date and Signature page has been delivered to Strategic Metals Limited.