ASSESSMENT REPORT
on the

STU PROPERTY

STU 1-132: YC37770-795, YC40249-276, YC40201-218, YC65256-315
HOO 1-28, 35-46: YF20773-800, 46387-398
CHE 1-30: YF46357-380, 401- 406
KOO 1-12, 21-44, 47-58: YF46501-512, 521-544, 547-558
WC 1-72: YF20701-772
WCF 1-11: YF46407-417
LED 1-5, 9-16: YE1088-100
PEANUT 1-12, 17-28: YE10064-87

Near Carmacks, Yukon
NTS 115I07
Whitehorse Mining District

62° 24’ N and 136° 47’ W

Prepared for:
Bill Harris
Box 31347
Whitehorse, Yukon Territory
Y1A 5P7

Prepared by:
Debbie James B.Sc., P.Geo.
11-3194 Gibbins Road
Duncan, B.C.

March 31, 2016
Dates of Work: July 14th to October 14th, 2015

Table of Contents

List of Figures

Appendices

1 SUMMARY

This report describes a two part field exploration program completed on the STU property in 2015. The report was prepared to satisfy requirements for Assessment Report filing by the Yukon Mining Recorder, Ministry of Energy, Mines and Resources, Government of Yukon. The work was carried out by Midnight Mining Services Ltd. and funded by Bill Harris, with financial assistance from the Yukon Minerals Exploration Program (YMEP Target Evaluation 15-065). The program consisted of mechanized and hand trenching, rehabilitation of old core, road and trail clearing, camp construction, trench sampling, collection of XRF data on trenches, staking, prospecting, reconnaissance mapping and sampling. Work was done on claims STU 1, 3,5,7,29,31,33,35,36,38 KOO 18, 20, WC 7,8,17,18,39 and WCF 7 and 8.

The STU Property (the "Property") is located approximately 47 km directly northeast of Carmacks, Yukon and 210 km directly northwest of Whitehorse, the capital of the Yukon Territory. The Property consists of 376 contiguous claims which cover approximately 7638 hectares. The claims are registered to or in the process of being transferred to Bill Harris and are located in the Whitehorse Mining District. The claims are in good standing. The centre of the property is located at latitude 62° 23' 38" N and 136° 47' 30" W longitude on NTS map sheet 115I07. Vehicle access to the STU project is along gravel and dirt road and trails from the village of Carmacks, which is a 1.75 hour drive along paved public highways from Whitehorse.

Intensive exploration in the vicinity of the STU property started in the late 1960s following discovery of the Casino porphyry copper deposit in the Dawson Range, 100 km northwest of the STU property. Prior to this time, copper showings had been staked close to the Yukon River in the late 1890s. Following the Casino discovery a staking rush in the area found the Williams Creek (now Carmacks Copper) and Minto properties in 1970. The STU claims were worked aggressively from 1971 to 1982 and in 1989. Unfortunately most of the vital trenching and drilling results from this time period are not available.

The Carmacks Copper Belt is a 180km long by 60 km wide belt of intrusion hosted Cu-Au-Ag mineralization in the Dawson Range. Centered on the Minto Mine the belt extends from north of the Yukon/Pelly River confluence southeast to the community of Carmacks. The occurrences are hosted in, or close to the contacts of, intermediate to felsic intrusive and meta-intrusive rocks of the Early Jurassic Minto Suite. Minto Suite members the Granite Mountain Batholith (GMB) and the Minto Pluton host the Minto, STU and Carmacks Copper occurrences. On the STU property the GMB is the dominant rock type. It is cut by aplite, microganite and pegmatite dykes and contains lenses of foliated to gneissic quartz-feldspar-hornblende-biotite granodiorite which contain most of the mineralization. The foliation strikes northwest and dips from moderate to steep to the southwest or northeast.

Copper mineralization is contained in the foliated to gneissic granodiorite, probably formed as shear zones, similar to the Minto mine and the Carmacks Copper deposit. There are 3 trenched and drilled zones of mineralization on the northern part of the property and showings and anomalies on the southern part of the claim block. Copper sulphides occur within the foliated

granodiorite and gneiss where they replace mafic minerals. Copper oxides have in turn replaced the copper sulphides where the mineralization has been exposed to oxidation. The highest gold and silver values are associated with bornite-rich sections.

The deposit type at the STU is a variation of that seen at Minto and Carmacks Copper although there is no agreement on the classification for those deposits. The deposits formed at crustal levels deeper than 20 km, there is a strong structural control on mineralization and the deposits are a variant of the porphyry model.

Approximately 4000m of core from the 1980 diamond drilling program at Zone A was rehabilitated. Three holes were relogged, one was resampled, and historic sections were digitized to produce a drill database combining historic and new information. Further relogging and sampling of old holes will improve the database, but it has been used to create new sections and a simple 3D model of Zone A. There are at least 4 mineralized zones dipping 30-40^{o} to the northeast. Values in drillholes seem to be higher than surface values in trenches. The longest body is at least 200m long from north to south, extends 80m downdip and ranges in width from 10-15m. Other mineralized bodies have an interpreted downdip extent of 85 to 160m and range in thickness from 2 to 20m wide. The deepest intersection is at 550m elevation, 380m below surface. Copper grades of 2.8 to 3.5% analysed over 12 to 14m widths in drill core equate to surface grades less than 0.4% over similar widths. Oxidation (malachite vs bornite and chalcopyrite) increases southwards, but holes are shallower here (not reaching below 800m elevation) and did not get below oxidation.

The 2015 program on the STU claims has advanced the project to the next stage which is drilling. Further work is recommended and a two phase program costing $600,000 is laid out. If funding and market conditions do not allow for drilling, then phase 1 alone will move the project ahead and prepare it for drilling.

There are multiple exploration targets on the STU project and depending on the time and budget available they can be advanced separately or simultaneously. Drilling and trenching are the main activities in the proposed program, but early stage exploration outside the main zones is also recommended.

More old trenches should be cleared of overburden and deepened or extended where required. Systematic chip sampling, geological mapping and magnetic susceptibility measurements should be carried out. A 2007 assessment report (Casselman) contains a compilation of historic geophysics on the Williams Creek/Carmacks Copper property, covering the STU project. This information should be reviewed by a geophysicist and geologist to determine geophysical responses over known zones and that response used to search for new targets. Following extraction of information from previous surveys, more ground geophysics may be required.

2 INTRODUCTION

This report describes a two part field exploration program completed on the STU property in 2015. The report was prepared to satisfy requirements for Assessment Report filing by the Yukon Mining Recorder, Ministry of Energy, Mines and Resources, Government of Yukon. The work was carried out by Midnight Mining Services Ltd. and funded by Bill Harris, with financial assistance from the Yukon Minerals Exploration Program (YMEP Target Evaluation 15-065).

This report is based on the writer's observations collected during a field program on the STU property, observations and information collected by other geologists and technicians during the program, and information from previous reports and publications listed under References. In the preparation of this report, the author used Government of Yukon and Government of Canada geological maps, geological reports, and claim maps as well as the mineral assessment work reports from the Carmacks Copper Belt area that have been filed with the Yukon Mining Recorder by various companies. The history of exploration and historic exploration results on the STU claims portion of the STU Property were discussed in a 2013 assessment report by this author. The same material will not be covered in such detail in this report, but is incorporated and compared with new results and findings. The results of historic exploration and reports from other operators will be relied upon in the sections about the HOO, CHE, KOO, WC and WCF claims which were staked in 2014 and added to STU project.

The author reserves the right, but will not be obliged, to revise the report and conclusions if additional information becomes known subsequent to the date of this report.

2.1 UNITS AND MEASUREMENTS

g	Grams
kg	Kilograms
g/t	Grams per metric tonne
oz	Troy ounces
oz/st	Ounces per short tonne
ppb	Parts per billion
ppm	Parts per million
st	Short ton
t	Metric tonne

mm	Millimeters
m	Meters
km	Kilometers
ha	Hectares
'	Feet
"	Inch

°C	Celsius Degree
$	Canadian Dollars

1 oz (troy)	=	31.103	g
1 oz (troy)/st	=	34.286	g/t
1 pound (lb)	=	0.454	kg
1 pound (lb)	=	1.215	troy pound
1 short ton	=	0.907	t
1 g	=	0.03215	oz (troy)

1 short ton = 2000 pounds (lb) = 0.907 tonne
1 pound = 16 oz = 0.454 kg = 14.5833 troy ounces

1 inch	=	2.54	cm
1 foot	=	0.3048	m
1 mile	=	1.6	km
1 ha	=	0.01	km^2

1 square mile = 640 acres = 259 hectares

The information, opinions, and conclusions contained herein are based on:

- Information available to the author at the time of preparation of this report;
- Field data collected by the author and other qualified individuals supervised by the author or working independently.
- Assumptions, conditions, and qualifications as set forth in this report; and
- Data, reports, and other information supplied by Bill Harris and other third party sources.

3 PROPERTY DESCRIPTION AND LOCATION

The STU Property (the "Property") is located approximately 47 km directly northeast of Carmacks, Yukon and 210 km directly northwest of Whitehorse, the capital of the Yukon Territory. The Property consists of 376 contiguous claims which cover approximately 7638 hectares (Figure 1).

The claims are registered to or in the process of being transferred to Bill Harris and are located in the Whitehorse Mining District. The claims are in good standing. The centre of the property is located at latitude 62° 23' 38" N and 136° 47' 30" W longitude on NTS map sheet 115I07. Claim data is summarized in Table 1, a map showing the claims is presented in Figure 2. The list of claims from the Whitehorse Mining Recorder is attached as Appendix 1.

The northern part of the project, consisting of the STU claims has received considerably more work than the southern HOO, CHE, KOO, WC, WCF, LED and Peanut claims. The term" STU project" is used to describe all 376 claims, the term "STU claims" refers to just the northern part of the project and HOO, CHE, KOO, WC, WCF (HCKW) claims refers to the southern part of the project.

Table 1: Claim Data

Grant Number	Owner	Claim label	No. of claims	Expiry date	New expiry date*
YC37770-779	Bill Harris	STU 1-10	10	Dec 13, 2014	Dec 13, 2022
YC40249-258	Bill Harris	STU 11-20	10	Sep 19, 2015	Dec 13, 2022
YC37788-795	Bill Harris	STU 21-28	8	Jun 21, 2015	Dec 13, 2022
YC40259-260	Bill Harris	STU 29-30	2	Sep 19, 2015	Dec 13, 2022
YC37780-787	Bill Harris	STU 31-38	8	Dec 13, 2014	Dec 13, 2022
YC40261-276	Bill Harris	STU 39-54	16	Sep 19, 2015	Dec 13, 2022

YC40201-218	Bill Harris	STU 55-72	18	Nov 29, 2015	Dec 13, 2022
YC65256-315	Bill Harris	STU 73-132	60	Jul 9, 2015	Dec 13, 2022
YF20773-800, 46387-398	stakers	HOO 1-28, 35-46	40	Jul 29, 2015	Dec 13, 2021
YF46357-380, 401-406	stakers	CHE 1-30	30	Jul 29, 2015	Dec 13, 2021
YF46501-512, 515-544, 547-556	stakers	KOO 1-12, 15-44, 47-58	54	Jul 29, 2015	Dec 13, 2021
YF20701-772	stakers	WC 1-72	72	Jul 29, 2015	Dec 13, 2021
YF46407-417	stakers	WCF 1-11	11	Jul 31, 2015	Dec 13, 2021
YE10088-100	Bill Harris	LED 1-5, 9-16	13	Nov 12, 2016	na
YE10064-87	Bill Harris	PEANUT 1-12, 17-28	24	Nov 12, 2016	na
		TOTAL	**376**		

*dependent upon acceptance of this report

The STU project lies within the traditional territories of the Little Salmon-Carmacks and Selkirk First Nations. Land claims are settled with both nations and Figure 1 shows the location of settlement lands closest to the STU property.

Bill Harris has obtained a five year, Class 3 Mining Land Use Permit (MLU LQ00413) from Mining Land Use, Government of Yukon for the STU claims which is valid until December 11, 2018. A similar permit application has been made for the HOO, CHE, KOO, WC and WCF claims. At time of writing the permit will be granted pending transfer of claims registered to stakers to Bill Harris.

4 ACCESSIBILITY, CLIMATE, PHYSIOGRAPHY, LOCAL RESOURCES & INFRASTRUCTURE

4.1 ACCESS

Vehicle access to the STU project is along gravel and dirt road and trails from the village of Carmacks, which is a 1.75 hour drive along paved public highways from Whitehorse. At Carmacks the government maintained gravel Freegold road leads northwest into the Dawson Range. At 35km along the Freegold road the access road to the Carmacks Project branches off. This Carmacks Project access road is passable for 25 km by 4WD vehicle past the Carmacks Project camp to Hoocheekoo Creek in the middle of the STU property. Cat and ATV trails on the property lead from the access road to zones. The STU property can also be accessed by helicopter from Carmacks. Landing pads have been cleared on the STU claims in the 3 zones.

A camp is located close to Zone A on the STU claims, consisting of a kitchen trailer, outhouse, wooden tent frames and core racks. The camp is accessible by a 4 km ATV trail from the end of the 4WD road near Hoocheekoo Creek. The camp was upgraded for use during the 2015 field program.

4.2 CLIMATE

The Carmacks area has a northern interior climate with warm summers (+20º C), long cold winters (-20º C) and low to moderate precipitation (25-30 cm), most of which falls in summer. Mean annual temperatures are near -4^{o}C. The dry climate leads to frequent forest fires. Snow cover remains from mid-October to mid-April at lower elevations and a month longer at higher elevations. The typical exploration season is from April to October.

4.3 PHYSIOGRAPHY

The property is part of the Yukon Plateau-Central Ecoregion which is characterized by a dry climate and extensive grasslands on south aspect slopes. The west boundary of the ecoregion sits at the limit of Cordilleran Pleistocene glaciation and glacial deposits. Glacial cover was partial, valley glaciers extended along major valleys and tributaries depositing glacial drift on lower slopes and valley bottoms. Colluvium blankets steep slopes and uplands.

The property covers an area bisected by Hoocheekoo Creek within the northeastern edge of the Dawson Range of the Yukon Plateau. Elevations range from a low of 600m in the eastern part of the project up to 1075m in the western portion. Most slopes are gentle except along the north side of Hoocheekoo Creek. North-facing slopes are heavily timbered with black spruce and generally have a thick moss cover. Some north facing slopes and low lying wet areas are covered by dense alder and willow. South facing slopes are better drained and have a cover of poplar or pine. Some parts of the claims have been burnt by forest fires in 1995 and 2004.

Outcrop exposure on the property is <1% with float covering approximately 8%. Large areas of the property are covered by thick overburden and all of the known mineralization is found on hill tops or along ridge slopes where the overburden is thin or absent.

Several small streams flow in broad swampy valleys between 400 m and 800m wide. The streams drain to the northeast and southeast into Hoocheekoo Creek and Nancy Lee Creek, a tributary of Williams Creek. Northerly flowing tributaries of Big Creek drain the northwestern property area.

Figure 1: Regional Location Map

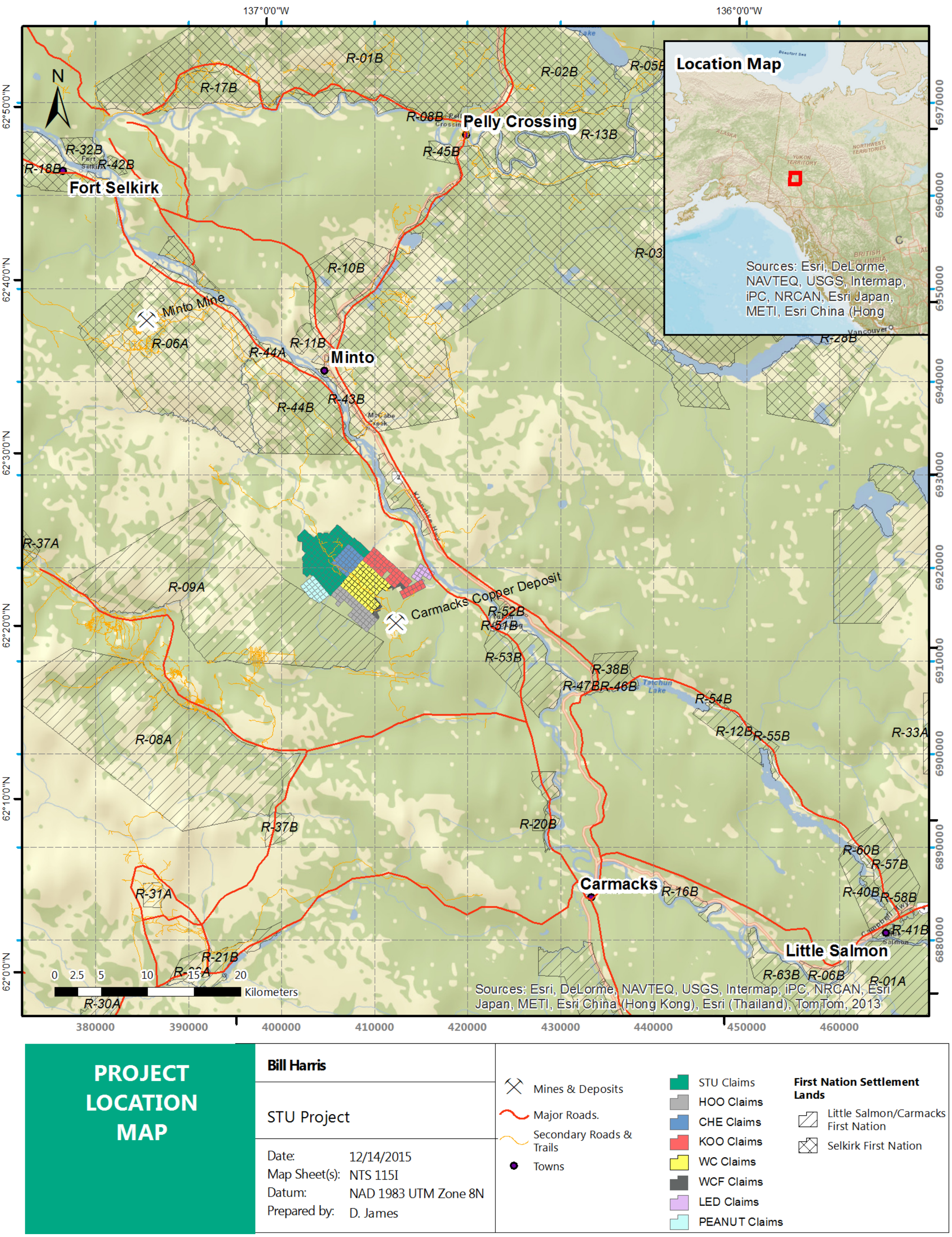
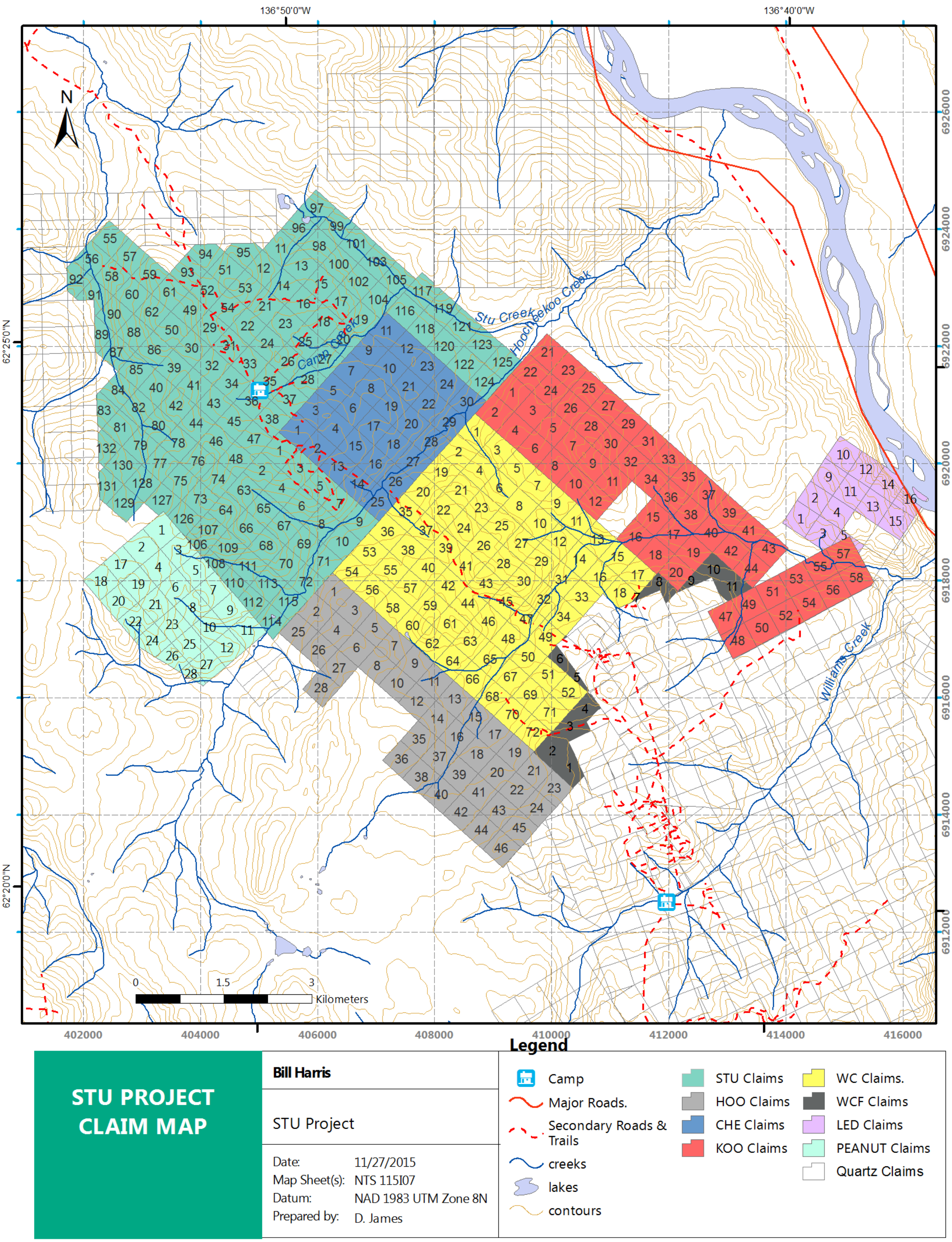


Figure 2: STU Property Claim Map



4.4 LOCAL RESOURCES AND INFRASTRUCTURE

The nearest community to the project area is Carmacks, 60 km by road and trail or 47 km directly. Carmacks is incorporated as a village and covers 37 square kilometres. The economic base is government and services. There is seasonal work in mining and exploration, tourism, firefighting and construction.

Services in the village include:

- Nursing station with doctors' consultations by appointment.
- Tantalus School offering classes for K-12. Yukon College provides GED, upgrading, computer training and occupational courses.
- Recreation Centre with attached curling rink.
- Airport and helicopter within city limits, No scheduled flights.
- Landfill site at south end of town. Recycling services once a week at landfill.
- A community water system, although some residents have private wells, and there is a water delivery service.
- Electricity from the Yukon electrical grid.
- Cell service, internet and telephone available.

Carmacks has a population of 503 people, an increase of 78 people since 2006. The age group distribution is: 0-14, 125 people, 14-64, 345 people and over 65, 35 people. There are 195 private households, 100 of them married or common law families, and 35 are lone parent families. English is the dominant language with a few aboriginal speakers and some French. (All information from Statistics Canada. 2012. GeoSearch 2012).

5 HISTORY

Intensive exploration in the vicinity of the STU property started in the late 1960s following discovery of the Casino porphyry copper deposit in the Dawson Range, 100 km northwest of the STU property. Prior to this time, copper showings had been staked close to the Yukon River in the late 1890s. Following the Casino discovery a staking rush in the area found the Williams Creek (now Carmacks Copper) and Minto properties in 1970. The STU claims were worked aggressively from 1971 to 1982 and in 1989. Unfortunately most of the vital trenching and drilling results from this time period are not available.

The HOO, CHE, KOO, WC, WCF and Peanut claims were worked by United Keno Hills Mines (UKHM) in the 1980s, Western Copper from 1990-2013, and BC Gold from 2006-2012 but have seen little drilling or systematic trenching. The LED claims were staked by Northern Tiger and cover copper bearing vein showings and workings from the early 1900s.

Exploration history and ownership of the STU property and pertinent adjacent properties is summarized below. References to reports on STU work programs are listed.

5.1 CHRONOLOGY

1887

- G.M. Dawson discovers copper at Hoocheekoo Bluff on the Yukon River.

1898

- Claims staked on copper bearing veins in the canyons of Merrice and Williams Creek, near LED and KOO claims.

1917

- Smelter shipment from Bonanza King (near LED and KOO claims) with average grade of 5.26% Cu, 66.9 g/t Ag, 4.4 g/t Au from 5.9 tonnes of ore *(YGS minfile 115I010)*

1960s

- Staking rush in the Dawson Range following discovery of Casino deposit.

1970

- Dawson Range Joint Venture (Straus Exploration Inc., Great Plains Development of Canada, Trojan Consolidated Minerals Ltd., and Molybdenum Corporation of Canada Ltd.) options Williams Creek property which had been staked by G. Wing and A. Arsenault. Discovery of Zones 1 and 2 *(Archer, 1971).*
- Dawson Syndicate (Silver Standard Mines Ltd. And Asarco) carries out stream sediment survey around Minto area.

1971

- Hudson's Bay Oil & Gas Company Ltd. stake Bay claims which cover east side of present day STU claims. Program of line cutting, grid soil sampling and magnetometer survey. *(Burgan and Mitchell, 1971).*
- Extensive exploration including drilling, trenching, road construction, ground geophysics surveys, mapping and sampling on the Williams Creek property. Some of this work is close to the south boundary of the STU claims. After 1971, no significant work was performed on this property until 1990.
- Minto claims staked based on stream sediment anomalies, followed by drilling, sampling, geophysics and hand trenching.
- DEF claims (now part of Minto) staked by United Keno Hill Explorations (United Keno Hill Mines, Falconbridge Nickel and Canadian Superior Explorations. Program of ground geophysics, soil sampling and mapping.

1973

- Main mineralized body found at Minto.

1974

- Hudson's Bay completed IP and VLF-EM surveys over the Bay claims. Follow-up detailed soil sampling over geophysics anomalies. Most of the work is southeast of current STU claims but there is an EM anomaly around the present day C Zone and just to the north of the STU claims. Anomalies are oriented northwest. (*Olson, 1975*)

1976

- Reconnaissance soil sampling between Minto and Williams Creek by United Keno Hill Mines Ltd. (UKHM) In the vicinity of the Bay claims.
- Following feasibility studies, significant work ceases on the Minto claims until 1984.

1977

- UKHM stake the STU claims in the area of the expired Bay claims. UKHM felt that Hudson's Bay soil samples had failed to penetrate the ash layer as had occurred previously at Williams Creek. UKHM had also found foliated rocks and copper mineralization beside the Bay claims, in what could have been the Zone A.
- UKHM carry out grid soil sampling, geological mapping and ground geophysics surveys and stake more claims. Three zones of foliated, copper-bearing rock are outlined. (*Watson and Joy, 1977*).

1978

- UKHM carry out an IP survey on the STU claims (*Smith, 1979*).

1979

- UKHM excavate 16 trenches in with a bulldozer over four anomalies. No results available (*Ouellette, 1989*).

1980

- UKHM stake more STU claims, then drill 28 diamond drill holes (4504m) in the A and C Zones. Most of this information is not in the public record but 3 holes returned intersections exceeding 2.5% copper. The UKHM 1981 report contains no text, just assays for hole 80-17 and drill logs for holes 80-17, 80-25, 80-27 and 80-28. *Ouellette, 1989* summarizes the work and states that some high grade mineralization was encountered.
- UKHM stake the NOON claims to the south of the STU claims. Program of geological mapping and grid soil sampling over the NOON claims. The NOON claims overlapped the present day HOO, CHE, KOO, WC and ACF claims. (*Newman and Joy, 1980*).
- UKHM stake the MOON claims to cover favourable ground NW of STU. Program of geological mapping and grid soil sampling. (*Leblanc and Joy, 1980*)

1981

- UKHM flies regional airborne EM and magnetic surveys over their holdings in the area.
- Soil sampling and mapping on the NOON claims (*Coughlan and Joy, 1981*).
- Reconnaissance geological mapping and soil sampling on MOON claims (*Joy, 1981*).

1982

- UKHM excavate 13 trenches on five areas over geochemical anomalies in the SW corner (Zone B) of the claim block. No results available (*Ouellette, 1989*). UKHM excavate 8 trenches on the NOON claims *(YGS minfile 115I126).*

1984

- Drilling on the Minto and DEF claims.

1989

- UKHM drilled 30 percussion holes (1823 m) in Zone B. Partial results are available in drill sections and assay certificates. The best hole was SB-6 which returned 0.71% Cu. (*Ouellette, 1989*).

1993

- First feasibility study at Carmacks Copper deposit. Western Copper flies airborne geophysics and discover the 4000N zone.

1994

- Western Copper survey extensive grid over WC claims for magnetics and VLF and collect soil samples. Strong geophysics and coincident geochemical anomaly over the 4000N zone. Weak magnetic anomaly and anomalous soils over the NW extension of Gran/Zone 3.

1995

- Feasibility study completed on Minto deposit.

2001

- Regional airborne magnetic and radiometric survey carried out by Yukon Government (*Shives et al, 2001*).

2002

- Regional program of prospecting and silt sampling over 8 alkalic porphyry-copper-gold targets in the area by B. Kreft. 17 samples of rock and previously unsampled core were collected at STU. Staked 24 claims and recommended further soil sampling and follow up of any anomalies (even single point) with prospecting or trenching. (*Kreft, 2002*).

2004

- Carmacks Copper deposit enters permitting process.

2005

- STU claims 1-54 restaked by B. Harris. Reconnaissance prospecting and property examination program. Soil sampling, examination and sampling of core and trenches. (*Robertson, 2006*).

2006

- Program of GPS surveying of old drill holes and trenches, examination of showings and rock sampling. Limited magnetic susceptibility testing of drill core. (*Pautler, 2007*).
- S. Ryan stakes Bread, Butter, Peanut, Copper, Sleep and Jam claims over and around the STU, NOON and MOON claims. Claims optioned to BC Gold after limited soil sampling. (*Ryan, 2006*).

2007

- BC Gold staked more Bread claims and flew a regional airborne magnetic and radiometric survey over their claims in the area.
- B. Harris stakes additional STU claims.
- Commercial production starts at Minto mine.

2008

- B. Harris did geological mapping, rock and soil sampling, a petrographic study and a compilation report on STU claims (*Pautler, 2009*).
- BC gold collected MMI soil samples across the entire Bread claim block *(Newton, 2008).*
- BC gold did MMI soil sampling and IP over 2 areas on the Copper claims *(Sidhu, 2009)*

2010

- Rock sampling and mapping on areas of the STU claims outside of the main three zones (*Pautler, 2011*).

2012

- Property examination, magnetic susceptibility and petrographic study of mineralized rocks on STU claims (*Pautler 2012*).

2013

- B. Harris completes a program of trail clearing and sampling of trenches, soils and rocks in Zone B *(James, 2014).*

2014

- B. Harris conducts a program of upgrading access, clearing old trenches, hand trenching and sampling a new showing, an overview archaeological survey, XRF test survey, mapping and sampling on the STU claims. 201 HOO, CHE, KOO, WC, WCF claims were staked. *(Pautler, 2015).*

5.2 HISTORIC WORK

Work on the STU claims prior to 2005 is discussed in this section and work after 2005 when the claims were owned by B. Harris is discussed in Section 8. Work on the HOO, CHE, KOO, WC, WCF (abbreviated as HCKW) claims since 2006 is discussed in Section 8 and older work is discussed in this section. Historic work on the STU claims was sourced from assessment reports and from UKHM maps and sections housed in the Alexco archives.

Claims in the area were called Bay when first staked in 1971 and later STU since 1977. The STU claims have stayed in the same general area, but have changed in number over the years. The current CHE claims were part of the STU claim block before 2005. STU is documented by the Yukon Geological Survey as Minfile Number 115I011, covering all 3 zones.

The HCKW claims, which were staked in 2014 by Bill Harris, cover ground recently held by Copper North and BC Gold. In the 1980s much of the ground was held by UKHM as the NOON claims, staked to cover prospective ground between STU and Carmacks Copper. Three Yukon Geological Survey minfile occurrences are located on the claims, the Gran/Zone 3 (115I128) on the WC claims, the Butter (115I126) on the KOO claims and the Hooche (115I127) on the Peanut claims. The 4000N anomaly, discovered by Western Copper in 1993, is located on the WC claims, the South Butter showing is located on the WC and WCF claims and extends southeast onto Copper North's property. The Sleep showing is located on the easternmost KOO claim. The Bonanza Creek (115I010) minfile occurrence is adjacent to the KOO and LED claims on the east and the Lookout showing is located on the LED claims. The CHE claims host soil anomalies that may be extensions of the zones on the STU claims. None of the showings have received much work and many are still geochemical or geophysical anomalies.

5.2.1 Soil and Stream Sediment Samples

5.2.1.1 STU Claims

A deep (0.9m average) soil sampling program was undertaken by UKHM in 1977 after they staked the STU claims. Samples were taken on a grid over the entire property at 30 m intervals along lines 100m apart. 8,958 samples were collected and copper in soil results plotted. Three main zones were outlined along with northwest trending anomalies in the south and east section of the property.

The 1977 soil survey is not documented to current standards; there are no laboratory analysis certificates, and no documentation of QAQC. However; the reported methodology is sound, samplers were aware of the detrimental effects of volcanic ash and collected samples in B horizon soils below the ash. The value of a survey can be judged on whether it locates mineralization, and under this criterion the survey was successful; the 3 zones were found. UKHM used 15 ppm copper as background and 50 ppm copper as a threshold value for soil anomalies over granodiorite. The Carmacks Group volcanics contain more copper and have a higher threshold at ~75 ppm. Statistical analysis on the digitized 1977 soil data produced a median value of 15 ppm and a mean of 20 ppm copper which concurs with the previous background value.

In 1977, a stream sediment survey was carried out along Stu, Camp and Hoocheekoo Creeks. 362 active inorganic and quiet water organic samples were taken at 100m intervals. Both UKHM surveys have been digitized.

5.2.1.2 HOO, CHE, KOO, WC, WCF (HCKW) Claims

In 1970 the Dawson Range Joint Venture carried out reconnaissance geochemical sampling over the Williams Creek property which located two mineralized outcrops – Carmacks Copper's Zones 1 and 2. Additional claims were staked north towards Hoocheekoo Creek, bordering onto the Bay claims and covering parts of the present day WC, WCF and KOO claims. Soil geochemical samples and reconnaissance geological mapping was undertaken over an 800' by 400' (244m by 122m) grid covering 14 square miles (3626 ha). None of this information has been digitized. Of interest is that the report author (Archer, 1971) felt that the soil sampling was only partly successful. The widespread reconnaissance sampling failed to locate either zone, while the grid sampling picked up Zone 1 but not Zone 2. Also noted is that Cu in soil values above 35 ppm were considered anomalous.

In 1971 Hudson's Bay soil sampled the Bay claims on a property wide grid which covered the northern sections of the WC and KOO claims along with part of the STU claims. Later workers criticised the quality of the sampling, suggesting the samplers did not consistently sample below the volcanic ash layer so prevalent over the property. This survey has not been digitised but is worth further inspection before it is rejected, because it detected Zone C on the STU claims. The survey also picked up soil anomalies southwest of the Butter showing and southwest of the 4000N anomaly.

The 1981 UKHM soil survey of the NOON claims covers all of the WC claims and parts of KOO and HOO claims. UKHM delineated five separate northwest trending, moderate to strong copper anomalies over Area "A" at the headwaters of Nancy Lee Creek. The area covered was 500m long by 230-330m wide (Coughlan and Joy 1981) and is in the same location as Gran/Zone 3. The other significant anomaly, Area "B" is equivalent to the South Butter showing and there are spot anomalies in the area of the Butter showing. Polygons containing soil points >30 ppm have been digitized from this survey, but the point data has not been digitized.

In 1994, Western Copper cleared a baseline through the centre of the WC claims (historic and present day WC claims cover the same area). Survey lines were put in at 500m intervals and stations were spaced along each line at 25m intervals. Soil samples were collected at each station, with every other sample sent in for analysis. Moderate to highly anomalous copper in soil values were found northwest of Gran/Zone 3 and spotty soil geochemical values up to 323 ppm Cu over the 4000N anomaly. Copies of assay certificates are available for 421 soils samples analysed for Au, Ag, Co, Cu, Fe, Mn, Mo, Ni, Pb, Zn using ICP-AES at Chemex in Vancouver, B.C. No detailed maps are available, but it may be possible to reconstruct a digital version of the grid if this information is to be digitised.

5.2.2 Geophysical Surveys

5.2.2.1 Regional Surveys

The Government of Yukon and the Geological Survey of Canada contracted Fugro Canada Corp. to carry out airborne gamma ray spectrometer and magnetometer surveys over the Minto area in September 2001. Five hundred metre space lines were flown at an azimuth of 45^{o}. Gridded data from the survey is presented as colour interval maps overlain with topography.

This data has not been interpreted but some general observations were made on two of the map products most relevant to the STU property:

Potassium:
Potassium levels appear to be controlled by topography and underlying rock type. The Carmacks volcanics and the northern section of the Povas formation close to Minto have consistently high levels (1.3-1.8%). The Minto Pluton has high levels along ridges and low (0.4-0.95) and moderate (0.96-1.3%) levels in valleys. The GMB shows variation with a dissected high zone running east through STU to an area south of Hoocheekoo Creek. South of Hoocheekoo Creek values are low to moderate with the exception of isolated highs around Carmacks Copper and along Merrice Creek. At STU, Zone B has the highest values.

Residual Total Field:
Minto sits on the south edge of a 7.8 X 12km area of high magnetism up to 1700nT. This area is underlain by the Minto Pluton and Povas Formation. A much smaller linear high of similar

magnitude is located in Povas Formation south of Minto along the Yukon River. The Carmacks volcanics have a distinctive mottled pattern of high, low and moderate values. Again topography is a factor with ridges tending to have higher values than valleys; magnetism is moderate around Carmacks Copper. Zone C at STU is mostly high while Zones A and B are situated in areas of moderate magnetism along the shoulders of magnetic highs.

5.2.2.2 STU Claims

Hudson's Bay carried out a magnetometer survey in 1971 over the Bay claims. Prominent magnetic highs were mapped over the granodiorite-volcanics contact (east of the present STU claims), prominent narrow highs were mapped over dykes in the granodiorite and less prominent highs occurred over increased magnetite in the porphyritic granodiorite.

Further magnetometer and electromagnetic surveys by UKHM outlined five zones of which the best four were followed up with an IP survey prior to trenching. None of these surveys have been digitized. Smith (1978) concludes following the 1978 IP survey over Zones A, B and C that there was little or no direct correlation between geochemical anomalies and IP anomalies. IP anomalies were generally very weak and poorly defined. Anomalies were usually complex, resulting mainly from variations in resistivity, a response expected over weathered sulphides.

In 1993, Western Copper flew an airborne electromagnetic survey that covers all three zones. The data is available in a 2007 report (see figure 5).

5.2.2.3 HCKW Claims

The 1974 Bay claims VLF-EM and IP geophysical surveys covered the northern sections of the WC and KOO claims. Linear geophysical anomalies were found between Hoocheekoo and Nancy Lee Creeks, over the Butter showing and southwest towards the 4000N zone.

In 1993, Western Copper flew an airborne electromagnetic survey along the eastern side of the WC claims (historic and present WC claims cover the same area) and found the 4000N anomaly which stretched from lines 3000E to 4000E. The next year, Western Copper cleared a baseline through the centre of the WC claims with cross lines at 500m spacing and stations along each line at 25m intervals. The entire grid was surveyed for total field magnetics, magnetic gradient and VLF-EM. The northwest extension of Gran/Zone 3 occurrence showed up as a weak magnetic anomaly associated with moderate to highly anomalous copper in soil values. It averaged 300-500m in width and 1500m in length. The 4000N zone showed possible narrow extensions onto lines 2500E and 4500E. (McNaughton, 1994)

A 2007 assessment report by Casselman contains a compilation of historic geophysics from a 1991 ground total magnetic and VLF-EM survey and the 1993 airborne total magnetic and VLF-EM survey over the Carmacks Copper property, covering much of the current HCKW claims and extending over the three main zones on STU (see figure 5). The 1994 ground surveys were not incorporated because digital information was not available.

5.2.3 Trenching

5.2.3.1 Stu Claims

The soil, stream sediment and geophysical surveys identified four areas of geological importance on the STU claims. UKHM carried out bulldozer trenching programs in 1979 and 1982 over four anomalies. Complete assay results are not available, but trench maps with geology and some results were sourced from the Alexco archives. See section 8 for results of ongoing trench resampling.

In 1979, nine bulldozer trenches were dug in Zone A to expose 900m of strike length. No results are available but the best trench intersection was 0.19% copper over 15m (*Ouellette, 1989*). Similar results were returned from the 2015 resampling program.

In Zone B 14 bulldozer trenches were excavated in 1979 and 1982 and up to 2% malachite over 0.5m in gneiss was observed. Trench resampling is ongoing and similar narrow zones of malachite have been observed and sampled. Of note is a comment by Ouellette (1989) regarding sampling "No malachite was noted in the trench at this location and the material was not sampled (p.7)." This comment refers to trench 7400E which was later drilled and returned a copper intersection of 0.71%. This comment raises the possibility than the trenches were only sampled in areas of visible mineralization.

Three trenches over 350m of strike length were excavated in Zone C in 1979. Recent sampling has produced encouraging results.

On the northwest edge of the STU claims the Northwest Zone is a mystery. There are 3 short trenches but no soil anomaly or outcrop mapped nearby.

5.2.3.2 HCKW Claims

The Gran/Zone 3 occurrence is a weak magnetic anomaly associated with moderate to highly anomalous copper in soil values. Eight or nine trenches are located in the general area, either from work by the Dawson Range Joint Venture in the 1970s or UKHM in the 1980s. No results or mapping are available from this time. There is some exposure of weakly altered granodiorite but no mineralization was encountered. The remainder of the trenches are sloughed and overgrown (Pautler, 2015c).

In the South Butter bulldozer trenching has exposed mafic intrusive rocks but no mineralization was observed (Pautler, 2015c). The data of trenching is not known but probably occurred in the early 1980s as a follow-up to the soil anomaly from 1981.

5.2.4 Drilling

5.2.4.1 STU claims

Approximately 4500 metres of diamond drilling was done in 1980 in the A and C Zones. Core from the program is stored near the camp and in 2015 the racks were disassembled and the majority of the core rehabilitated (see Section 9). Complete results are available for one hole (80-17) and high grade intersections are reported for 3 holes.

Templeman-Kuit (1981) reports three high grade intersections:

- 80-09 3.44% Cu, 1.87 g/t Au, 13.37 g/t Ag over 13.5m
- 80-14 3.51% Cu, 2.49 g/t Au, 18.35 g/t Ag over 13.5 m
- 80-18 2.80% Cu, 4.04 g/t Au, 17.42 g/t Ag over 12.5m.

He notes that the remainder of the mineralized rock ran between trace and 0.49% Cu over 17m. Although they have not been resampled, all three intersections were rehabilitated.

80-17 was a deep hole (426m), drilled behind and beneath hole 80-14, presumably to test the depth of mineralization beneath the high grade intersection in hole 80-14. From 376-401m the hole intersected 25m of 0.155% copper, 6.2 g/t silver and trace gold. This intersection is 380m below surface.

In 1989, 30 percussion drill holes were drilled along trenches in the B Zone. Most holes were oriented at 225^{o} azimuth, with dips ranging from -49^{o} to -63^{o}. Three holes were oriented at 45^{o}. Two to three holes were drilled 3 to 20m apart in each trench. Hole depths are 27 to 88m and the entire length of each hole was sampled at 1.5m intervals. Copper results were plotted onto sections. Most holes intersected multiple zones with anomalous copper values ranging from 100-500 ppm. The zones can be traced from hole to hole in about half of the sections but they do not always coincide with malachite occurrences in the trenches. The best results are:

- hole SB-4 in trench 7600E 10 feet (3m) of 0.135% Cu
- hole SB-6 in trench 7400E 5 feet (1.5m) of 0.71% Cu
- hole SB-8 in trench B-1 5 feet (1.5m) of 0.11% Cu
- hole SB-9 in trench B-1 5 feet (1.5m) of 0.23% Cu
- hole SB-10 in trench B-1 5 feet (1.5m) of 0.16% Cu

The three intersections in trench B-1 are of interest because they suggest continuity.

Three holes were drilled in the C Zone; drill logs are available for 2 of them. No mineralization was logged.

5.2.4.2 HCKW Claims

Gran/Zone 3 is the only area on the HCKW claims where there is any evidence of drilling. Two to three drill pads are located in the general area, either from the 1960s or the 1980s. There is no record of drilling in publically available reports, but McNaughton (1994) suggests the holes are from the 1960s. Conversely, UKHM reports from the 1980s make no mention of finding drillholes. Archer, 1973 comments on the need for drilling in Zone 3 because of a depth of glacial till from 15-48m.

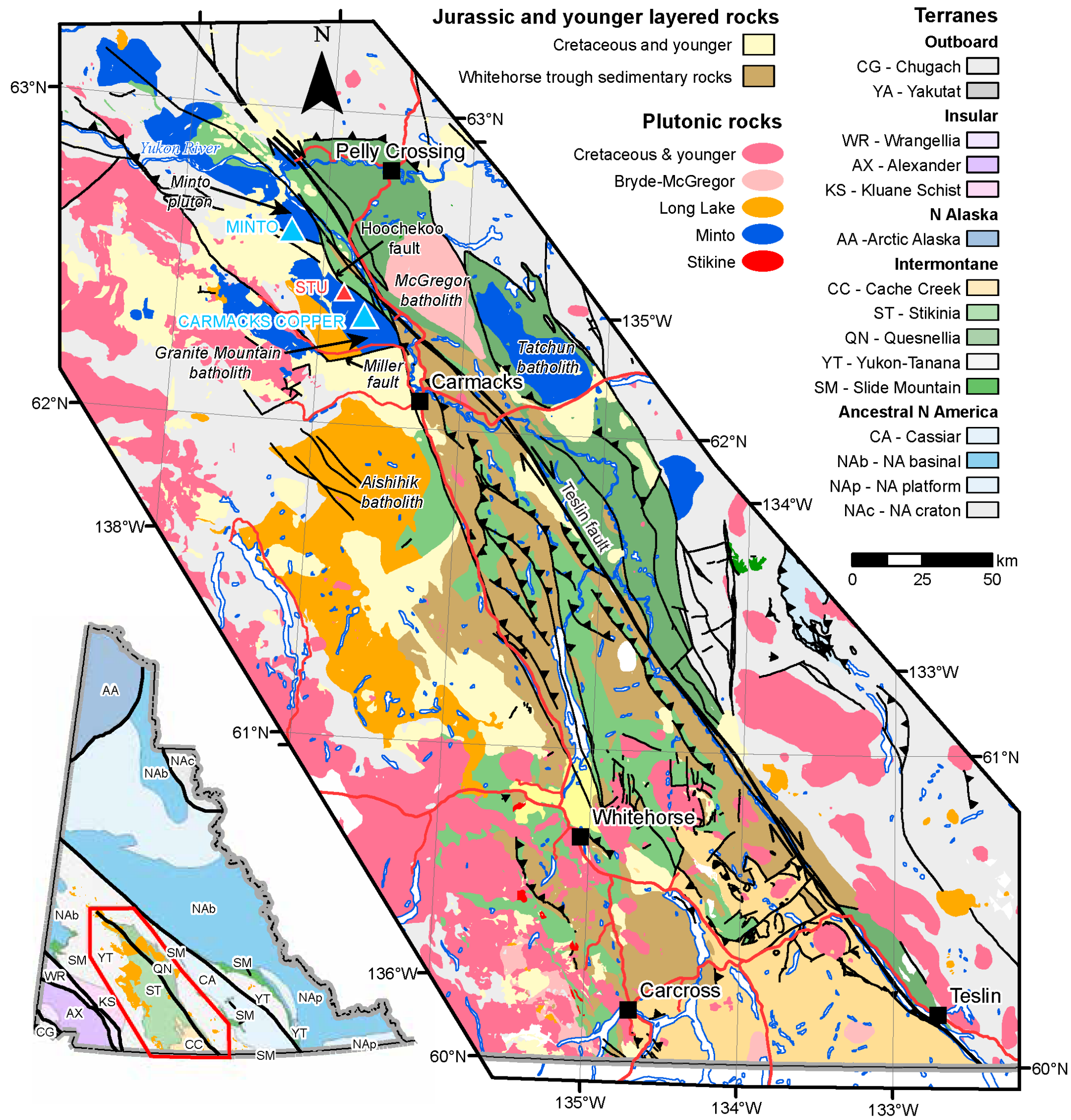


Figure 3. Simplified geology of south central Yukon with emphasis on Late Triassic to Jurassic plutonic suites as described in text. Significant Early Jurassic Cu – gold ± silver mineral occurrences shown by triangles. Main map coloured by terrane with Whitehorse trough and younger cover sequences in brown and yellow, respectively. Inset Yukon terrane map to lower left shows the area of the main map with Late Triassic to Jurassic plutonic rocks in orange. Map, data and caption from Yukon Geological Survey (2015).

Figure 3: Regional Geology

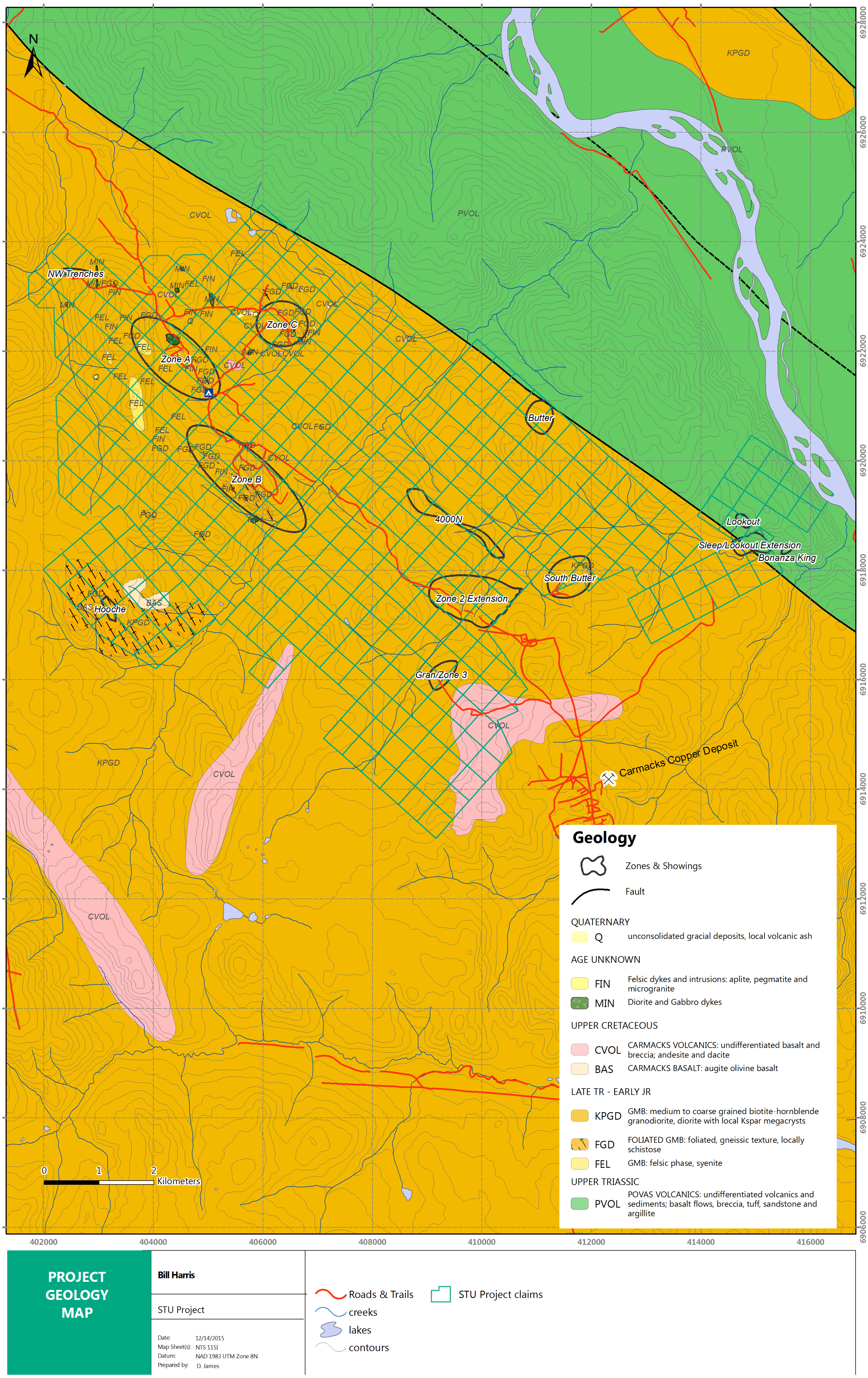


Figure 4: Property Geology

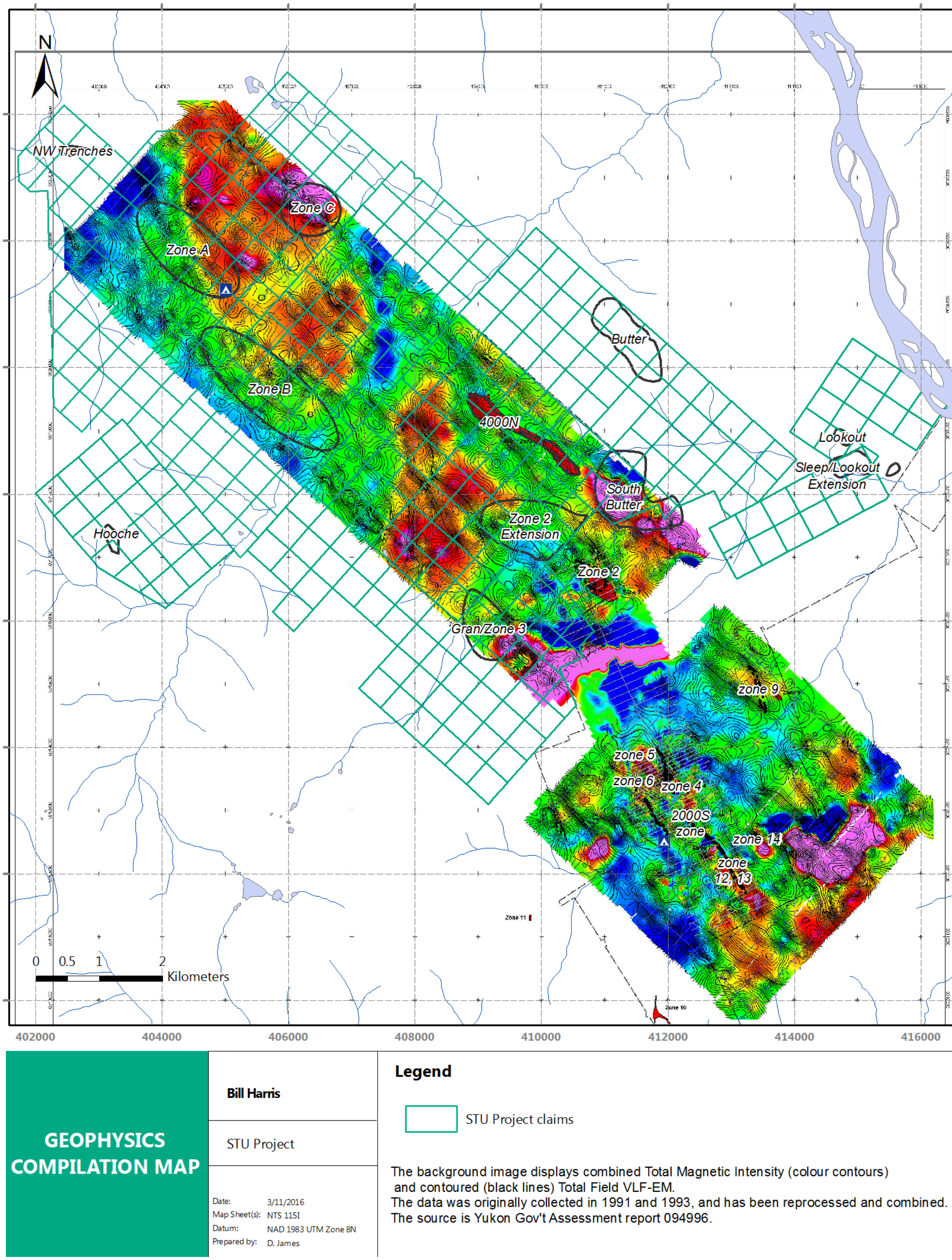


Figure 5: Compilation of 1991 and 1993 Total Magnetic Field and Total VLF-EM.

6 GEOLOGICAL SETTING AND MINERALIZATION

6.1 REGIONAL GEOLOGY

The Carmacks Copper Belt is a 180km long by 60 km wide belt of intrusion hosted Cu-Au-Ag mineralization in the Dawson Range. Centered on the Minto Mine the belt extends from north of the Yukon/Pelly River confluence southeast to the community of Carmacks. The occurrences are hosted in, or close to the contacts of, intermediate to felsic intrusive and meta-intrusive rocks of the Early Jurassic Minto Suite. Minto Suite plutons suite are of biotite-hornblende granodiorite to quartz monzonite composition and lie between Stikinia and the Yukon Tanana Terrane (YTT). Recent work by the Yukon Geological Survey on the Late Triassic to Jurassic plutons will be released this year. Some of that work and terminology will be used in this report (**Figure 3**).

Minto Suite members the Granite Mountain Batholith (GMB) and the Minto Pluton host the Minto, STU and Carmacks Copper occurrences. The GMB is composed of two different igneous suites: the Early Jurassic Long Lake Suite on the western side and the older Minto Suite on the east side, where the deposits occur. Younger volcanic rocks of the Carmacks Group and Quaternary Selkirk Group overlie the GMB. The south end of the Minto pluton is separated from the rest of the GMB by an east-west normal fault. South of the fault lie basalts of the Upper Cretaceous Carmacks Group which stretch south where they unconformably overlie the GMB.

On its west side the GMB intrudes Paleozoic metamorphic rocks of the Yukon Tanana Terrane. To the east the batholith is in fault contact with upper Triassic or older mafic volcanic rocks of the Lewes River Group (specifically basal Povas Formation) overlain by Jurassic age Laberge Group sediments. South of Williams Creek the GMB is in normal fault contact with more Carmacks Group basalts along the Miller Fault.

The Hoocheekoo Fault runs northwest from near Minto along the northeast side of STU and Carmacks Copper parallel to the regional strike slip Teslin Fault which forms the valley of the Yukon River.

6.2 PROPERTY GEOLOGY

On the STU property the GMB is the dominant rock type. It is cut by aplite, microganite and pegmatite dykes and contains lenses of foliated to gneissic quartz-feldspar-hornblende-biotite granodiorite which contain most of the mineralization. Locally outcrops of Carmacks volcanics overlie or intrude the other rock types. A few mafic dykes cut the GMB (**Figure 4**).

The Hoocheekoo Fault runs down the east side of the property separating the GMB from the Povas Formation. Smaller east-west cross structures are expressed as creeks such as Camp, Nancy Lee and Hoocheekoo.

Geology of the HCKW claims is not as well known, but is assumed to be similar to STU with the exception of more Carmacks volcanics. On the southeastern portions of the HOO, WC and WCF claims a large outcropping of Carmacks volcanics overlies the GMB. The eastern KOO claims extend across the Hoocheekoo Fault into Povas Formation. Compilation of historic work for the claims is ongoing.

6.2.1 Table of Formations

A range of rock codes have been used for the property and are in the process of being consolidated.

Q – Quaternary	Unconsolidated alluvium, colluvium and glacial deposits. Local volcanic ash.
Upper Cretaceous Carmacks Group volcanics uKC1, CVOL, BAS	Occur on the property as a few outcrop and float or debris. Rocks are greenish-brown to brown, basic to intermediate flows and tuff breccias. Porphyritic and aphanetic varieties are found.
Unknown age (possibly upper Cretaceous) Diorite and Gabbro MIN	Dark coloured, fine to medium grained rock that appears to be a separate unit from the granodiorite and not a mafic phase because contacts are sharp and trend northeast. The diorite contains up to 50% biotite and hornblende, the gabbro 70% mafics with hornblende>> biotite and occasional pyroxene. Close to contacts the diorite locally shows a reduction in grain size and a weak foliation parallel to the contact. This unit may be associated with the Carmacks volcanics, the two units occur in close proximity.
Unknown age Aplite, Pegmatite and Microgranite Dikes FIN, APL, PEG, MGR	Felsic intrusions cutting both foliated and non-foliated granodiorite. Aplite dykes are white to pinkish white, with a mafic content < 1% biotite which may show a preferred orientation. Fine to medium grained and sucrosic. Pinkish white to white pegmatite dikes are coarse grained and composed of 70-80% large feldspar crystals, quartz and biotite. The aplite and pegmatite typically occur in swarms, are less than 1 m thick and are found proximal to contacts between foliated and unfoliated granodiorite. Casselman et al (2015) find the dikes to be of similar composition to the quartz monzonite on the southwest portion of the property. Microgranite is white to grey white and fine grained with 2-8% biotite aligned parallel to contact with the granodiorite. Sharp contacts with the granodiorite, may grade into the aplite.
Latest Triassic to earliest Jurassic Granite Mountain Batholith Felsic phase FEL, QM	Closely associated with the granodiorite. Mafic poor, fine to medium grained and syenitic in composition, occurs along the southwestern portion of the STU claims. Historically mapped as felsite (FEL) and had rarely been found in trenches.
GMB Granodiorite KPGD, PGDM, GDM, BGD	Potassium feldspar megacrystic granodiorite and quartz-phyric granodiorite to quartz monzonite. Minor diorite to quartz diorite It is medium grained with lesser fine grained or coarse grained occurrences and is typically porphyritic.
GMB Mafic phase QD, HBL, DIO, DQD	Mafic phases of the GMB. Limited in extent.
GMB Granodiorite, foliated, gneissic textures FGD, GN	Foliated, gneissic and locally schistose granodiorite. When foliated it has a slightly higher mafic content. Foliation is weak to strong. Gneissic texture is fine to medium grained with a moderate to strong foliation or banding, may display extreme variation in mafic content. Hosts copper mineralization. Historic mapping separated foliated, gneissic and schistose textures.

uTrP Upper Triassic or older Povas Formation PVOL	Andesitic basalt flows, breccia, tuff, sandstone and argillite. Separated from GMB by Hoocheekoo Fault. Hosts showings on the KOO claims.

6.2.1.1 GMB Granodiorite

The most common phase of the granodiorite is dark grey to grey on weathered surfaces and grey white to grey on fresh surfaces. It is medium grained with lesser fine grained or coarse grained occurrences and is typically porphyritic with 5-15% potassium feldspar phenocrysts.

When foliated it has a slightly higher mafic content and foliation is weak to strong. The gneissic phase is fine to medium grained with a moderate to strong foliation or banding. An extreme variation in mafic content has been observed. The genesis of the foliation or gneissic texture is unclear. It may be a shear zone, a partially metamorphosed phase of the GMB or an inclusion of older metamorphic or volcanic rocks that have been partly assimilated. Both the foliated and gneissic phases host copper mineralization. In trenches and outcrop, resistant reefs of silicified gneiss or foliated granodiorite occur which have more chalcopyrite and bornite compared to non-siliceous sections. These reefs are resistant to weathering and form outcropping ridges in Zones A, B and C and low ridges along trench floors.

A similar suite of igneous rocks is found at Minto and Carmacks Copper although there are some differences. At Carmacks Copper quartz diorite and diorite phases of the GMB are more common than at Minto. A fine grained biotite schist or amphibolite is an additional rock type that host mineralization. The biotite schists have very low quartz content and a high mafic content which is attributed to their origin from assimilated rafts of Povas Formation andesitic to basaltic pyroclastic tuffs, agglomerates or breccias. It is expected that more of the schists or amphibolites will be encountered on the HCKW claims, especially in the South Butter showing and close to Zone 2.

6.2.2 Petrography

In 2008 a petrographic study (Foncesca) of 6 samples of strongly foliated, medium-grained black and white, equigranular granodiorite determined an average composition of 25-35% quartz, 35% plagioclase, <10% potassium feldspar, up to 15% biotite and 5% hornblende. Accessory minerals are sphene, epidote, apatite and zircon. Magnetite is the dominant opaque at 2-4% and is weakly replaced by hematite along micro fissures. The granodiorite is divided into two domains, a leucocratic domain of quartz and feldspar and a melanocratic domain of biotite>hornblende-epidote-apatite-sphene-magnetite and zircon. The melanocratic domain foliation is defined by brown, elongate lather of biotite up to 3mm. Hornblende is closely associated with biotite and locally partially converted to metamorphic biotite. Hornblende is absent in samples containing the highest amount of supergene copper minerals. Metamorphism was upper greenschist facies biotite zone. A very well developed penetrative fabric is defined by the melanocratic domain and a second less developed foliation is defined by biotite. Tabular zones of severe grain boundary reduction affect leucocratic domains and results in formation of mosaics of quartz and feldspars with polygonal texture and intensely developed granophyric texture. Myrmekitic textures and elongated quartz grains are common.

In 2012, a petrographic study classified an unmineralized sample of country rock as an orthoclase megacrystic hornblende-biotite monzogranite. Hornblende and biotite make up 15% of the sample. Accessory sphene and sulphides were clustered with the amphibole similar to the melanocratic domain of the foliated granodiorite. A high grade sample from Zone B had only faint foliation but a similar composition to the granodiorite. Garnet, sphene, topaz and fluorite were accessory minerals.

6.2.3 Structural Geology and Metamorphism

The dominant structural direction in the Carmacks Copper Belt is northwest, parallel to the Teslin Fault. Foliation, fractures, structural zones and contacts tend to parallel this direction which appears to control mineralization. The exception is the diorite and gabbro intrusions that have north-easterly trending contacts with the granodiorite. In Zone C foliation in the GMB trends northwest and dips steeply southwest, in Zones A and B it trends 130 and dip on average 70^{o} northeast. The Hoocheekoo Fault runs northwest just off the east side of the STU claims. Feldspar phenocrysts, mafic minerals and mafic schlieren in the GMB are aligned parallel to the dominant direction.

Easterly to north-easterly trending younger, post-mineralization brittle faults such as the DEF fault north of Minto, the normal fault south of Minto and the Miller Fault south of Carmacks Copper have down dropped and rotated large blocks of ground. This block faulting may have caused the difference between flatter ore zones at Minto and steeper zones at Carmacks Copper. Block faulting can cause large degrees of rotation within a short distance as shown by younger sedimentary units at Minto that have been tilted up to 60^{o}. At STU, Hoocheekoo Creek and possibly Camp and Nancy Lee Creeks could be surface expressions of these structures.

The degree of metamorphism determined from petrographic study is upper greenschist facies biotite zone. Igneous hornblende is locally converted to metamorphic prograde biotite. Two penetrative foliations are present; the first is the melanocratic domain and the second is less well defined and dominantly made up of biotite. Metamorphism has caused severe grain boundary reductions up to 1 cm wide in quartz and feldspar grains.

Hood (2012) observed two types of rock fabrics within the Minto pluton at Minto; magmatic flow fabrics and solid-state recrystallization fabrics. Magmatic flow features observed at Minto and STU are mafic magmatic enclaves, mafic mineral accumulations (schlieren), igneous emplacement contacts and magmatic lineation. Solid-state deformation features range from recrystallization microtextures up to shear zones metres wide. A penetrative foliation dips northeast or southwest with variable dips, but averages near horizontal. The shear zones contain internal folds or may be folded with hinges plunging at shallow northwest to southeast angles.

Hood interprets the Minto ore as being hosted within granitoid rocks that were sheared by ductile deformation during emplacement of the GMB. Multiple intrusions were emplaced into an actively deforming environment with the variably sheared host rock separated by weakly deformed barren granodiorites. The shear zones may have controlled fluid flow resulting in concentration of alteration and sulphide deposition. Sulphides may have been further remobilized and concentrated as deformation continued.

Recrystallization microtextures such as elongated quartz grains, grain size reduction along linear zones, myrmekitic and granophyric textures and mosaics of quartz and feldspar were observed in STU thin sections. Hand sample and outcrop scale features such as foliation and shear zones are seen in trenches and core. Weak foliation at Minto is defined by fractures in potassium feldspars, discontinuous biotite wrapping feldspars and the development of lenticular plagioclase and quartz grains formed by recrystallization. Moderate foliation is defined by Kspar megacrysts deformed to kspar augens, an overall grainsize reduction, and biotite forming continuous layers and anastomosing around larger feldspars. The degree of biotite foliation depends on its relative abundance, but hornblende is not typically observed in deformed rocks. These features are observed in hand samples at STU.

At Minto a mylonitic foliation caused by strong deformation is observed. It is identified by an abrupt grainsize reduction at the transition from fine grained mylonite to coarser grained less deformed rocks. Mylonites form within larger deformed or foliated zones, usually paralleling the foliation. At STU, biotite-rich, finer grained intensely foliated rocks in trenches that were mapped historically as schists may be mylonites.

6.2.4 Alteration

Like Minto, alteration at STU is biotite-rich potassic. Airborne radiometric and residual total field maps (Shives et al., 2002) show zones of increased potassium values and higher magnetic field levels proximal to the Minto mine. A slightly weaker and dissected version of this pattern is repeated at STU. The main alteration mineral is biotite, followed by magnetite, quartz and secondary potassium feldspar overgrowths on plagioclase. Late propylitic alteration is typically controlled by brittle fractures. Alteration assemblages are chlorite +/- epidote +/- calcite +/- hematite dusting of feldspars +/- hematite veining. Hematite dusting of plagioclase is common and the resulting pink colour may lead to misidentification as K-feldspar. (Hood, 2012)

At Carmacks Copper no alteration minerals related to mineralization have been identified. Epidote and potassium feldspar are related to the intrusion of post-mineralization pegmatite dykes. Clay and sericite are attributed to weathering. Silicification in the form of veinlets is rare. Alteration of mafics to chlorite, hornblende to biotite, rare garnets, carbonate and anhydrite appear related to assimilation and metasomatism of gneiss units. (Casselman and Arseneau, 2011).

A north trending zone of intense alteration is mapped through Zone A. Two lineaments along aeromagnetic lows intersect at Zone A, one north trending and the other northwest trending. In trenches and core, zones of intensely clay altered granitoids may be the surface expression of the lineaments. Whether the clay zones are caused by faulting or alteration is yet to be determined.

At the Lookout Showing (KOO claims) two northwest trending zones of epidote-chlorite-hematite altered, silicified coarse grained granodiorite occur just north of KOO 57. The alteration hosts a copper-gold showing. The nearby Bonanza Creek prospect contains bornite and chalcopyrite bearing veins and siliceous zones over a 2 km strike extent. Alteration minerals are silica and chlorite. (Pautler, 2015a, 2015b)

6.2.5 Mineralization

Copper mineralization is contained in foliated to gneissic granodiorite, probably formed as shear zones, similar to the Minto mine and the Carmacks Copper deposit. There are 3 zones of mineralization on the STU claims: Zone A in the center, Zone B in the southwest and Zone C in the north. The foliation strikes northwest in all three zones and dips steeply to the southwest in Zone C and northeast in Zones A and B. Copper sulphides occur within the foliated granodiorite and gneiss where they replace mafic minerals. Copper oxides have in turn replaced the copper sulphides where the mineralization has been exposed to oxidation. Copper bearing minerals malachite, azurite, chalcopyrite, bornite, chalcocite and tenorite (copper wad) have been observed in hand samples and drill core. Magnetite is locally abundant in both mineralized and unmineralized rock. The highest gold and silver values are associated with bornite-rich sections.

Deformed sulphides seen at Minto have not been observed at STU while the replacement of mafic minerals by sulphides has not been seen at Minto. At Minto sulphides are variably deformed, forming disseminated grains, thin discontinuous veinlets, elongate blebs, and massive net textures enveloping other minerals.

6.2.5.1 Hypogene Mineralization

In hand samples and thin sections disseminated chalcopyrite is the most common copper sulphide. Bornite is seen in drill core, but rarely on the surface. In high grade drillhole 80-14 bornite and chalcopyrite replace mafic minerals. This is also seen in thin sections from surface samples. Possible gold grains <0.5 microns were observed in two thin sections.

Primary copper minerals at Carmacks Copper are bornite and chalcopyrite with a zoning from bornite on the north through chalcopyrite to pyrite and pyrrhotite on the south. Other sulphides and opaques are magnetite, gold <5 microns, pyrite and pyrrhotite. Molybdenite, native bismuth, bismuthinite, arsenopyrite, and visible gold are rare. Primary sulphides at Minto are: chalcopyrite, bornite, minor pyrite and rare chalcocite. A silver telluride is observed in polished sections and native gold and electrum form inclusions in bornite grains. Coarse free gold is sometimes observed on chloritic fractures cross-cutting sulphide mineralization and may be caused by secondary enrichment. At Minto copper mineral zoning is from bornite on the west towards thicker and lower grade chalcopyrite on the east. The bornite zone contains more magnetite and chalcopyrite than bornite, and has higher grades of copper and precious metals. In the chalcopyrite zone the mineral assemblage is chalcopyrite-pyrite, very minor bornite and no magnetite.

6.2.5.2 Supergene Mineralization

In hand samples and thin sections, malachite is the dominant supergene copper mineral with lesser tenorite, chalcocite, azurite, chrysocolla and possible brochantite. The minerals display textures indicative of transport and open space fill. In sample 82527 (1.07% Cu and 106 ppb Au) malachite and Fe-oxihydroxides were interpreted to have replaced primary Cu-sulphides that had previously replaced mafic grains. Hornblende was absent in samples with the highest supergene copper mineralization.

At Carmacks Copper much of the exposed portion of the deposit is oxidized and the rock is weathered and permeable. Copper minerals in the oxide layer are malachite, cuprite, azurite and tenorite with lesser covellite, digenite, djurlite and native copper. They occur as cavity fill, irregular masses, fractures fill and rims on sulphides. A few primary sulphides are found in the oxide zone and form disseminations or narrow massive bands. Secondary mineralization is not restricted to a single rock type.

Supergene copper minerals are rare at Minto and are assumed to be the eroded remnants of foliated horizons or remobilized copper along brittle faults and fractures. Malachite is most common, followed by chalcocite, azurite and native copper. Earthy hematite indicates oxidation zones.

6.2.5.3 Mineralized Zones – STU Claims

Zone A in the centre of the STU claims is the largest zone and has had the most work done; bulldozer trenching and diamond drilling (figure 5). Historically Zone A extended for 1 km based on trench and drillhole locations, though the lack of historic assay results cannot confirm if there was mineralization in all trenches and drillholes. The underlying soil anomaly is 2 km long, reaching beyond the trenches to the edge of the claim block boundary. North of the zone the soil anomaly swings from a northwest to northerly trend. The intersection of two north-northwest trending magnetic lineaments is coincident with this anomaly. Patchy copper in soil anomalies are found on the west side of the Zone A trenches and the number of soil anomalies decreases rapidly west of the magnetic lineaments. East of Zone A trenches, soil anomalies continue towards the east, thinning out as they approach Zone C.

In 2015, three old trenches were deepened and two new trenches were dug over a 350m area at the north end of the zone. See section 8.3 for details. Surface work has confirmed 350m of mineralization from trench 400W to trench 2015A. Mineralization is open ended and further trenching (infill trenches, deepening old trenches and extending old trenches) is required to extend the mineralization to the 1 km extent reported in historic reports.

Copper grades of 2.8 to 3.5% were returned over 12 to 14m widths in drill core. On surface, Cu grades over similar widths are less than 0.4%. A similar relationship is seen with Ag and Au. Increased amounts of bornite and chalcopyrite below the oxidized layer may account for the higher subsurface grades when compared to surface grades.

The Nic showing, found in 2014, is an eastward extension of Zone A, located 100m from the end of the closest trench. The best sample from hand trenching assayed of 0.55% Cu, 1.9 g/t Ag and 0.27 g/t Au over 6m. A mechanized trench was dug south of the showing in 2015, but failed to intersect significant mineralization. No samples were collected, but a silicified reef was observed in the trench along strike from mineralization uncovered in the hand trenches. The northernmost hand trench did not intersect mineralization but the trench was short and may not have reached bedrock. There is a possibility that the mineralization continues east of the trench.

Zone B is located in the southwest part of the property on a dry ridge; it has the most rock exposure and the largest mapped extent of foliated and gneissic granodiorite of the three zones (figure 6). Mineralization in Zone B is locally high grade but appears to be over narrow widths and has not yet shown consistency below surface. In 2015 selected trenches were deepened and 2 new trenches were dug. See section 8.3 for details. To date sampling has confirmed the narrow high grade mineralization.

Zone C was first discovered by Hudson's Bay in 1971 as a copper in soil anomaly coincident with electromagnetic anomalies. It is the smallest zone with 110m of mineralization between trenches 9+50E and 14+50E reaching a width of 25-30m in trench 14+50E. The zone is open at both ends. Mineralization is significant with values up to 1.59% Cu and 3.7 g/t Au along northwest trending fractures (figure 7).

Prior to trenching, there were 2 separate showings of malachite in Zone c, one at the northwest end measuring 150m by 60m and a smaller showing 30m by 45m at the southeast end close to Camp Creek. The dominant host rock in the northwest showing is a medium grained quartz-feldspar biotite gneiss with >50% mafic zones. At the southeast showing, malachite is hosted in a strongly foliated, fine-grained granitoid. Three trenches over 350m of strike length were excavated in 1979 over the northwest showing, but none over the southeast showing. No results are available and no new trenching has been done in this zone. Three holes were drilled in 1980 but did not intersect mineralization. All holes were drilled to the southeast, which may be parallel to the orientation of the foliated zones.

Rotational block faulting is observed along regional east trending normal fault. At the property scale, steep-sided Hoocheekoo Creek and possibly Camp and Nancy Lee Creeks may also be normal faults with down dropped south sides consistent with the regional pattern. At STU, Zone B may be down dropped and potentially rotated from Zones A and C, exposing a higher level of the mineralized system, prone to more oxidation and migration of copper minerals similar to Carmacks Copper.

6.2.5.4 Mineralized Zones – HCKW Claims

The Gran/Zone 3 occurrence is a weak magnetic anomaly associated with moderate to highly anomalous copper in soil values. It averages 300-500m in width and 1500m in length

(McNaughton, 1994). UKHM delineated five separate northwest trending, moderate to strong copper anomalies over a similar area (Area A) covering 500m by 230-330m wide (Coughlan and Joy 1981). The anomalies were open to the southeast off the claim boundary. In 2008, BC Gold delineated an MMI copper in soil anomaly associated with magnetic and IP chargeability anomalies over the same ground. Two to three drill pads and nine trenches are located in the general area, most likely from work by UKHM in 1982.

The Butter showing is a 450m long MMI copper in soil anomaly on the northeast side of the KOO claims. It is in the same location as a set of copper in soil anomalies from the NOON claims that correlated with a northwest trending magnetic anomaly attributed to the presence of amphibolite (Coughlan and Joy, 1981).

The South Butter is located near the edge of the WCF claims and continues onto Copper North's ground. It overlaps with northwest trending anomalous copper in soil values from UKHM's soil programs, when it was referred to as Area B. In 2009 BC Gold found malachite bearing aplite with weak epidote and muscovite alteration trending 315^{o}. A grab sample from a 0.5m subcrop exposure assayed 0.33% Cu (Pautler, 2015c).

The 4000N zone is a 2km long coincident copper in soil and geophysics anomaly that was detected by airborne geophysics in 1993 and followed up in 1994. The highest copper in soil value was 323 ppm (MacNaughton, 1994). Prospecting in 1994 did not locate any outcrop, but the area has been burnt since that time which may expose some outcrop. There is no record of further surface work on the zone, but an overgrown road/trail leads to within 1 km of the zone.

The Bonanza Creek minfile occurrence is located north of the confluence of Nancy Lee Creek with Williams Creek close to the LED and KOO claims. It consists of multiple bornite and chalcopyrite bearing quartz veins and siliceous zones cutting GMB rocks over a 2 km strike extent. An old trench (Sleep) in the northeast corner of KOO 57 returned 6.82% Cu, 2.33 g/t Au and 65.5 g/t Ag from quartz vein material (Pautler, 2015b), a similar value to assays obtained from Bonanza Creek samples. A smelter shipment from the nearby Bonanza King adit produced an average grade of 5.26% Cu, 66.9 g/t Ag, 4.4 g/t Au from 5.9 tonnes of ore (YGS minfile).

A new copper-gold showing, the Lookout Zone, was discovered 400m north off the edge of KOO 57. Malachite, chalcocite, +/- bornite occur in northwest trending zones of epidote-chlorite-hematite altered, silicified GMB rocks, returning values in the range of 0.63% Cu, 340 ppb Au and 35 g/t Ag (Pautler, 2015b). An open 150m diameter copper in soil anomaly in located in the area of Lookout. Although little work has been done on the Lookout it is similar to Carmacks copper-gold belt mineralization and there is potential for similar mineralization to extend southward onto the KOO claims.

Zone 2 is located on Copper North's ground about 200m south of the WC claim boundary. Zone 2 was one of the discovery outcrops found in 1970 during the staking rush in the Dawson Range. Archer (1971) described the extent of Zone 2 as 125m on surface with a true width of 30m. The zone is hosted in monzonite porphyry and strikes N65^{o}W. Samples over the zone in the trench averaged 1.0% Cu over 45.7m. Trenching on strike did not encounter mineralization, nor did the zone show up in soil samples (Archer, 1971). In 2014 Copper North returned to Zone 2 and expanded the strike length to 500m to the southeast through trenching and drilling. The zone was traced by following up on IP chargeability anomalies. Trenching on the north extension uncovered a cross fault which truncates the zone 20m northeast of the discovery outcrop (Copper North website).

Although Zone 2 is on Copper North's ground, and appears to be truncated, an offset extension of the zone may continue onto the WC claims. At Carmacks Copper some of the mineralized zones are offset by cross faults and that pattern may continue north of Zone 2. There is a possibility that one of the 4000N, South Butter or Gran/Zone 3 showings could be the offset. Another area of interest is a northwest trending magnetic lineament on the WC claims in line with Zone 2. There are 4 historic short trenches or pits dug along the lineament.

The CHE claims (recently BC Gold's Butter claims) have been part of the STU claims in the past. The claims are located adjacent to Zone B and separated from Zone C by a possible fault along Camp Creek. The CHE potentially could host the southeast extension of Zone C. A strong north to north northwest trending aeromagnetic lineament bisects the claims and is a target. It runs parallel to the productive lineament in Zone A and correlates with anomalous MMI copper in soil samples collected by BC Gold. Limited digitizing of 1977 UKHM copper in soil samples on the CHE shows a similar pattern to the BC Gold soil anomalies.

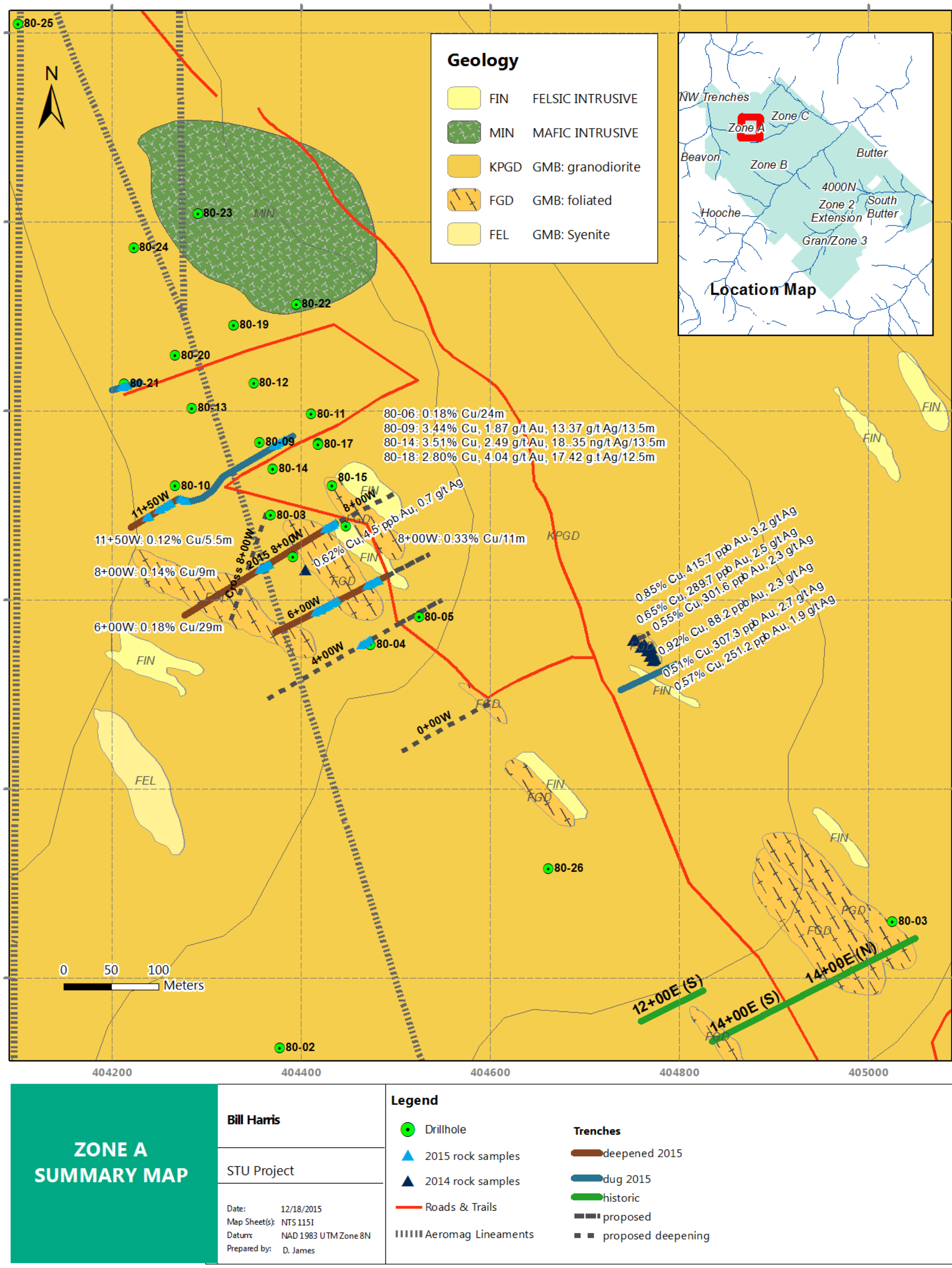


Figure 6: Zone A Detail

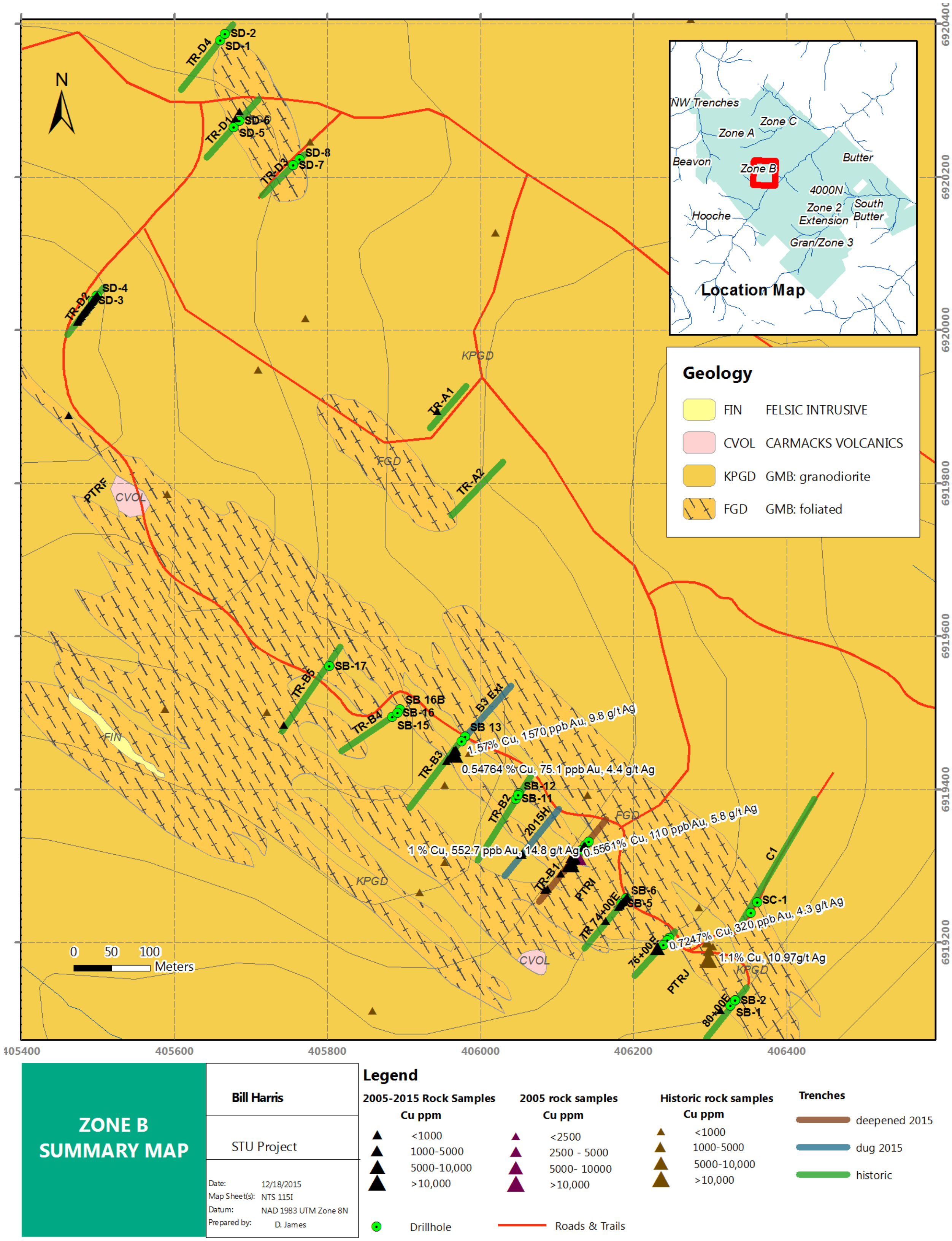


Figure 7: Zone B Detail

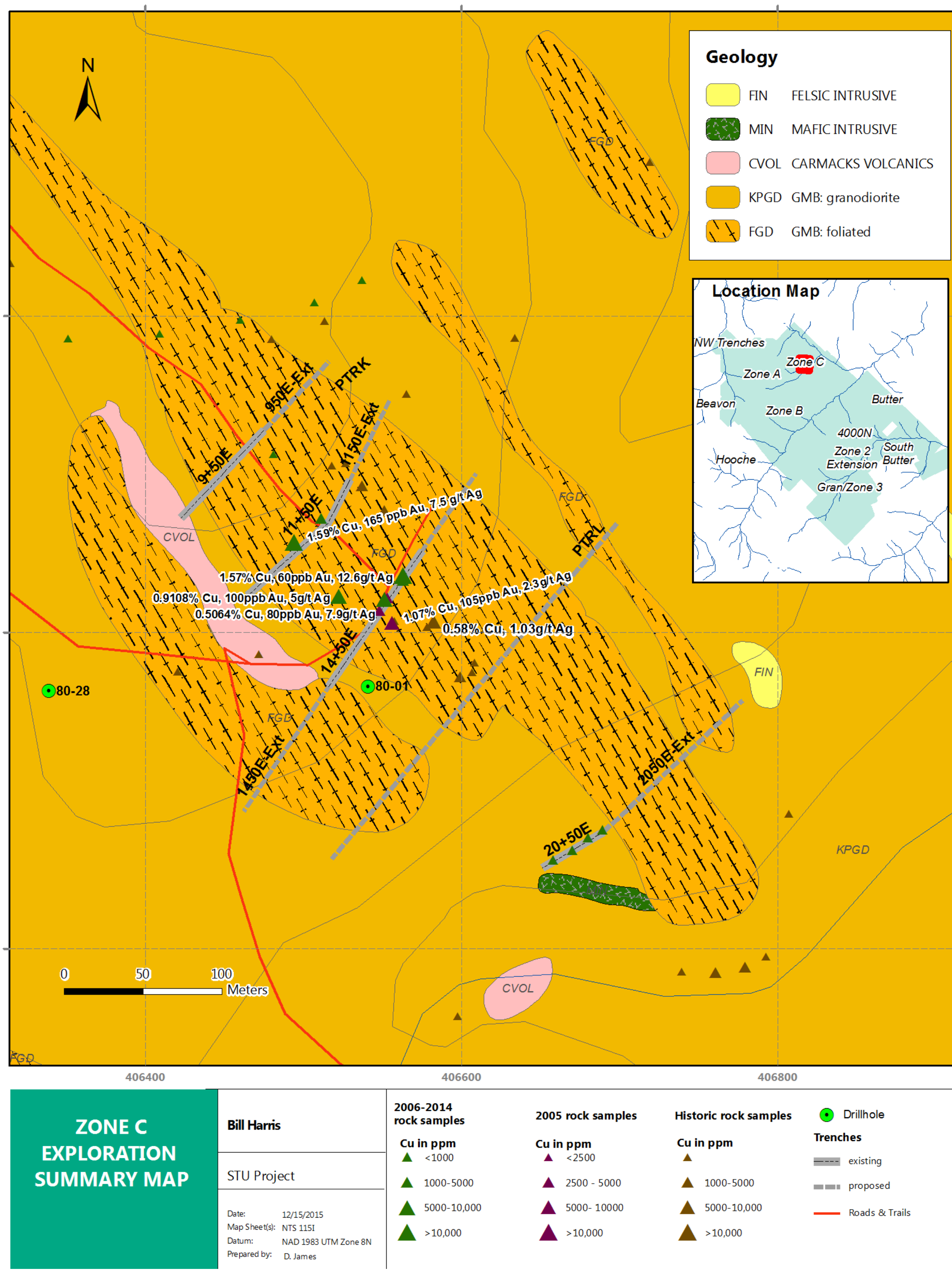


Figure 8: Zone C Detail

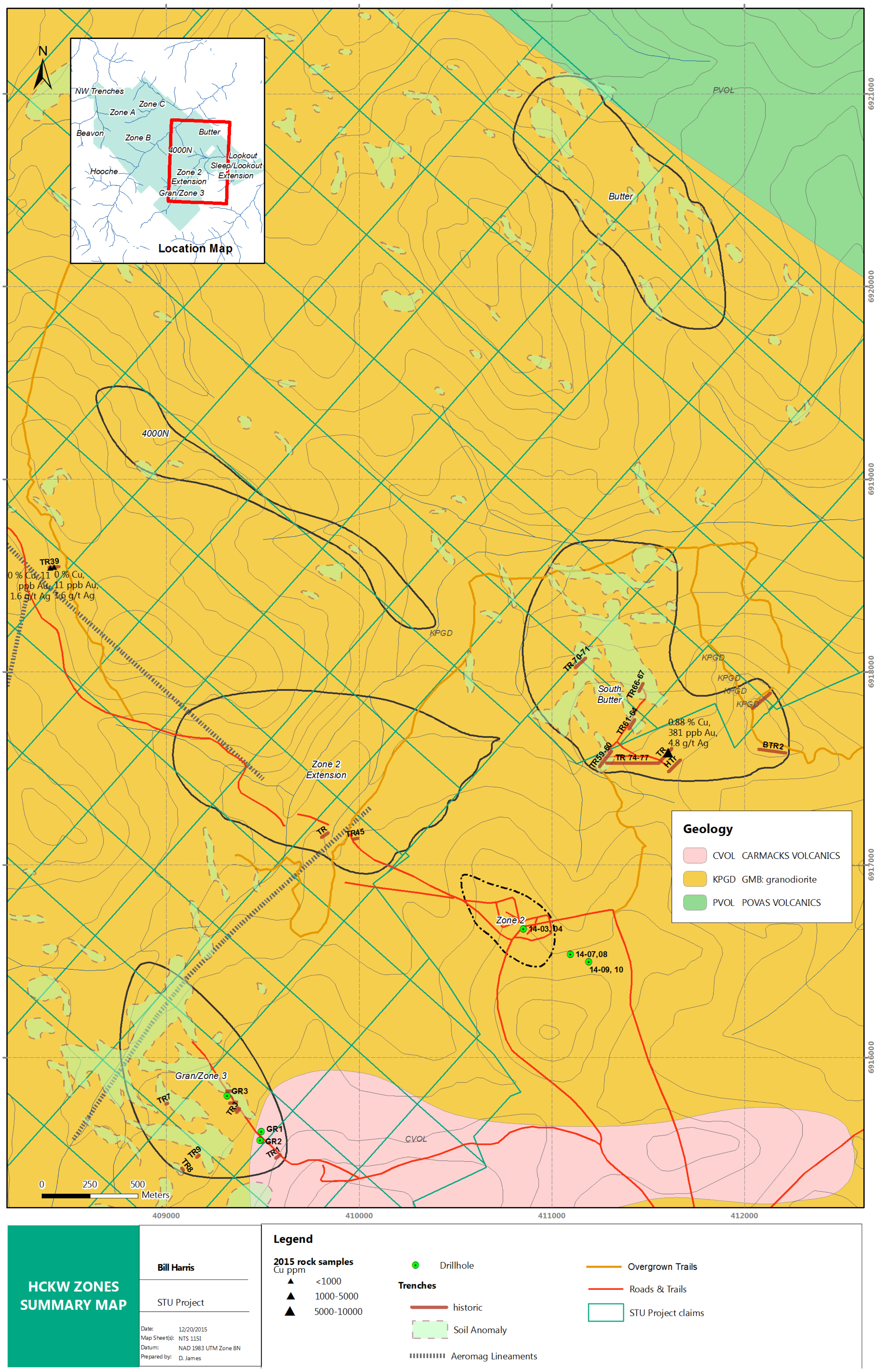


Figure 9: HCKW Zones

7 DEPOSIT TYPES

The deposit type at the STU is a variation of that seen at Minto and Carmacks Copper although there is no agreement on the classification for those deposits.

Over its history, the Minto deposit has been classified as a metamorphosed or digested redbed copper deposit metamorphosed volcanogenic massive sulphide deposit, deformed copper-gold porphyry, magnetite skarn, iron oxide copper gold and a shear-hosted deep porphyry.

Casselman and Arseneau do not assign a deposit type to Carmacks Copper other than to state it is similar to Minto but with fewer sulphides. They believe that it was formed by assimilation of older, copper-bearing volcano-sedimentary rocks of the Povas formation into the younger Jurassic Granite Batholith. These rafts of mineralized rock were metamorphosed and partially to fully assimilated by the granodiorite. Additionally, the rafts would have peeled apart along bedding planes to form large tabular sheets. Later, sulphide mineralization was re-mobilized out of the rafts into the surrounding granodiorite. Following uplift and erosion, the rafts were exposed and the sulphide mineralization was oxidized and precipitated as oxide minerals.

Tafti and Mortensen, 2004 argue the deposits are a variant of typical copper (-gold) porphyries whose formation can be explained using the 'arrested porphyry" model. In this model a typical porphyry deposit under development was rapidly buried to depths greater than 9km which arrested formation of the deposit. The late stage typical porphyry hypogene mineralization and broad phyllic and argillic alteration zones with widespread pyrite did not have time to develop.

Hood (2012) stays with a deep porphyry model, but believes that deformation of the intrusion as it was emplaced is the cause of the foliated host rocks. Deformation caused grain size reduction and left space for deposition of hydrothermal mineralization. The increase in biotite caused continued deformation of the shear zones and remobilization of sulphides.

Pautler (2014) has done considerable work in the region and believes that mineralization within the Carmacks Copper (-Gold) Belt is hosted by schlieren zones (including some volcanic xenoliths) within Jurassic granodiorite and is consistent with a calc-alkaline porphyry copper-gold model which formed at a deep crustal level. Similar deposits are the Kemess Mine and Kemess North deposits in northwestern B.C. which have similar age, chemistry and deposit characteristics; lacking only the foliated rocks associated with mineralization.

Regardless of the label, there is a consensus that the deposits formed at crustal levels deeper than 20 km, that there is a strong structural control on mineralization and that the deposit is a variant of the a porphyry model. An MSc thesis is underway at Carmacks Copper and work by the YGS on Jurassic plutons in the Carmacks Copper belt should add to understanding of the deposits.

8 EXPLORATION

8.1 PROGRAMS

This section covers exploration undertaken on the STU project by Bill Harris from 2005-2015 and work on the HCKW claims by various operators since 2006.

8.1.1 2015

Midnight Mining Services Ltd carried out the program in 2015 for Bill Harris, with the exception of a heritage overview survey that was carried out by Yukon Government over the HCKW claims. The program was funded by Bill Harris with assistance from the Yukon Mineral Exploration Program YMEP Target Evaluation 15-065. The program consisted of mechanized and hand trenching, rehabilitation of old core, road and trail clearing, camp construction, trench sampling, collection of XRF data on trenches, staking, prospecting, reconnaissance mapping and sampling. Work was done on claims STU 1, 3,5,7,29,31,33,35,36,38 KOO 18, 20, WC 7,8,17,18,39 and WCF 7 and 8.

The Midnight Mining Services crew spent 32 days on the project over four time periods: July 3rd to July 6th, July 12th to July 31st, September 24th to September 29th and October 13-14th. The field crew consisted of: Geologist and Project Manager Debbie James, Geologists Bill Mann and Jean Pautler, Prospector Bill Harris, Field Technicians, Mike Linley, Andrew Robinson and Howard Coyne, and Equipment Operators Mark Pierson and Danny Coyne. Between July 23rd and 28th Yukon Geological Survey (YGS) geologists Scott Casselman and Patrick Sack and student Josh Pillsbury visited the site daily and provided assistance in rehabilitating core, core logging and trench mapping. On July 26th, Nicolette Kovacs, a MSc. candidate, visited the site for 0.5 day. Nicolette's thesis topic is the Carmacks Copper deposit. The purpose of the YGS work was to write a paper for the YEG yearly report which is included as appendix 5. The YGS crew's assistance, observations and ideas were invaluable to the STU project and moved it forward considerably both in amount of work accomplished in a short time and in interpreting data.

8.1.2 2005-2014

Complete information on programs on the STU claims from 2005-2014 can be found in assessment reports by R. Robertson, J. Pautler and D. James. Programs have been short and consisted of examination and inspection of the property, rock sampling, surveying of trenches and drill holes, petrography, data compilation, collection of magnetic susceptibility measurements, claim staking and a limited amount of chip sampling of trenches. The information and results from these programs partially confirmed missing surface information from the UKHM work.

BC Gold undertook airborne magnetic surveys, geological mapping, prospecting, MMI soil sampling and IP ground geophysical programs over parts of the HCKW claims from 2006 to 2008.

8.2 TRENCHING & SAMPLING

8.2.1 2015

Between July 23 and 31st, a Hitachi 33 ton excavator was used to clean and deepen 630m in 7 old trenches and dig 5 new trenches over 385m in Zones A and B on the STU claims. Mineralized zones in trenches were chip sampled, and XRF readings were taken at 5m intervals along the length of the trench. Entire trenches were not sampled because of limited time and funding, but XRF readings were used to estimate the presence and magnitude of copper mineralization. Sample intervals were chosen where there was visual evidence of mineralization such as copper minerals, increased biotite, silicification, foliation or anomalous values on the XRF (values >100 ppm). Samples were located using a GPS to locate the trench endpoints, then a measuring tape was strung along the trench in order to record sample start and endpoints. In all, 97 samples were collected, 6 grab samples and 91 chip samples between 0.5-3m long, averaging 1.8 m long. See the sample database in Appendix 2 for complete results and trench maps in figures 9 and 10.

2015 Trenching Summary Table

Zone	Trench	Type	Length (m)	# Samples	Selected results	Length sampled (m)	comments
A	2015A	New	30	5	0.11% Cu 4 other samples >100ppm Cu	Grab samples over 10m	Permafrost and deep overburden. Filled in
A	1150W	Deepened	58	11	0.27% Cu/1.1m 4 other samples >100ppm Cu	23	
A	1150WExt	New	143	13	0.12% Cu/5.5m 8 other samples >100ppm Cu	23.5	Permafrost and deep overburden. Partly filled in.
A	2015 800W	Deepened	187	17	0.14% Cu/9m, 0.33% Cu/10.8m 3 other samples >100ppm Cu	29.8m	
A	600W	Deepened	133	23	0.18% Cu/29m 5 other samples >100ppm Cu	45.5	
A	400W	Cleaned by hand	48	7	All 7 samples >100ppm Cu	13	Cleared to start of deep overburden
A	2015C	New	64	0		0	XRF only, not sampled
B	B3Ext	New	91	0		0	XRF only, not sampled
B	2015H	New	118	3	All 3>100ppm	4 (plus 1 grab)	Only 51m dug
B	B1	Deepened	82	6	0.12% Cu/2m 2 other samples >100ppm	13	Zone chip sampled in 2013
B	7400E	Cleaned by hand	18	12	6 samples>100ppm	18	
Totals			**972**	**97**		**536**	

When trenches were cleaned by hand one of the trench walls (or the floor) was dug out with shovels and mattocks to expose bedrock and granular, weathered bedrock (rock flour) in place below the soil layer.

Deep overburden and permafrost were encountered in trenches 2015A and 1150WExt at the northern end of Zone A. To avoid these areas, the excavator dug where the ground was softer or bedrock closer, resulting in pits separated by undisturbed permafrost along the length of each trench. Trench 2015A and a deep pit at the end of 1150W Ext were filled in after being sampled because the trenches were unstable. 2015H in Zone B was only excavated in 2 locations along its proposed length. It was the last trench dug before the end of the program finished and there was not enough time to finish the entire trench. The remaining trenches are stable, relatively shallow and sloped at both ends to allow wildlife to escape, so were left open for further work.

No trenching occurred on the HCKW claims in 2015. Three samples were collected from prospecting and reconnaissance visits to trenched areas on the HCKW claims (figure 8).

8.2.2 2005-2014

In 2014, systematic hand trenching was done over the Nic showing 200m east of the eastern side of Zone A. Four 2-8m long northeast trending hand trenches were dug about 10m apart and 19 rock samples were collected. Significant results were obtained from 3 of the 4 trenches. The northernmost trench (14-03) intersected a 5m zone of unmineralized granodiorite cut by a 1m wide diorite dyke. Three short lines of soil samples were taken around the showing.

- Trench 14-01 returned 0.55% Cu, 1.9 g/t Ag and 0.27 g/t Au over 6m
- Trench 14-02 returned 0.49% Cu, 2.2 g/t Ag, 0.33 g/t Au over 3.5m
- Trench 14-03 no significant results, 3 samples all under 100 ppm Cu
- Trench 14-04 returned 0.36% Cu, 1.3 g/t Ag, 0.16 g/t Au over 4.0m

In 2013, 38 chip samples were collected in Zone B. Samples were collected from the D2, B1 and B3 trenches where bedrock was close to the surface or previous sample results had been good. Chip samples were taken between 0.5 and 2.0m long on good bedrock exposures. Where exposure was poor samples were either taken at a single location or pieces of rock were collected over a length.

2013 Trench Samples in Zone B

Trench	Length (m) sampled	# of samples	results
D2 (or 1978 trench)	36.5	23	16 > 100ppm copper
B1	6.3	10	>1.0% Cu (the sample was over limit but not assayed), 14.8 g/t Ag and 553 ppb Au over 0.5m. Three other samples >100ppm Cu
B3	22	8	0.55% Cu, 4.4 g/t Ag and 75 ppb Au over 2 metres. Three other samples >100 ppm Cu

Between 1982 and 2014 no mechanized trenching had been done on the STU claims. A few trenches had been partly cleared by hand and 50 grab samples collected between 2005 and 2014. Samples were collected from trenches in all three zones and most of the samples were malachite bearing foliated granodiorite. No consistent sampling along trenches was done due to poorly exposed bedrock in sloughed and overgrown trenches. Results are included in the sample database and are shown on maps.

There are no reports or evidence of trenching on the HCKW claims since the 1980s.

8.2.3 XRF Survey

An XRF was first used on the STU project in 2014. It was not deemed successful, because although there was a rough correlation between higher XRF readings and higher assay results, a visual estimate was deemed to be more accurate (Pautler, 2015). The XRF was used after the samples had been collected in an attempt to replicate known assay results.

In 2015 the XRF was used before samples were collected as an exploration tool to assist in locating areas to sample in trenches. Once a trench had been cleared, a single 90 second reading was taken at 5 intervals along the trench. Copper values were recorded in a field notebook along with information about the sample site. Full spectrum readings were stored on the XRF and downloaded later. The table below and figures 9 and 10 compare XRF readings along trenches with analytical values from the lab. The table contains the point location of the XRF reading, the analysed sample start and finish locations, the analytical result from the analysed sample and the XRF value. In summary, the XRF is a fast way to determine the presence and order of magnitude of the mineralization but is not a substitute for laboratory analysis. Of practical note is that the field crew enjoyed using the XRF. Some of the enjoyment is linked to seeing instant element values scroll up the screen, but part of the pleasure is derived from the instrument's resemblance to Star Trek phasers and the transmogrifier from the Calvin and Hobbes cartoon.

Table comparing XRF and analysed sample results

Trench	XRF reading location along trench (m)	Analysed sample start (m)	Analysed sample end (m)	Analysed Sample result (Cu ppm)	XRF reading in Cu ppm	Analysed sample number
1150W	10	9.0	10.5	671.7	726	615606
1150W	15	15.0	17.2	276.9	210	615609
1150W	20	20.0	22.5	48.8	540	615612
1150W	25	22.5	25.0	87.7	189	615613
1150W	35	34.0	35.7	98.7	368	615614
1150W-Ext	5	4.5	5.8	1024.3	1641	615602
1150W-Ext	10	7.5	10.0	1550.8	455	615604
1150W-Ext	120	120.0	122.0	74.6	0	615617
1150W-Ext	125	124.0	126.0	345.8	0	615621
1150W-Ext	130	128.0	130.0	457.6	5304	615623
1150W-Ext	135	134.0	136.0	664.5	2050	615626

Trench	XRF reading location along trench (m)	Analysed sample start (m)	Analysed sample end (m)	Analysed Sample result (Cu ppm)	XRF reading in Cu ppm	Analysed sample number
2015-800w	0	0.0	2.0	1934.4	323	615627
2015-800w	5	4.0	6.5	4980.4	2125	615629
2015-800w	10	9.2	10.8	2906.8	992	615633
2015-800w	80	80.0	82.5	201.0	0	615635
2015-800w	85	84.0	85.5	1874.5	3969	615637
2015-800w	90	88.0	90.0	1349.9	1190	615641
2015-800w	95	93.0	95.0	105.0	85	615644
2015H	75	74.0	76.0	174.4	370	615723
400W	35	35.0	37.0	371.2	406	615701
400W	40	39.0	40.5	262.2	488	615703
400W	45	44.0	46.0	738.3	677	615706
400W	47	46.0	48.0	952.8	460	615707
600w	10	8.5	10.5	50.8	197	615645
600w	15	14.0	15.5	480.9	922	615648
600w	25	22.5	25.0	66.5	925	615653
600w	60	59.0	60.7	1788.8	1404	615661
600w	65	64.3	66.0	1987.9	10800	615664
600w	70	68.5	71.0	1884.0	3079	615666
600w	75	74.5	76.5	3442.5	1272	615669
600w	80	78.5	80.0	1795.9	996	615672
600w	85	84.0	86.0	906.9	1570	615675
7400E	0	0.0	0.6	248.8	413	615709
7400E	10	9.1	10.5	47.3	0	615716
7400E	15	14.5	15.5	151.9	1548	615719
7400E	18	16.5	18.0	153.5	278	615722
B1	43	42.0	44.0	351.1	2344	615676
B1	45	44.0	46.0	1223.2	444	615677
B1	76	76.0	78.0	39.3	407	615679
B1	80	78.0	80.0	23.7	0	615681

8.3 MAGNETIC SUSCEPTIBILITY

Magnetic susceptibility measurements on samples have been collected since 2012. Multiple readings were taken from different pieces of rock in each sample and either recorded immediately or stored in the data recorder prior to being downloaded onto a computer. Readings were taken through the Kraft bag when measuring soil samples. Readings are recorded in the sample database and can be directly compared to assay results.

There is no correlation between grade and magnetic susceptibility but there is a tendency for samples with high copper values to have either high (>10) or low (<2) magnetic susceptibility. The two populations may represent hypogene mineralization with magnetite and supergene malachite-dominant mineralization where magnetite has been destroyed by alteration and weathering.

Magnetic susceptibility measurements should be collected regularly on STU samples and will assist in identifying magnetite in weathered samples and mapping alteration.

8.4 GPS SURVEYING

The locations of 14 rotary holes and 22 diamond drill holes have been GPS surveyed. Diamond drill collars were marked in 1980 with a log placed in the collar and a metal tag with the hole number inscribed nailed to the log. The logs have since fallen out of the collar hole and rotted or been burnt, but in some cases part of the log and the metal tag have survived. At other locations the tag has been attached to a nearby tree. RAB holes are identified by a pile of cuttings and in some cases a metal tag had been attached to a rock and placed on the pile.

8.5 SOIL SAMPLING

Minimal soil sampling has been done since Bill Harris staked the STU claims in 2005. Other that a small grid over the Nic showing in 2014 and two short lines along roads, most soil samples were collected to supplement rock samples in trenches or areas with no outcrop.

In 2014 three 150m soils line northeast trending were collected around the NIC showing, an eastward extension of Zone A. Thirty nine samples were collected at a spacing of 11-12m. The highest copper value was 30.4 ppm and molybdenum 1.1 ppm. The author (Pautler, 2015) felt that thick overburden and volcanic ash lowered thresholds and suggested that copper values >12.5 ppm are significant and >19 ppm are anomalous.

In 2008, BC Gold collected 107 MMI soil samples over grids in two areas on the Copper claims (present HOO and WC claims). The strongest anomaly was south of the Gran/Zone 3 and may connect with that zone. BC Gold also collected 270 MMI soil samples on the CHE claims in 2008 and 106 MMI soil samples around the Butter showing. Their surveys confirmed or extended anomalies previously delineated in historic work. The MMI soil anomalies have been incorporated into a polygon shapefile but the raw data has not been digitized.

8.6 PETROGRAPHY

Two petrographic studies by different authors were done on trench samples from all three zones in 2008 and 2012. In the 2008 study, 6 malachite stained samples from all three zones were inspected. In 2012, 3 samples of higher grade bornite-bearing specimens from the B and C zones and one sample of nonmineralized granodiorite from the B zone were studied. The sample suite was biased towards oxide mineralization. Findings from the petrography are discussed in section 6.

8.7 GEOPHYSICAL SURVEYS

No geophysical surveys have been done on the STU claims since the 1980s.

In 2007, BCGold carried out an airborne magnetic and radiometric regional survey over the area. Images of the magnetic data are available and lineaments have been interpreted from the survey and used in this report. In 2008, BC gold carried out 12.8 line km of IP surveying on the Copper claims (close to the Gran/Zone 3) and 18 line km over the Peanut claims. Digital data for the IP surveys is included with the assessment reports. Anomalous apparent resistivity and apparent chargeability correlate well on the Copper and may be caused by changes in lithology (Barrios and Newton, 2009).

8.8 STAKING

Thirty seven new claims were staked in 2015, 24 Peanut claims on the west side of the property and 13 LED claims on the east side of the property bordering the Yukon River. The Peanut claims had been held by BC Gold and host Yukon Minfile occurrence 115I127, Hooche which covers a MMI copper in soil anomaly, IP geophysical anomaly and is coincident with the margins of a linear magnetic high (YG minfile). The LED claims were previously held by Golden Predator and cover vein showings.

8.9 HERITAGE POTENTIAL STUDY

During the permitting process for the HCKW claims, a Yukon government archaeologist completed an overview archaeology survey. Small areas having high potential to host heritage sites were identified and provided as shapefiles. Such areas can be managed by avoidance, or by carrying out a ground survey if the area cannot be avoided.

In October 2014 a Heritage Resource Overview Assessment was carried out by Ecofor Consulting Limited for the STU project as required in the Mining Land Permit. The report was included in the assessment report for the property. Figure 10 shows the areas of high or elevated cultural/heritage potential from the two surveys.

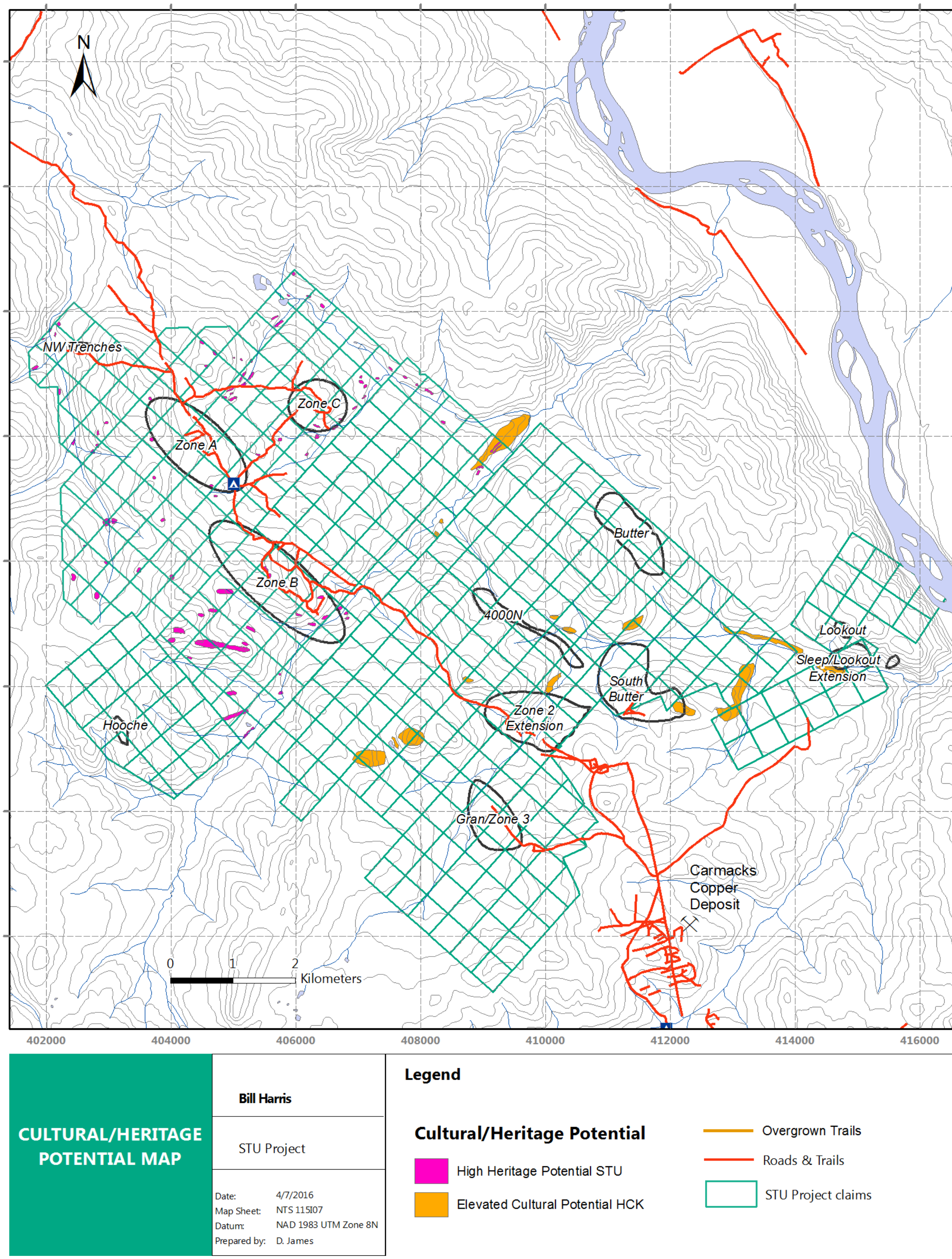


Figure 10: Cultural/Heritage Potential

9 DRILLING

No new holes have been drilled since 1989 (see historic work in Section 5), but in 2015 core from the 1980 program was rehabilitated. Three holes were relogged, one was resampled, and historic sections were digitized to produce a drill database combining historic and new information.

Information about the RAB holes was taken from page size drill sections in a 1989 report. No sample numbers are plotted on the sections but copies of original assay certificates are provided and all values >0.01% Cu are plotted. No information on lithology or alteration was collected.

Diamond drill sections with geology, alteration, mineralization and structure were recovered from Alexco in 2013. The information from these sections has been entered into a drill database and converted into metric. The database is still in need of cleaning because it contains multiple rock codes for the same rock type. Further relogging and sampling of old holes will improve the database, but it has been used to create new sections and a simple 3D model of Zone A. See drill sections in appendix 4 and the YGS paper in appendix 5. Interpreted mineralized bodies are drawn on the sections. They were derived from assays or mineralization noted in the UKHM logs.

Preliminary observations can be made from the sections:

1. There are at least 4 mineralized bodies exposed in the trenches and drillholes
2. Mineralization dips 30-40^{o} to the northeast.
3. The longest body is at least 200m long from north to south, extends 80m downdip and ranges in width from 10-15m.
4. Other larger mineralized bodies have an interpreted downdip extent of 85 to 160m and range in thickness from 2 to 20m wide.
5. The deepest intersection is at 550m elevation, 380m below surface.
6. Values in drillholes so far are higher than surface values in trenches. Cu grades of 2.8 to 3.5% analysed over 12 to 14m widths in drill core. On surface, Cu grades over similar widths are less than 0.4%. A similar relationship is seen with Ag and Au.
7. Oxidation (malachite vs bornite and chalcopyrite) increases southwards, but holes are shallower here (not reaching below 800m elevation) and did not get below oxidation.

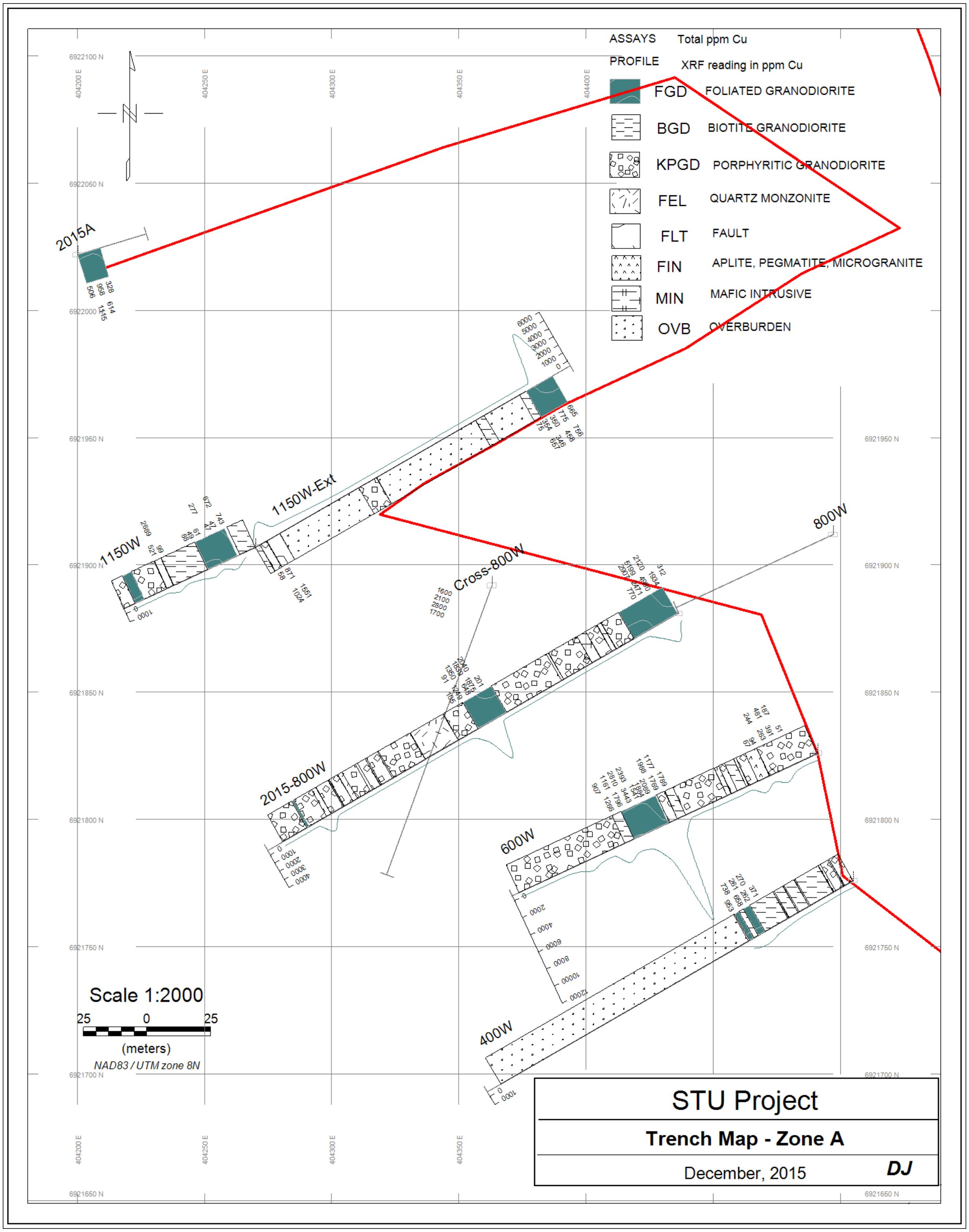


Figure 11: Trench Map Zone A

Map shows trenches that were mapped and sampled in 2015. Profiles along trenches are XRF results in ppm Cu. Chip sample results in ppm Cu are listed opposite profiles. All samples are shown.

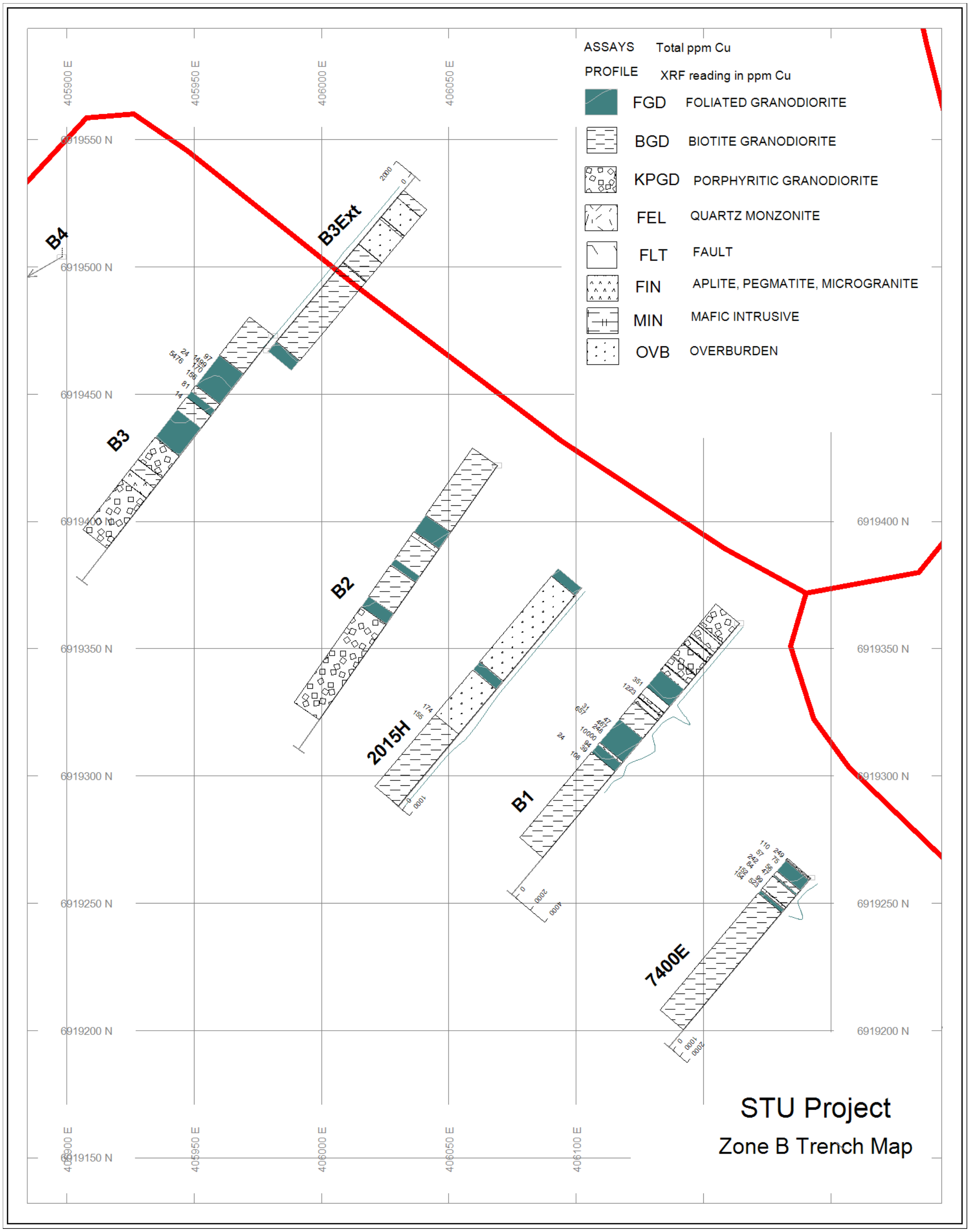


Figure 12: Trench Map Zone B

Map shows trenches that were mapped and sampled in 2015 except for B2 and B3 which were sampled in 2013. Profiles along trenches are XRF results in ppm Cu. Chip sample results in ppm Cu are listed opposite profiles. All samples are shown. Geological units are a combination of historic and 2015 work.

10 ADJACENT PROPERTIES

Golden Predator's DEL claims sit on the east side of the Hoocheekoo Fault across from the STU property in Povas Formation volcanics and sediments. This is not a favourable setting for Carmacks Copper Belt mineralization, but could provide information on the eastern side of KOO claims and the LED claims.

Adjoining the southern claims of the STU Project is Copper North Mining Corp's Carmacks Project. Based on the Preliminary Economic Assessment from June 2014 the deposit has mineral resources of 11.98 million tonnes (measured and indicated) of 0.86% oxide Cu, 0.21% Sulphide Cu, 0.456 g/t au and 4.578 g/t Ag A new prefeasibility study is in progress and will supersede the PEA. (www.coppernorthminingcom November 29, 2015).

Capstone Mining Corp. Minto mine is located north of the STU project. Estimated mineral reserves as at December 31, 2014 are 7,659,000 tonnes proven and probable, grading 1.71% Cu, 6 g/t silver, 0.74 g/t gold. Estimated mineral resources inclusive of reserves are 47,958,000 tonnes of measured and indicated, grading 1.08% copper, 4 g/t silver, 0.40 g/t gold. The mine has an estimated 7 years remaining mine life. (www.capstonemining.com, January 18, 2015)

11 SAMPLING PREPARATION, ANALYSIS AND SECURITY

The 2015 work program resulted in the collection of 99 rock samples by Midnight Mining Services and 31 core samples by the YGS. The rock samples were mostly chip samples from trenches collected from potential mineralized locations and other areas of geological interest. Core samples were 23 from 80-06 for geochemical analysis, 4 from 80-14 and 4 from 80-07 for petrographic analysis.

The rock chip samples collected by Midnight Mining Services during 2015 were placed in marked poly bags, sealed with zap straps, placed into marked rice bags, sealed with zap straps, and delivered directly to the Bureau Veritas preparation facility in Whitehorse. There 1kg of sample was crushed to 70% passing 2mm, then a 250g split was pulverized to 85% passing 75 microns (preparation code PRP70-250). The split was shipped to Bureau Veritas in Vancouver, B.C. for analysis by method MA270, which involves digestion of a 0.5g sample split in a multi acid solution followed by analysis using ICP-ES or ICP-MS. Gold was analysed by method FA430, fire assay fusion, and read using AAS. Nonsulphide copper oxide values were determined using method GC921in which the sample is leached with 5% sulfuric acid for 1 hour at room temperature, filtered, then measured using AAS. Total copper values were taken from MA270 and nonsulphide copper oxide values from GC921. The latter is an analysis method used at Carmacks copper to determine the amount of copper in oxides versus copper in sulphides.

Core samples collected by the YGS were also sent to Bureau Veritas and prepared and analysed using the same methods as those used by Midnight Mining Services.

Bureau Veritas is an independent accredited laboratory located in Vancouver, B.C with a preparation facility in Whitehorse, YT. Both the laboratory and the Whitehorse preparation facility comply with the requirements of ISO 9001:2008 (certificate Number FM 63007).

All sample pulps were discarded after 90 days and rejects were returned to Bill Harris for storage. All of the samples are recorded in MS Excel spreadsheets and the data is exported to GIS programs for viewing and map production.

QAQC samples were inserted on sample tags ending in zero. During sampling, the tag was reserved and the QAQC samples were inserted after collection of the samples. Six standards, 3 blanks and 1 duplicate sample were inserted into the sample stream. A copper gold standard (CDN-CGS-13) was the only standard used. See appendix 2 for information sheets on the standard and analysis techniques.

12 INTERPRETATION AND CONCLUSIONS

12.1 DISCUSSION OF DRILLING

The 2015 program on the STU claims has advanced the project to next stage which is drilling. Although drilling new holes would be the best method, some resampling of the rehabilitated core combined with continued trenching could be used to supplement a smaller drill program.

Resampling of the old core would be a cost efficient method of carrying out a drill program, but there are some concerns.

- Not all of the collars have been located so there is some doubt on the exact hole locations.
- Historic core is BQ and was split when sampled previously so in some intersections there is not much material remaining to sample.
- If all of the remaining half intersections are completely sampled they will be no physical record of the intersections. Partially resampling the intersections is a workaround but is not completely satisfactory.
- The rehabilitated core is in good condition and pieces appear to be in order, but there will always be some question especially in intersections where the core is looser and able to shift around.
- The historic holes alone may not be reliable enough for a resource calculation, mainly for the reasons stated in the previous points; at least some new holes would be required.

New holes should not replicate the old drilling by twinning holes, but should be strategically located between old holes to both confirm historic results and generate new information. In general, new holes should be deeper than historic holes, reaching down to 750-800 m. If possible, oriented core should be used for at least some of the holes, especially those nearest the high grade historic holes. Depending on results of early holes, further drilling should be conducted both to the east and west of old holes. If a model of multiple lenses similar to Carmacks Copper or Minto is followed, there should be more lenses outside of the 4 found so far. The strength of soil anomalies suggests that east is the more favourable direction.

The old core should be relogged and photographed and susceptibility measurements and XRF readings should be collected. Previously unsampled sections, especially any that are mineralized can be resampled.

12.2 DISCUSSION OF TRENCHING

12.2.1 STU Claims

More old trenches should be cleared of overburden and deepened or extended where required. Systematic chip sampling, geological mapping and magnetic susceptibility measurements should be carried out. Proposed new trenches and extended or deepened trenches are listed in the tables below.

Zone A

Zone A historically had the best results of the three zones and recent sampling has confirmed this. The ground north and east of trenches 11+50W is not suitable for trenching. Overburden is deep and permafrost makes digging difficult. This area would be better tested through drilling. Further north where the ground slopes up should be suitable for trenching if anomalies are present.

Proposed trenches in Zone A

Trench	SW coordinate (NAD83 Z8N)	NE coordinate (NAD 83 Z8N)	Length (m)	Comments
PTRM	404096, 6922579	403922, 6922559	175	New
Cross 800W			~150	Deepen and extend NE depending on overburden depth
14-03 (Nic)			20	Deepen and extend
800W			68	Deepen to NE, continuing on from 2015 work.
600W			50	Extend to NE
400W			50	Deepen and extend past 50m mark where hand trenching ended.
000W			~100	Deepen, depending on overburden
		Total	**613**	

Zone C

This zone has received the least work perhaps because the access trail passes through a wet area making regular access difficult and limiting the amount of work. There are only 4 trenches and the second outcrop showing near Camp Creek does not appear to have been trenched. Although small the zone has high copper values along with gold up to 3.7 g/t (sample 526140) and silver up to 15.09 g/t (historic sample 2512). Repeated rock sampling in trenches 11+50E and 14+50E has returned samples in the 0.3-1.6% copper range. UKHM mapping shows that foliated granodiorite continues on either side of the trenched area. Trench extensions and a new trench are listed in the table below.

Proposed trenches in Zone C

Trench	SW coordinate (NAD83 Z8N)	NE coordinate (NAD 83 Z8N)	Length (m)	Comment
950E			60	Extend NE
1150E			60	Extend NE
1450E			155	Extend 60 m to NE and 95m to SW
2050E			120	Extend to NE
PTRL	406518, 6922257	6406698, 6922469	280	
		Total	**319**	

Zone B

Zone B is a lower priority target. More of an understanding of the geometry of mineralization needs to be better understood before advanced work continues. Old trenches should be mapped and XRF readings collected. A few deep exploratory drillholes would be interesting in this area, but more information is needed before they can be planned.

12.2.2 HCKW Claims

Compilation and interpretation of previous work needs to be finished and the showings require prospecting before trenching can occur on the HCKW claims. At some of the zones, Gran/Zone 3 in particular, deep overburden (>15m) makes it difficult to reach bedrock.

12.3 DISCUSSION OF SOIL SAMPLES

12.3.1 STU Claims

Historic soil sampling has been undertaken over most of the STU claims. That information is being used to characterize the footprint of soil anomalies and as an indicator of targets outside the main zones. The survey was carried out over multiple mineralized areas allowing the copper geochemical signature to be recognized. Fifty ppm was the original threshold to characterize an anomaly, but the author suggests that a lower threshold should be used. Similar conclusions were reached by other operators; Archer (1970) recommends values >35 ppm Cu as being anomalous and Pautler (2015) recommends values >19 where deeper overburden and volcanic ash are present.

Soil anomalies in the mineralized zones are not distinct linear highs that can be traced for some distance. Instead they are clusters of >30 ppm with an occasional >50 ppm value that have an overall northwest to north trend. There are thirteen zones at Minto ranging from 1-60m wide and up to 100m apart and 11 zones at Carmacks Copper up to 50m wide and 20-400m apart. That adds up to a lot of potential zones and soil anomalies if STU has a similar geometry to either of those deposits which it appears to have.

Property wide soil sampling on a grid, essentially reproducing the 1977 work, is not recommended at this time. Additional and infill sampling should be considered in certain areas.

1. Areas of the current STU claim configuration that were not covered in the 1977 grid. This is especially important on the southwest side where prospecting uncovered foliated granodiorite and in areas underlain by magnetic lineaments.
2. Low lying areas or places where a number of 1977 samples could not be taken could be resampled using alternate material or analysis methods.
3. The burns that swept through part of the property may have uncovered new outcrop or thawed permafrost and this area could be revisited.

When sampling these areas, samples should be collected that overlap the 1977 grid so that the two surveys can be levelled. MMI soil sampling has been successfully used in the area and Ah horizon sampling has proven success over buried porphyries in BC (assuming a sufficient amount of Ah horizon is present). On north aspect slopes and in valleys were permafrost is an issue vegetation sampling may be suitable. When any resampling occurs it should be analyzed for multiple elements.

12.3.2 HCKW Claims

The HCKW claims have been soil sampled by multiple operators, including recent small MMI surveys, so no more soil sampling is recommended until all possible information has been recovered from the historic work.

An initial compilation of soil anomalies from historic work and recent MMI surveys suggest that the Gran/Zone 3 is surrounded by a significant soil anomaly approx. 2 km long and at least 1 km wide with a possible extension to the southwest (figure 12). Previously, the zone had been split between different operators and was truncated by claim boundaries. The zone is also situated along strike to zones at Carmacks Copper.

12.4 DISCUSSION OF GEOPHYSICS

Casselman's (2007) assessment report contains a compilation of historic geophysics on the Williams Creek/Carmacks Copper property, covering much of the current HCKW claims. This information should be reviewed by a geophysicist and geologist to determine geophysical responses over known zones and that response used to search for new targets. Additionally, assessment reports on 2000 era geophysical surveys by BCGold on their Carmacks properties contain digital geophysical data which can be added to the older information. Following extraction of information from previous surveys, more ground geophysics may be required.

There is some disagreement over the ability of IP surveys to locate mineralization on the STU claims. Following an IP survey over the STU claims in 1978, Smith concluded that the IP anomalies were weak and poorly defined and generally did not coincide with geochemical anomalies over Zones A, B and C. Resistivity anomalies were more common than chargeability anomalies. On the other hand, Casselman (2007) reports on the success Western Copper had in tracing mineralization using IP, though he notes that over a few zones IP did not work and VLF-EM surveys were a better choice.

12.5 EXPLORATION TARGETS

There are multiple exploration targets on the STU project and depending on the time and budget available they can be advanced separately or simultaneously. Advanced targets (mechanized trenching, drilling) are Zones A, B and C on the STU claims and are discussed above. The next most advanced targets are extensions of Zones A and C. These targets would be ready for hand and mechanized trenched after prospecting and possible ground geophysics. There are three early stage targets outside of the three main zones requiring prospecting, mapping, sampling and geophysics prior to trenching. They are listed below and shown in figure 11.

12.5.1 STU Claims

Extension of Zone A. There are soil anomalies north of Zone A coincident with two magnetic lineaments and soil anomalies east of Zone A extending past the Nic showing. These areas are candidates for possible ground geophysics and trenching.

Extension of Zone C. Soil anomalies on the Che claims may cover an extension of Zone C. This area is a candidate for ground geophysics and trenching following compilation of historic data and prospecting.

Early Stage Targets

- Coincident stream, soil and magnetic lineament northeast of Zone C close to the confluence of Camp and Stu Creeks.
- The southwest side of the STU claims where the claims extend past the limit of 1977 soil sampling. A program of grid soil sampling and stream sediment sampling should be undertaken over this area. The first soil samples should be taken to cover the ridge parallel to Zone B where there is both foliated granodiorite and a magnetic lineament. Work in this area can link up to the newly staked Peanut claims.
- Soil anomaly associated with junction of two magnetic lineaments on the west side of the property south of the NW Trenches.

12.5.2 HCKW Claims

The zones on the HCKW claims have not been systematically tested nor are results available for the limited trenching and drilling that have been done. The general elongate structure of the zones and the results from limited sampling indicate that there is potential for the zones to host mineralization similar in geometry and mineralization to the Carmacks Copper deposit and the STU zones. Targets are listed in order of precedence, incorporating ease of access. Should the exploration budget include substantial helicopter time, then work on outlying zones may be moved forward. Further compilation work will be needed prior to starting fieldwork.

Gran/Zone 3. An initial compilation of soil sampling indicates that this zone may be larger than originally thought. Deep overburden will be a concern as will Carmacks volcanics rock that cover the south end of the zone. Few of the historic trenches reached bedrock and the drillholes may have failed to do so as well. A prospecting and trenching target in areas of shallower overburden. Also a geophysical target.

South Butter. Existing trenches could be cleaned and deepened with follow up mapping and prospecting.

Zone 2 Ext. There are no soil anomalies in this area, but Zone 2 did not show up as soil anomaly, so the lack of an anomaly does not mean there is no mineralization. This area is probably the best candidate for ground IP which was used successfully to trace the southern extension of Zone 2 on

Carmacks Copper's ground. Prospecting should be done prior to the survey and as a follow-up to check on any anomalies.

Lookout & Sleep. Soil sampling, mapping and prospecting (initial ridge and spur with follow-up grid sampling) should be carried out in this area. Helicopter access at present, but an overgrown trail reaches to within 1 km. Trail upgrading to allow ATV access would greatly facilitate work on these showings. Compilation work needed prior to further fieldwork.

4000N. A difficult target to tackle. Soil anomalies are spotty, a recent burn makes access difficult and there is little outcrop. A creek draw and a moderate ridge just north of the creek near the middle of the anomaly may be the best place to start prospecting and mapping. An overgrown road reaches close to the zone and it might be most efficient to create a cutline along the spine of the geophysics anomaly with a bulldozer to create access.

Butter. The Butter zone has a smaller soil anomaly than Gran/Zone 3 or South Butter and is not accessible by road. It is a target for hand trenching depending on helicopter availability and depth of overburden. The area has been burnt and no outcrop was detected from the air in 2008 (Pautler, 2015c)

Hooche. No work recommended at this time unless a significant helicopter budget is available. Foliated granodiorite has been mapped in the area, but at present the occurrence is only accessible by helicopter.

13 RECOMMENDATIONS

This section outlines a 2 phase program of geophysics, trenching, resampling old core and prospecting, followed up by diamond drilling. Phase 1 starts at Zone A, then moves to other zones to allow time for results to be received and interpreted before drilling starts in phase 2. If funding and market conditions do not allow for drilling, then phase 1 alone will move the project ahead and prepare it for drilling.

Pre – Program (~ 2 weeks)

- Compile geophysics surveys from 1970s
- Compile HCKW historic data and refine prospecting and trenching targets
- Continue to approach Alexco (owners of UKHM archives) in case there is more information in their archives, namely assay results.
- Research showings and work done on newly staked LED and Peanut claims
- Review past geophysical results with a geophysicist to determine if ground geophysics might be suitable for some of the targets, and if so, what type of geophysics

Field Program Phase 1- ground geophysics, trenching, core resampling, prospecting (1 month)

- Ground geophysics surveys if required
- mobe excavator onto site, upgrading existing roads and trails along the way to allow 4WD access to the STU camp.
- Trenching in zone A
- complete reboxing of old core
- log, photograph and collect magnetic susceptibility and XRF measurements on old core
- resample some of the old core
- trenching in zone C
- prospecting on HCKW targets
- trenching on HCKW targets

Field Program Phase 2 – diamond drilling (1 month)

- Plan drillholes
- Upgrade camp to accommodate drill crew
- Drill program minimum 1000m (depends on budget)

Budget

Where a range of costs are given, the amount used in the total is the middle of the range. It is not possible to know how much (if any) ground geophysics will be required. The budget assumes that a substantial amount of old core will be resampled, but if more new drilling is planned, then less of the old core will be resampled.

Pre-program		
Geologist 7 days @ $500/day	$3,500	
Geophysicist 4 days @ $600/day	$2,400	
GIS/Database support 7 days @$350/day	$2,450	
Pre-program total	$8,350	
Field program – phase 1 (1 month)		
Program preparation	$3,000	
Linecutting	$5,000-$10,000	
Ground Geophysics	$10,000-$30,000	
Geologist 30 days @ $500/day	$15,000	
2 Junior Geologists 60 days @$400/day	$24,000	
Machine Operator 20 days @ $400/day	$10,000	
Camp Person/Cook 30 days @ $400/day	$12,000	
2 Field Technicians 60@ $350/day	$21,000	
Office Support	$1,000	
Helicopter –10 hours @ $1500/hour	$15,000	
Rock and core sample analysis, 300-600 samples@ $60/sample	$27,000	
Soil samples – 400 @ $30/sample	$12,000	
Sample standards	$500	
Camp costs, (food, fuel, equipment) 200 person days @ $120/day	$24,000	
Truck rental, 2 @ $150/day each	$9,000	
ATV rental, 3 @ $50/day each	$4,500	
Field gear (bags, flagging, tools, cameras, packs, etc.)	$3,000	
Excavator rental, 20 days @ $2,300/day	$46,000	
Excavator fuel	$7,000	
Vehicle fuel (travel and field)	$2,000	
Pre-program & Phase 1 Subtotal	$263,500	
Contingency (15%)		$39,500
Phase 1 Total	**$303,000**	
Field program – phase 2 (20-25 days, 1000m drilled)		
Program preparation	$3,000	
Camp upgrading	$10,000	
Geologist 25 days @ $500/day	$12,500	
Junior Geologist 20 days @$400/day	$8,000	
First Aid/Cook 25 days @ $500/day	$12,500	
Field Technician 25 days@ $350/day	$8,750	
Drilling costs 1,000 m @$120/m	$120,000	
Office Support	$1,000	
Rock and core sample analysis, 200 samples@ $60/sample	$12,000	

Sample standards	$500
Camp costs, (food, fuel, equipment) 175 person days @ $120/day	$21,000
Expediting	$5,000
Truck rental, 2 @ $150/day each	$7,500
ATV rental, 2 @ $50/day each	$2,500
Field gear (bags, flagging, tools, cameras, packs, etc.)	$3,000
Bulldozer rental, 10 days @$1800/day	$18,000
Bulldozer fuel	$4,000
Vehicle fuel (travel and field)	$2,000
Phase 2 Subtotal	$251,250
Contingency (15%)	$37,690
Phase 2 Total	$288,940

Report & Data Management

Report writing, 10 days @ $500/day	$3,500
GIS, digitizing, database compilation, 7 days @ 350/day	$2,450
Report Subtotal	$5,950

All phases Total	**$597,890**

Figure 13: Early Stage and Extension Exploration Targets STU and CHE Claims

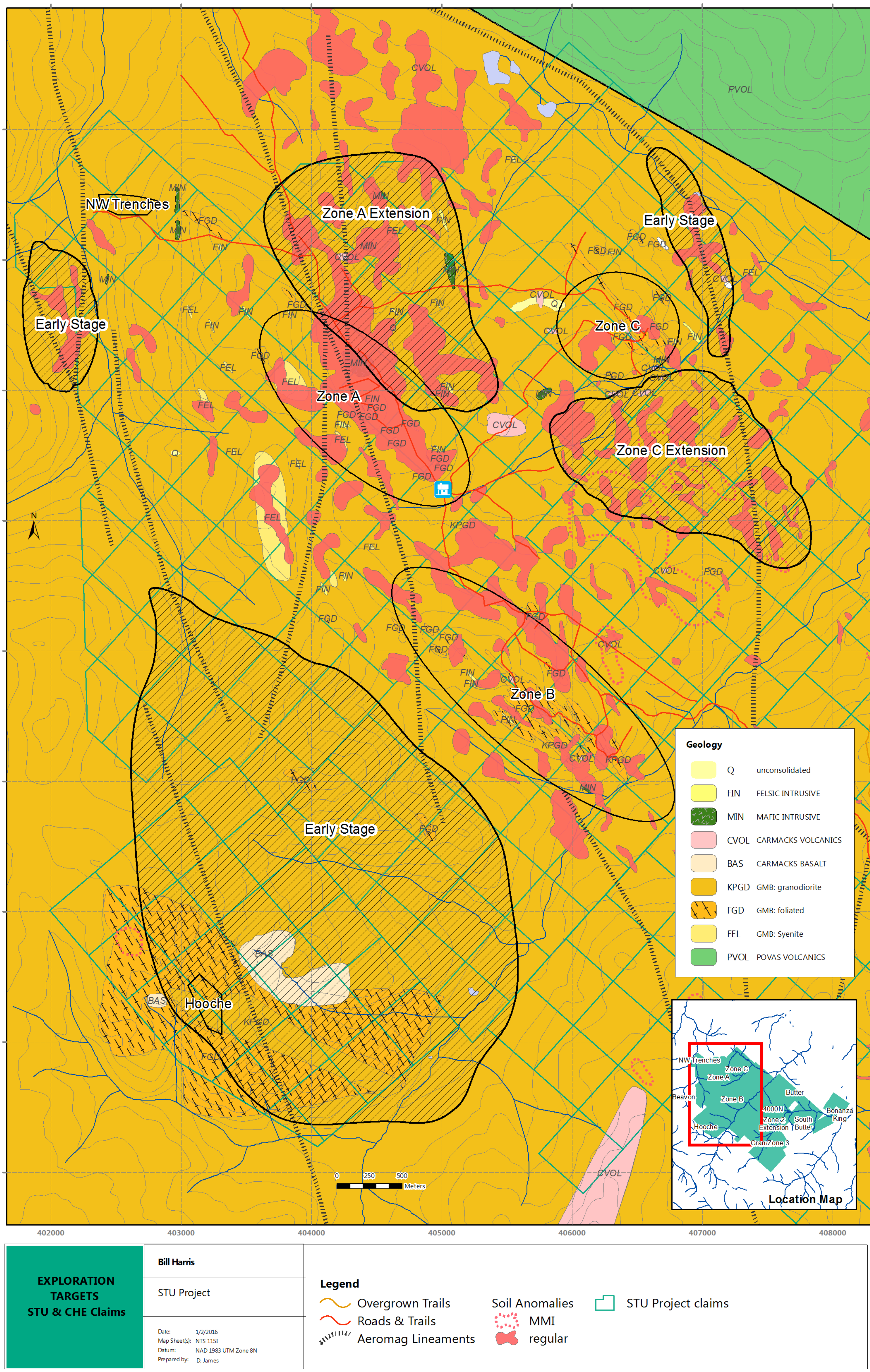
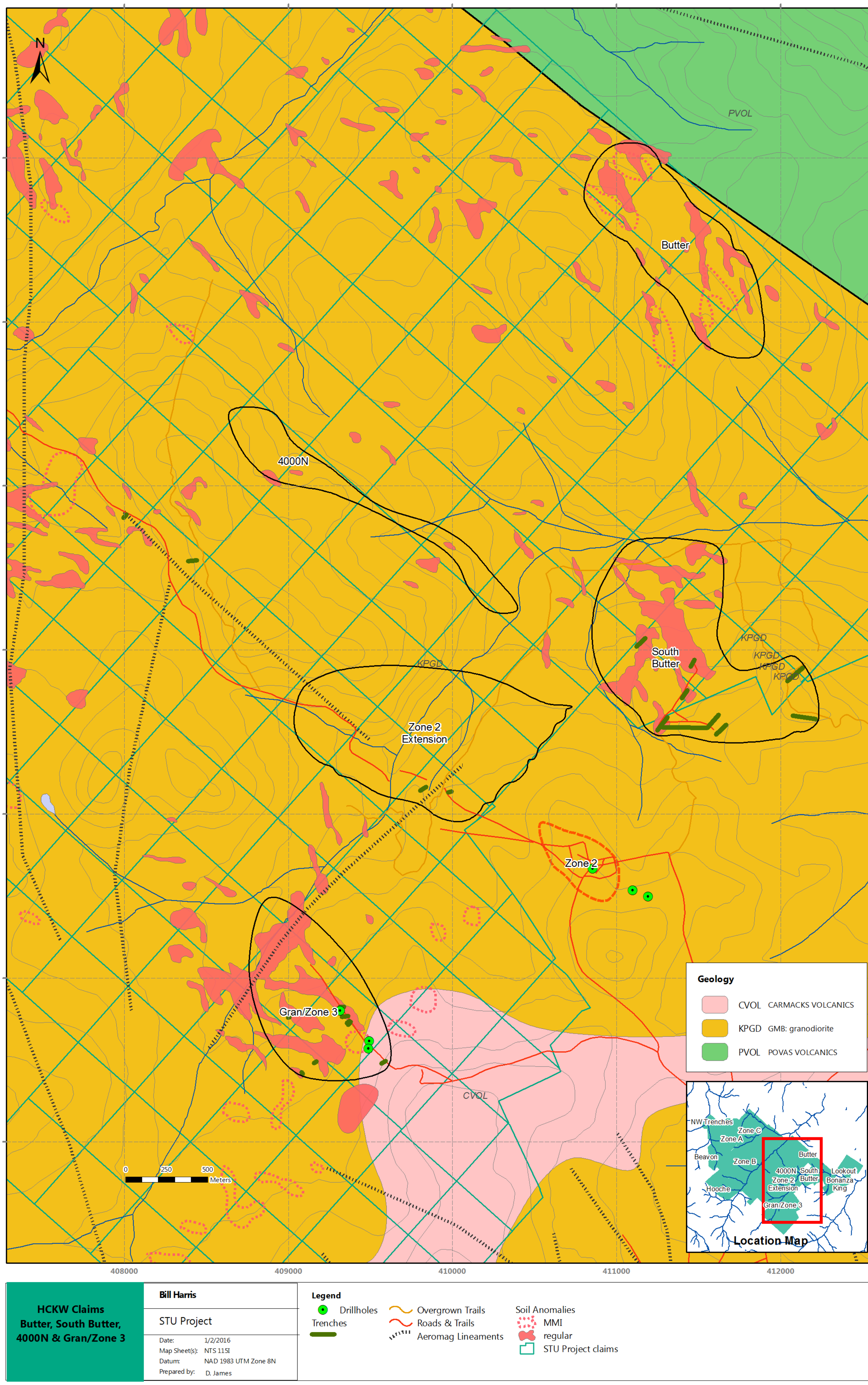


Figure 14: Exploration Targets HCKW Claims



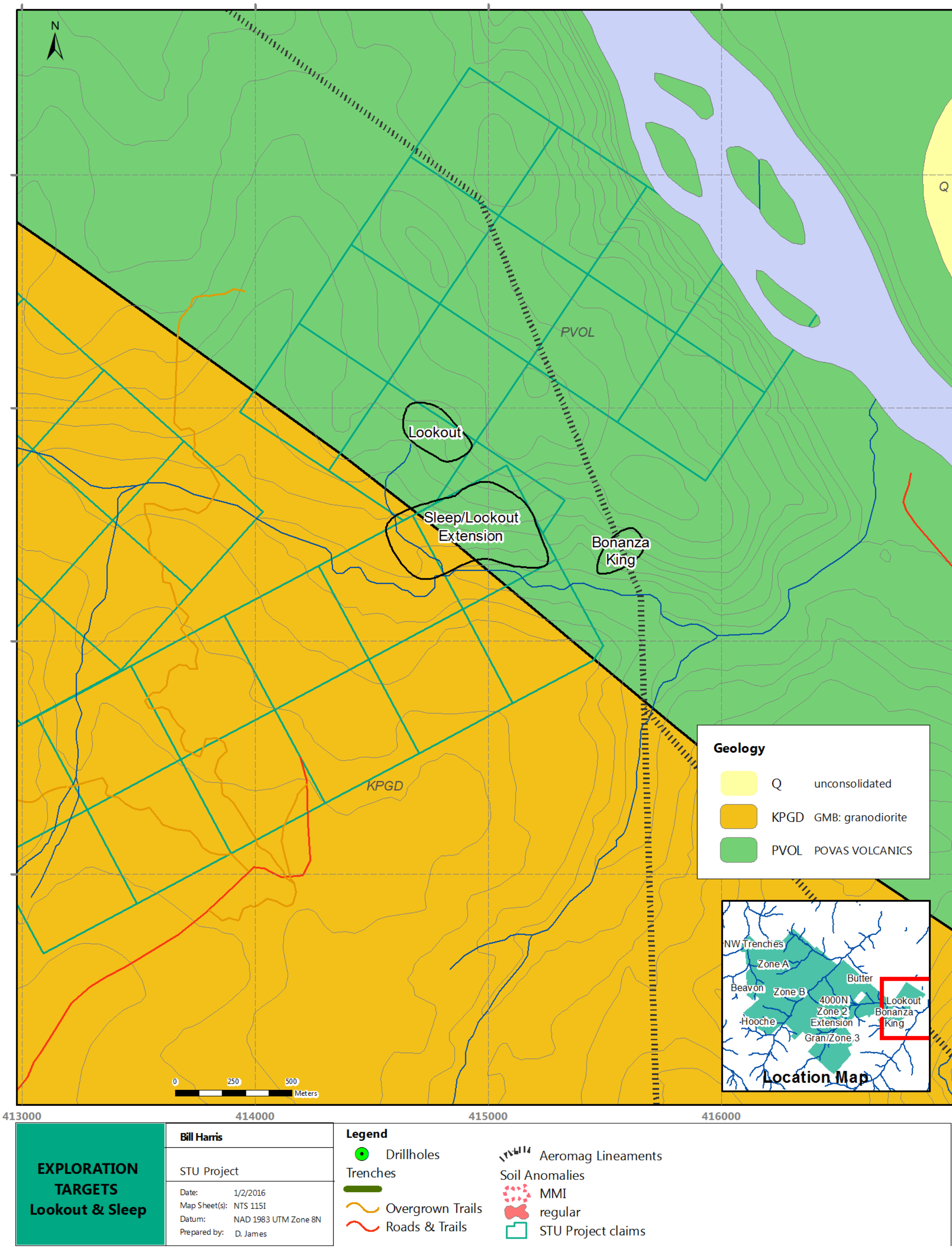


Figure 15: Exploration Targets HCKW Claims (cont.)

12 REFERENCES

Archer, A.R., 1971. Geology and Geochemistry of the Williams Creek property, Yukon. Assessment report #060203.

Archer, A. R. 1973. Report on 1972 geochemical diamond drilling and trenching program, Williams creek Property. Report for Dawson Creek Joint Venture. Assessment report #060114.

Barrios, A. and Newton, G., 2009. 2009 geophysical report on the Copper property. Report for BCGold Corporation. Assessment report #095198.

Casselman, S.G., 2008. 2007 Assessment report for the Carmacks Copper project. 2 Volumes. Report for Western Copper Corporation. Assessment report #094996.

Casselman, S. and Arseneau, G., 2011. 2011 Qualifying report for the Carmacks Copper Deposit, Yukon Territory. Report for Copper North Mining Corp. and Carmacks Mining Corp. SEDAR.

Coughlan, L.L. and Joy, R.J., 1981. 1981 geological and geochemical report on the NOON claim group, Hoocheekoo Creek area. Report for United Keno Hill Mines Ltd. Assessment report #090929.

Deklerk, R. and Traynor, S. (compilers), 2004. "Yukon Minfile 2004 – a database of mineral occurrences", Yukon Geological Survey (website and CD-ROM).

Doherty, A., 2008. Yukon Mining Incentive Program report on the Peanut claims: Focused regional program Carmacks area, Yukon. Report for BCGold Corp. YMIP 07-

Fisher, J, 1981: "United Keno Hill Mines Ltd., Hoocheekoo Creek area, Yukon", Assessment report # 090729 on diamond drilling.

Gordey, S. P. and Makepeace, A.J., 2000. "Yukon Digital Geology", Geological Survey of Canada, Open File D3826, and Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada, Open File 1999-1(D).

Hart, C. J. R., 2002. "The Geological Framework of the Yukon Territory", in Yukon Geological Survey website.

Hood, S. et al., 2009. High-grade hydrothermal copper-gold mineralization in foliated granitoids at the Minto mine, central Yukon. *In*: Yukon Exploration and Geology 2008, L.H. Weston et al. (eds), Yukon Geological Survey, p. 137-146.

Huss, C. et al. Carmacks Copper Project, NI 43-101 technical report, feasibility study, Vol. 1, Yukon Territory, Canada. Report for Copper North. SEDAR.

James, D., 2014. Assessment report on the STU property. Report for Bill Harris. Asseement report #TBD.

Joy, R.J., 1981. 1981 geological and geochemical report on the MOON claim group, Hoocheekoo Creek area, Whitehorse mining district. Report for United Keno Hill Mines Ltd. Assessment report #090930.

Kreft, B., 2002. Report on phase #1 alkalic porphyry copper gold recce project. YMIP Focused Regional Module 2002-9.

Leblanc, E. and Joy, R.J., 1980. 1980 geological and geochemical report on the MOON claim group, Hoocheekoo Creek area, Whitehorse mining district. Report for United Keno Hill Mines Limited. Assessment report #090771.

Mitchell, D.C., 1971. Report on geochemical soil and magnetometer surveys. Report for Hudson's Bay Oil and Gas Company Limited. Assessment report #061111.

McNaughton, K. 1994. Carmacks Copper Project 1994 Exploration Program. Report for Western Copper Holdings Limited. YMIP 94-029.

Mortensen, J. K. and Tafti, R., 2002. "Nature and origin of copper-gold mineralization at the Minto and Williams Creek deposits, west-central Yukon: Preliminary investigations", in Yukon Exploration and Geology 2002, D. S. Emond and L. L. Lewis (eds.), Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada, p. 165-174.

Newman. D. and Joy, R.J., 1980. 1980 geological and geochemical report on the NOON claim group, Hoocheekoo Creek area, Whitehorse mining district. Report for United Keno Hill Mines Limited. Assessment report #090775.

Newton, G., 2008. 2008 Geochemical report on the BREAD property. Report for BCGold Corporation. Assessment report #095208.

Newton, G., 2008. 2008 geochemical report on the BUTTER property. Report for BCGold Corporation. Assessment report #095209.

Olsen, D.P., 1974. Geophysical and geochemical report on the Bay claims, Hoocheekoo Creek area, Yukon Territory. Report for Hudson's Bay Oil and Gas Company Limited. Assessment report #061099.

Ouellette, D., 1989. "Report on the 1989 percussion drilling of the STU property". Report for United Keno Hill Mines Limited. Assessment report # 0902854.

Pautler, J., 2007. Geological, geochemical and geophysical assessment report on the STU Property. Report for Bill Harris. Assessment report #094737.

Pautler, J. 2009. Geological, geochemical, petrographic and compilation assessment report on the STU Property. Report for Bill Harris. Assessment report # 095195.

Pautler, J., 2011. Geological and geochemical assessment report on the STU property. Report for Bill Harris. Assessment report #095273.

Pautler, J., 2012. "Petrographic and Geophysical assessment report on the STU property in the Carmacks Copper-Gold Belt, Yukon". Report for Northern Tiger Resources Inc. Assessment report #096165.

Pautler, J., 2015. Geological, geochemical, trenching and archaeological report on the STU project in the Carmacks copper-Gold Blet, Yukon. Report for Bill Harris. YMEP Project no. 14-081.

Pearson, W. N. and Clark, A. H., 1979. "The Minto copper deposit, Yukon Territory: A metamorphosed orebody in the Yukon Crystalline Terrane". Economic Geology, vol. 74, p.1577-1599.

Robertson, R., 2006. 2005 assessment report on the STU Property. Report for Midnight Mines Ltd. Assessment report #094592.

Ryan, S., 2007a. Geochemical report JAM 1-24. Assessment report #094843.

Ryan, S., 2007b. Geochemical report BREAD 1-24. Assessment report #094842.

Sidhu, Gary., 2009. Technical report for Copper claims: target evaluation program, Carmacks area, Yukon. Report for BCGold Corp. YEIP report 2008-036.

Smith, C.A.S., Meikle, J.C., and Roots, C.F. (editors), 2004. Ecoregions of the Yukon Territory: Biophysical properties of Yukon landscapes; Agriculture and Agri-Food Canada, PARC Technical Bulletin No. 04-01, Summerland, British Columbia, 313 p.

Smith, Paul A., 1979. Report on the induced polarization & resistivity survey on the STU & HI claim groups. Report for United Keno Hill Mines Limited. Assessment report #090428.

Schulze, C., 2008. Geological and Geochemical Surveying on the DEL claim block. Assessment report #095064.

Shives, R.B.K, et al., 2002. Airborne multisensor geophysical survey, Minto, Yukon. GSC Open File 4333, EGSD 2002-20D.

SRK Consulting, 2008. Technical Report Minto Mine, Yukon. Report for Minto Explorations Ltd. SEDAR.

Smith, P.A., 1979. Report on the induced polarization & resistivity survey on the STU & HI claim groups. Report for United Keno hill Mines Limited. Assessment report #090428.

Tafti, R. and Mortensen, J. K. 2003. “Early Jurassic porphyry (?) copper (-gold) deposits at Minto and Williams Creek, Carmacks Copper Belt, western Yukon”, in Yukon Exploration and Geology 2003, Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada, p. 289-303.

Tempelman-Kluit, D. J., 1981, Description of the Stu property, Yukon Geology and Exploration 1979-80: Whitehorse, Yukon, Geology Section, Department of Indian and Northern Affairs, p. 262-263.

Tempelman-Kluit, D. J., 1984. “Geology of the Laberge and Carmacks map sheets”, Geological Survey of Canada Open File 1101.

Thompson, A.J.B and Thompson, J.F.H (eds), 1996. *Atlas of Alteration: A Field and petrographic guide to hydrothermal alteration minerals*. Geological Association of Canada, Mineral Deposits Division.

Watson, K.W. and Joy, R.J., 1977. “1977 Geological, geochemical and geophysical report on the STU claim group, Hoocheekoo Creek area, Whitehorse Mining District”, Assessment report # 090248.

Websites

BC Gold Corporation. www.bcgoldcompany.com.

Capstone Mining Corp. www.capstonemining.com

Copper North Mining Corp. www.coppernorthmining.com

13 CERTIFICATE OF AUTHOR

I, Deborah Ann Rachel James, do hereby certify that:

1) I, Deborah Ann Rachel James of 11-3194 Gibbins Road, Duncan, British Columbia am self-employed as a consultant geologist and have authored this report.

2) I am a graduate of the University of British Columbia with a B.Sc. degree in Geological Sciences

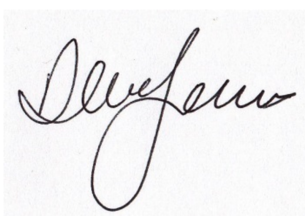
3) I am a geologist with more than ten years of experience in the Canadian Cordillera and ten years of experience in Yukon.

4) I am registered as a professional geoscientist with the Association of Professional Engineers and Geoscientists of B.C. #094996.

5) I was the senior geologist and project manager on the 2015 program on the STU Project.

6) I have no direct or indirect interest in the STU Project, which is the subject of this report.

DATED at Duncan, British Columbia, this 29th day of December, 2015



____

Debbie James
Suite 11, 3194 Gibbins Road
Duncan, BC, V9L 1G8

Appendix 1
CLAIM LIST

GRANT NUMBER	CLAIM LABEL	OWNER	RECORDED DATE	EXPIRY DATE	NEW EXPIRY DATE
YC37770	STU 1	Bill Harris - 100%	12/13/2004	12/13/2014	12/13/2022
YC37771	STU 2	Bill Harris - 100%	12/13/2004	12/13/2014	12/13/2022
YC37772	STU 3	Bill Harris - 100%	12/13/2004	12/13/2014	12/13/2022
YC37773	STU 4	Bill Harris - 100%	12/13/2004	12/13/2014	12/13/2022
YC37774	STU 5	Bill Harris - 100%	12/13/2004	12/13/2014	12/13/2022
YC37775	STU 6	Bill Harris - 100%	12/13/2004	12/13/2014	12/13/2022
YC37776	STU 7	Bill Harris - 100%	12/13/2004	12/13/2014	12/13/2022
YC37777	STU 8	Bill Harris - 100%	12/13/2004	12/13/2014	12/13/2022
YC37778	STU 9	Bill Harris - 100%	12/13/2004	12/13/2014	12/13/2022
YC37779	STU 10	Bill Harris - 100%	12/13/2004	12/13/2014	12/13/2022
YC37780	STU 31	Bill Harris - 100%	12/13/2004	12/13/2014	12/13/2022
YC37781	STU 32	Bill Harris - 100%	12/13/2004	12/13/2014	12/13/2022
YC37782	STU 33	Bill Harris - 100%	12/13/2004	12/13/2014	12/13/2022
YC37783	STU 34	Bill Harris - 100%	12/13/2004	12/13/2014	12/13/2022
YC37784	STU 35	Bill Harris - 100%	12/13/2004	12/13/2014	12/13/2022
YC37785	STU 36	Bill Harris - 100%	12/13/2004	12/13/2014	12/13/2022
YC37786	STU 37	Bill Harris - 100%	12/13/2004	12/13/2014	12/13/2022
YC37787	STU 38	Bill Harris - 100%	12/13/2004	12/13/2014	12/13/2022
YC37788	STU 21	Bill Harris - 100%	12/21/2004	6/21/2015	12/13/2022
YC37789	STU 22	Bill Harris - 100%	12/21/2004	6/21/2015	12/13/2022
YC37790	STU 23	Bill Harris - 100%	12/21/2004	6/21/2015	12/13/2022
YC37791	STU 24	Bill Harris - 100%	12/21/2004	6/21/2015	12/13/2022
YC37792	STU 25	Bill Harris - 100%	12/21/2004	6/21/2015	12/13/2022
YC37793	STU 26	Bill Harris - 100%	12/21/2004	6/21/2015	12/13/2022
YC37794	STU 27	Bill Harris - 100%	12/21/2004	6/21/2015	12/13/2022
YC37795	STU 28	Bill Harris - 100%	12/21/2004	6/21/2015	12/13/2022
YC40201	STU 55	Bill Harris - 100%	8/29/2005	11/29/2015	12/13/2022
YC40202	STU 56	Bill Harris - 100%	8/29/2005	11/29/2015	12/13/2022
YC40203	STU 57	Bill Harris - 100%	8/29/2005	11/29/2015	12/13/2022
YC40204	STU 58	Bill Harris - 100%	8/29/2005	11/29/2015	12/13/2022
YC40205	STU 59	Bill Harris - 100%	8/29/2005	11/29/2015	12/13/2022
YC40206	STU 60	Bill Harris - 100%	8/29/2005	11/29/2015	12/13/2022
YC40207	STU 61	Bill Harris - 100%	8/29/2005	11/29/2015	12/13/2022
YC40208	STU 62	Bill Harris - 100%	8/29/2005	11/29/2015	12/13/2022
YC40209	STU 63	Bill Harris - 100%	8/29/2005	11/29/2015	12/13/2022
YC40210	STU 64	Bill Harris - 100%	8/29/2005	11/29/2015	12/13/2022
YC40211	STU 65	Bill Harris - 100%	8/29/2005	11/29/2015	12/13/2022
YC40212	STU 66	Bill Harris - 100%	8/29/2005	11/29/2014	12/13/2022
YC40213	STU 67	Bill Harris - 100%	8/29/2005	11/29/2014	12/13/2022
YC40214	STU 68	Bill Harris - 100%	8/29/2005	11/29/2014	12/13/2022
YC40215	STU 69	Bill Harris - 100%	8/29/2005	11/29/2014	12/13/2022
YC40216	STU 70	Bill Harris - 100%	8/29/2005	11/29/2014	12/13/2022
YC40217	STU 71	Bill Harris - 100%	8/29/2005	11/29/2014	12/13/2022
YC40218	STU 72	Bill Harris - 100%	8/29/2005	11/29/2014	12/13/2022
YC40249	STU 11	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40250	STU 12	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40251	STU 13	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40252	STU 14	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40253	STU 15	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40254	STU 16	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40255	STU 17	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40256	STU 18	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40257	STU 19	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40258	STU 20	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40259	STU 29	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022

GRANT NUMBER	CLAIM LABEL	OWNER	RECORDED DATE	EXPIRY DATE	NEW EXPIRY DATE
YC40260	STU 30	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40261	STU 39	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40262	STU 40	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40263	STU 41	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40264	STU 42	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40265	STU 43	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40266	STU 44	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40267	STU 45	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40268	STU 46	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40269	STU 47	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40270	STU 48	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40271	STU 49	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40272	STU 50	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40273	STU 51	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40274	STU 52	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40275	STU 53	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC40276	STU 54	Bill Harris - 100%	9/19/2005	9/19/2015	12/13/2022
YC65256	STU 73	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65257	STU 74	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65258	STU 75	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65259	STU 76	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65260	STU 77	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65261	STU 78	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65262	STU 79	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65263	STU 80	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65264	STU 81	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65265	STU 82	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65266	STU 83	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65267	STU 84	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65268	STU 85	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65269	STU 86	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65270	STU 87	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65271	STU 88	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65272	STU 89	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65273	STU 90	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65274	STU 91	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65275	STU 92	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65276	STU 93	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65277	STU 94	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65278	STU 95	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65279	STU 96	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65280	STU 97	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65281	STU 98	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65282	STU 99	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65283	STU 100	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65284	STU 101	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65285	STU 102	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65286	STU 103	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65287	STU 104	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65288	STU 105	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65289	STU 106	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65290	STU 107	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65291	STU 108	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65292	STU 109	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65293	STU 110	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022

GRANT NUMBER	CLAIM LABEL	OWNER	RECORDED DATE	EXPIRY DATE	NEW EXPIRY DATE
YC65294	STU 111	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65295	STU 112	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65296	STU 113	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65297	STU 114	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65298	STU 115	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2022
YC65299	STU 116	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2021
YC65300	STU 117	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2021
YC65301	STU 118	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2021
YC65302	STU 119	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2021
YC65303	STU 120	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2021
YC65304	STU 121	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2021
YC65305	STU 122	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2021
YC65306	STU 123	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2021
YC65307	STU 124	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2021
YC65308	STU 125	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2021
YC65309	STU 126	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2021
YC65310	STU 127	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2021
YC65311	STU 128	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2021
YC65312	STU 129	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2021
YC65313	STU 130	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2021
YC65314	STU 131	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2021
YC65315	STU 132	Bill Harris - 100%	7/9/2007	7/9/2015	12/13/2021
YE10064	PEANUT 1	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10065	PEANUT 2	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10066	PEANUT 3	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10067	PEANUT 4	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10068	PEANUT 5	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10069	PEANUT 6	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10070	PEANUT 7	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10071	PEANUT 8	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10072	PEANUT 9	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10073	PEANUT 10	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10074	PEANUT 11	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10075	PEANUT 12	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10076	PEANUT 17	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10077	PEANUT 18	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10078	PEANUT 19	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10079	PEANUT 20	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10080	PEANUT 21	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10081	PEANUT 22	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10082	PEANUT 23	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10083	PEANUT 24	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10084	PEANUT 25	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10085	PEANUT 26	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10086	PEANUT 27	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10087	PEANUT 28	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10088	LED 1	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10089	LED 2	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10090	LED 3	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10091	LED 4	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10092	LED 5	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10093	LED 9	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10094	LED 10	Bill Harris - 100%	11/12/2015	11/12/2016	

GRANT NUMBER	CLAIM LABEL	OWNER	RECORDED DATE	EXPIRY DATE	NEW EXPIRY DATE
YE10095	LED 11	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10096	LED 12	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10097	LED 13	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10098	LED 14	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10099	LED 15	Bill Harris - 100%	11/12/2015	11/12/2016	
YE10100	LED 16	Bill Harris - 100%	11/12/2015	11/12/2016	
YF20701	WC 1	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20702	WC 2	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20703	WC 3	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20704	WC 4	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20705	WC 5	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20706	WC 6	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20707	WC 7	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20708	WC 8	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20709	WC 9	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20710	WC 10	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20711	WC 11	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20712	WC 12	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20713	WC 13	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20714	WC 14	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20715	WC 15	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20716	WC 16	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20717	WC 17	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20718	WC 18	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20719	WC 19	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20720	WC 20	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20721	WC 21	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20722	WC 22	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20723	WC 23	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20724	WC 24	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20725	WC 25	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20726	WC 26	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20727	WC 27	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20728	WC 28	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20729	WC 29	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20730	WC 30	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20731	WC 31	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20732	WC 32	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20733	WC 33	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20734	WC 34	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20735	WC 35	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20736	WC 36	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20737	WC 37	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20738	WC 38	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20739	WC 39	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20740	WC 40	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20741	WC 41	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20742	WC 42	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20743	WC 43	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20744	WC 44	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20745	WC 45	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021

GRANT NUMBER	CLAIM LABEL	OWNER	RECORDED DATE	EXPIRY DATE	NEW EXPIRY DATE
YF20746	WC 46	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20747	WC 47	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20748	WC 48	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20749	WC 49	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20750	WC 50	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20751	WC 51	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20752	WC 52	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20753	WC 53	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20754	WC 54	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20755	WC 55	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20756	WC 56	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20757	WC 57	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20758	WC 58	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20759	WC 59	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20760	WC 60	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20761	WC 61	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20762	WC 62	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20763	WC 63	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20764	WC 64	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20765	WC 65	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20766	WC 66	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20767	WC 67	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20768	WC 68	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20769	WC 69	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20770	WC 70	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20771	WC 71	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20772	WC 72	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF20773	HOO 1	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF20774	HOO 2	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF20775	HOO 3	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF20776	HOO 4	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF20777	HOO 5	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF20778	HOO 6	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF20779	HOO 7	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF20780	HOO 8	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF20781	HOO 9	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF20782	HOO 10	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF20783	HOO 11	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF20784	HOO 12	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF20785	HOO 13	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF20786	HOO 14	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF20787	HOO 15	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF20788	HOO 16	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF20789	HOO 17	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF20790	HOO 18	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF20791	HOO 19	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF20792	HOO 20	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF20793	HOO 21	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF20794	HOO 22	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF20795	HOO 23	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021

GRANT NUMBER	CLAIM LABEL	OWNER	RECORDED DATE	EXPIRY DATE	NEW EXPIRY DATE
YF20796	HOO 24	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF20797	HOO 25	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20798	HOO 26	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20799	HOO 27	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF20800	HOO 28	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF46357	CHE 1	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46358	CHE 2	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46359	CHE 3	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46360	CHE 4	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46361	CHE 5	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46362	CHE 6	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46363	CHE 7	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46364	CHE 8	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46365	CHE 9	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46366	CHE 10	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46367	CHE 11	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46368	CHE 12	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46369	CHE 13	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46370	CHE 14	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46371	CHE 15	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46372	CHE 16	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46373	CHE 17	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46374	CHE 18	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46375	CHE 19	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46376	CHE 20	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46377	CHE 21	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46378	CHE 22	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46379	CHE 23	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46380	CHE 24	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46387	HOO 35	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46388	HOO 36	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46389	HOO 37	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46390	HOO 38	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46391	HOO 39	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46392	HOO 40	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46393	HOO 41	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46394	HOO 42	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46395	HOO 43	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46396	HOO 44	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46397	HOO 45	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46398	HOO 46	Conor O'Donovan - 100%	7/29/2014	7/29/2015	12/13/2021
YF46399	KOO 57	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46400	KOO 58	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46401	CHE 25	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF46402	CHE 26	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF46403	CHE 27	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF46404	CHE 28	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF46405	CHE 29	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF46406	CHE 30	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF46407	WCF 1	Nicolai Goeppel - 100%	7/31/2014	7/31/2015	12/13/2021

GRANT NUMBER	CLAIM LABEL	OWNER	RECORDED DATE	EXPIRY DATE	NEW EXPIRY DATE
YF46408	WCF 2	Nicolai Goeppel - 100%	7/31/2014	7/31/2015	12/13/2021
YF46409	WCF 3	Nicolai Goeppel - 100%	7/31/2014	7/31/2015	12/13/2021
YF46410	WCF 4	Nicolai Goeppel - 100%	7/31/2014	7/31/2015	12/13/2021
YF46411	WCF 5	Nicolai Goeppel - 100%	7/31/2014	7/31/2015	12/13/2021
YF46412	WCF 6	Nicolai Goeppel - 100%	7/31/2014	7/31/2015	12/13/2021
YF46413	WCF 7	Nicolai Goeppel - 100%	7/31/2014	7/31/2015	12/13/2021
YF46414	WCF 8	Nicolai Goeppel - 100%	7/31/2014	7/31/2015	12/13/2021
YF46415	WCF 9	Nicolai Goeppel - 100%	7/31/2014	7/31/2015	12/13/2021
YF46416	WCF 10	Nicolai Goeppel - 100%	7/31/2014	7/31/2015	12/13/2021
YF46417	WCF 11	Nicolai Goeppel - 100%	7/31/2014	7/31/2015	12/13/2021
YF46501	KOO 1	Colby Knowler - 100%	7/29/2014	7/29/2015	12/13/2021
YF46502	KOO 2	Colby Knowler - 100%	7/29/2014	7/29/2015	12/13/2021
YF46503	KOO 3	Colby Knowler - 100%	7/29/2014	7/29/2015	12/13/2021
YF46504	KOO 4	Colby Knowler - 100%	7/29/2014	7/29/2015	12/13/2021
YF46505	KOO 5	Colby Knowler - 100%	7/29/2014	7/29/2015	12/13/2021
YF46506	KOO 6	Colby Knowler - 100%	7/29/2014	7/29/2015	12/13/2021
YF46507	KOO 7	Colby Knowler - 100%	7/29/2014	7/29/2015	12/13/2021
YF46508	KOO 8	Colby Knowler - 100%	7/29/2014	7/29/2015	12/13/2021
YF46509	KOO 9	Colby Knowler - 100%	7/29/2014	7/29/2015	12/13/2021
YF46510	KOO 10	Colby Knowler - 100%	7/29/2014	7/29/2015	12/13/2021
YF46511	KOO 11	Colby Knowler - 100%	7/29/2014	7/29/2015	12/13/2021
YF46512	KOO 12	Colby Knowler - 100%	7/29/2014	7/29/2015	12/13/2021
YF46515	KOO 15	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF46516	KOO 16	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF46517	KOO 17	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF46518	KOO 18	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF46519	KOO 19	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF46520	KOO 20	Nicolai Goeppel - 100%	7/29/2014	7/29/2015	12/13/2021
YF46521	KOO 21	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46522	KOO 22	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46523	KOO 23	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46524	KOO 24	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46525	KOO 25	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46526	KOO 26	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46527	KOO 27	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46528	KOO 28	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46529	KOO 29	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46530	KOO 30	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46531	KOO 31	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46532	KOO 32	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46533	KOO 33	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46534	KOO 34	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46535	KOO 35	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46536	KOO 36	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46537	KOO 37	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46538	KOO 38	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46539	KOO 39	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46540	KOO 40	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46541	KOO 41	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46542	KOO 42	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021

GRANT NUMBER	CLAIM LABEL	OWNER	RECORDED DATE	EXPIRY DATE	NEW EXPIRY DATE
YF46543	KOO 43	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46544	KOO 44	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46547	KOO 47	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46548	KOO 48	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46549	KOO 49	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46550	KOO 50	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46551	KOO 51	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46552	KOO 52	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46553	KOO 53	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46554	KOO 54	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46555	KOO 55	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021
YF46556	KOO 56	Tyler Quock - 100%	7/29/2014	7/29/2015	12/13/2021

Appendix 2
2015 samples (pdf and xls files)
Sample Database (xls file)
Drill Database (xls files)

See Data Folder for Appendix

Appendix 3
Work Summary & Cost Statements

See Data Folder for Appendix

Appendix 4
Cross Sections (pdf files)

- Cross section legend is preliminary, rock types have not been finalized and there are multiple codes for the same rock type.
- Orange zones along drillholes are foliated zones.
- Pink polygons with gray dashed outlines are mineralized zones extrapolated between holes.
- Copper assays are plotted in ppm along left hand side of drillholes.

See Data Folder for Appendix

Appendix 5
YGS Paper

See Data Folder for Appendix

Appendix 6
PDF versions of maps included in body of report

See Data Folder for Appendix