ASSESSMENT REPORT

On the

STU PROPERTY
STU 1-315, YC37770-95, YC40249-76, YC40201-18, YC65256-315

NTS 115I07
Whitehorse Mining District

62° 25' N and 136° 50' W

Prepared for:

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1 SUMMARY

The STU 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 132 contiguous claims which cover approximately 2760 hectares. The claims are registered to Bill Harris and are located in the Whitehorse Mining District. The centre of the property is located at latitude 62° 24' 37" N and 136° 50' 38" W longitude, located on NTS map sheet 115I07.

This report describes a field exploration program completed on the STU property in 2013 and the subsequent compilation and analysis of historic work and more recent exploration. 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. Evaluation of the STU Property is based on historical data derived from Assessment Files and other regional reports. Limited trenching and drillhole assay results are available in the public record so most of the discussion is based on rock, soil sampling, geophysics and comparison with adjacent properties.

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. Following the Casino discovery a staking rush found the Williams Creek (now Carmacks Copper) and Minto properties in 1970. The STU property was first staked in 1971 by Hudson's Bay Oil & Gas Company Ltd. who did grid soil sampling and ground geophysics. The claims were picked up by United Keno Hill Mines in 1977 who carried out ground surveys, then trenched 3 zones of mineralization followed by diamond and percussion drilling. Much of the trenching and drilling work is not in the public record. UKHM ceased work on the claims after 1989 and the claims were restaked by Bill Harris in 2005.

Since then, programs have been short and consisted of examination and inspection of the property, rock sampling, surveying of trenches and drill holes, petrography and magnetic susceptibility measurements. In 2010 the program focused on areas outside of the main three zones. The information and results from these programs have partially confirmed missing surface information from the UKHM work.

Midnight Mines carried out a small program in 2013 for Bill Harris. It consisted of road and trail clearing, trench sampling, limited soil sampling and collection of magnetic susceptibility measurements. Further work was done after the field program to compile, digitize and analyze previous soil and stream sediments, rock samples, geological mapping and drill programs. Soil sampling information on adjacent claims was analyzed along with government and industry airborne geophysics surveys. Goals for the field program were to collect chip samples from around high grade samples taken in previous programs and to keep the claims up to date. The purpose of the compiling and digitizing was to look for additional zones, based on the multiple zones found on Carmacks Copper and Minto since the 1970 era soil surveys.

The Midnight Mines crew spent 5 days on the project, mobilizing into camp on September 14th spending three full days in the field and then returning to Whitehorse on September 18th. The first field day was spent clearing roads and trails and the remainder rock and soil sampling in Zone B. Forty rock samples were collected in Zone B, 38 from trenches and 2 from outcrop. The best results were >1% Cu, 14.8 g/t Ag and 553 ppb Au over 0.5m in trench B1 and 0.55% Cu, 4.4 g/t Ag and 75ppb Au over 2m in trench B3.

STU is within the Carmacks Copper Belt, a 180km long by 60 km wide belt of intrusion hosted Cu-Au 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 Aishik/Long Lake Plutonic Suite. The Granite (Mountain) Batholith (GMB) and its subsidiary the Minto Pluton are Aishihik Suite plutons that host the Minto, STU and Carmacks Copper occurrences. Younger volcanic rocks of the Carmacks Group and Quaternary Selkirk Group 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. 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.

On the STU property the GMB is the dominant rock type. It is cut by aplite, microganite and pegmatite dykes and contains horizons or lenses of copper-bearing quartz-feldspar-biotite gneiss. Locally outcrops of Carmacks volcanics overlie or intrude the other rock types. A few mafic dykes cut the GMB. Mineralization is hosted in the foliated and gneissic granodiorite. Like Minto, alteration at STU is biotite-rich potassic. The main alteration mineral is biotite, followed by magnetite, quartz and potassium feldspar. Magnetite is a common constituent of biotite-rich potassic alteration.

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 and, magnetite skarn. Since 2003 an Iron Oxide Copper Gold model has been favoured. Regardless of the label, all agree that the deposits were emplaced between 9 and 20 km, the host is a moderately oxidized magma, iron oxide mineralization is widespread, there are very strong structural controls on ore mineral emplacement and peripheral alteration zones are missing.

Copper mineralization on the STU property is containing in foliated to gneissic granodiorite, similar to that at the Minto mine and the Carmacks Copper deposit. The foliation strikes northwest and dips steeply. Malachite, azurite, chalcopyrite, bornite chalcocite and tenorite (copper wad) have been observed in hand samples and drill core. Magnetite is locally abundant. Copper sulphides occur within the foliated granodiorite and gneiss where they replace mafic minerals. Copper oxides, malachite, azurite, brochantite 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. A crude vertical zonation has been observed, from bornite and chalcocite at the top of the zone to pyrite at the bottom.

There are 3 zones of mineralization on the STU property. Zone A is the largest and consists of 9 bulldozer trenches dug in 1979 over 900m of strike length. No results are available but the best intersection was 0.19% copper over 15m. Approximately 1000 metres of diamond drilling was done in 1982. Results are available for one hole and intersection of 3.51% Cu, 3.5 g/t Au and 18.4 g/t Ag over 13.5m in 80-14 is reported in the Yukon government minfile report. No reserves were calculated because the sections were too complex, but high grade intersections were drilled.

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. Mineralization in Zone B is locally high grade but appears to be over narrow widths and has not yet shown consistency below surface. Grab samples prior to trenching assayed from 0.09 to 1.10% copper. Fourteen bulldozer trenches were excavated in 1979 and 1982. No maps or assay results are available, but up to 2% malachite over 0.5m gneiss zones was observed. In 1989 30 percussion drill holes were drilled along trenches in the B Zone. Most holes intersected multiple zones with low grade copper values ranging from 100-500ppm (0.01% 0.05%). 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 3.0m of 0.135% Cu in hole SB-4 and 1.5m of 0.71% Cu in hole SB-4.

Zone C was first discovered by Hudson's Bay in 1971 as a copper in soil anomaly coincident with electromagnetic anomalies. Grab samples from Zone C outcrops ranged from 0.01 to 0.58% copper. Three trenches over 350m of strike length were excavated in 1979. Three holes were drilled in the C Zone; drill logs are available for 2 of them. No mineralization was noted in either hole.

STU has features in common with both Minto and Carmacks Creek: the near vertical structure and secondary copper mineralization of Carmacks Creek and the sulphide mineralization, potassic alteration and higher magnetic signature of Minto. So far, the folded and deformed foliation and sulphides characteristic of Minto has not been seen at STU.

Rotational block faulting is observed at Minto and may occur along the regional east trending normal faults that place the Granite Mountain Batholith against Carmacks volcanics. At the property scale, steep-sided Hoocheekoo Creek and possibly Camp Creek 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.

Rock samples collected since 2005 and property examinations have outlined a minimum length and width to mineralization in the three zones at STU which in size and grade resembles that from historic work. However, systematic sampling of the existing trenches and excavation of new trenches is required to take the project further. Historic work at STU concentrated on secondary copper minerals such as malachite and azurite; the primary sulphide minerals were either not observed or not considered as important. In addition gold and silver were either not analyzed or not reported in the available historic records. These metals are of significant economic value and their distribution needs to be understood at STU.

The 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. New trenches should be excavated following, or in conjunction with, cleaning up old trenches. A month long program of trenching and resampling old core is recommended which would cost in the region of $260,000.

2 INTRODUCTION

This report describes a field exploration program completed on the STU property in 2013 and the subsequent compilation and analysis of historic work and more recent exploration. 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.

This evaluation of the STU Property is based on historical data derived from Assessment Files and other regional reports. Limited trenching and drillhole assay results are available in the public record so most of the discussion is based on rock sampling, soil sampling, geophysics and comparison with adjacent properties.

In the preparation of this report, the authors 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. A list of reports, maps, and other information examined is provided in Section 12 of this report. The history of exploration and exploration results on the STU Property are discussed in detail in Sections 5 and8.

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;
- 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.

The list of claims from the Whitehorse Mining Recorder is attached as Appendix 1.

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 (**Figure 1**) The Property consists of 132 contiguous claims which cover approximately 2760 hectares.

The claims are registered 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° 24' 37" N and 136° 50' 38" W longitude on NTS map sheet 115I07. Claim data is summarized in Table 1, a map showing the claims is presented in Figure 2.

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, 2013	Dec 13, 2014
YC40249-258	Bill Harris	STU 11-20	10	Sep 19, 2013	Sep 19, 2015
YC37788-795	Bill Harris	STU 21-28	8	Jun 21, 2014	Jun 21, 2015
YC40259-260	Bill Harris	STU 29-30	2	Sep 19, 2013	Sep 19, 2015
YC37780-787	Bill Harris	STU 31-38	8	Dec 13, 2013	Dec 13, 2014
YC40261-276	Bill Harris	STU 39-54	16	Sep 19, 2013	Sep 19, 2015
YC40201-211	Bill Harris	STU 55-65	11	Nov 29, 2013	Nov 29, 2015
YC40212-218	Bill Harris	STU 66-72	7	Nov 29, 2013	Nov 29, 2014
YC65256-315	Bill Harris	STU 73-132	60	Jul 9, 2013	Jul 9, 2015
		TOTAL	**132**		

*based on acceptance of this report

The Yukon Government has settled land claims with the first nations in the area, Little Salmon-Carmacks and Selkirk. 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 the for the STU property which is valid until December 11, 2018.

4 ACCESSIBILITY, CLIMATE, PHYSIOGRAPHY, LOCAL RESOURCES & INFRASTRUCTURE

4.1 Access

The STU property is reached along gravel/dirt road and trails from Carmacks which is a 1.75 hour drive along paved public highways from Whitehorse. At Carmacks, the government maintained Freegold road leads for 35km to the access road to Carmacks Copper. In 2013 this access road was passable for 12 km by 4WD vehicle for as far as the closed camp at Carmacks Copper. From the camp an ATV accessible road/trail leads 12.5 km to the edge of the STU property. Overgrown cat trails on the property lead to the main zones. The STU property can also be accessed by helicopter from Carmacks with the best landing at Zone A and secondary sites in the other zones.

The remains of a drill camp are located close to Zone A, consisting of a trailer, wooden tent frames and core racks.

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.

4.3 Physiography

The property belongs to 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 is 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 northwest of Hoocheekoo Creek within the northeastern edge of the Dawson Range of the Yukon Plateau. Elevations range from a low of 640m 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. Areas in the northwest portion of the claim block, including part of the A Zone, were burned 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 a southeast flowing tributary of Hoocheekoo Creek locally called Stu Creek. Camp Creek (local name) drains from the A Zone into Stu Creek. Northerly flowing tributaries of Big Creek drain the northwestern property area.

Figure 1: Regional Location Map

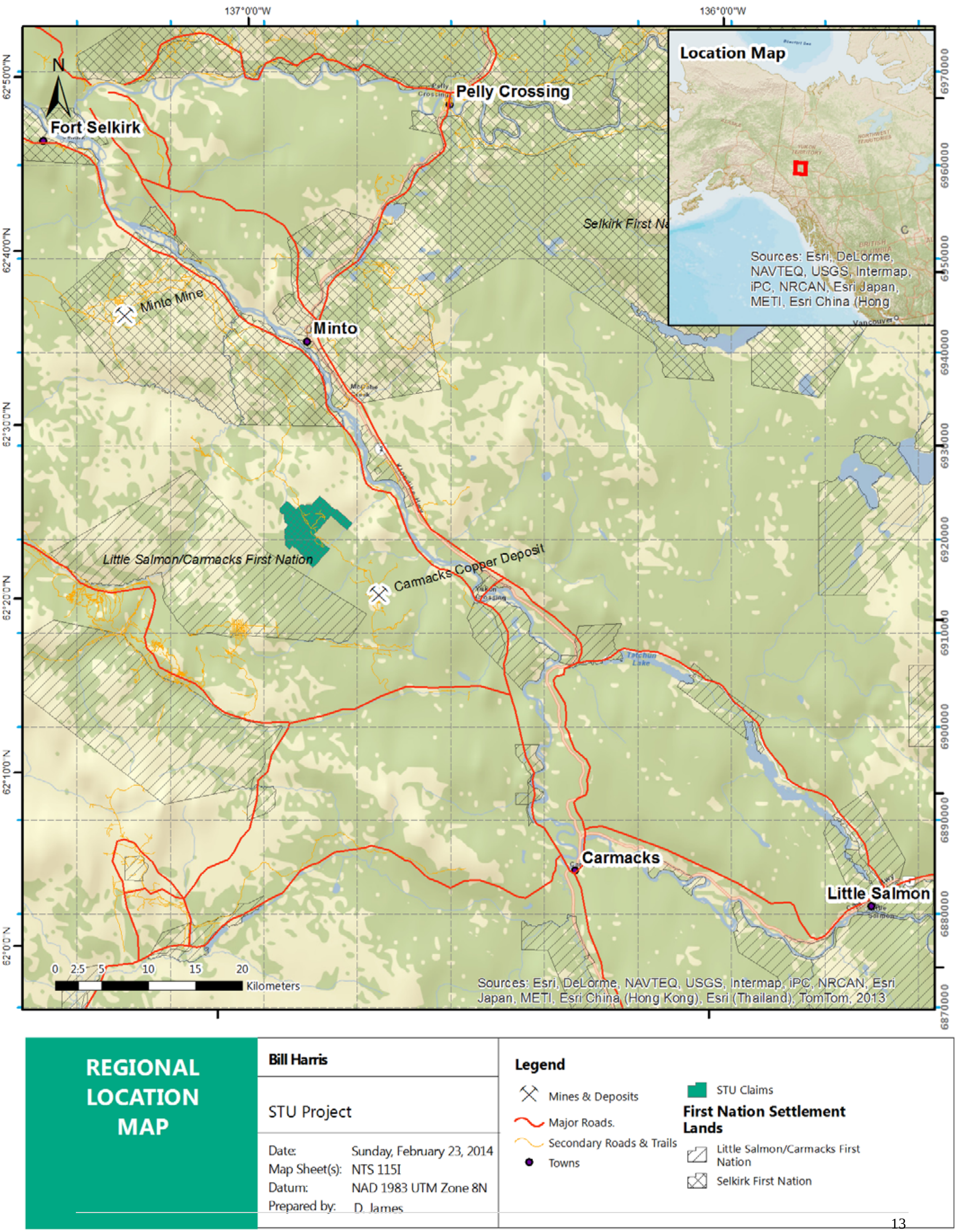
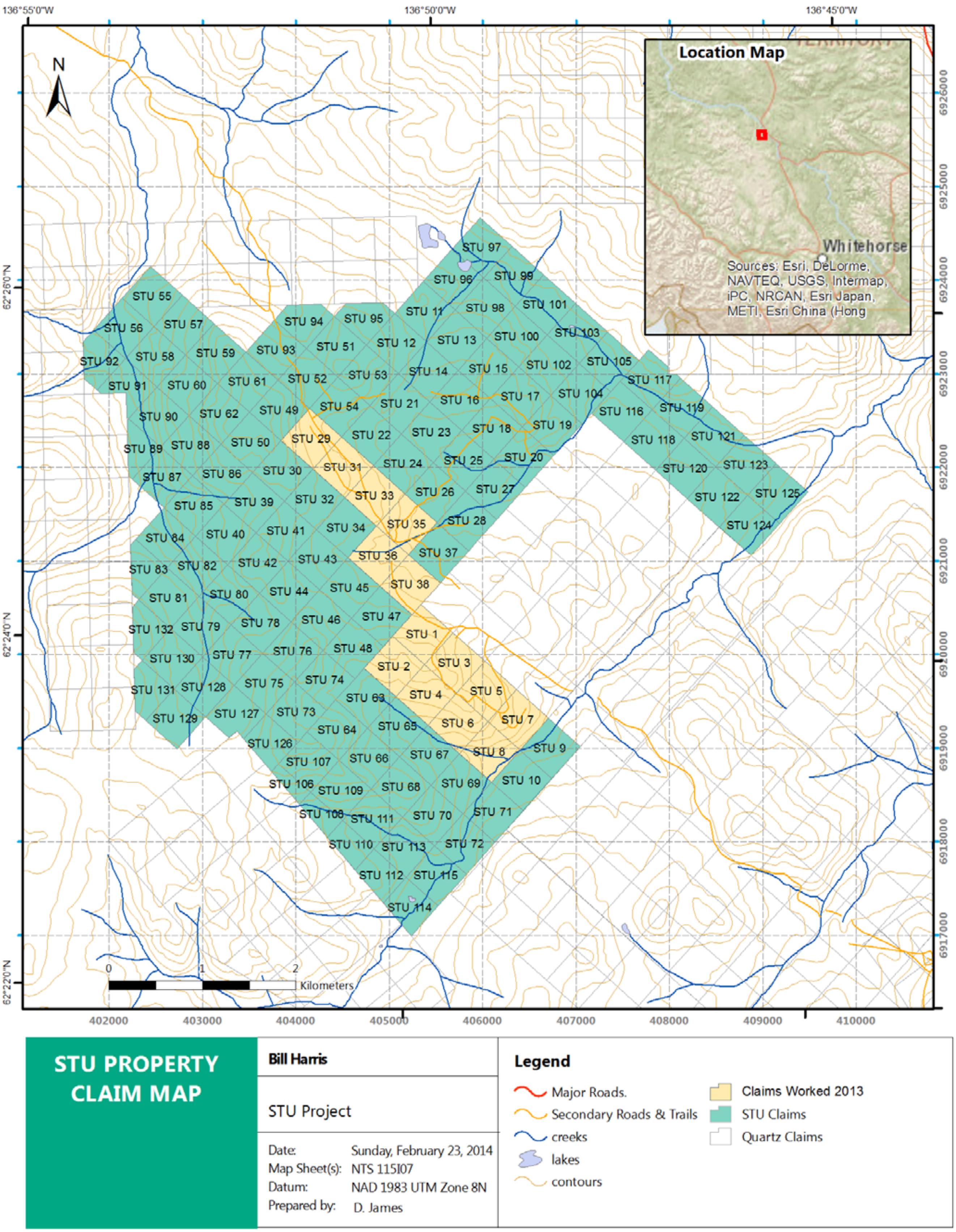


Figure 2: STU Property Claim Map



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 206. 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 found the Williams Creek (now Carmacks Copper) and Minto properties in 1970.

Exploration history of the STU claims and pertinent adjacent properties is summarized below. Unless otherwise noted, information was sourced from the Yukon Geological Survey minfile report 115I011, Casselman and Arseneau's 2011 report on Carmacks Copper, SRK Consulting's 2008 technical report on the Minto Mine and assessment reports. References to STU work programs are listed.

5.1 Chronology

1887

- G.M. Dawson discovers copper at Hoocheekoo Bluff on the Yukon River, 10km NE of STU.

1898

- Claims staked on copper bearing veins in the canyons of Merrice and Williams Creek, 11 km SE of STU.

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 found by G. Wing and A. Arsenault.
- 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 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 on the present day Jam claims 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 (1504 m) 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 overlap onto the present STU 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*).

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*). No further work until 2005.

1993

- First feasibility study at Carmacks Copper deposit.

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 staked Bread claims over part of the original STU claims. Claims optioned to BC Gold after a 30 soil sample program. (*Ryan, 2007b*).

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.

2010

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

2012

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

5.2 Historic Work

Work prior to 2005 is discussed in this section. Work after 2005 when the claims were owned by B. Harris is discussed in Section 8.

Copper mineralization on the STU property is containing in foliated to gneissic granodiorite, similar to that at the Minto mine and the Carmacks Copper deposit. The foliation strikes northwest and dips steeply. Copper sulphides occur within the foliated granodiorite and gneiss where they replace mafic minerals. Copper oxides, malachite, azurite, brochantite have in turn replaced the copper sulphides where the mineralization has been exposed to oxidation. STU is documented by the Yukon Geological Survey as Minfile Number 115I011.

5.2.1 Soil and Stream Sediment Samples

In 1971 Hudson's Bay soil sampled the Bay claims on a property wide grid. 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. 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. A threshold of 50ppm was determined from statistical analysis of the results. The three main zones were outlined along with northwest trending anomalies in the south and east section of the property.

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 has been digitized and results are shown in **Figure 3**

5.2.2 Geophysical Surveys

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 three were followed up with an IP survey prior to trenching. None of these surveys have been digitized.

5.2.3 Mineralized Zones

The soil, stream sediment and geophysical surveys identified three areas of geological importance as follows:

Zone A: Located in the geographic centre of the STU property it sits west of the original Bay claims and may have been the showing found by UKHM prospectors in 1976. Originally called Area 3 it was identified by sparse outcrops and float of quartz-feldspar-biotite gneiss with malachite, and a 1.7km long discontinuous copper in soil anomaly. Approximately 1000m of bulldozer trenching was done in 1979 to excavate nine trenches over 900m of strike length. No results are available but the best intersection was 0.19% copper over 15m (*Ouellette, 1989*). See map in **Figure 4**.

Approximately 1000 metres of diamond drilling was done in 1982. Results are available for hole 80-17 and drill logs for 80-17 and 80-25. An intersection of 3.51% Cu, 3.5 g/t Au and 18.4 g/t Ag over 13.5m in 80-14 is reported in the Yukon government minfile report. No reserves were calculated because the sections were too complex, but high grade intersections were drilled.

80-17 was a deep hole (426m), oriented at 242^{o} with a dip of -72^{o}. It was drilled parallel to trench 11+50E and behind and beneath hole 80-14. The steep dip and length of the hole suggest it was drilled to test the depth of mineralization beneath the good 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. The drill log reveals that the rock was a weak to moderately foliated granodiorite with trace chalcopyrite and pyrite. Moderate to strong potassium feldspar alteration, minor chlorite alteration and pervasive hematite were noted.

80-25 was drilled at 220^{o} azimuth and 50^{o} dip for 162m at the north end of the zone. It appears to have been a step out hole testing the north extent of the zone. No assays are available and no mineralization is noted in the drill log. The hole intersects variably altered granodiorite with narrow foliated zones.

Core from Zone A is stored near the camp. The racks have deteriorated but some of the core is salvageable. Pautler, 2009 notes that significant mineralized intervals, particularly tenorite bearing sections have not been sampled. Kreft (2002) sampled core from holes 80-23 to 80-26. Results were low; the best value was 127 ppm copper in one section of foliated granodiorite from 80-24.

Zone B: Located in the southwest part of the STU property on a dry ridge, the B zone has the most rock exposure and the largest mapped extent of foliated and gneissic granodiorite of the three zones. Zone B was identified by a 2km discontinuous soil anomaly tracking north between Hoocheekoo and Camp Creeks. Mineralization in Zone B is locally high grade but appears to be over narrow widths and has not yet shown consistency below surface. Grab samples prior to trenching assayed from 0.09 to 1.10% copper. (Figure 6)

Fourteen bulldozer trenches were excavated in 1979 and 1982. No maps or assay results are available, but up to 2% malachite over 0.5m gneiss zones was observed. The trenches appear to have been dug on the eastern side of the outcrop and copper in soil anomaly. This may be an apparent error caused by mapping or it may due to inaccessible terrain; the ground slopes steeply on the west side of the zone and may be difficult to access with a bulldozer.

In 1989, 30 percussion drill holes (1823m) were drilled in the 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. Information about the holes can be gleaned from page size drill sections in the 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.

Most holes intersected multiple zones with low grade copper values ranging from 100-500ppm (0.01% 0.05%). 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. If the three intersections in trench B-1 are connected they would form a shallowly dipping zone about 20m below surface.

Zone C: Zone C was first discovered by Hudson's Bay in 1971 as a copper in soil anomaly coincident with electromagnetic anomalies. It was originally referred to as Zone 1 by UKHM. Prior to trenching, UKHM report 2 separate showings of malachite in this zone, 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 and a minor narrow felsic rock with several percent magnetite and minor copper oxide was also found. At the southeast showing, malachite is hosted in strongly foliated, fine-grained granitic rocks. Grab samples from Zone C outcrops ranged from 0.01 to 0.58% copper. Three trenches over 350m of strike length were excavated in 1979 over the northwest showing. No results are available. (Figure 7)

Three holes were drilled in the C Zone; drill logs are available for 2 of them. Hole 80-27 had an azimuth of 030^o and a dip of -50^o and was 190m long. No mineralization was logged. The hole passed through variably altered granodiorite with narrow weakly foliated sections. No mineralization was noted but magnetite was ubiquitous from 36 to 109m. Chlorite increases downhole and from 170m to the end the hole intersected a breccia with granodiorite clasts in a volcanic matrix. Hole 80-28 was drilled at azimuth 028^o, dip -50^o. It passed through 180m of locally weakly foliated granodiorite with no mineralization. In 2002 Kreft sampled core from holes 80-27 and 80-28. Results were low but no samples of foliated or gneissic granodiorite were collected.

NW Zone: Located on the northwest edge of the claim block the Northwest Zone is a mystery. There are 2 short trenches but no soil anomaly or outcrop mapped nearby.

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Figure 3: Historic Work STU claims soil and stream

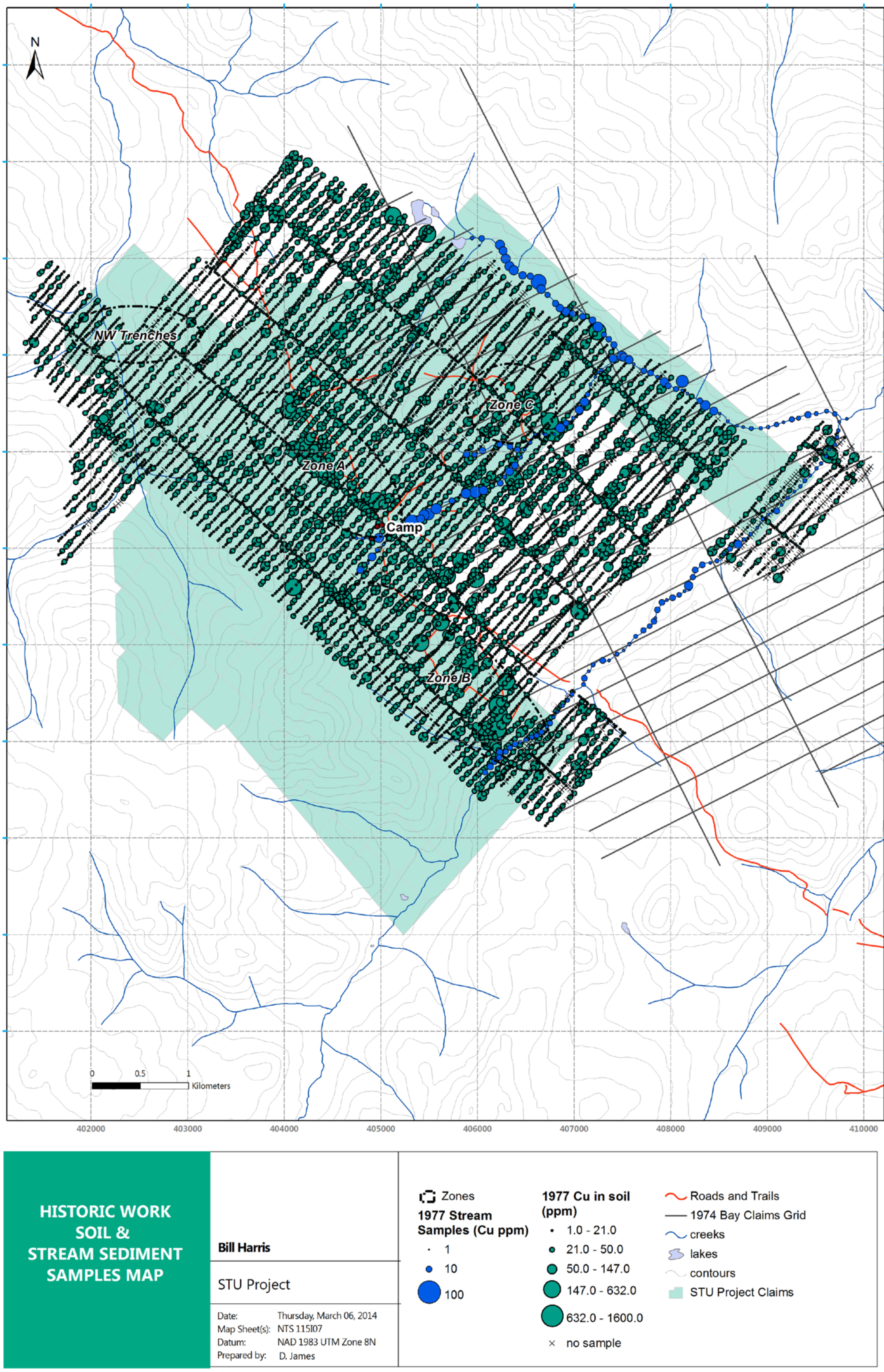


Figure 4: Historic Work STU claims trenches, drillholes, and rock samples

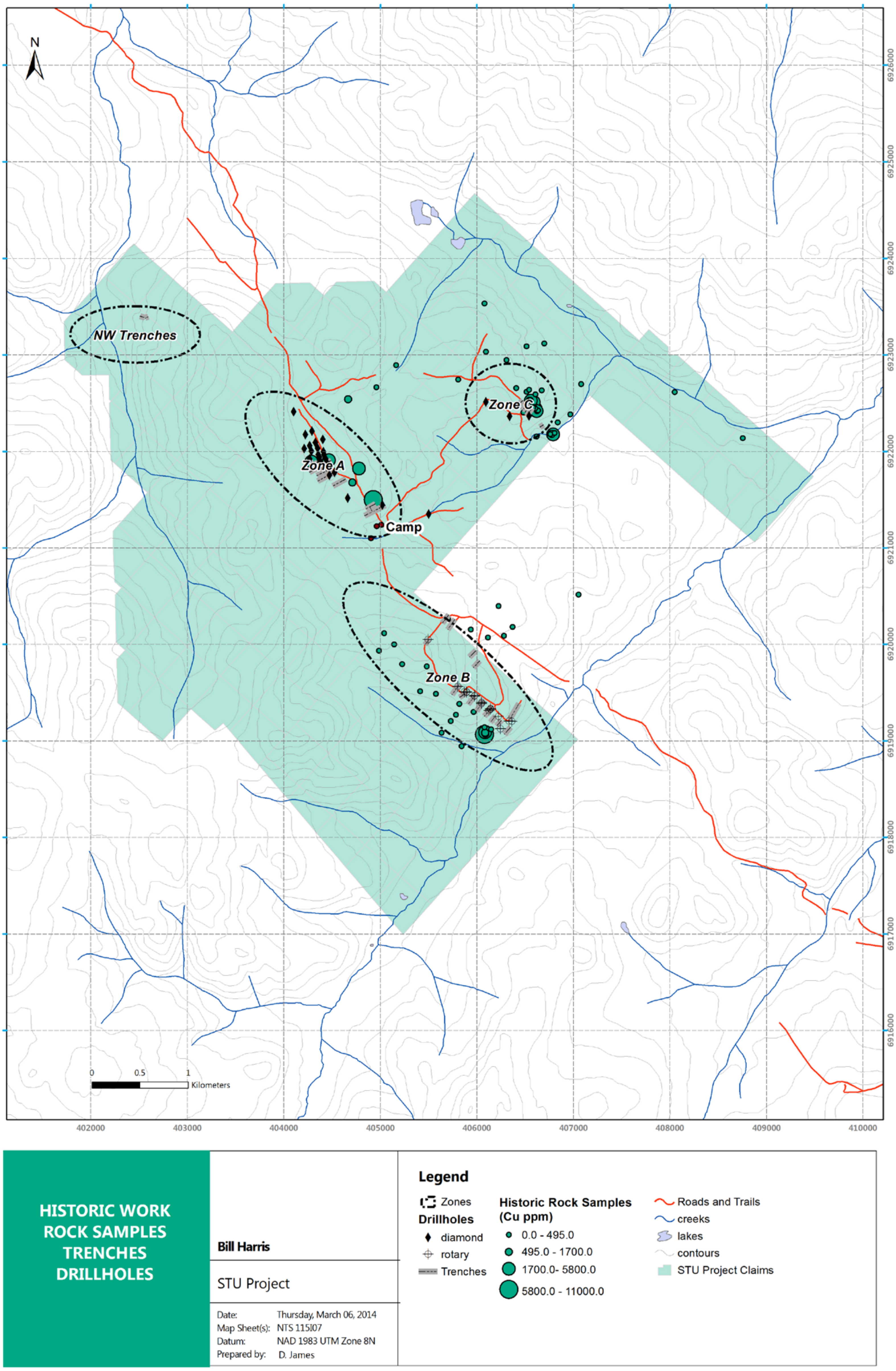


Figure 5: A Zone Detail

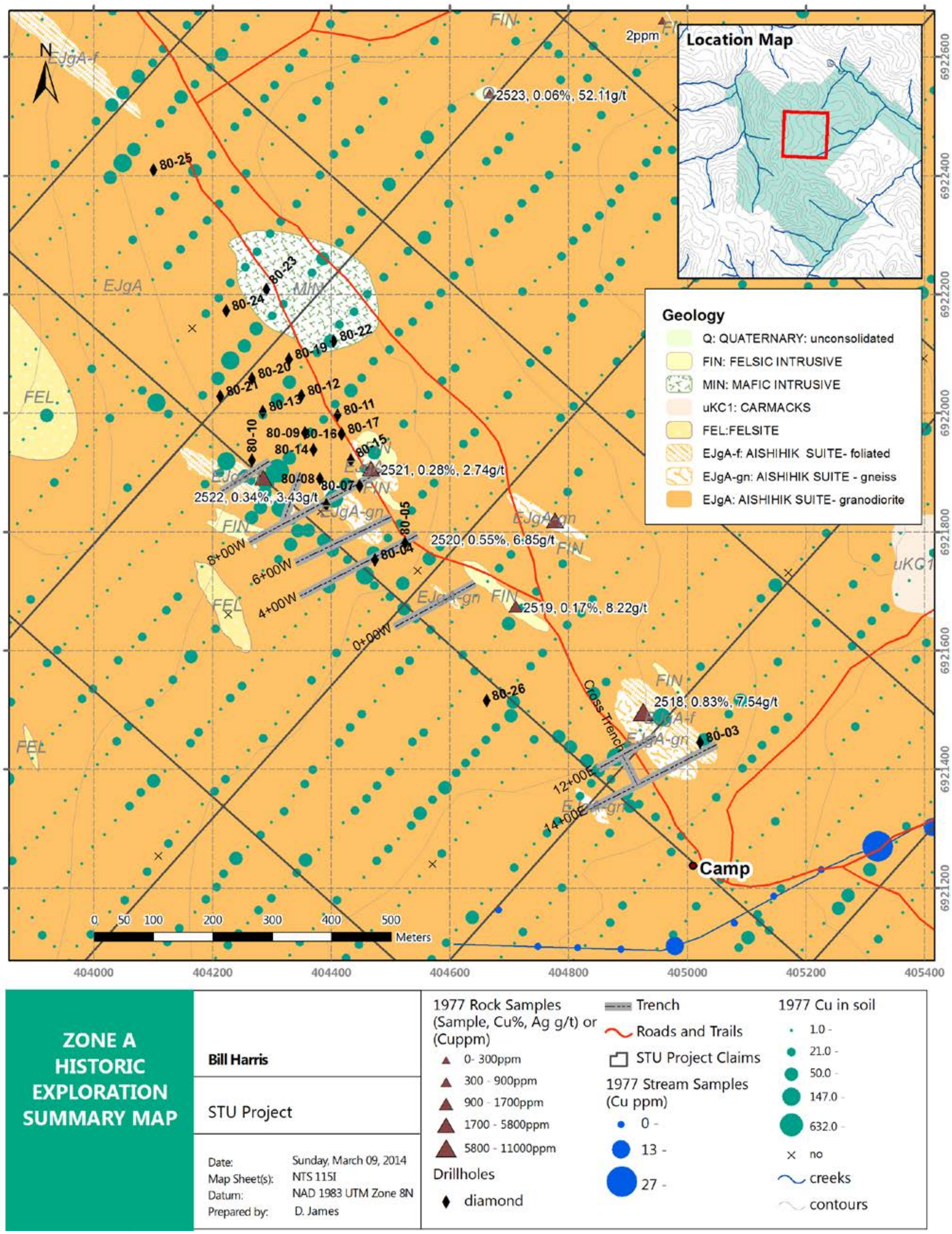


Figure 6: B Zone Detail

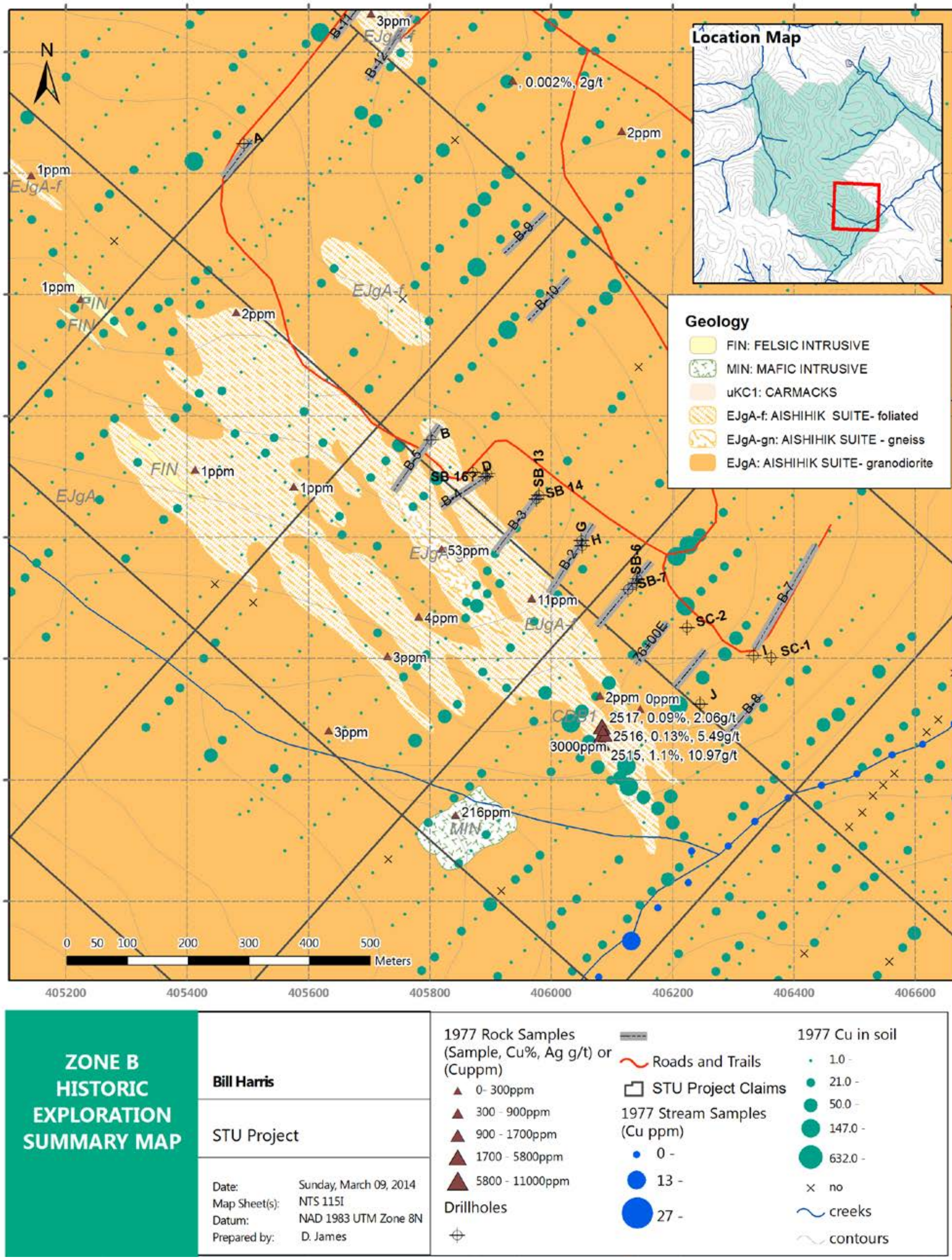
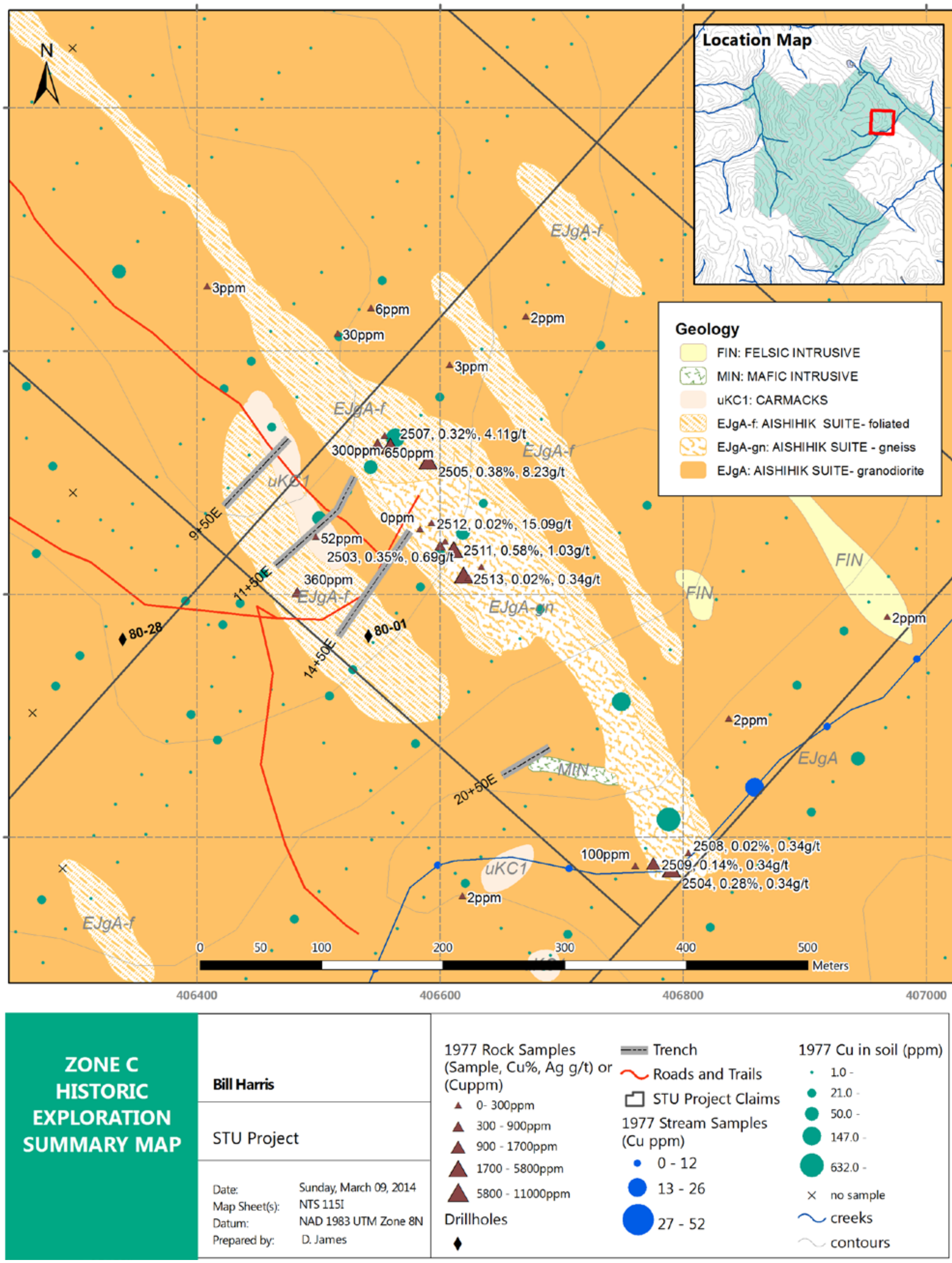


Figure 7: C Zone Detail



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 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 Aishihik/Long Lake Plutonic Suite. Rocks in this suite are of biotite-hornblende granodiorite to quartz monzonite composition and intrude along the contact between Stikinia and the Yukon Tanana Terranes (**Figure 8**).

The Granite (Mountain) Batholith (GMB) and its subsidiary the Minto Pluton are Aishihik Suite plutons that host the Minto, STU and Carmacks Copper occurrences. 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.

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 horizons or lenses of copper-bearing quartz-feldspar-biotite gneiss. Locally outcrops of Carmacks volcanics overlie or intrude the other rock types. A few mafic dykes cut the GMB. Mineralization is hosted in the foliated and gneissic granodiorite (**Figure 9**).

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 Creek and Hoocheekoo Creek.

Throughout this section, observations are included on Carmacks Copper and Minto. Both deposits are similar to Stu and have been studied in detail through trenches, pit walls and drill core.

6.2.1 Igneous Rocks

Granodiorite

This is the major unit in the area under investigation. There are several phases:

- Potassium feldspar megacrystic granodiorite grading to foliated biotite granodiorite (eJgA and eJgA-f)
- Biotite gneiss and locally biotite schist (eJgA-gn)
- Quartz-phyric granodiorite to quartz monzonite (eJgA)
- Minor diorite to quartz diorite (eJgA)

The granodiorite is dark grey to grey on weathered surfaces, 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 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 gneissic phase is considered either a partially metamorphosed phase of the GMB or an inclusion of older metamorphic rocks or volcanics that have been partly assimilated. Both the foliated and gneissic phases host copper mineralization.

In 2008 a petrographic study of 6 samples of strongly foliated, medium-grained black and white, equigranular granodiorite found a 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 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.

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.

The Yukon minfile database describes siliceous sections of quartz feldspar gneiss that have more abundant disseminated grains of chalcopyrite and bornite compared to non-siliceous sections.

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 between the two rock types are sharp and trend northeast across foliation. 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 in the northeast side of the property.

Felsite (FEL)
Closely associated with the granodiorite. Mafic poor, fine to medium grained and syenetic in composition. Could be a felsic phase of the granodiorite or related to the FIN unit. Early reports map it as a separate unit.

Carmacks Group volcanics (eTCv)
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.

Aplite, Pegmatite and Microgranite Dikes (FIN)
Felsic intrusions found over most of the property in 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.

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. Pinkish white to white pegmatite dikes are coarse grained and composed of 70-80% large feldspar crystals, quartz and biotite.

Igneous Rocks – Carmacks Copper and Minto
A similar suite of igneous rocks is found at Minto and Carmacks Copper although there are some small 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 and a less common 'siliceous ore" are two additional tock types 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. The biotite schists are not seen at Minto.

The siliceous ore is more common at Minto. It is thinly banded on an mm scale by layers of quartz with lesser potassium feldspar and magnetite. Mineralization is disseminated bornite and chalcopyrite. Tafti and Mortensen, 2004 suggest an origin quite different from the gneiss unit, perhaps thinly bedded supracrustal rocks or quartz veins. This siliceous ore may be equivalent to the more highly mineralized siliceous sections at STU. At Minto the mineral banding within the gneissic rocks is convoluted and folded. This has not been reported at STU.

6.2.2 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 trends northwest and dips steeply southwest, in Zones A and B it trends 130 and dips 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. This alignment is ascribed to magmatic flow during emplacement of the GMB along a northwest trending suture (Tafti and Mortensen 2004).

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 near horizontal zones at Minto and near vertical zones at Carmacks Copper. It can cause large degrees of rotation within a short distance as shown by younger sedimentary units at Minto have been tilted up to 60^{o}. At STU, Hoocheekoo Creek and possibly Camp Creek could be expressions of these structures.

The degree of metamorphism determined from the 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 1cm wide in quartz and feldspar grains.

6.2.3 Alteration

At the microscopic scale, clays and chlorite are the hydrothermal alteration minerals seen in thin section. Illite, kaolinite and smectite partially replace plagioclase and are most intense where supergene copper mineralization is strongest. Weak chlorite partially replaces biotite.

At the property scale, UKHM report a north trending zone of intense alteration on the main mineralized zone. There is no description of the alteration and it can only be assumed that main zone equals Zone A. Two lineaments along aeromagnetic lows intersect at Zone A, one north trending and the other northwest trending. Potassium feldspar alteration is associated with the mineralized zone in hole 80-17. UKHM considered epidote an alteration mineral, occurring along fractures in the granodiorite.

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*).

At Minto pervasive strong potassic alteration is associated with mineralization and is characterised by biotite concentrations up to 30% and secondary potassium feldspar overgrowths on plagioclase. Silicification is sporadic on the west side in the bornite zone and lacking on the east side in the chalcopyrite zone. Sericite is rare; associated with post-mineral brittle faults or pegmatite veins.

6.2.4 Mineralization

Copper bearing minerals malachite, azurite, chalcopyrite, bornite chalcocite and tenorite (copper wad) have been observed in hand samples and drill core. All occur in foliated or gneissic granodiorite. Magnetite is locally abundant. The highest gold and silver values are associated with bornite-rich sections. A crude vertical zonation has been observed, from bornite and chalcocite at the top of the zone to pyrite at the bottom (Yukon minfile).

Hypogene Mineralization - STU

In the 2008 petrographic study, primary magnetite formed 2-4% of the rock in the melanocratic foliation domains. Chalcopyrite forms rare disseminations and isolated grains <0.5 micron in size. Copper sulphides appear to occupy mafic sites in the foliation. Possible gold grains <0.5 microns were observed in two samples.

Supergene Mineralization - STU

From petrographic observations, malachite is the dominant supergene copper mineral with lesser 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.

Hypogene Mineralization – Carmacks Copper and Minto

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. Sulphide minerals occur as disseminations and foliform stringers along foliation planes in the granodiorite and appear to have formed simultaneously with or just after ductile deformation. Bornite and magnetite have a close association although deformation of magnetite stringers suggests that the stringers were formed prior to ductile deformation. The intensity of the deformation of the orthogneiss correlates with higher grade samples.

Supergene Mineralization – Carmacks Copper and Minto

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 and in the northern half of the No. 1 Zone it forms consistent high and low grade zones with a tendency for higher grades to be found in the footwall.

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 Airborne Geophysics

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. Lines were flown at 45^{o} and 500m spacing. Gridded data from the survey is presented as colour interval maps overlain with topography. Eight map products have been created:

- Magnetic First Vertical Derivative
- Magnetic Residual Total Field
- Natural Air Absorbed Dose Rate
- Potassium
- Thorium
- Uranium
- Thorium/Potassium Ratio
- Uranium/Potassium ratio

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 Batholith has high levels along ridges and low (0.4-0.95) and moderate (0.96-1.3%) levels in valleys. The Granite Batholith 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 Batholith 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.

Figure 8: Regional Geology. Map of the Carmacks Copper Belt.

revised by Hood et al.2006)

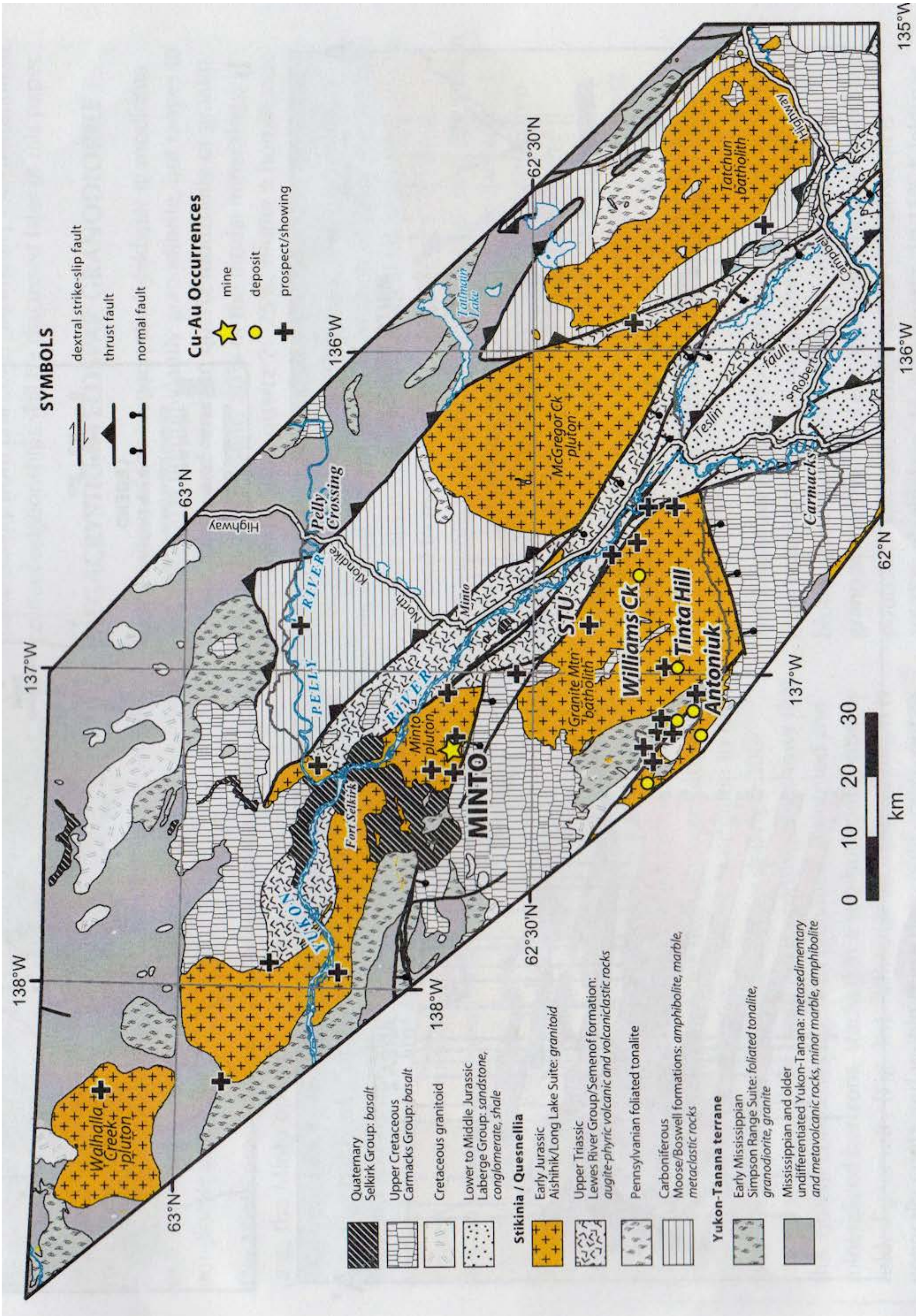
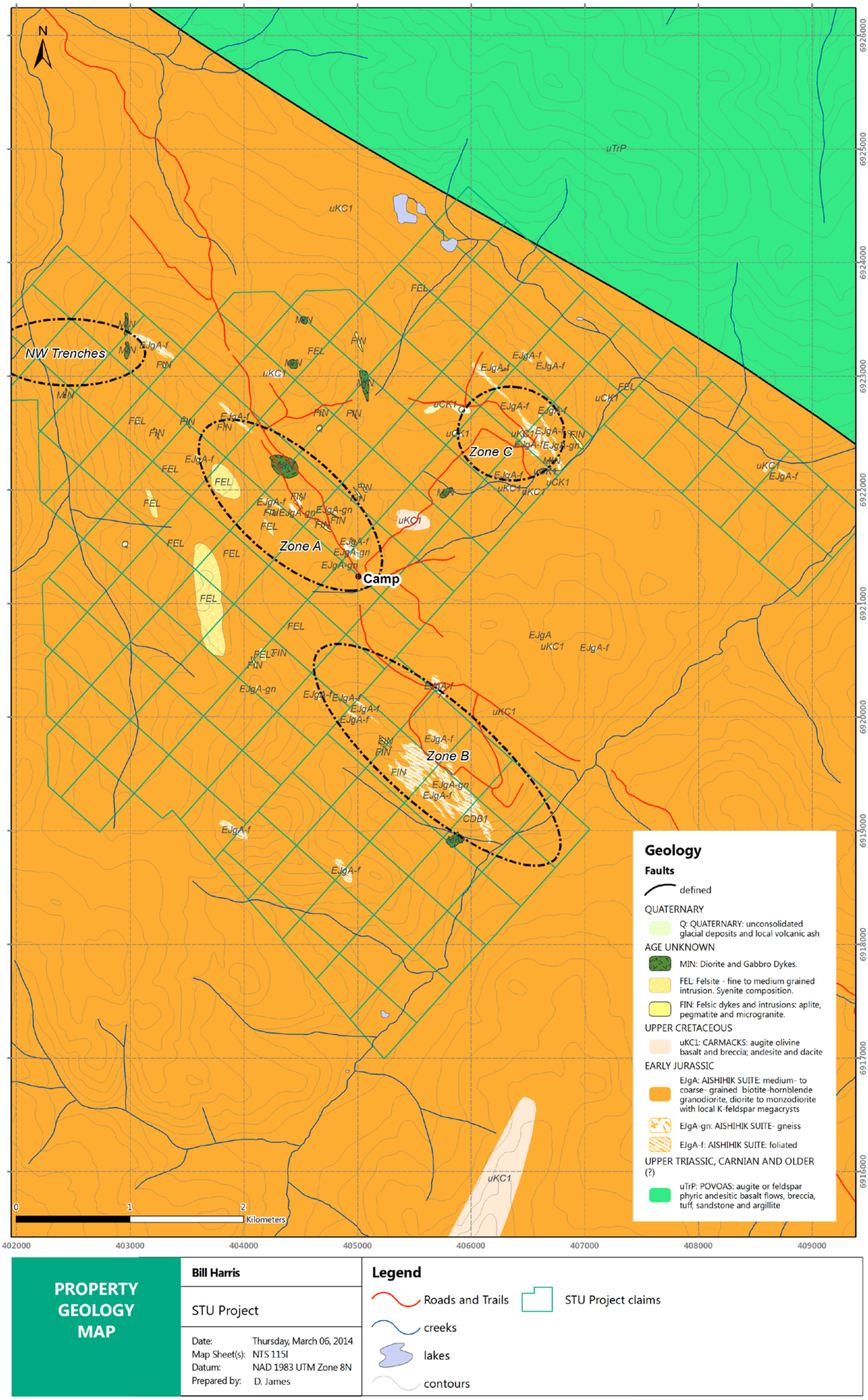


Figure 9: Property Geology



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 and, magnetite skarn. Since 2003 an Iron Oxide Copper Gold model has been favoured similar to Copperstone in Arizona, Caldelaria in Chile, Ernest Henry in Australia and the Sossefo Deposit in Brazil (Hatch, 2006).

Taft 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 was developing when the entire system was rapidly buried to depths greater than 9km which shut off or 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.

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 as seen at both Minto and Carmacks Copper. At Carmacks Copper, the 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.

Following the petrographic study, Fonseca, (in Pautler 2009) felt that the deposit lacked many defining features of porphyry deposits, most importantly the depth of emplacement and the lack of hydrothermal alteration mineral assemblages. The dominant control over mineralization was the development of permeable zones through grain boundary reduction. Reduction was because of severe metamorphism possibly caused by heating from a nearby intrusive source. The Tropicana gold deposit of Anglo Ashanti in Western Australia was suggested as a model because even though it is a gold deposit it is hosted in felsic gneiss and there is a strong relationship between gold and grain size. Tropicana has been variably considered as an IOCG, its own deposit type and more recently as having affinities with large intrusion related gold ore bodies such as Pogo in nearby Alaska (InfoMine website).

Pautler (2009 and 2012) 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, all agree that the deposits were emplaced between 9 and 20 km, the host is a moderately oxidized magma, iron oxide mineralization is widespread, there are very strong structural controls on ore mineral emplacement and peripheral alteration zones are missing.

8 EXPLORATION

8.1 2013 Program

Midnight Mines carried out a small program in 2013 for Bill Harris. It consisted of road and trail clearing, trench sampling, limited soil sampling and collection of magnetic susceptibility measurements. Work was done on claims STU 1-8, 29, 31, 33, 35, 36 and 38. Further work was done after the field program to compile, digitize and analyze previous soil and stream sediments, rock samples, geological mapping and drill programs. Soil sampling information on adjacent claims was analyzed along with government and industry airborne geophysics surveys.

Goals for the field program were to collect chip samples from around high grade samples taken in previous programs and to keep the claims up to date. The purpose of the compiling and digitizing was to look for additional zones, based on the multiple zones found on Carmacks Copper and Minto since the 1970 era soil surveys.

The Midnight Mines crew spent days on the project, camping in 2 cabins at the temporarily closed Carmacks Copper camp. The field crew consisted of: Debbie James, Geologist, Bill Harris, Prospector and Cody Bassett and Winston Billy, Field Technicians. The crew mobed into camp on September 14th spent three full days in the field and then returned to Whitehorse on September 18th. The first field day was spent clearing roads and trails and the remainder rock and soil sampling in Zone B.

8.2 2013 Rock Samples

Forty rock samples were collected in Zone B, 38 from trenches and 2 from outcrop. Results are shown below for the 40 rock samples. Samples were collected from the 1978, B1 and B3 trenches where bedrock was close to the surface or previous sample results had been good. Trench walls were dug out with shovels and mattocks to expose bedrock and granular, weathered bedrock (rock flour) that is in place below the soil layer. A measuring tape and a GPS were used to locate samples. Where bedrock exposure was good, chip samples were taken between 0.5 and 2.0m long. Where exposure was poor samples were either taken at a single location or pieces of rock were collected over a length. Table 2 below summarizes the results, appendix 2 contains complete sample notes and assays. Sample locations and analytical results are shown on Figures 10-13.

1978 trench
36.5m of chip samples of massive and foliated granodiorite were taken in this trench. Of the 23 samples collected 16 contained greater than 100ppm copper (0.01%). The highest value was 905ppm of copper in an oxidized granodiorite bordered by 594 ppm and 478 ppm (samples M896840-42).

B1 trench
6.3m of sampling was done in B1 in the area of high grade grab samples that had assayed 0.56% and 1.07% copper. One of the samples, 82530 had assayed 444 g/t silver. 2013 sample S896861 produced >1.0% copper (the sample was over limit but not assayed), 14.8 g/t silver and 553 ppb Au over 0.5m. Three other samples produced anomalous copper values >100ppm.

B3 Trench
22m of sampling was done in B3 trench around grab samples grading 1.57% copper, 1.86 g/t gold and 9.8 g/t silver (sample 22329) and 2.86% copper, 2.56 g/t gold and 13.5 g/t silver (sample 82529). The highest value from 2013 was S896875 at 0.55% copper, 4.4 g/t silver and 75 ppb gold over 2 metres. Three other samples assayed >100 ppm including S896872 which assayed 0.55% copper, 2.6 g/t silver and 34 ppb gold over 1m.

8.3 Soil Geochemical Survey

Seven soil samples were collected in Zone B. An auger was used to penetrate and sample below the ash layers. The target was the lower B/upper C horizons. Upper C was identified by small bedrock chips in the soil. Information about each sample was collected on a form and later entered into the sampling database. A GPS was used to record sample locations. No significant results were obtained. See appendix 2 for results and Figure 12.

8.4 Magnetic Susceptibility

Thirty nine rock samples and five soil samples from the 2013 program were tested for magnetic susceptibility using a handheld KT-9 meter. Multiple readings were taken from different pieces of rock in each sample and stored in the data recorder prior to being downloaded onto a computer. The reading was taken through the Kraft bag when measuring soil samples. Readings are recorded in the sample database and can be directly related to assay results. An average of all readings was calculated for each sample and is presented in the table below.

The magnetic susceptibility measurements Table 3 below are listed in descending order along with assay results. There is not a correlation between grade and magnetic susceptibility but there is a tendency for high copper values to have either high (>10) or low (<2) magnetic susceptibility. Magnetite was observed in S896861 which had the second highest reading at 43.7.

Table 2: 2013 Samples

Sample No.	Type	Length (m)	Location	Cu (ppm)	Ag (ppm)	Au (ppb)	Mo (ppm)
M896831	CHIP	2	1978 TRENCH	208.6	0.05	3.2	0.2
M896832	CHIP	2	1978 TRENCH	110.4	0.05	2.1	0.05
M896833	CHIP	1	1978 TRENCH	155.4	0.05	2.8	0.2
M896834	CHIP	2	1978 TRENCH	183.7	0.05	0.8	0.3
M896835	CHIP	2	1978 TRENCH	97.8	0.05	2	0.05
M896836	CHIP	1	1978 TRENCH	18.5	0.05	0.25	0.1
M896837	CHIP	2	1978 TRENCH	199.4	0.1	0.25	0.3
M896838	CHIP	2	1978 TRENCH	196.1	0.05	0.9	0.3
M896839	CHIP	2	1978 TRENCH	361.7	0.2	0.8	0.6
M896840	CHIP	2	1978 TRENCH	594.1	0.3	7	0.5
M896841	CHIP	1	1978 TRENCH	**905.1**	0.2	3.1	0.4
M896842	CHIP	1.5	1978 TRENCH	478.7	0.2	3.8	0.4
M896843	CHIP	0.5	1978 TRENCH	274.5	0.1	3.3	0.2
M896844	CHIP	1	1978 TRENCH	65.3	0.05	0.25	0.2
M896845	CHIP	1	1978 TRENCH	26.6	0.05	0.6	0.3
M896846	CHIP	1.5	1978 TRENCH	124.7	0.05	1.2	0.2
M896847	CHIP	1	1978 TRENCH	258.9	0.1	0.8	0.3
M896848	CHIP	2	1978 TRENCH	336.6	0.1	0.7	0.4
M896849	CHIP	1.5	1978 TRENCH	167.9	0.05	1.9	0.4
M896850	CHIP	1.5	1978 TRENCH	185.9	0.05	2.1	1.6
S896851	CHIP	2	1978 TRENCH	7.1	0.05	1.8	0.05
S896852	CHIP	2	1978 TRENCH	8.8	0.05	1.5	0.05
S896853	CHIP	2	1978 TRENCH	3	0.05	0.6	0.2
S896855	GRAB	1.5	B3 TRENCH	155.6	0.4	0.25	1.3
S896856	GRAB	7.5	B3 TRENCH	80.8	0.05	0.25	0.5
S896857	GRAB	2	B3 TRENCH	14.3	0.05	0.25	0.8
S896858	CHIP	1.5	B1 TRENCH	47.1	0.1	0.8	0.7
S896859	CHIP	1	B1 TRENCH	31	0.1	0.25	0.1
S896860	CHIP	1.2	B1 TRENCH	466.9	0.4	3.4	0.3
S896861	CHIP	0.5	B1 TRENCH	**>10000**	**14.8**	**552.7**	**16.8**
S896862	CHIP	0.4	B1 TRENCH	657	1.1	43.9	0.4
S896863	CHIP	1.7	B1 TRENCH	248.3	1.1	14	0.3
S896864	GRAB	0	B1 TRENCH	53.8	0.5	2.1	0.5
S896869	GRAB	0	B Zone	2.5	0.05	1	0.05
S896870	GRAB	0	B Zone SOIL ANOMALY	1.3	0.05	0.7	0.1
S896871	grab	5	B3 TRENCH	97.1	0.2	4.1	0.2
S896872	GRAB	1	B3 TRENCH	**1498.7**	2.6	34.1	10.3
S896873	GRAB	1	B3 TRENCH	23.8	0.05	0.8	0.1
S896874	GRAB	2	B3 TRENCH	170	0.1	1.1	0.5
S896875	GRAB	2	B3 TRENCH	**5476.4**	**4.4**	75.1	**20.9**

Table 3: 2013 magnetic susceptibility

SAMPLE	ROCK	DESCRIPTION	MAG_SUSC	CuPPM	AgPPM	AuPPB	MoPPM
M896839	GRANODIORITE	Brow n rock flour, oxidized? Mafic GRD	66.4	361.7	0.2	0.8	0.6
S896861	GRANODIORITE	50 cm zone of malachite and lesser azurite. Magnetite. Weakly foliated.	43.7	**10000**	**14.8**	**552.7**	**16.8**
M896838	GRANODIORITE	Brow n rock flour, oxidized? Mafic GRD	35.6	196.1	0.05	0.9	0.3
M896837	GRANODIORITE	rock flour, mafic GRD	31.2	199.4	0.1	0.25	0.3
M896834	GRANODIORITE	rock flour and rock, mafic GRD	14.7	183.7	0.05	0.8	0.3
M896835	GRANODIORITE	rock flour, mafic GRD	11.6	97.8	0.05	2	0.05
M896848	GRANODIORITE	Weakly oxidized mafic GRD	10	336.6	0.1	0.7	0.4
S896869	GRANODIORITE	Weak foliation apparent w hen w eathered but not on fresh surface. Large Kspar phenos up to 10%. Local pegmatite veins or segregations.	9.8	2.5	0.05	1	0.05
M896833	GRANODIORITE	rock flour, mafic GRD	8.8	155.4	0.05	2.8	0.2
M896844	GRANODIORITE	Partially oxidized mafic GRD	8.5	65.3	0.05	0.25	0.2
S896870	GRANODIORITE	Weak foliation on w eathered surface.	8.1	1.3	0.05	0.7	0.1
M896850	GRANODIORITE	Small rock and rock flour. Weakly oxidized mafic GRD.	7.1	185.9	0.05	2.1	1.6
S896852	GRANODIORITE	Rock flour and small rocks.	6.8	8.8	0.05	1.5	0.05
S896862	GRANODIORITE	Mod foliation. Hematite staining	6.7	657	1.1	43.9	0.4
M896845	GRANODIORITE	Weak foliation.	6.6	26.6	0.05	0.6	0.3
S896851	GRANODIORITE	Small rocks. Mafic GRD, minor oxidation.	6.5	7.1	0.05	1.8	0.05
M896849	GRANODIORITE	Small rock and rock flour. Weakly oxidized mafic GRD.	6.2	167.9	0.05	1.9	0.4
M896832	GRANODIORITE	rock flour, mafic GRD	5.9	110.4	0.05	2.1	0.05
M896843	GRANODIORITE	Rock flour and small rocks, mafic GRD	5.8	274.5	0.1	3.3	0.2
S896858	GRANODIORITE	Hematite staining. Mod foliation.	5.3	47.1	0.1	0.8	0.7
M896831	GRANODIORITE	Weak foliation. Mixed w ith felsite or silicified grd	5.3	208.6	0.05	3.2	0.2
S896863	GRANODIORITE	Hematite staining. Weak foliation.	5.2	248.3	1.1	14	0.3
S896856	GRANODIORITE	Locally mod foliation. Up to 15% bio.	5.2	80.8	0.05	0.25	0.5
M896847	GRANODIORITE	Rock and rock flour. Mod foliation.	4.9	258.9	0.1	0.8	0.3
M896836	FELSITE	angular blocks	3.8	18.5	0.05	0.25	0.1
M896846	GRANODIORITE	Mod foliation.. Quartz sections	3.8	124.7	0.05	1.2	0.2
S896874	GRANODIORITE	Bio-rich GRD. Local pieces of silicified GRD or felsite. Weak foliation.	3.5	170	0.1	1.1	0.5
S896853	GRANODIORITE	Rock flour and small rocks.	3.3	3	0.05	0.6	0.2
M896842	GRANODIORITE	Yellow brow n GRD rock flour	3.2	478.7	0.2	3.8	0.4
S896859	DYKE	Felsic dyke cutting granodiorite	2.6	31	0.1	0.25	0.1
S896873	FELSITE	Silica zone. Pegmatite and bleached, silicified GRD or felsite	2.4	23.8	0.05	0.8	0.1
S896860	GRANODIORITE	Weak foliation	2.4	466.9	0.4	3.4	0.3
S896871	GRANODIORITE	Mafics incl. biotite. Weak foliation.	2.4	97.1	0.2	4.1	0.2
M896841	GRANODIORITE	Yellow brow n GRD rock flour	1.8	**905.1**	0.2	3.1	0.4
S896855	GRANODIORITE	Brecciated, silicified GRD.	1.6	155.6	0.4	0.25	1.3
S896875	GRANODIORITE	Locally brecciated w ith abundant limonite. One piece has malachite along bio bands. Strongly foliated.	1.2	**5476.4**	4.4	75.1	20.9
S896872	GRANODIORITE	15% BIO, 5% LIM. Mod foliation.	0.5	**1498.7**	2.6	34.1	10.3
S896864	GRANODIORITE	Strong limonite. Locally brecciated.	0.4	53.8	0.5	2.1	0.5
S896857	GRANODIORITE	Clay alteration, local foliation, pale, mafics removed.	0.3	14.3	0.05	0.25	0.8

8.5 2005-2012 programs

The information in this section is taken J. Pautler's 2009 and 2012 reports which compile and interpret all of the work done since Bill Harris restaked the STU property in 2005. Programs have been short and consisted of examination and inspection of the property, rock sampling, surveying of trenches and drill holes, petrography and magnetic susceptibility measurements. In 2010 the program focused on areas outside of the main three zones. The information and results from these programs have partially confirmed missing surface information from the UKHM work.

8.5.1 GPS Surveying

The locations of 14 rotary holes and 22 diamond drill holes have been GPS surveyed. Combined with drillhole sections from Zone B this information will allow construction of a workable drill database for interpretation.

8.5.2 Rock Sampling

Forty rock samples have been collected from trenches in all three zones: 12 from Zone A, 17 samples from zone B, and 11 from Zone C. Most of the samples were malachite bearing foliated granodiorite. No consistent sampling along trenches was done due to poorly exposed bedrock in the trenches where they have slumped in.

Rock sampling in Zone A traced mineralization (values >0.1% to 0.67% Cu with a maximum of 470 ppb Au) for 800m along strike from trench 11+50W in the north to trench 12+00E in the south. The zone appears widest in Trench 6+00W, reaching 95m in width, and the best mineralization stretches for 400m between trench 11+50W and 0+00W. The zone appears to be open to the northwest and either dissipates or moves east of trench 12+00 E and 14+00E. See Figure 10

Mineralization in Zone B was traced for 400m along strike between trenches B3 and B6. Although there is a substantial extent of exposed foliated granodiorite, mineralization (values up to 2.86% Cu and 2.56 g/t Au) is narrow. North of trench B3 the mineralization may move east of trenches B4 and B5. See Figures 11 and 12.

Zone C is the smallest zone with 110m of mineralization between trenches 9+50E and 14+50E reaching its widest extent 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. See Figure 13.

8.5.3 Soil Sampling

The only systematic soil samples collected were two lines 700 m long collected along roads at the north and south ends of Zone A. The best result was a 50ppm copper in soil anomaly at the south end of the north line. Other soil samples were collected to supplement rock samples in trenches with no outcrop.

8.5.4 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 under property geology, mineralization and deposit model.

8.5.5 Magnetic Susceptibility

Magnetic susceptibility measurements were made on 25 samples of drill core taken from the core stacks in 2005 and 4 samples that were collected for petrographic study in 2012. No assay results are available for the samples so a direct comparison between grade and magnetic susceptibility cannot be made. However, visual evidence of mineralization can be used as a proxy to make observations.

Fresh granodiorite returned average readings (all values x 10^{-3} SI units) between 1.0 and 2.0 with a range from 0.13 to 7.86. Mineralized and foliated specimens ranged from 0.04 to 23.6. Values <3.0 came from samples of foliated or gneissic granodiorite with none to trace flecks and disseminations of malachite, chalcopyrite and bornite. Highly mineralized specimens gave higher readings regardless of whether the visible mineralization was primary bornite and chalcopyrite or secondary malachite.

Figure 10: STU Summary Exploration Map Zone A

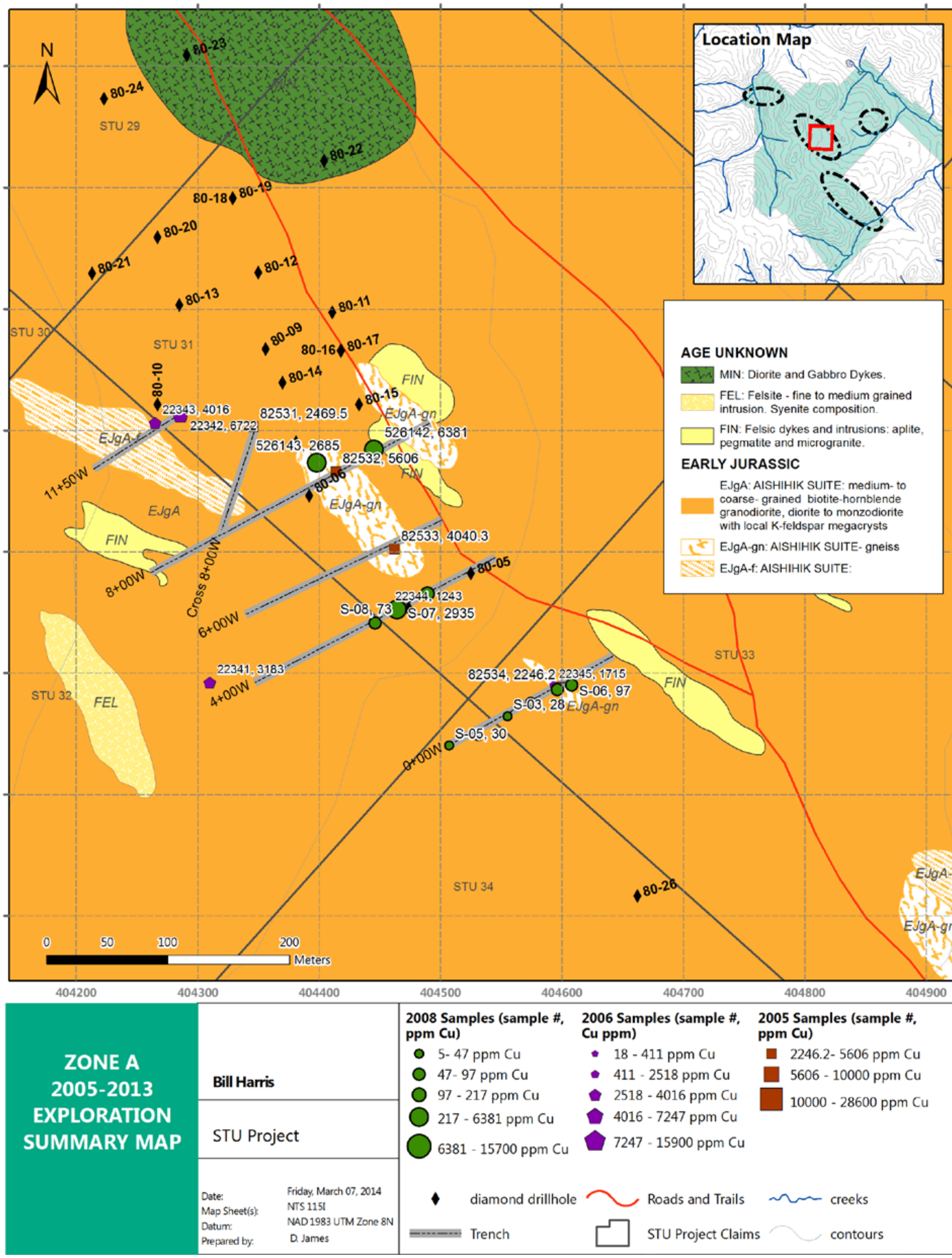


Figure 11: STU Summary Exploration Map Zone B South

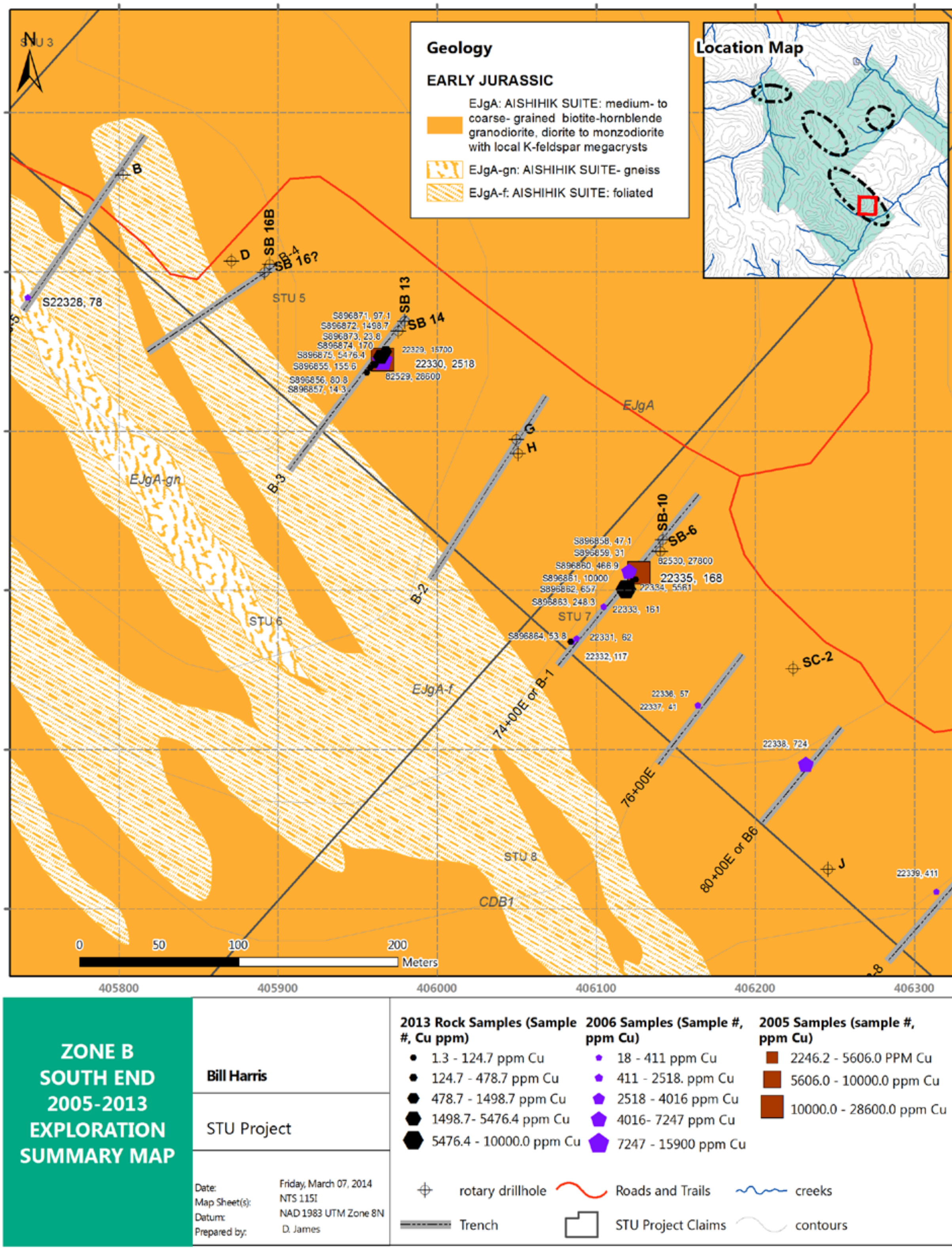


Figure 12: STU Summary Exploration Map Zone B North

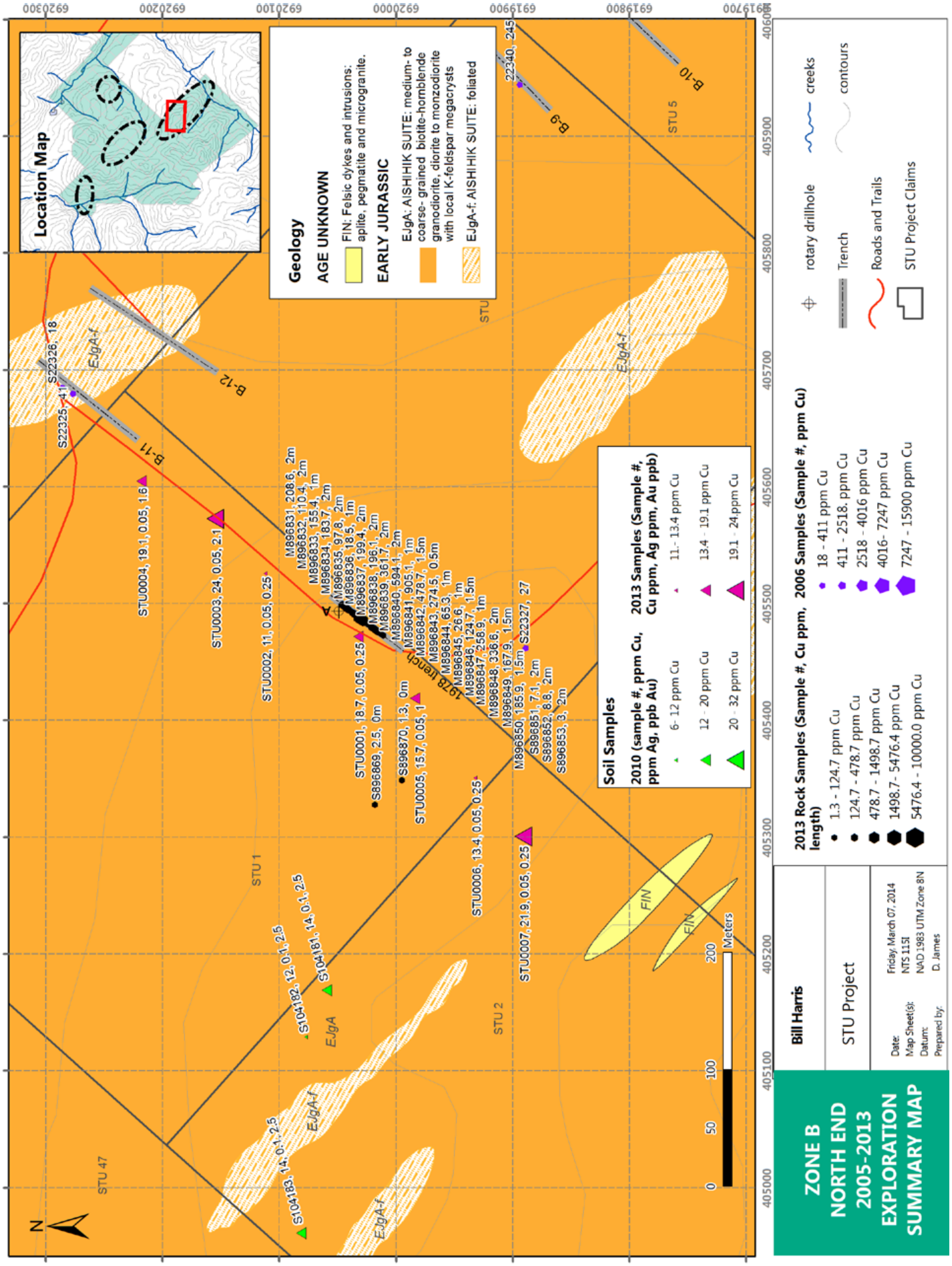
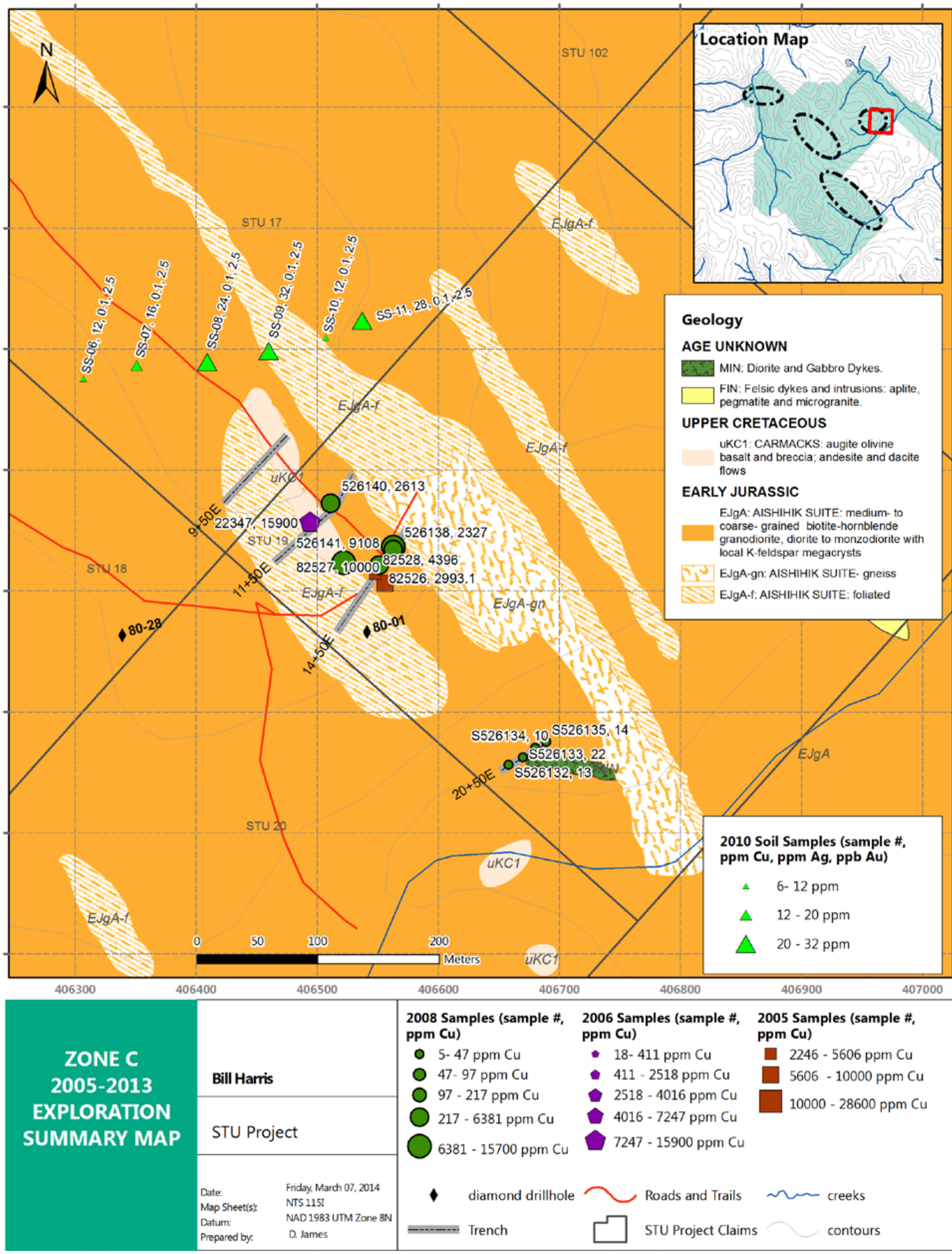


Figure 13: STU Summary Exploration Map Zone C



9 ADJACENT PROPERTIES

BC Gold's Bread, Jam Peanut and Copper claims all surround the STU claims. They cover ground that was previously staked by UKHM as the MOON, NOON and FIL claims. BC Gold has carried out IP surveys, MMI soil sampling surveys and an airborne magnetic and radiometric survey over their claim blocks. Once the information becomes publicly available it will be valuable for identifying anomalous trends on the STU property. The MMI results can be compared to the 1977 STU soil survey. Meanwhile, images of anomalies on the four blocks are published on BC Gold's website. They are presented in Figure 14.

Northern Tiger'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.

The Minto and Carmacks Copper deposits have been discussed previously in this report but the variable geometry of the mineralized zones at Carmacks Copper could be applicable to exploration at STU.

The No. 1, 4, 7 and 7a zones at Carmacks Copper contain the reserves. No. 1 zone is 50m wide by 800m long and reaches at least 450m down dip. It strikes NNW and dips 60 to 75 degrees east. The northern half of the zone has different characteristics from the south. The northern half is consistent in thickness, orientation and down dip characteristics while the southern half splays irregularly and appears to be truncated by subparallel faults down dip. Gold grades are higher in the northern half and copper grades are higher in the footwall than the hanging wall. The northern end of No. 1 Zone is also terminated by cross-cutting faults and a northern extension had not yet been identified. Shorter and narrower zones No. 7 and 7a are considered offset extensions of the No. 1 Zone in the south. Mineralization in 7 and 7a extends down to 120m below which the gneiss continues but is only weakly mineralized. (Casselman and Arseneau, 2011).

Zone No. 4 measures 60m by 90m and extends downwards for 90m as a shallowly dipping, wavy body which forms a large "bowl" shape. Oxidation is shallower and copper content is lower than in the No. 1 Zone.

The north end of the Carmacks Copper property joins the south edge of the STU claims along Hoocheekoo Creek. There are 3 relatively unexplored zones on that property close to STU: the 4000N, No. 2 and No. 3 zones.

Mineral Reserves for Minto and Carmacks Copper are presented in tables 4 and 5 below.

Table 4 5:Mineral Reserves at Minto
NI 43-101 Mineral Reserves

MINERAL RESERVES									CONTAINED METAL[1]					
	Category	000's Tonnes	Cu %	Zn %	Pb %	Ag g/t	Au g/t	Fe %	Cu M lbs	Zn M lbs	Pb M lbs	Ag k ozs	Au k ozs	Fe Mt
Minto Dec. 31, 2012	Proven	6,003	1.56	-	-	5.09	0.66	-	206	-	-	982	127	-
	Probable	7,044	1.51	-	-	5.16	0.54	-	234	-	-	1,169	122	-
	Total	13,047	1.53	-	-	5.13	0.60	-	440	-	-	2,152	252	-

(from Capstone Mining website www.capstonemining.com)

Notes:

1. Excludes material mined but not processed in the Area 2 region of MSD and currently held in stockpile. Includes any resources remaining in the Minto Main Deposit not considered in the current mine plan.

   * Cut-off grades (COG) used for Mineral Resource Estimates: Minto global resource 0.5% Cu; All mineral resources are exclusive to dilution and mining recovery factors. Rounded to nearest thousand; totals may not sum exactly due to rounding. M&I = Measured & Indicated. See Technical Reports filed under Capstone's profile on SEDAR for further information.

Table 6: Mineral Reserves at Carmacks Copper

NI 43-101 Mineral Reserves[2]

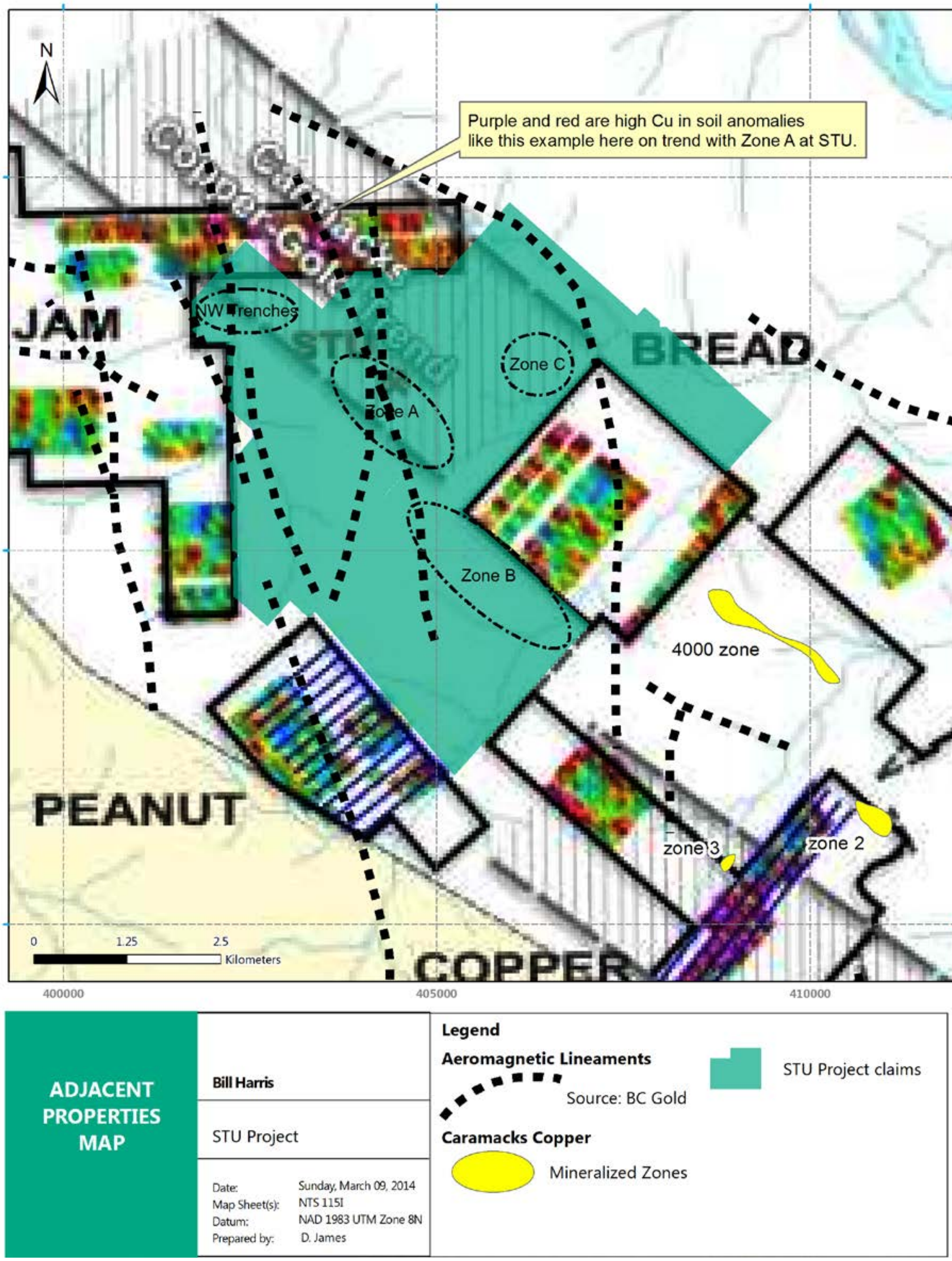
Reserve category	Ktonnes	Tot Cu (%)	Sol Cu (%)	Nonsol Cu (%)	Gold (g/t)	Silver (g/t)
Proven Mineral Reserve	4,127	1.039	0.851	0.188	0.559	5.39
Copper (Mlbs)		*94.5*				
Probably Mineral Reserve	7,424	0.943	0.78	0.163	0.365	3.76
Copper (Mlbs)		*154.3*				
Proven & Probable Reserve	11,551	0.977	0.805	0.172	0.435	4.34
Copper (Mlbs)		*248.9*				

(from company website www.coppernorthmining.com)

[2] As disclosed in November 1, 2012 Feasibility Study Update for Carmacks News Release

1. Indicated Mineral Resources are inclusive of Mineral Reserves
2. The estimate of Mineral Resources contained within the Feasibility Study conforms to the Canadian Institute of Metallurgy (CIM) Mineral Resource and Mineral Reserve definitions (December 2005) referred to in the National Instrument (NI) 43-101, Standards of Disclosure for Mineral Projects.
3. Mineral Reserves are fully diluted and are based on a cut-off grade of 0.18% recoverable copper November
4. Qualified Person -- Michael G. Hester, FAusIMM of IMC

Figure 14: Anomalies on adjacent properties



10 SAMPLING PREPARATION, ANALYSIS AND SECURITY

The 2013 work program resulted in the collection of 40 rock and 7 soil samples. The rock samples were collected from potential mineralized locations and other areas of geological interest.

The rock chip samples collected during 2013 were placed in marked poly bags, sealed with zap straps, placed into marked rice bags, sealed with zap straps, and delivered directly to the ACME preparation facility in Whitehorse. There 1kg of sample was crushed to 85% passing 10 mesh, then a 250g split was pulverized to 85% passing 200 mesh (preparation code R200-250). The split was shipped to ACME in Vancouver, B.C. for analysis by method 1DX2, which involves wet digestion of a 15g sample split in 95^{o}C aqua regia which is then read using ICP-MS. Gold values > 1ppm were reanalysed by method G6, fire assay fusion and read using AAS.

Soil samples from the 2013 exploration work were collected from a depth of 25-60 cm using a soil auger. Soil samples were placed in marked Kraft envelopes, which were then dried, placed into marked poly bags, sealed with zap straps, placed into marked rice bags, sealed with zap straps, and delivered to the ACME preparation facility in Whitehorse. At the preparation lab, samples were dried at 60^{o}C then 100g was sieved to -80 mesh (method SS80). Following preparation, samples were shipped to Vancouver where they were analysed by method 1DX2 where samples area digested in hot aqua regia and read using ICP-MS.

All the rock and soil samples collected during 2013 exploration work were prepared and analyzed by ACME Analytical Laboratories Ltd. which is an independent accredited laboratory located in Vancouver, B.C. Canada. ACME’s Vancouver lab 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 Midnight Mines 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.

11 INTERPRETATION AND RECOMMENDATIONS

11.1 Discussion of Rock Samples & Trenching

Grab samples collected since 2005 have outlined a minimum length and width to mineralization in three zones at STU which in size and grade resembles that from historic work. However, systematic sampling of the existing trenches and excavation of new trenches is required to take the project further. Historic work at STU concentrated on secondary copper minerals such as malachite and azurite; the primary sulphide minerals were either not observed or not considered as important. The sulphides at STU are typically small and require a 20X hand lens to be discerned (pers. comm B. Harris). In addition gold and silver were either not analyzed or not reported in the available historic records. At Carmacks Copper and Minto these metals are of significant economic value and their distribution needs to be understood at STU.

The 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. New trenches should be excavated following, or in conjunction with, cleaning up old trenches. Pautler 2012 proposed locations for 2170m of new trenches in all 3 zones (see tables below and figure 15). The locations are a good starting point for a trenching program. More trenches can be added or locations adjusted as the program proceeds.

Zone A

Zone A historically had the best results of the three zones and recent sampling has confirmed this. The next stage of exploration should start in this zone with clean up and deepening of old trenches. An examination of drill core (see Discussion of Drilling below) prior to trenching should assist in understanding structure and mineralization geometry so excavation of new trenches can proceed along with or shortly after the old trenches are prepared.

Table 6: Proposed trenches in Zone A

Trench ID	**Easting of start (NAD83 Z8N)**	**Northing of start (NAD 83 Z8N)**	**Length (m)**
PTRA	404468	6922120	308
PTRB	404533	6922040	247
PTEC	404698	6921680	215
PTRD	404672	6921440	142
PTRE	404801	6921260	148
		Total	**1060**

Zone B

Zone B is the second target area for exploration. Cleaning and deepening of existing trenches should be the priority in this area. Zone B has a high number of old trenches and an expanse of outcrop. These should be mapped and sampled first to gain an understanding of structure and geometry of mineralization before embarking on further trenching. Geological mapping and soil sampling suggests that the mineralization continues or could be of higher grade on the west side of the zone and this should be confirmed.

Table 7: Proposed trenches in Zone B

Trench ID	Easting of start (NAD83 Z8N)	Northing of start (NAD 83 Z8N)	Length (m)
PTRF	405556	6919830	142
PTEG	406057	6919570	119
PTRH	406020	6919300	180
PTRI	406221	6919350	169
PTRJ	406360	6919230	180
		Total	**790**

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. Cleaning and deepening of old trenches and excavation of new trenches can proceed simultaneously.

Table 8: Proposed trenches in Zone C

Trench ID	Easting of start (NAD83 Z8N)	Northing of start (NAD 83 Z8N)	Length (m)
PTRK	406499	6922520	102
PTRL	406723	6922410	217
		Total	**319**

11.2 Discussion of Alteration

Like Minto, alteration at STU is biotite-rich potassic. The 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. Recent petrography used mineralized surface samples from weathered trenches and outcrops or from core that has been sitting outside for 34 years. All of this material has been altered by secondary copper mineral mobilization and surface weathering and is not representative of fresh rock. The main alteration mineral is biotite, followed by magnetite, quartz and potassium feldspar. Magnetite is a common constituent of biotite-rich potassic alteration.

11.3 Discussion of Soil Samples

The 1977 grid 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. The survey can now be used as an orientation survey and as an indicator of additional targets outside the main zones. It was carried out over multiple mineralized areas allowing the geochemical signature can be recognized. Unfortunately copper is the only element for which values are available.

UKHM used 15 ppm copper as background and 50 ppm copper as a threshold value for soil anomalies. 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. The survey was then used as an orientation survey to characterize the footprint of soil anomalies on STU and results suggested that a lower threshold than 50 ppm should be used.

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. Kreft, 2002 suggests investigating even single point anomalies although he does not give an anomalous value. This seems somewhat overzealous, but there are thirteen zones at Minto ranging from 1-60m wide and up to 100m apart surface 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.

Figures 15 and 16 illustrate the clustered anomalies. Zone A is within the largest and most continuous of the geochemical anomalies and may extend north and east of the current trenched and drilled area. This anomaly continues past the northern edge of the claim block where it coincides with an MMI anomaly on the JAM claims (figure #). The intersection of two north trending magnetic lineaments is coincident with this anomaly. Patchy 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.

Zone B has a long, discontinuous soil anomaly extending from Hoocheekoo Creek north onto the Bread claims and towards Zone A. Zone C is located on a small anomaly and may continue west towards Zone A and south onto the Bread claims.

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. BC Gold successfully used MMI on neighbouring claims 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.

Reports on MMI soils sampling on adjacent BC Gold properties are scheduled to be in the public record shortly. That information can be added to the STU data and used to look for trends. In the meantime there is historic and recent soil data from the surrounding properties that should be digitized and used to predict trends.

11.4 Discussion of Historical Drilling

No reserves have been published for the STU property and the drilling results in the public domain are extremely sparse. However the results of the first drilling program encouraged UKHM to stake large numbers of claims around the STU property; the NOON, MOON and FIL claim blocks were all staked in 1980. Ouellette, 1989 states that the Area A Zone appears structurally complex. Grades were good but the zones were reported as discontinuous along strike and down dip. No reserves could be calculated because of complexities apparent in the sections but there were intersections of >3% copper over 14m and one deep hole, 80-17, intersected 0.155% copper at 380m below surface suggesting some continuity at depth.

Results were disappointing in percussion program at Zone B; lower than the diamond drilling results, but B Zone trenches had lower surface values than A and C trenches. The percussion drill sample widths were 1.5m and this may have smeared the narrow, high grade values found on surface. The 1989 percussion drill hole data from the cross sections and the limited 1980 drill data should be entered into a database. There is enough information in the cross sections to get a better understanding of the B Zone prior to further trenching or drilling.

Since the UKHM drilling programs were completed, a lot more is known about ore geometry and mineralization at Carmacks Copper and Minto and can be applied to STU. The difficulties found in tracing reserves between sections may indicate that the structure and mineralization are different than originally thought. The surface measurements were taken on weathered, jointed bedrock that may have rotated through mechanical weathering.

The core from the program remains on site and with some care could be salvaged and sampled. The core should be reboxed and relabelled and long continuous sections should be sampled if possible. Previously sampled sections should be sampled as well as unsampled sections. The core should be logged while resampling and magnetic susceptibility measurements taken.

Following trenching and resampling of old core, and if results warrant, a program of drilling should be planned. A diamond drill is preferable to a percussion drill because it will provide information on structure and alteration which is vital to understanding the mineralization. A percussion drill could be used to test extension of zones in lieu of or to compliment trenching. It may also be a quick and relatively inexpensive first pass method to check subsurface values prior to diamond drilling.

11.5 Discussion of Magnetic Susceptibility

Although only a few magnetic susceptibility measurements have been collected from surface samples and weathered core at STU, the data suggests two populations of mineralization with corresponding magnetic susceptibilities; one with high susceptibility and the other with low susceptibility. The two populations may correspond to hypogene mineralization with magnetite and supergene, malachite-dominant mineralization where magnetite has been destroyed by alteration and weathering.

At Minto magnetic susceptibility measurements were collected on drill core in 2007. No correlation between magnetic susceptibility and grade could be made, but higher measurements were found in mineralized intervals. This is caused by magnetite which is seen in most mineralized horizons although magnetite is more widespread than sulphide and magnetite concentration is not proportional to copper grade. Hematite or hematite and magnetite are found in unmineralized rock associated with post-mineralization brittle structures. This suggests remobilization of iron after mineralization in a supergene process. (*SRK Consulting, 2008*).

No information was found on magnetic susceptibility measurements at the Williams Creek deposit. Magnetite is present in the oxide portion of the deposit along with primary sulphides in both disseminated form and as narrow massive or disseminated bands (*Casselman, 2011*). Magnetic susceptibility measurements should be collected regularly on STU samples and will assist in identifying magnetite in weathered samples.

11.6 Exploration Model

STU has features in common with both Minto and Carmacks Creek: the near vertical structure and secondary copper mineralization of Carmacks Creek and the sulphide mineralization, potassic alteration and higher magnetic signature of Minto. So far, the folded and deformed foliation and sulphides characteristic of Minto has not been seen at STU.

Rotational block faulting is observed at Minto and may occur along the regional east trending normal faults that place the Granite Mountain Batholith against Carmacks volcanics. At the property scale, steep-sided Hoocheekoo Creek and possibly Camp Creek 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.

At Minto the global model is a large area of copper mineralization containing 13 stacked higher grade zones or horizons from 1-50m wide. These zones display variable consistency horizontally and not all zones are economically mineralized. At Carmacks Copper the zones are not all near vertical nor are they all consistent at depth. Zone 4 is bowl-shaped and the southern half of the No. 1, No. 7 and 7A zones are interrupted and offset by faults. In the less explored area of the Carmacks Copper property, Zone 2 has significant copper oxide mineralization on surface but a limited program of two drillholes did not find any at depth. The variable geometry of mineralization at the two deposits should be considered when working at STU.

An immediate priority is to determine the orientation of the foliation and mineralization in each zone. Consistent structural measurements were collected in the historic geological mapping programs from trenches and outcrops but surface bedrock on unglaciated terrain may have been rotated by mechanical weathering processes, a caution noted in the 1977 report.

New work should focus on mapping sulphide content and location. At Minto and Carmacks Copper bornite and chalcopyrite are zoned leading to increased copper grades associated with increased bornite. Magnetite can be used as a proxy for bornite and mapping magnetite will also identify the extent of the potassic alteration. A vertical zoning at STU from bornite and chalcocite on surface to pyrite needs to be confirmed.

Mineralization could not be traced from section to section in the historic drilling suggesting that either the structural model was flawed and the drilling was not orthogonal to mineralization, or the mineralization is irregular and drilling will need to be closely spaced. Historic drilling and trenching seems to have chased malachite which may have been transported from its original sulphide source and redeposited as seen at Carmacks Copper. A small amount of copper remobilization along fractures occurred at Minto and is used as a vector to sulphide mineralization.

11.7 Exploration Targets

Following the trenching and resampling of old core recommended above there are five early stage target areas on the rest of the property (see figure 16 for target locations).

Target 1
The southwest side of the property where the claims extend past the limit of 1977 soil sampling. A program of grid soil sampling should be undertaken over this area. The first samples should be taken to cover the ridge parallel to Zone B where there is both foliated granodiorite and a magnetic lineament.

Target 2
Soil anomalies north of Zone A coincident with two magnetic lineaments and a soil anomaly on the adjacent property.

Target 3
Soil anomalies between Zones A and C coincident with stream sediment anomalies.

Target 4
Coincident stream, soil and magnetic lineament northeast of Zone C close to the confluence of Camp and Stu Creeks.

Target 5
Soil anomaly associated with junction of two magnetic lineaments on the west side of the property south of the NW Trenches.

11.8 Recommended Program & Budget

This section outlines a preliminary program of resampling old core and trenching.

Pre – Program (~ 1 week)

- Digitize ground geophysics surveys from 1970s
- Review 1971 soil sampling on BAY claims and digitize if the information appears valid.
- Approach Alexco (owners of UKHM archives) and attempt to obtain access to missing trench and drill program results.
- Start a drill database for STU using the 1989 percussion sections and the few diamond drill logs available.
- Research showings and work done on claims between STU and Minto, i.e. HI claims.

Field Program (~ 1 month)

Week one

- mobe excavator into camp, upgrading existing roads and trails along the way
- once on the property, upgrade existing trails and build new ones as needed.
- build/upgrade camp
- rebox and resample old core

Weeks 2-3

- clean and deepen old trenches,
- excavate new trenches
- map and sample trenches

Week 4

- finish sampling and mapping trenches and nearby outcrop
- prospect soil anomalies close to Zone A
- late season soil sampling of southwest side
- mobe out

Budget

(assumes 5 person crew, 1 geologist, 1 machine operator, 1 junior geologist, 1 camp person/cook, 1 field technician)

Pre-program	
Geologist 5 days @ $500/day	$2,500
GIS/Database support 5 days @$350/day	$1,750
Pre-program total	$4,250
Field program	
Program preparation	$3,000
Geologist 30 days @ $500/day	$15,000
Junior Geologist 30 days @$400/day	$12,000
Machine Operator 22 days @ $400/day	$8,800
Camp Person/Cook 30 days @ $400/day	$12,000
2 Field Technicians 60@ $350/day	$21,000
Office Support	$1,000
Helicopter – soil sampling, 10 hours @ $1300/hour	$13,000
Rock and core sample analysis, 1000 samples@ $45/sample	$45,000
Soil samples – 400 @ $30/sample	$12,000
Sample standards	$500
Camp costs, (food, fuel, equipment) 172 person days @ $120/day	$20,640
Expediting	$5,000
Truck rental, 2 @ $150/day each	$9,000
ATV rental, 2 @ $50/day each	$3,000
Field gear (bags, flagging, tools, cameras, packs, etc.)	$3,000
Excavator rental, 1 month @ $20,000/month	$20,000
Excavator fuel	$7,000
Vehicle fuel (travel and field)	$2,000
Field total	$212,940
Report writing, 7 days @ $500/day	$3,500
GIS, digitizing, database compilation, 7 days @ 350/day	$2,450
Subtotal	$223,140
15% contingency	$33,470
Total	$256,610

Figure 15: Exploration Targets in Zones A, B and C

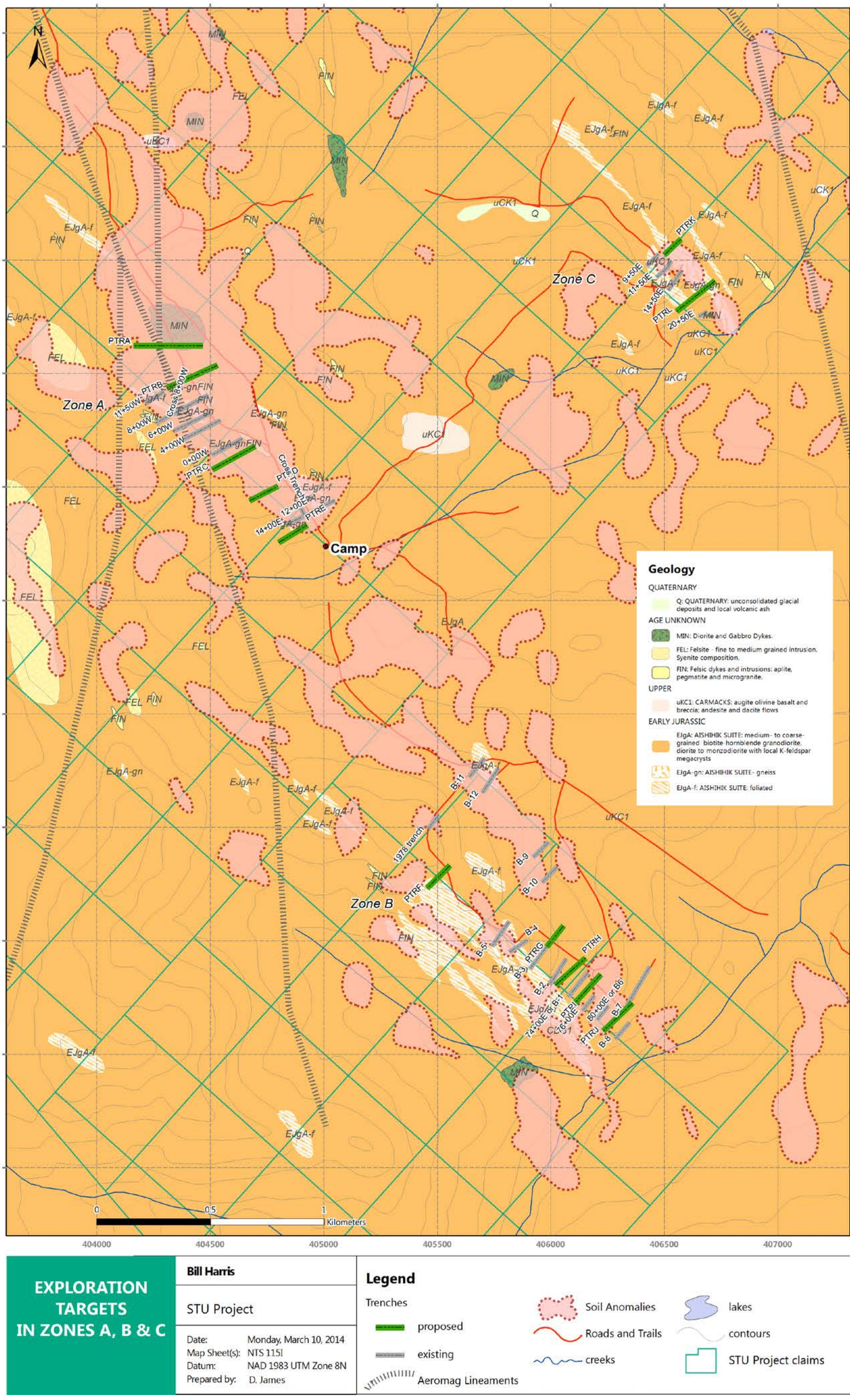
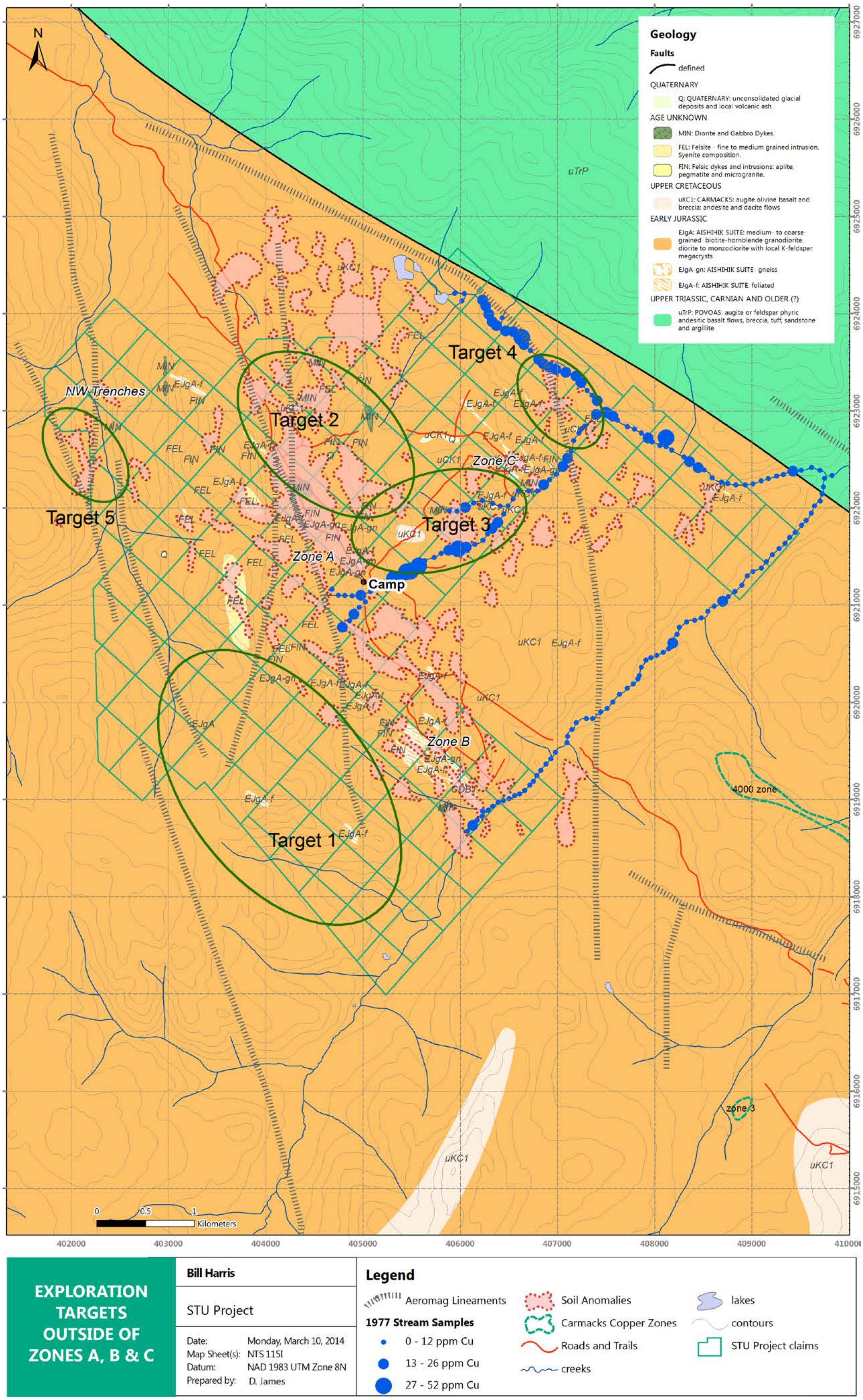


Figure 16: Exploration Targets outside main zones



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InfoMine. www.infomine.com

Tropicana Joint Venture. www.tropicanajv.com.au

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 co-authored this report.

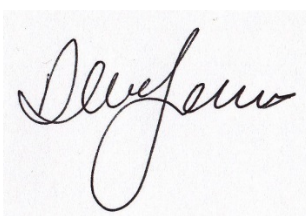
2) I am a graduate of the University of British Columbia with a B.Sc. degree in Geological Sciences (May 1988).

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

4) I was the senior geologist and project manager on the 2013 program on the STU Project.

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

DATED at Duncan, British Columbia, this 10th day of March, 2014



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

Appendix 1
CLAIM LIST

GRANT NUMBER	CLAIM LABEL	OWNER	EXPIRY DATE	YEARS RENEWAL	NEW EXPIRY_DATE
YC37770	STU 1	Bill Harris - 100%	12/13/13	1	12/13/2014
YC37771	STU 2	Bill Harris - 100%	12/13/13	1	12/13/2014
YC37772	STU 3	Bill Harris - 100%	12/13/13	1	12/13/2014
YC37773	STU 4	Bill Harris - 100%	12/13/13	1	12/13/2014
YC37774	STU 5	Bill Harris - 100%	12/13/13	1	12/13/2014
YC37775	STU 6	Bill Harris - 100%	12/13/13	1	12/13/2014
YC37776	STU 7	Bill Harris - 100%	12/13/13	1	12/13/2014
YC37777	STU 8	Bill Harris - 100%	12/13/13	1	12/13/2014
YC37778	STU 9	Bill Harris - 100%	12/13/13	1	12/13/2014
YC37779	STU 10	Bill Harris - 100%	12/13/13	1	12/13/2014
YC40249	STU 11	Bill Harris - 100%	9/19/13	2	9/19/2015
YC40250	STU 12	Bill Harris - 100%	9/19/13	2	9/19/2015
YC40251	STU 13	Bill Harris - 100%	9/19/13	2	9/19/2015
YC40252	STU 14	Bill Harris - 100%	9/19/13	2	9/19/2015
YC40253	STU 15	Bill Harris - 100%	9/19/13	2	9/19/2015
YC40254	STU 16	Bill Harris - 100%	9/19/13	2	9/19/2015
YC40255	STU 17	Bill Harris - 100%	9/19/13	2	9/19/2015
YC40256	STU 18	Bill Harris - 100%	9/19/13	2	9/19/2015
YC40257	STU 19	Bill Harris - 100%	9/19/13	2	9/19/2015
YC40258	STU 20	Bill Harris - 100%	9/19/13	2	9/19/2015
YC37788	STU 21	Bill Harris - 100%	6/21/14	1	6/21/2015
YC37789	STU 22	Bill Harris - 100%	6/21/14	1	6/21/2015
YC37790	STU 23	Bill Harris - 100%	6/21/14	1	6/21/2015
YC37791	STU 24	Bill Harris - 100%	6/21/14	1	6/21/2015
YC37792	STU 25	Bill Harris - 100%	6/21/14	1	6/21/2015
YC37793	STU 26	Bill Harris - 100%	6/21/14	1	6/21/2015
YC37794	STU 27	Bill Harris - 100%	6/21/14	1	6/21/2015
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YC40264	STU 42	Bill Harris - 100%	9/19/13	2	9/19/2015
YC40265	STU 43	Bill Harris - 100%	9/19/13	2	9/19/2015
YC40266	STU 44	Bill Harris - 100%	9/19/13	2	9/19/2015
YC40267	STU 45	Bill Harris - 100%	9/19/13	2	9/19/2015
YC40268	STU 46	Bill Harris - 100%	9/19/13	2	9/19/2015
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YC40271	STU 49	Bill Harris - 100%	9/19/13	2	9/19/2015
YC40272	STU 50	Bill Harris - 100%	9/19/13	2	9/19/2015

GRANT NUMBER	CLAIM LABEL	OWNER	EXPIRY DATE	YEARS RENEWAL	NEW EXPIRY_DATE
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YC40274	STU 52	Bill Harris - 100%	9/19/13	2	9/19/2015
YC40275	STU 53	Bill Harris - 100%	9/19/13	2	9/19/2015
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YC40201	STU 55	Bill Harris - 100%	11/29/13	2	11/29/2015
YC40202	STU 56	Bill Harris - 100%	11/29/13	2	11/29/2015
YC40203	STU 57	Bill Harris - 100%	11/29/13	2	11/29/2015
YC40204	STU 58	Bill Harris - 100%	11/29/13	2	11/29/2015
YC40205	STU 59	Bill Harris - 100%	11/29/13	2	11/29/2015
YC40206	STU 60	Bill Harris - 100%	11/29/13	2	11/29/2015
YC40207	STU 61	Bill Harris - 100%	11/29/13	2	11/29/2015
YC40208	STU 62	Bill Harris - 100%	11/29/13	2	11/29/2015
YC40209	STU 63	Bill Harris - 100%	11/29/13	2	11/29/2015
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YC40212	STU 66	Bill Harris - 100%	11/29/13	1	11/29/2014
YC40213	STU 67	Bill Harris - 100%	11/29/13	1	11/29/2014
YC40214	STU 68	Bill Harris - 100%	11/29/13	1	11/29/2014
YC40215	STU 69	Bill Harris - 100%	11/29/13	1	11/29/2014
YC40216	STU 70	Bill Harris - 100%	11/29/13	1	11/29/2014
YC40217	STU 71	Bill Harris - 100%	11/29/13	1	11/29/2014
YC40218	STU 72	Bill Harris - 100%	11/29/13	1	11/29/2014
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YC65263	STU 80	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65264	STU 81	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65265	STU 82	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65266	STU 83	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65267	STU 84	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65268	STU 85	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65269	STU 86	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65270	STU 87	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65271	STU 88	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65272	STU 89	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65273	STU 90	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65274	STU 91	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65275	STU 92	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65276	STU 93	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65277	STU 94	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65278	STU 95	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65279	STU 96	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65280	STU 97	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65281	STU 98	Bill Harris - 100%	7/9/13	1	7/9/2015

GRANT NUMBER	CLAIM LABEL	OWNER	EXPIRY DATE	YEARS RENEWAL	NEW EXPIRY_DATE
YC65282	STU 99	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65283	STU 100	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65284	STU 101	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65285	STU 102	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65286	STU 103	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65287	STU 104	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65288	STU 105	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65289	STU 106	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65290	STU 107	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65291	STU 108	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65292	STU 109	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65293	STU 110	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65294	STU 111	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65295	STU 112	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65296	STU 113	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65297	STU 114	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65298	STU 115	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65299	STU 116	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65300	STU 117	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65301	STU 118	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65302	STU 119	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65303	STU 120	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65304	STU 121	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65305	STU 122	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65306	STU 123	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65307	STU 124	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65308	STU 125	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65309	STU 126	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65310	STU 127	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65311	STU 128	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65312	STU 129	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65313	STU 130	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65314	STU 131	Bill Harris - 100%	7/9/13	1	7/9/2015
YC65315	STU 132	Bill Harris - 100%	7/9/13	1	7/9/2015

Appendix 2
2013 Rock & Soil Samples

See Data Folder for Sample Information

Appendix 3
Work Summary & Cost Statements

Progress Report

Date	Activity	Soil Samples	Rock Samples
8-Sep	Reviewing STU reports.		
9-Sep			
10-Sep	Georeference and digitize 1977 maps with soil geochemistry, exposure map		
11-Sep	Digitize soil contours and create field map.		
12-Sep	Deb travel to Whitehorse.		
13-Sep	Sorted and packed supplies		
14-Sep	Mobed into camp. Left Whitehorse at 3:00 pm. Picked up Winston in Carmacks		
15-Sep	Bill, Deb, Cody and Winston travelled to A and B zones clearing roads/trails along		
16-Sep	Deb, Cody and Winston trench sampling in 1978 trench and soil sampling along B		
17-Sep	Deb, cody and Winston soil sampling SW of 1978 Trench and prospecting ridge.	4	21
18-Sep	Mobed out of camp. Left trailer, ATVs, ATV trailer and some equipment.	3	17
19-Sep	Bill and Cody return to camp to pick up vehicles and equipment. Deb office		
20-Sep			
21-Sep			

Statement of Costs Sept. 14-19, 20132

Personnel	$		
Prospector- Bill Harris	$	1,500	
Geologist - Debbie James	$	3,000	
Field Tech - Cody Bassett	$	2,450	
Field Tech- Winston Billy	$	1,750	
Wages total:	**$**	**8,700**	
4X4 truck +trailer (incl. fuel)	$	1,200	
Atv (2)	$	1,200	
ATV trailer	$	105	
Chainsaws	$	240	
Camp costs - 14 person days	$	1,400	
Supplies - 14 person days	$	700	
Sample Analysis	$	1,244	(see receipts)
Camp, supplies, equiqment total:	**$**	**6,089**	
Report	$	2,500	
TOTAL	**$**	**17,289**	