GEOLOGICAL, GEOCHEMICAL, TRENCHING and ARCHAEOLOGICAL REPORT on the

STU PROJECT

in the

Carmacks Copper-Gold Belt, Yukon

STU 1-72	YC37770-95, 40249-76, 40201-18
STU 73-132	YC65256-315
HOO 1-28, 35-46	YF20773-800, 46387-98
CHE 1-30	YF46357-380,401-6
KOO 1-12, 15-44, 47-58	YF46501-12, 15-44,47-58
WC 1-72	YF20701-72
WCF 1-11	YF46407-17

NTS: 115I/7

Latitude 62°24'N **Longitude 136°49'W**

Whitehorse Mining District

Work performed between July 3 and October 18, 2014

For :
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September 21, 2015

SUMMARY:

The 7050 hectare STU Project, comprising the STU, HOO, CHE, KOO, WC and WCF claims on NTS map sheet 115I/7, lies within the Carmacks copper-gold belt and is located approximately 60 km by road northwest of Carmacks, which is 177 km by road from Whitehorse, Yukon Territory. The property is situated in the Whitehorse Mining District with a latitude and longitude of 62°24'N, 136°49'W. Mr. Bill Harris of Whitehorse, Yukon is the owner and funded the current program.

The Carmacks copper-gold belt is a 180 km long by 60 km wide belt of intrusion hosted copper - gold mineralization which includes the Carmacks Copper deposit (Williams Creek) of Copper North Mining Corporation, containing a resource of 12.0 million tonnes of copper oxide ore grading 1.07% Cu (0.86% oxide Cu), and 0.46 g/t Au and 4.6 g/t Ag, using a cutoff grade of 0.25% C *(Huss et al., 2012)*, and the 3,850 tonne per day Minto mine of Capstone Mining Corporation in production since 2007. The above resource information has not been verified by the author and is not necessarily indicative of the mineralization on the STU which is the subject of this report.

The STU Project is primarily underlain by Early Jurassic intrusive rocks of the Granite Mountain Batholith (Minto suite) intruding the Paleozoic metamorphic basement rocks of the Yukon-Tanana terrane and Stikinia to the east, overlain by younger volcanic rocks of the Late Cretaceous Carmacks Group. Exploration on the STU property has been hampered by lack of exposure, thick overburden cover, variable but generally poor soil profiles, and unavailability of results from previous programs. The old trench data and most of the drill results are not available in the public record.

Mineralization consists of chalcopyrite and bornite with minor pyrite and locally abundant magnetite as disseminations, irregular grains and aggregates, associated with more foliated to gneissic zones within the Granite Mountain Batholith trending 130º with magnetite-silica and biotite alteration. The highest gold and silver values are associated with bornite-rich sections. The host rocks, structures, mineralization and alteration at STU are similar to the Minto and Carmacks Copper deposits, which are generally thought to be a variant on the porphyry copper-gold model.

Previous work, conducted from 1971 to 2013 on the STU claim block includes prospecting, mapping, grid soil geochemistry, magnetic, electromagnetic and induced polarization geophysical surveys, bulldozer trenching (28), 4504m of diamond drilling in 28 holes, 1823m in 30 rotary air blast drill holes, petrography, GPS surveying and magnetic susceptibility testing. Results include 3.51% Cu, 2.5 g/t Au and 18.4 g/t Ag across 13.5m from DDH 80-14 in the A Zone, with three of the 1980 diamond drill holes returning intersections exceeding 2.5% Cu. The rotary drill program returned maximum results of 0.71% Cu over 1.5m in hole SB-6 in the B Zone.

The 2014 exploration program, completed between July 3 and October 18, consisted of clearing old trenches, upgrading trails, follow up mapping and geochemical sampling over priority targets, hand trenching and sampling across a new showing, completion of a

requested archaeological survey, and a test Niton XRF survey. The program was funded by Bill Harris with the aid of a grant under the Yukon Mineral Exploration Program. Work filed on claims staked in July, 2014 did not commence until after October 1, 2014.

A new showing (NIC) was discovered in 2014, which extends the A Zone 180m further east. Hand trenching returned results of 0.55% Cu, 1.9 g/t Ag and 0.27 g/t Au over 6m, 0.36% Cu, 1.7 g/t Ag and 0.25 g/t Au over 5m, including 0.49% Cu, 2.2 g/t Ag and 0.33 g/t Au over 3.5m, and 0.36% Cu, 1.3 g/t Ag and 0.16 g/t Au over 4m, primarily limited by exposure. The original grab sample from the NIC showing returned 0.92% Cu, 2.3 g/t Ag and 0.06 g/t Au. Also in 2014, a freshly cleaned out section of Trench 6+00W in the A Zone returned 0.36% Cu, 0.9 g/t Ag and 0.03 g/t Au with 13.3 ppm Mo as a composite grab of rubble over 30m. A subcrop exposure of malachite stained, siliceous foliated biotite granodiorite with Mn or possible tenorite on fractures and minor quartz veining just south of Trench 8+00W in the A Zone returned 0.62% Cu, 0.7 g/t Ag with 10.3 ppm Mo.

Potential exists on the 207 claims added to the STU Project in 2014. The claims cover the almost 2 km long 4000 zone soil-magnetic-electromagnetic anomaly, the Gran (Zone 3) soil-MMI soil-magnetic-induced polarization anomaly and the Butter MMI soil-magnetic anomaly. Malachite has been noted in aplite near the southern Butter claims. In addition a 40 cm wide quartz vein with bornite and malachite occurs in a trench on the southeastern KOO claims, proximal to the Bonanza Creek Minfile prospect, which occurs on a privately owned lot. Potential for oxide copper and sulphide resources exists in the Zone 2 area at the Carmacks Copper deposit, which lies <400m south of the STU Project boundary *(Casselman and Arseneau, 2011)*.

The A Zone appears to be the main zone of interest on the property with results of >0.1% Cu to 0.67% Cu and a maximum of 470 ppb Au obtained in 2005 to 2014 from samples over a 400m strike extent and up to 95m width. Malachite has been noted an additional 400m to the southeast. This probably corresponds to the zone 914m long and up to 91m wide that was delineated by United Keno Hill Mines Limited in 1977-79. The zone does not appear to have been completely delineated. The zone was explored by 24 diamond drill holes in 1980, with only results from two of the holes reported; results from the 1980 diamond drill program are critical in the evaluation of this area.

Mineralization in the B Zone is often high grade over narrow widths suggesting a distal signature. Potential exists at depth in the area between Trench B3 to B6, which returned the best copper-gold-silver results (maximum 2.86% Cu and 2.56 g/t Au), and along strike to the northwest (northeast of the trenches to the north) and to the southeast, where little work has been completed.

Similar mineralization to the A and B Zones is exposed in the C Zone. Mineralization was traced over a 110m strike and 25-30m width in 2005 to 2014 with significant maximum results of 1.59% Cu and 3.7 g/t Au associated with 130º/NE trending mineralized fractures. Elevated copper in soils from 2010 suggests that some mineralization may extend 140m further north. Little work has been done in this area but results from DDH 80-1 would be beneficial in the evaluation of this zone.

Results from the 1980 United Keno Hill Mines Limited drill program are not in the public record but the core is stored on the property and the collar locations were located and surveyed by GPS in 2006. The first priority in a Phase 1 program is to label, unstack and systematically sample the core on the STU property so that results can be correlated and interpreted. Magnetic susceptibility measurements over the entire core can be collected at this time and, if results are located, additional unsplit mineralized intervals assayed.

Systematic MMI soil and IP geophysics surveys may be useful in tracing mineralization along strike within the three zones, particularly where the drill results from the above core sampling program are inconclusive due to poor condition of the core, and if the zone is shown to remain open or the drill hole did not adequately test the target. The surveys should be tested over several trenches with mineralization to determine their usefulness and if positive completed along strike of the zones.

A program of 2,395 metres of excavator trenching in twelve trenches is recommended over the A to C Zones to trace mineralization along strike and to complete infill trenching in known higher grade areas. An initial evaluation of the 207 new claims is necessary, with particular emphasis on the 4000 zone, the Gran (Zone 3) and Butter anomalies, the southeastern KOO claims and the northwestern strike extent of Zone 2 from Carmacks Copper. It is important to note in future programs that the original surface exposures at Carmacks Copper were “deceptively uninteresting” until assays were obtained *(Archer, 1970)*.

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1.0 INTRODUCTION

Ms. Jean M. Pautler, P.Geo. was commissioned by Bill Harris of Whitehorse, Yukon Territory to participate in and document the 2014 exploration program on the STU Project comprising the STU, HOO, CHE, KOO, WC and WCF claims on NTS map sheet 115I/07. The 2014 exploration program, completed between July 3 and October 18, consisted of upgrading access, clearing old trenches, follow up mapping and geochemical sampling over priority targets, hand trenching and sampling across a new showing, completion of an archaeological survey, and a test Niton XRF survey. The program was funded by Bill Harris with the aid of a grant under the Yukon Mineral Exploration Program. This report was prepared to support assessment requirements. Most of the work was completed by Midnight Mining Services Ltd., a contracting company duly incorporated in the Yukon Territory.

2.0 PROPERTY DESCRIPTION AND LOCATION

2.1 Location and Access (Figure 1)

The STU Project, comprising the STU, HOO, CHE, KOO, WC and WCF claims on NTS map sheet 115I/7, is bisected by Hoochekoo Creek approximately 60 km by road, northwest of Carmacks, approximately 200 km northwest of Whitehorse, Yukon Territory *(Figure 1)*. Whitehorse lies 180 km northeast of the year-round port at Skagway, Alaska. The property is centered at a latitude of 62°24'N and a longitude of 136°49'W.

The property is accessible from Carmacks via the Freegold Road, a year round government maintained gravel road, which is followed for 35 km. At this point, the access road to the Carmacks Copper property (Williams Creek) of Carmacks North Mining Corporation is followed for approximately 18 km northerly past Carmacks Copper. The last 7.5 km to the STU camp are by ATV along an overgrown road. Several cat trails on the claims, variably overgrown, provide access to trenches and drill sites. Access to and on the property was improved and additional helipads were constructed in 2014 to facilitate necessary access, and will be discussed under section 7, "2014 Exploration".

The claims can also be accessed by helicopter from Carmacks, 47 km to the southeast, with a suitable landing site at the STU camp situated on the central STU claim block at UTM coordinates 6921240m N, 0405015m E, Nad 83, Zone 8 projection *(Figure 2)*. The STU camp refers to the former United Keno Hill Mines Limited drill camp, consisting of a trailer suitable for rough accommodation for up to 4 people. The STU camp provides good access to Zone A. Central Zone B can be accessed from a helipad at 6919288mN, 406124mE along Trench 74+00E and Zone C from a new landing site at UTM coordinates 6922494mN, 406492mE.

Carmacks is the closest town, with a population of approximately 500. Facilities include a grocery store, nursing station, two service stations, and a restaurant. Complete services are available in Whitehorse, less than two hours by paved highway from Carmacks.

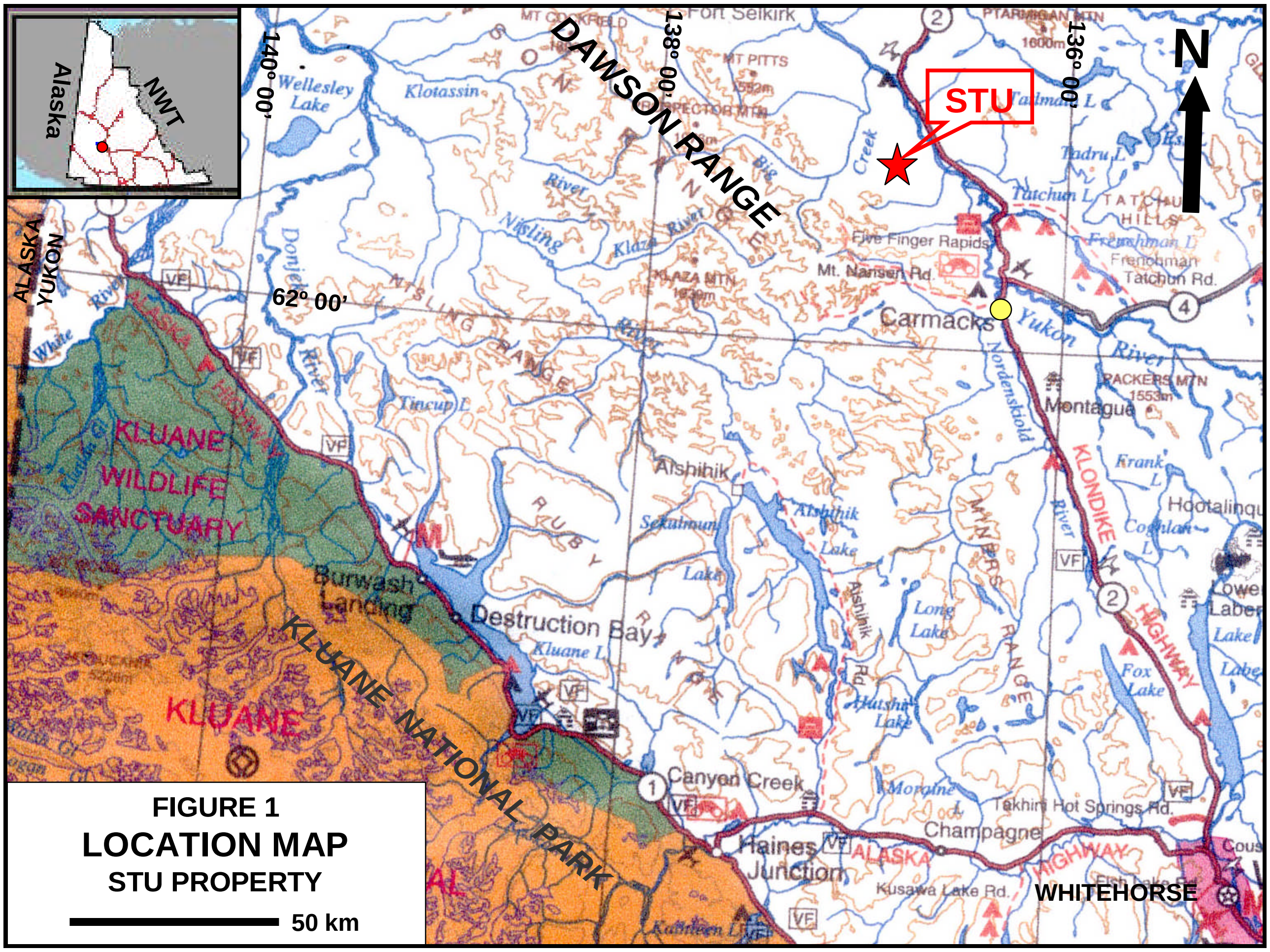


FIGURE 1
LOCATION MAP
STU PROPERTY

2.2 Legal Description (Figure 2)

The STU Project consists of 339 contiguous claims, comprising the STU, HOO, CHE, KOO, WC and WCF claims on NTS map sheet 115I/7, covering an area of approximately 7050 hectares in the Whitehorse Mining District. The area is approximate since claim boundaries have not been legally surveyed. The total includes 207 claims which were staked in 2014 to cover significant targets on adjoining claims which had recently lapsed. The targets will be discussed under section 8, “New Targets”. The mineral claims were located by GPS and staked in accordance with the Yukon Quartz Mining Act on claim sheet 115I/07. The property is owned and the current program operated by Mr. Bill Harris of Whitehorse, Yukon. Work filed on the newly staked claims, which are currently still registered in the names of the stakers, commenced after October 1, 2014. A table summarizing pertinent claim data is shown on the second page following.

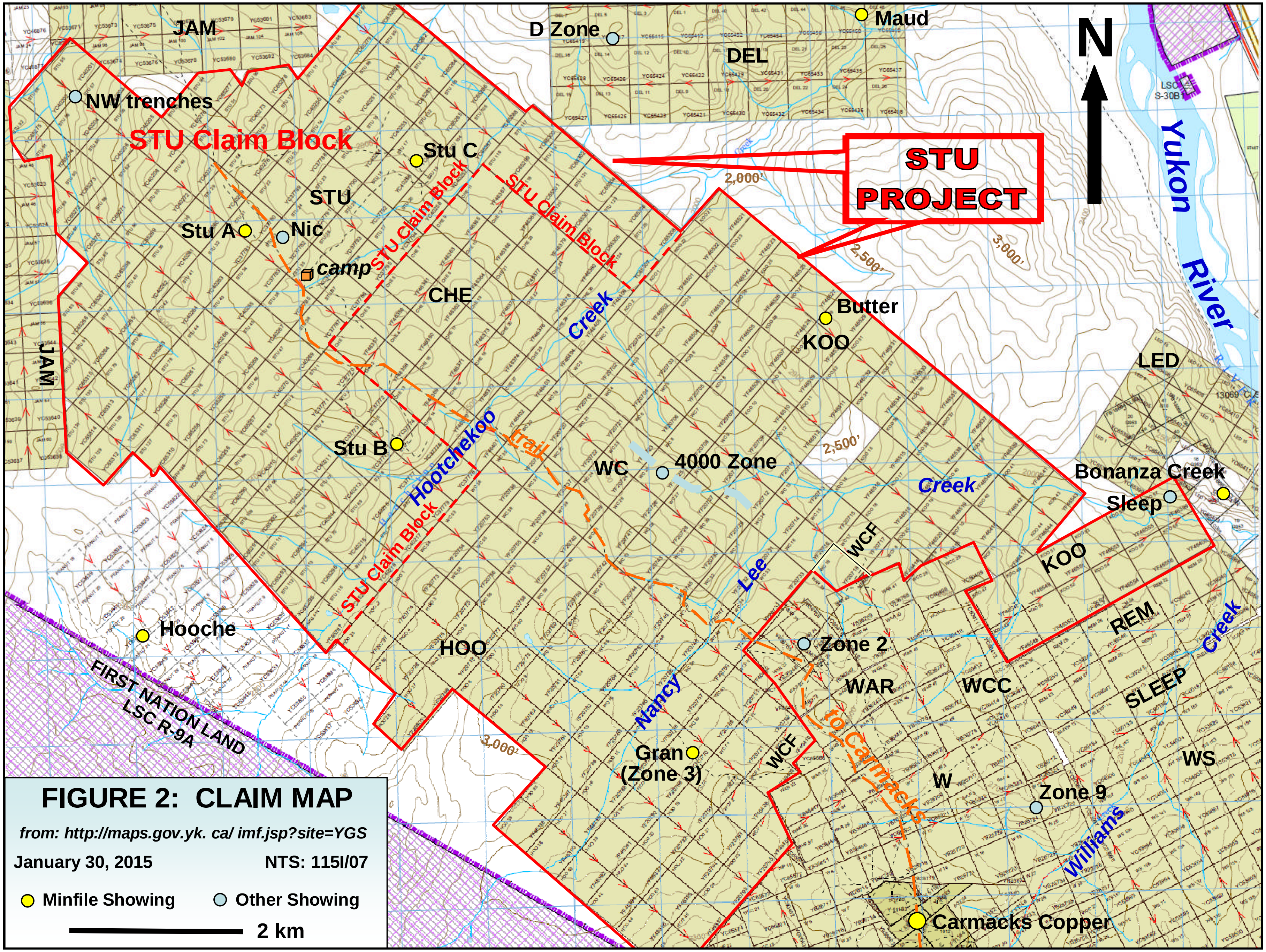


FIGURE 2: CLAIM MAP

from: http://maps.gov.yk. ca/ imf.jsp?site=YGS

January 30, 2015 NTS: 115I/07

Minfile Showing · Other Showing

TABLE 1: Claim data

Claim Name	Grant No.	No. of Claims	Registered Owner	Recording Date	New Expiry Date ŧ
STU 1-10	YC37770-79	10	Bill Harris	2004-12-13	2015-12-13
STU 11-20	YC40249-58	10	Bill Harris	2005-09-19	2015-09-19
STU 21-28	YC37788-95	8	Bill Harris	2004-12-21	2016-06-21*
STU 29-30	YC40259-60	2	Bill Harris	2005-09-19	2015-09-19
STU 31-38	YC37780-87	8	Bill Harris	2004-12-13	2015-12-13
STU 39-54	YC40261-76	16	Bill Harris	2005-09-19	2015-09-19
STU 55-65	YC40201-11	11	Bill Harris	2005-08-29	2015-11-29
STU 66-72	YC40212-18	7	Bill Harris	2005-08-29	2015-11-29
STU 73-132	YC65256-315	60	Bill Harris	2007-07-09	2016-07-09*
HOO 1-28, 35-46	YF20773-800, 46387-98	40	stakers	2014-07-29	2016-07-29*
CHE 1-30	YF46357-380,401-6	30	stakers	2014-07-29	2016-07-29*
KOO 1-12, 15	YF46501-12, 15	13	stakers	2014-07-29	2015-07-29*
KOO 16-44, 47-58	YF46516-44,47-58	41	stakers	2014-07-29	2015-07-29
WC 1-72	YF20701-72	72	stakers	2014-07-29	2016-07-29*
WCF 1-11	YF46407-17	11	staker	2014-07-31	2015-07-31*
TOTAL		**339**			

ŧ represents expiry date as of July 28, 2015 filing
*new expiry date based on acceptance of this assessment report

First Nations have settled their land claims in the area with Little Salmon/Carmacks First Nation surveyed land (LSC R-9A) with surface and subsurface rights occurring just southwest of the STU property *(Figure 2)*. Selkirk First Nation land lies 15 km to the north. The land in which the mineral claims are situated is Crown Land and the mineral claims fall under the jurisdiction of the Yukon Government. Surface rights would have to be obtained from the government if the property were to go into development. A Class III permit is currently in place for the STU Project, permit number LQ00413, valid to December 11, 2018.

3.0 PHYSIOGRAPHY, CLIMATE AND INFRASTRUCTURE (Figures 1 and 2)

The STU Project covers an area bisected by Hoochekoo Creek, west of the Yukon River *(Figure 2)*, within the northeastern edge of the unglaciated Dawson Range *(Figure 1)* of the Yukon Plateau. In the STU area glacial cover was partial, valley glaciers extended along major valleys and tributaries depositing glacial drift on lower slopes and valley bottoms. Overall ice directions are northwesterly with local southeast ice directions, particularly in the west. Colluvium blankets steep slopes and uplands. The regional volcanic ash layer is widespread in this area with thicknesses from a few cm to 1m. The property is situated within the Yukon Plateau - Central Ecoregion which is characterized by a dry climate and extensive grasslands on south aspect slopes.

Elevations range from a low of 600m in the eastern property area up to 1075m in the western portion of the STU claim block, a maximum relief of 475m. Most slopes are gentle except locally along the north banks of Hoochekoo and Nancy Lee Creeks. 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. The property is drained by Hoochekoo Creek, a southeast flowing tributary of Hoochekoo Creek, and Nancy Lee Creek and their tributaries. The tributaries consist of small streams that occupy broad swampy valleys. Northerly flowing tributaries of Big Creek drain the northwestern property area. Areas in the northwest portion of the claim block, including part of the A Zone, were burned in the 2004 and 1995 seasons.

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 showings occur on hill tops or along ridge slopes where the overburden is thin or absent *(Ouellette, 1990)*.

The Carmacks area has a northern interior climate with warm summers (+20º C), long cold winters (-20º C) and moderate precipitation (25 cm), most of which is snow. The exploration season lasts from May until October.

Although there do not appear to be any topographic or physiographic impediments, and suitable lands appear to be available for a potential mine, including mill, tailings storage, heap leach and waste disposal sites, engineering studies have not been undertaken and there is no guarantee that such areas will be available within the subject property. The nearest source of power is approximately 20 km to the transmission line northwest of Carmacks.

4.0 HISTORY (Figure 3)

In the regional area copper showings had been staked close to the Yukon River in the late 1890s. Following the discovery of the Casino porphyry copper deposit in the late 1960's, 100 km west-northwest of STU, a staking rush throughout the region resulted in the discovery of mineralization at Williams Creek (now Carmacks Copper) and Minto in 1970 and 1971, respectively. This led to more detailed exploration in the STU area with work on the STU Project documented from 1971 to present.

The STU claim block covers the STU Minfile occurrence (Minfile 115I 011), a drilled prospect, as documented by the Yukon Geological Survey *(Deklerk, 2009 and Government of Yukon, 2015)*. The STU prospect covers three mineralized zones, A, B and C *(Figure 2)*. Historical work in the A Zone includes eight bulldozer trenches excavated in 1979 and 25 diamond drill holes completed in 1980 *(Figure 5)*. Fourteen historical bulldozer trenches from 1979 and 1982 have been located in the B Zone area, nine of which directly explore the B Zone *(Figure 6)*. The C Zone has seen limited historical exploration with only four short bulldozer trenches in 1979 and three diamond drill holes in 1980 *(Figure 5)*. Unfortunately the trench data and most of the drill results are not available in the public record; only four of the 1980 holes (DDH 80-17, -25, -27 to -28) were filed for assessment.

A summary of the work completed by various operators on the STU claim block is tabulated below:

1971-74 Program of grid soil sampling, magnetic and electromagnetic surveys undertaken in 1971 and an induced polarization (IP) survey in 1974, outlining four northwest trending anomalies, two with a strong EM response coincident with a weak IP and geochemical expression, by Hudson's Bay Oil & Gas Company Ltd. *(Mitchell, 1971)*.

1976-89 Programs of prospecting (1976), mapping, deep (0.9m average) soil sampling, magnetic and VLF electromagnetic surveys in 1977 *(Watson and Joy, 1977)*, an induced polarization survey in 1978 *(Smith, 1979)*, 16 bulldozer trenches (1978 or 79), 4504m of diamond drilling in 28 holes and soil sampling in 1980 *(Fisher, 1981)*, mapping and geochemical surveys and an airborne magnetic and electromagnetic survey (1981), 13 bulldozer trenches (1982) and 1823m in 30 rotary air blast drill holes, primarily in Zone B in 1989 *(Ouellette, 1989)* by United Keno Hill Mines Ltd.

The programs outlined three zones (A-C) up to 914m long and 91m wide with patchy malachite staining in foliated granodiorite, from which selected grab samples assayed up to 0.58% Cu. Three of the 1980 drill holes returned intersections exceeding 2.5% Cu, including 3.51% Cu, 2.5 g/t Au and 18.4 g/t Ag across 13.5m in DDH 80-14 from the A Zone. The rotary drill program returned a maximum of 0.71% Cu over 1.5m in hole SB-6 from the B Zone.

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

2004-13 Staking of STU claim block by Bill Harris in 2004-5 and 2007, with work primarily completed by Midnight Mines for Bill Harris. Prospecting, reconnaissance rock and soil sampling, examination and select rock sampling of most trenches were conducted in 2005 with significant grab sample results of 2.78% Cu, 444 g/t Ag and 1.07 g/t Au in Trench B1, 2.86% Cu, 4.4 g/t Ag and 2.56 g/t Au in Trench B3, 1.07% Cu, 2.3 g/t Ag and 105 ppb Au from the C Zone, and 0.56% Cu, 3.3 g/t Ag and 270 ppb Au as a composite over 10m in Trench 8+00W in the A Zone *(Robertson, 2005)*. Limited magnetic susceptibility testing of drill core samples (suggesting the alteration zones associated with mineralization would be detected as a magnetic low), GPS surveying of old trenches and drill sites, an evaluation of showings and geochemical sampling in 2006 allowed for the mapping and integration with historical data *(Pautler, 2007)*. In 2008 mapping, geochemical sampling and a petrographic study of mineralization from the three known showings was undertaken *(Pautler, 2009)*. Results from these programs are discussed under section 8.0, “Trenching” and 9.0, “Drilling”.

Mapping and geochemical sampling on outlying areas including location of NW trenches completed in 2010 *(Pautler, 2011)*. No mineralization was encountered, but the NW trenches primarily intersected thick overburden. The 2012 program consisted of petrographic analysis and magnetic susceptibility measurements *(Pautler, 2012)*. Overall, it would appear that a magnetic survey over the property should pick up the alteration zones associated with mineralization as a magnetic low, with a moderate magnetic response over mineralization. The petrographic study shows very little alteration, with only minor white mica, some clay and minor chlorite alteration of the mafic minerals. Program of road and trail clearing, and trench sampling, limited soil sampling and collection of magnetic susceptibility measurements from the B Zone in 2013 returned results of >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 *(James, 2014a*).

The newly staked ground to the south of the STU claim block covers ground until recently held by Carmacks North (WC and WCF claims) and BCGold Corp. (Bread, Butter, Copper, northern Sleep claims) and includes the Butter and Gran (Zone 3) anomalies, documented Minfile occurrences by the Yukon Geological Survey *(Government of Yukon, 2015)*, and the almost 2 km long 4000 zone. In addition a 40 cm wide quartz vein with bornite and malachite occurs in a trench on the southeastern KOO claims, proximal to the Bonanza Creek Minfile prospect, which occurs on a privately owned lot.

The 4000 zone is a soil-geophysics anomaly partially delineated by coincident VLF-EM and chargeability high anomalies in 1974 *(Olson, 1975)*. The anomaly was further defined in 1993 by airborne geophysics, with follow up soil sampling in 1994 returning a maximum of 323 ppm Cu *(McNaughton, 1994)*.

The BCGold properties were staked by prospector Shawn Ryan in 2006 to cover favourable geology and government regional airborne magnetic and stream sediment anomalies considered prospective for Carmacks copper-gold belt mineralization. In 2007 BCGold completed a 3,295 line km airborne magnetic and radiometric survey over their Carmacks Copper belt claims and conducted MMI soil sampling, geological mapping and prospecting from 2007 to 2009 on their properties, including on the Copper (HOO), Bread (CHE) and Butter (KOO) claims. In 2008 a 13.4 line km pole-dipole IP survey in 4 lines at 100m dipole spacing was completed on the Copper claims. The strongest IP target was on L104N at station 12700E *(Barrios and Newton, 2009).*

A coincident MMI copper in soil, magnetic high and induced polarization chargeability anomaly was outlined by BCGold in 2008 on the Copper claims *(Barrios and Newton, 2009)*, now part of the HOO claims, and documented as the Gran anomaly in Yukon Minfile *(Government of Yukon, 2015).* The Gran anomaly covers an area of anomalous soil geochemistry and probable geophysics, originally referred to as Zone 3. Three bulldozer trenches were documented here in 1980 *(Newman and Joy, 1980)* by United Keno Hill Mines Ltd. (UKHM). A 300-500m wide, 1500m long copper in soil anomaly, coincident with a weak magnetic anomaly was identified along the northwestern extent of Zone 3 in 1994 and previous old drilling was referred to, thought to be from the 1960's *(McNaughton, 1994)*. No evidence of drilling was noted in 1980, but 2-3 drill sites and a total of 9 small bulldozer trenches were located in 2009 by BCGold. The drilling and additional trenches probably date to the early 1980's. The drilling reportedly did not intersect mineralization with 30m of overburden encountered *(M^cNaughton, 1994)*.

The Butter Minfile anomaly covers a 450m long copper MMI soil anomaly on the northeast Butter claims, now staked as part of the KOO claims *(BCGold website)*. Several northwest trending copper MMI soil anomalies are evident across the Bread property, now staked as the CHE claims.

5.0 GEOLOGY

5.1 Regional (Figure 3)

The regional geology of the area is primarily summarized from Hood et al. (2009), Gordey and Makepeace (2003), Mortensen and Tafti (2004) and Tafti (2005).

The STU Project occurs within the southern portion of the Carmacks copper-gold belt, a 180 km by 60 km-wide north-northwest trending mineralized belt of similar intrusion-hosted copper-gold mineralization in the Dawson Range. The belt includes the Minto mine (Minfile 115I 021) of Capstone Mining Corporation, Carmacks Copper deposit (Minfile 115I 008) and STU drilled prospect (Minfile 115I 011). The regional area of the Carmacks copper-gold belt is underlain by intermediate to felsic intrusive and meta-intrusive rocks of the Early Jurassic Minto plutonic suite intruding Paleozoic metaplutonic rocks and locally metavolcanic rocks of the Yukon-Tanana terrane, near the boundary with upper Triassic and/or older mafic volcanic rocks of Stikinia/Quesnellia terranes to the east. The above lithologies are overlain by younger basaltic volcanic rock units of the Late Cretaceous Carmacks Group and the Quaternary Selkirk Group.

The northwest trending Hoochekoo Fault, which trends along the northeast side of STU and Carmacks Copper, parallel to the regional strike slip Teslin Fault, separates the Granite Mountain Batholith (GMB) from Upper Triassic mafic volcanic rocks of the Lewes River Group (basal Povoas Formation) which are in turn overlain by Jurassic Laberge Group sedimentary rocks. South of Williams Creek the Granite Mountain Batholith is in normal fault contact with Carmacks Group basalts.

The STU Project lies between the Carmacks Copper deposit (formerly Williams Creek) of Copper North Mining Corporation, containing a resource of 12.0 million tonnes of copper oxide ore grading 1.07% Cu (0.86% oxide Cu), 0.46 g/t Au and 4.6 g/t Ag, using a cutoff grade of 0.25% Cu *(Huss et al., 2012)*, and the 3,850 tonne per day Minto mine of Capstone Mining Corporation, which started production in October, 2007. Minto produced 50,353 tonnes of copper, 18,832 kg of silver and 1846 kg of gold from 2007 to 2009 and in 2010 reported a measured and indicated resource (to NI 43-101 standards) of 29.9 million tonnes grading 1.22% Cu, 0.45 g/t Au and 4.5 g/t Ag using a cutoff grade of 0.5% Cu *(News release March 17, 2010 at www.capstonemining.com)*. The above resource information has not been verified by the author and is not necessarily indicative of the mineralization on the STU which is the subject of this report.

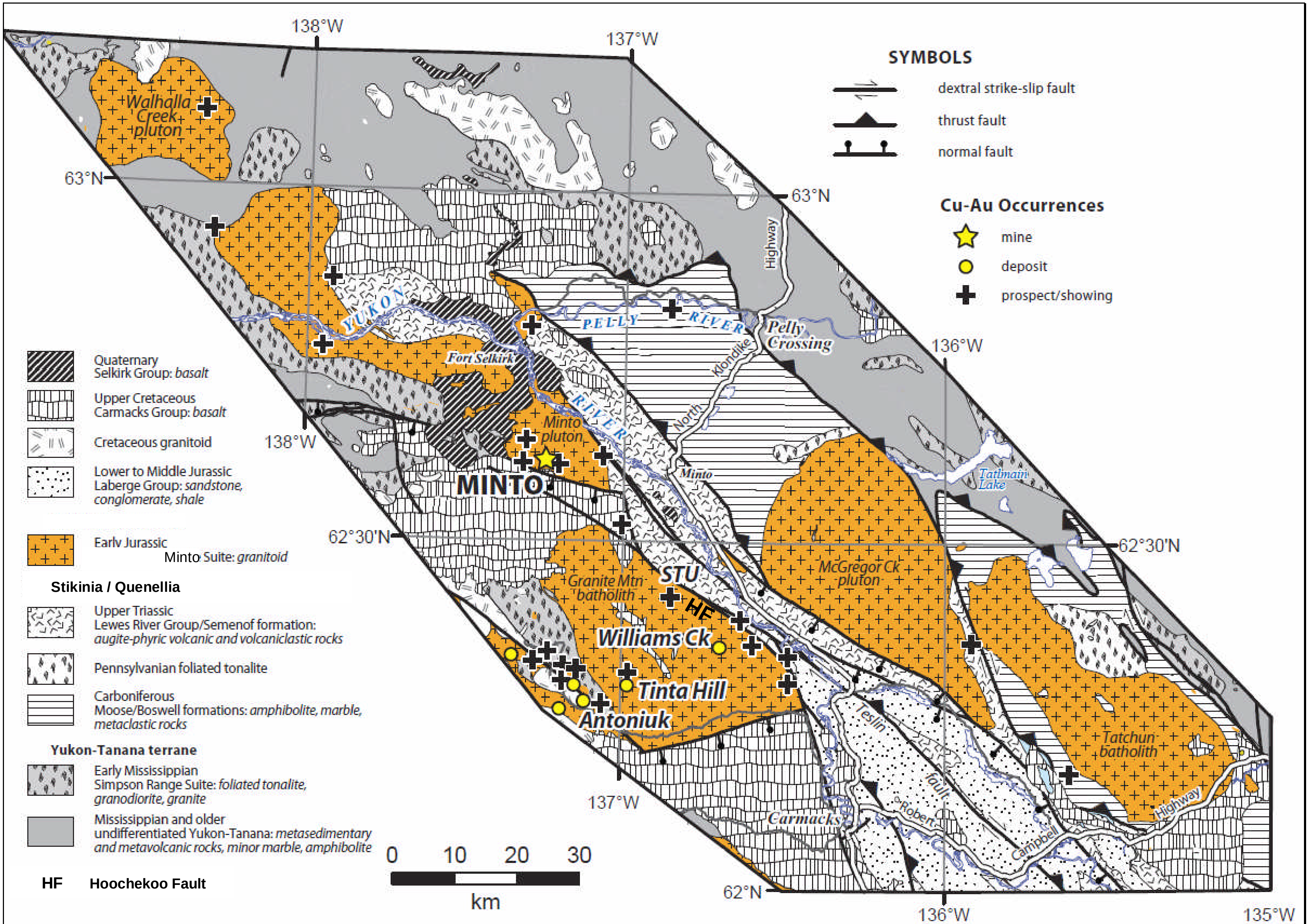
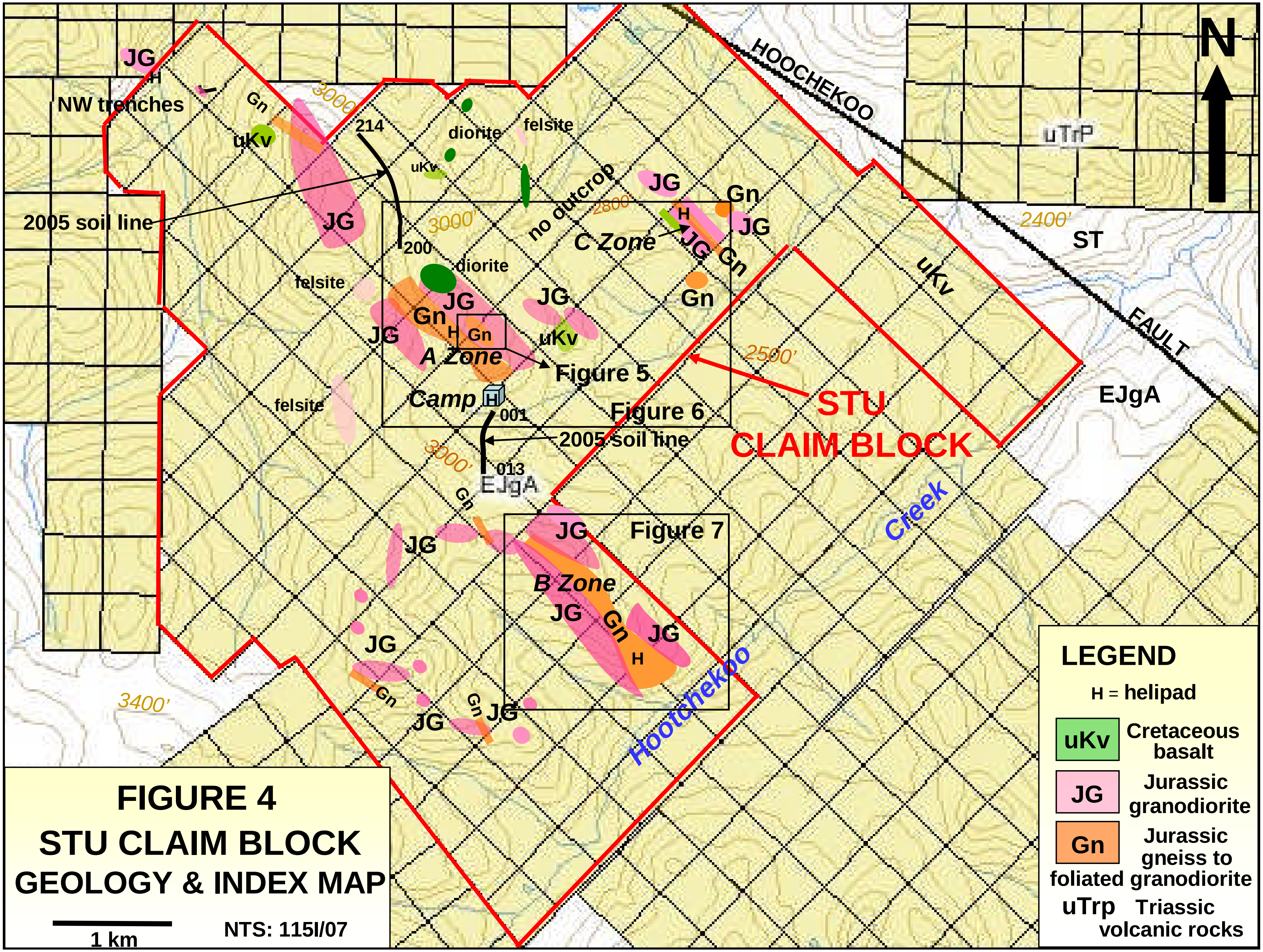


FIGURE 3: GEOLOGICAL SETTING *from Hood et al., 2009*



N
HOOCHEKOO
FAULT
uTrP
ST
EJgA
2400'
2500'
2800'
3000'
3400'
NW trenches
2005 soil line
214
200
001
013
diorite
felsite
uKv
JG
Gn
H
no outcrop
C Zone
A Zone
B Zone
Camp
Figure 5
Figure 6
Figure 7
STU
CLAIM BLOCK
Creek
Hootchekoo
LEGEND
H = helipad
uKv Cretaceous basalt
JG Jurassic granodiorite
Gn Jurassic gneiss to foliated granodiorite
uTrp Triassic volcanic rocks
FIGURE 4
STU CLAIM BLOCK
GEOLOGY & INDEX MAP
1 km
NTS: 115I/07

5.2 Property (Figure 4)

The STU Project is primarily underlain by Early Jurassic intrusive rocks of the Granite Mountain Batholith (Minto suite) which intrude the Paleozoic metamorphic basement rocks of the Yukon-Tanana terrane, and locally volcanic rocks of the Povoas Formation of Stikinia to the east, and are overlain by younger volcanic rocks, and intruded by related dykes, of the Late Cretaceous Carmacks Group. Numerous aplite, felsite and pegmatite dykes, slightly younger than the main batholith, intrude the Granite Mountain Batholith (GMB). A Table of Formations follows.

Table of Formations:

***Upper Cretaceous*:**			
	Carmacks Group:	**volcanic rocks (uKv)**	andesite-basalt flows and tuff breccia
		mafic dykes	diorite and gabbro
***Early Jurassic*:**			
	slightly post GMB:	**felsic dykes**	aplite, felsite, pegmatite
	Minto suite:	**GMB**	primarily Kspar megacrystic biotite-hornblende granodiorite grading to gneiss

The intrusive rocks of the Granite Mountain Batholith (GMB) consist of several different phases that include potassium feldspar megacrystic granodiorite that grades to foliated biotite granodiorite, biotite gneiss and locally biotite schist, quartz-phyric granodiorite to monzogranite, and minor diorite to quartz diorite. Foliation of the granodiorite, where present, trends northwest, dipping steeply and varies from very weak to moderate to locally strong to gneissic; the latter particularly in mineralized zones.

Apart from the three main mineralized zones, gneissic granodiorite occurs on the eastern and western margins of the C Zone and at the NIC showing, approximately 200m east of the A Zone. Minor foliated granodiorite was also encountered approximately 1 km northwest (325°/75°E), 1 km southwest (350°/75°E) and 2 km west (320°/80°E) of the B Zone. A narrow (1m) zone of foliated biotite granodiorite, trending 300º/70ºNE, occurs in the northwest property area on STU 59 or 61.

Petrography primarily indicates a granodiorite composition for the host rock with 25-30% quartz, 35% plagioclase, 10% potassium feldspar, 15% biotite and 5% hornblende, with accessory epidote, apatite, sphene and zircon *(Fonseca, 2008)*. Metamorphism is of upper greenschist facies biotite zone as indicated by petrography and locally hornblende is partly converted to metamorphic prograde biotite *(Fonseca, 2008)*.

The intrusive rocks are cut by locally numerous aplite and pegmatite dykes of variable widths and overlain and cut by mafic flow and tuff breccia volcanic rocks and related dykes of the Camacks Group (**uKv**). Carmacks basalt flows are exposed in the northwestern C Zone and between the A and C Zones. A basalt hornblende feldspar porphyry flow is exposed as subcrop east of (above) the trenches in the northwest property area.

The northwest trending Hoochekoo Fault lies just to the northeast of the STU property and 130º trending, steeply dipping fractures and structural zones are evident across the property that appear to have a relationship to mineralization.

Three trenches occur at the northwest end of the property on the STU 55-58 claims, but only minor bedrock, consisting of clay altered granodiorite with limonite fractures and Mn staining, was exposed in Trench 3. The remaining trenches exposed till with ash horizons.

5.3 Mineralization and Alteration

The STU claims cover the STU Minfile drilled prospect as documented by the Yukon Geological Survey as Minfile Number 115I 011 *(Deklerk, 2009)*. Three zones of mineralization are documented, the A, B and C zones.

Work by United Keno Hill Mines Limited delineated a 914m long and up to 91m wide zone of mineralization at the A zone, with 3.51% Cu, 2.5 g/t Au and 18.4 g/t Ag reported across 13.5m in DDH 80-14. The B Zone was only tested by rotary drilling with the best hole returning 0.71% Cu over 1.5m from SB-6 in Trench 74+00E (B1). At the C Zone mineralization occurs over a 110m strike and 25-30m width with significant maximum results from 2005 to 2014 of 1.59% Cu and 3.7 g/t Au associated with 130º/NE trending mineralized fractures. Elevated copper in soils from 2010 suggests that some mineralization may extend 140m further north. Unfortunately the United Keno Hill Mines Limited trench data and most of the drill results are not available in the public record.

A new showing (NIC) was discovered in 2014, which would extend the A Zone 200m to the east. The NIC showing and anomalies on the newly staked claims, between the STU claims and the Copper North deposit will be discussed under section 7, “2014 Exploration” and section 8, “New Targets”.

Mineralization on the STU block consists of chalcopyrite and bornite with minor pyrite and locally abundant magnetite. It occurs as disseminations, irregular grains and aggregates hosted by weak to well foliated biotite granodiorite to gneiss. Chalcocite and digenite often rim bornite grains and tenorite occurs in fractures. Minor malachite and azurite, with lesser chrysocolla and possible brochantite *(Fonseca, 2008)*, occur in fractures, veinlets and occasionally rim chalcocite. The copper minerals appear to replace the mafic minerals within the granodiorite. Hematite replaces magnetite and also occurs as minor fracture and open space fillings. Possible gold grains were observed in samples PTS-3 from Trench 1450E in the C Zone and PTS-5 from Trench 74+00E in the B Zone *(Fonseca, 2008)*.

Mineralization appears to be associated with more foliated sections trending 130º with magnetite-silica alteration (observed as silicification with fine disseminated magnetite along foliation) and the presence of biotite, interpreted as potassic alteration. Small veinlets sometimes cut the mineralization. Alteration minerals include quartz, mica, carbonate, epidote and chlorite. The highest gold and silver values are associated with bornite-rich sections. A crude vertical zonation has been previously noted, from pyrite at the bottom of the zone to bornite and chalcocite at the top *(Deklerk, 2009)*.

A petrographic analysis of the granodiorite host from the three known mineralized zones on the property *(Fonseca, 2008)* shows a penetrative foliation defined by melanocratic domains of biotite, with lesser hornblende-epidote-sphene-apatite-magnetite, and leucocratic domains of quartz and feldspars. Hydrothermal alteration minerals include fine grained clays and white mica partly replacing feldspars, and chlorite partly replacing biotite. Clay alteration was found to be most intense in the vicinity of intense supergene copper mineral deposition *(Fonseca, 2008)*.

At the Minto mine copper mineralization occurs within 13 horizontally stacked "gneissic" zones from 1-50m wide which vary in consistency and grade. At the Carmacks Copper deposit not all of the zones are 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. Generally the more gneissic material and number of gneissic zones in an area, the better the grade. Consequently, there can be difficulty in correlation between wider spaced drill holes. In addition contacts are sharp between mineralized and unmineralized rock with little obvious alteration *(Photo 1)*.

Photo 1: Mineralized "gneissic" zone at Minto within massive granodiorite

6.0 DEPOSIT MODEL

Mineralization on the STU Project, located between the Minto and Carmacks Copper deposits within the Carmacks copper-gold belt, appears to fit a variant on the copper-gold porphyry deposit model as proposed by Tafti and Mortensen (2004) for the two deposits. Several variations have been proposed including metamorphosed, deformed, and stalled porphyry models *(Tafti and Mortensen, 2004, Tafti, 2005 and Mortensen, 2014)*.

In the “stalled porphyry” model, Mortensen suggests that the porphyry style mineralization formed at a depth of less than 9 km with copper and gold exsolved from sulphide veins. This was followed by active faulting, crustal thickening (resulting in the formation of shears, and burial to depths of 20 km, which stalled the system), followed by rapid uplift. The system was short lived (from 203-195 Ma), which is similar in age to the porphyry deposits (e.g. Kemess) of the Quesnel Trough, British Columbia. The alkaline porphyry deposits within Quesnellia in British Columbia formed at 204 Ma.

Mineralization on the STU Project has strong similarities to both Minto and Carmacks Copper, hosted by the same rock units with similar alteration (secondary biotite, magnetite-silica) and mineralization (gold-bornite association). It has been documented that the Minto and Carmacks Copper deposits are hosted by variably deformed plutonic rocks that occur as schlieren within slightly younger less deformed intermediate intrusive rocks of the Granite Mountain Batholith *(Tafti and Mortensen, 2004)*. It should be noted that schlieren are fragile, usually elongate concentrations of mafic material within some intrusions. Genesis may be due to shearing of heterogeneities (enclaves or xenoliths), crystal sorting during convective or magmatic flow, or crystal settling. Petrographic and field studies of the more gneissic host rocks from Minto and Carmacks Copper suggested that they could represent strongly deformed and metamorphosed intrusive rocks (orthogneiss), with the excess amount of biotite representing secondary (hydrothermal) biotite associated with strong hypogene potassic alteration *(Tafti and Mortensen, 2004)*.

Hornblende geochemical studies of plutonic and meta-plutonic host rocks at Minto and Carmacks Copper indicate that they formed in a continental magmatic arc setting *(Tafti and Mortensen, 2004)*. The setting, timing of mineralization and petrographic and field observations of the host rocks, mineralization and alteration led Tafti and Mortensen (2004) to conclude that the two deposits represent variations on typical copper (-gold) porphyry deposits.

It has been suggested that the highly foliated rocks controlling economic mineralization at the Carmacks Copper deposit are rafts and lenses (xenoliths) of augite-phyric volcanic rocks of the Povoas Formation within the Granite Mountain Batholith. The Povoas Formation occurs at the base of the Triassic aged Lewes River Group, part of Stikinia, and is exposed to the northeast of the Granite Mountain Batholith *(see Figure 3)*. Similarly mineralization at the Minto deposit has been described as being hosted by zones of strongly developed penetrative foliation, interpreted as shears or as rafts of volcanic rock within the granodiorite host.

Calc-alkaline porphyry copper-gold mineralization at the Kemess Mine (Kemess South deposit) and the Kemess North deposit in central British Columbia is hosted by Jurassic granodiorite intrusions and adjacent Upper Triassic augite-phyric flows of the Takla Group, indicating similar chemistry, age and deposit characteristics to mineralization within the Carmacks copper - gold belt. The main difference is the lack of foliated rocks associated with the mineralization at Kemess.

The STU petrographic analyses confirmed similarities between the STU and the Minto and Carmacks Copper deposits and indicated the presence of ubiquitous magmatic epidote, also reported at Minto, suggesting depths of formation of 18 to 20 km, which far exceeds typical depths of formation for porphyry style deposits *(Fonseca, 2008)*.

Based on the above discussion, the author believes that mineralization within the Carmacks copper - gold belt is hosted by schlieren zones (probably formed by crystal sorting or settling during magmatic flow) within Jurassic granodiorite and is consistent with a calc-alkaline porphyry copper-gold model (with similarities to the Kemess Mine and Kemess North deposit), but formed (or was buried) at a deep crustal level.

7.0 2014 WORK PROGRAM

A total of 20 man-days were spent on the STU Project, NTS map sheet 115I/07, between July 3 and October 18, 2014. The 2014 work program consisted of clearing old trenches, trail upgrading, follow up mapping and geochemical sampling over priority targets, hand trenching and sampling across a new showing, completion of a requested archaeological survey, and a test Niton XRF survey. The program was funded by Bill Harris with the aid of a grant under the Yukon Mineral Exploration Program. Work filed on claims staked in July, 2014 did not commence until after October 1, 2014.

7.1 Access and Trench Improvements

Trail and helicopter access was improved with helipads constructed, to facilitate necessary access, at 6921834mN, 404467mE in Zone A and 6922494mN, 406492mE in Zone C. The B Zone helipad at 6919288mN, 406124mE along Trench 74+00E was brushed out and expanded. In addition trenches were brushed out to facilitate access, examination and sampling. Brushed out trenches include Trenches 4+00W, 6+00W and 8+00W in the A zone (Figure 6), Trenches 11+50E and 14+50E in the C zone (Figure 6) and Trenches 74+00E and 76+00E in the B zone *(Figure 7)*. A Hitachi 330 excavator remains on site to commence trenching in 2015.

7.2 Archaeological Study

The archaeological study consisted of a heritage resource overview assessment by Ecofor Consulting Ltd., Whitehorse, Yukon to identify and assess the heritage resource potential or sensitivity within the STU claim block The study determined zones having potential for the occurrence of archaeological sites. Small areas were identified having high potential for temporary habitation/subsistence, trail or historic site types. The mapped areas of potential were meant to err on the side of caution, so the areas of potential may cover less than the area mapped. The location of and small size of the sites allows for management by avoidance. The study, showing the sites identified, is enclosed as Appendix V.

7.3 Geochemistry (Figures 4-7)

A new showing (NIC) was discovered in 2014, which would extend the A Zone to the east *(Figures 5 and 6)*. The NIC showing, consisting of a few minor malachite stained subcropping boulders, was discovered by Nicolai Goeppel at 404770mE, 6921740mN, approximately 200m east of the eastern A Zone. No previous work was apparent. Hand trenching on July 15 uncovered an open 2.6m wide zone of outcrop below the ash layer *(Photo 2)*, which was chip sampled as sample 1501036, with a grab as sample 1501027.

Additional hand trenching and soil sampling over the NIC showing *(Figure 5)* was conducted on October 18. Four 5-8m long northeasterly (035-055°) trending hand trenches were dug approximately 10m apart and 19 rock samples collected *(Appendix I)*. Rock samples were collected from southwest to northeast along the trenches. Three 150m long 045-050° trending lines of soils were collected at a sample spacing of 11-12m *(Appendix II)*. One line bracketed the Nic showing approximately 40m to the southwest (StuS) and two lines 60m (StuN) and 120m (StuN2) to the northwest, with 13 samples per line.

Sample locations with assays are shown in Appendix I for rock samples, along with sample descriptions for the rocks, and in Appendix II for soil samples. Locations are shown on Figure 5 for the NIC showing and Figures 6 and 7 for the A and C Zones, and B Zone, respectively. An index map is shown in Figure 4 and a more detailed index for the NIC showing in Figure 6.

The best soil results *(Figure 5)* were returned from the central line (StuN), with 12 of the 13 samples, covering 140m, returning 13 to 30.4 ppm Cu, with 1 ppm Mo at the southwest end. The southern line (StuS), returned values of 12.8 to 22.6 ppm Cu covering 105m, except for two isolated samples with <10 ppm Cu. The northern line (StuN2) returned values of 10.8 to 19.4 ppm Cu covering 95m, and 22.6 ppm Cu, with 1.1 ppm Mo at the southwest end, separated by 35m of samples with <10 ppm Cu. It should be noted that thresholds are lower in this area due to thick overburden and the presence of ash, which if obtained in the sample will dilute the values. Copper in soil values >12.5 ppm are significant and >19 ppm are anomalous.

Photos 2 and 3: NIC Showing

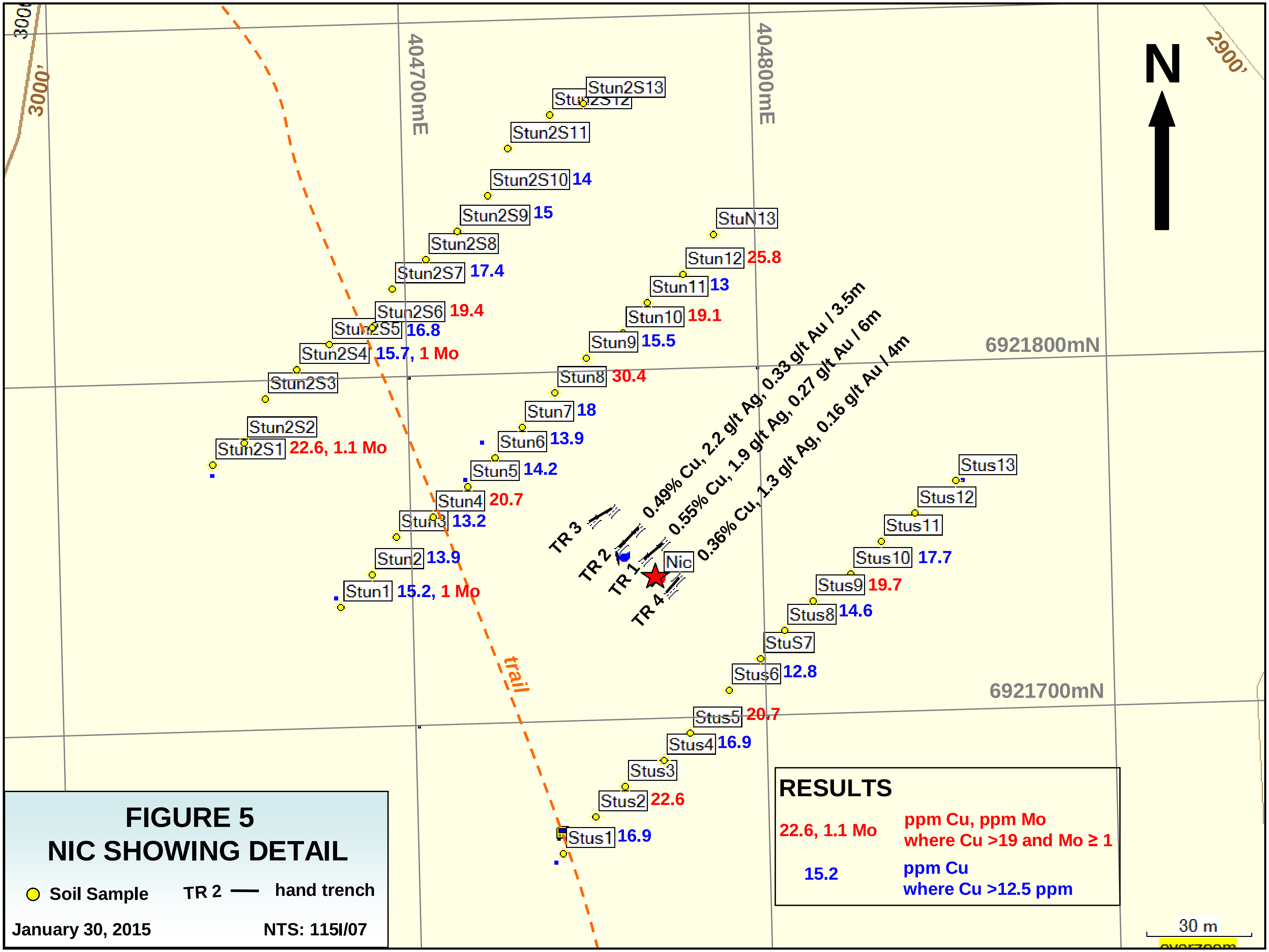
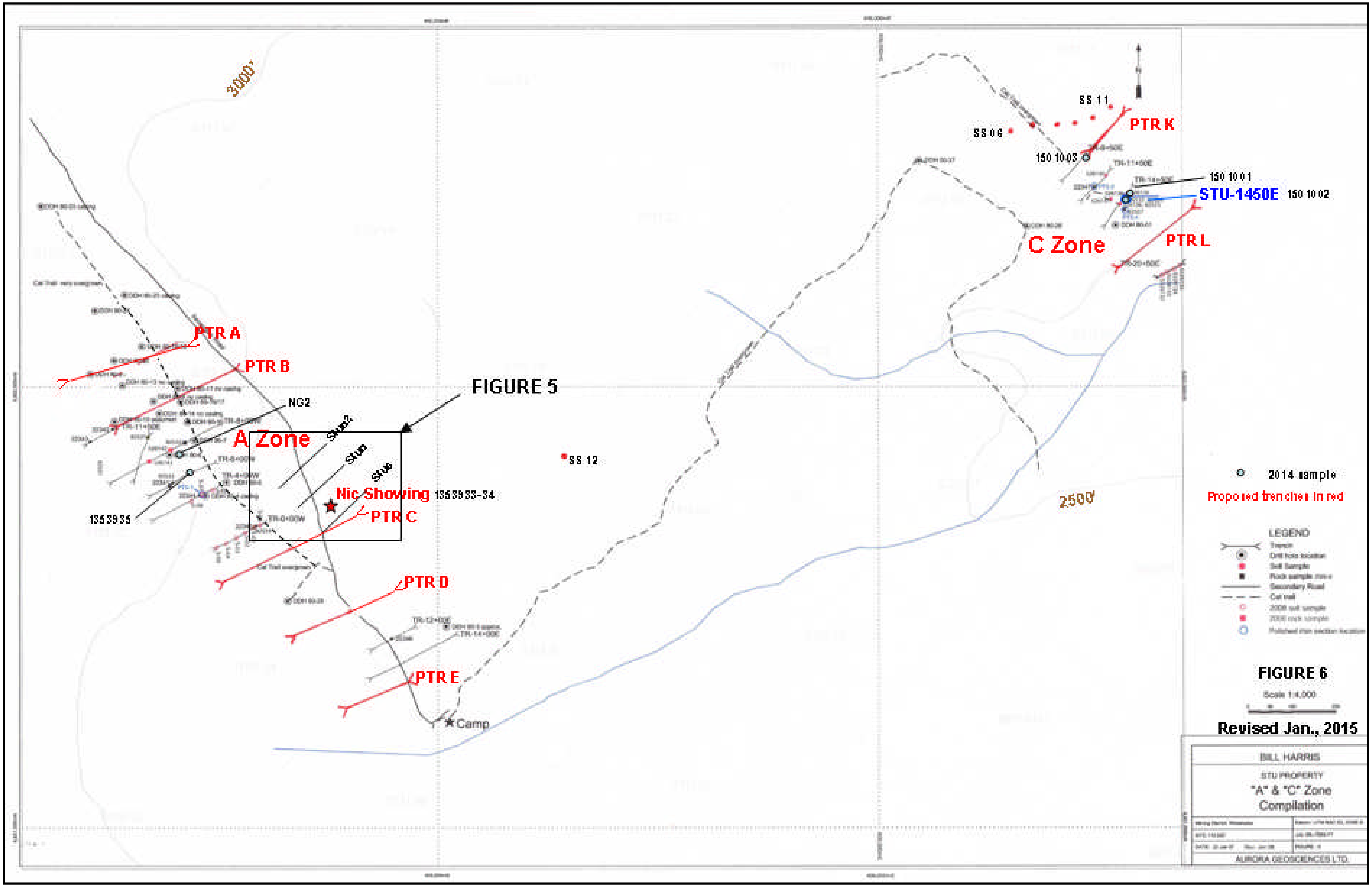
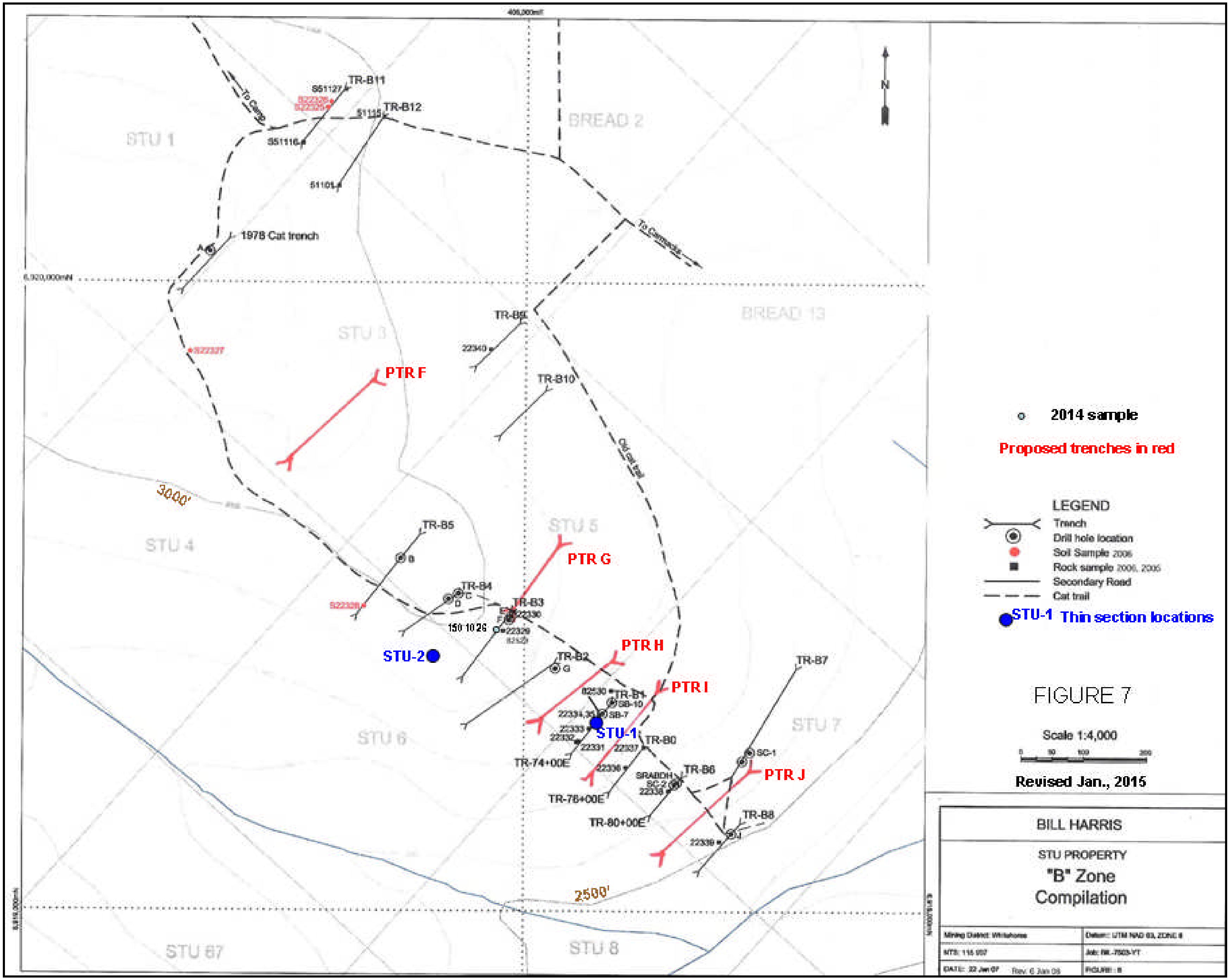


FIGURE 5
NIC SHOWING DETAIL
Soil Sample
TR 2 hand trench
January 30, 2015
NTS: 115I/07
RESULTS
22.6, 1.1 Mo
ppm Cu, ppm Mo
where Cu >19 and Mo ≥ 1
15.2
ppm Cu
where Cu >12.5 ppm
N
404700mE
404800mE
6921800mN
6921700mN
3000'
2900'
trail
30 m
Stun2S13
Stun2S11
Stun2S10 14
Stun2S9 15
Stun2S8
Stun2S7 17.4
Stun2S6 19.4
Stun2S5 16.8
Stun2S4 15.7, 1 Mo
Stun2S3
Stun2S2
Stun2S1 22.6, 1.1 Mo
StuN13
Stun12 25.8
Stun11 13
Stun10 19.1
Stun9 15.5
Stun8 30.4
Stun7 18
Stun6 13.9
Stun5 14.2
Stun4 20.7
Stun3 13.2
Stun2 13.9
Stun1 15.2, 1 Mo
Stus13
Stus12
Stus11
Stus10 17.7
Stus9 19.7
Stus8 14.6
StuS7
Stus6 12.8
Stus5 20.7
Stus4 16.9
Stus3
Stus2 22.6
Stus1 16.9
Nic
TR 3
TR 2
TR 1
TR 4
0.49% Cu, 2.2 g/t Ag, 0.33 g/t Au / 3.5m
0.55% Cu, 1.9 g/t Ag, 0.27 g/t Au / 6m
0.36% Cu, 1.3 g/t Ag, 0.16 g/t Au / 4m


3000'
2500'
SS 11
SS 06
PTR K
150 10 03
150 10 01
STU-1450E
150 10 02
C Zone
PTR L
PTR A
PTR B
FIGURE 5
NG2
A Zone
Stus2
Stus
Stus
Nic Showing
1353933-34
SS 12
1353935
PTR C
PTR D
PTR E
Camp
2014 sample
Proposed trenches in red
LEGEND
FIGURE 6
Scale 1:4,000
Revised Jan., 2015
BILL HARRIS
STU PROPERTY
"A" & "C" Zone
Compilation
AURORA GEOSCIENCES LTD.


STU 1
BREAD 2
TR-B11
TR-B12
To Camp
1978 Cat trench
To Carmacks
STU 3
BREAD 13
PTR F
TR-B10
Old cat trail
3000'
STU 4
STU 5
TR-B5
PTR G
TR-B4
TR-B3
150 10 26
STU-2
PTR H
TR-B2
PTR I
TR-B1
STU-1
TR-B0
TR-74+00E
TR-78+00E
TR-80+00E
TR-B6
TR-B7
PTR J
TR-B8
STU 6
STU 7
2500'
STU 67
STU 8
2014 sample
Proposed trenches in red
LEGEND
Trench
Drill hole location
Soil Sample 2006
Rock sample 2006, 2005
Secondary Road
Cat trail
STU-1 Thin section locations
FIGURE 7
Scale 1:4,000
Revised Jan., 2015
BILL HARRIS
STU PROPERTY
"B" Zone
Compilation

Significant results were returned from three of the four NIC hand trenches. Trench 14-01 returned the best results of 0.55% Cu, 1.9 g/t Ag and 0.27 g/t Au over 6m, limited by exposure. Trench 14-01 returned 0.36% Cu, 1.7 g/t Ag and 0.25 g/t Au over 5m, including 0.49% Cu, 2.2 g/t Ag and 0.33 g/t Au over 3.5m, limited by exposure to the northeast with 1.5m of unmineralized granodiorite to the southwest. No significant results were obtained from the northernmost trench which intersected a 5m zone of unmineralized granodiorite cut by a 1m wide diorite dyke. The southernmost trench returned 0.36% Cu, 1.3 g/t Ag and 0.16 g/t Au over 4m, limited by exposure. The original grab from the NIC showing returned 0.92% Cu, 2.3 g/t Ag and 0.06 g/t Au (1501027).

A freshly cleaned out section of Trench 6+00W in the A Zone returned 0.36% Cu, 0.9 g/t Ag and 0.03 g/t Au with 13.3 ppm Mo as a composite grab of rubble over 30m (1501029). A subcrop exposure of malachite stained, siliceous foliated biotite granodiorite with Mn or possible tenorite on fractures and minor quartz veining just south of Trench 8+00W in the A Zone returned 0.62% Cu, 0.7 g/t Ag with 10.3 ppm Mo (1501030).

Grab samples from Trench 1450E in the C Zone returned higher silver and anomalous molybdenum values with 0.23% Cu, 9.6 g/t Ag and 13.3 ppm Mo from sample 1501001 and 0.40% Cu, 2.1 g/t Ag and 9 ppm Mo from sample 1501002.

Two samples of mineralization were collected from Zone 2, just south of the newly staked WC claims to evaluate potential of the showing which could extend to the northwest onto the STU Project. Results of 0.81% Cu, 1.1 g/t Ag and 0.25 g/t Au with 10 ppm Mo from less biotite rich foliated granodiorite (1501024) and 0.88% Cu, 1.6 g/t Ag and 0.27 g/t Au with 24.6 ppm Mo from more biotite rich foliated granodiorite (1501025) were obtained.

It should be noted that there was some confusion with samples 1501023 to 1501038 during the XRF survey, resulting in the ultimate mismatch of nine samples, shown without GPS co-ordinates in the database.

7.4 Niton XRF Survey

A total of 39 samples were XRFed using a NITON XRF by Lauren Blackburn of Dawson City, Yukon. The instrument was calibrated at regular intervals during the survey and generally 2 readings collected per sample. Readings are tabulated in Appendix I with the rock descriptions and assay data. Comparisons have been made to assay data and there is a rough correlation of higher copper grades in assay data with overall higher XRF copper values, but a visual estimate is more accurate. Further XRF work is not recommended.

8.0 NEW TARGETS (Figure 2)

An additional 207 claims were added to the STU Project in 2014 to cover significant targets on adjoining claims which had recently lapsed. The claims, comprising the HOO, CHE, KOO, WC and WCF claims in the Whitehorse Mining District were located by GPS and staked on July 3-6 and 27 in accordance with the Yukon Quartz Mining Act on claim sheet 115I/07. The newly staked claims are currently still registered in the names of the stakers. A table summarizing pertinent claim data is shown in section 2.2, “Land Tenure”.

The newly staked ground, situated to the south of the STU claim block, covers ground until recently held by Carmacks North (WC and WCF claims) and BCGold Corp. (Bread, Butter, Copper, northern Sleep claims) and includes the Butter and Gran (Zone 3) anomalies, documented Minfile occurrences by the Yukon Geological Survey *(Deklerk, 2009)*, and the almost 2 km long 4000 zone. In addition a 40 cm wide quartz vein with bornite and malachite occurs in a trench on the southeastern KOO claims, proximal to the Bonanza Creek Minfile prospect, which occurs on a privately owned lot.

The 4000 zone is a soil-geophysics anomaly partially delineated by coincident VLF-EM and chargeability high anomalies in 1974 *(Olson, 1975)*. The anomaly was further defined in 1993 by airborne geophysics, with follow up soil sampling in 1994 returning a maximum of 323 ppm Cu *(McNaughton, 1994)*.

A coincident MMI copper in soil, magnetic high and induced polarization chargeability anomaly was outlined by BCGold in 2008 on the Copper claims *(Barrios and Newton, 2009)*, now part of the HOO claims, and documented as the Gran anomaly in Yukon Minfile *(Government of Yukon, 2015).* The Gran anomaly covers an area of anomalous soil geochemistry and probable geophysics, originally referred to as Zone 3. Three bulldozer trenches were documented here in 1980 *(Newman and Joy, 1980)* by United Keno Hill Mines Ltd. (UKHM). A 300-500m wide, 1500m long copper in soil anomaly, coincident with a weak magnetic anomaly was identified along the northwestern extent of Zone 3 in 1994 and previous old drilling was referred to, thought to be from the 1960’s *(McNaughton, 1994)*. No evidence of drilling was noted in 1980, but 2-3 drill sites and a total of 9 small bulldozer trenches were located in 2009 by BCGold. The drilling and additional trenches probably date to the early 1980’s. The drilling reportedly did not intersect mineralization with 30m of overburden encountered *(McNaughton, 1994)*. No mineralization was encountered in the nine old trenches located in 2009, but trenches were sloughed with no visible exposure. Granodiorite float was noted, with one float boulder of skarn. Carmacks volcanic rocks occur just to the south of the trenched area.

9.0 TRENCHING (Figures 6 to 7)

No mechanical trenching was conducted in the current program but a total of 29 trenches were excavated on the STU property between 1978 and 1982 by United Keno Hill Mines Ltd. All of the trenches were located and surveyed by GPS in recent years using UTM coordinates, Nad 83 datum, Zone 8 projection. Trench locations are documented below and shown in Figures 4-6.

Table 2: Trench locations

Name	Zone	Northing	Easting	Elev. (ft)
TR1150W	A	6921920	404296	3080
TR1150Wend	A	6921868	404214	3110
TR800W	A	6921906	404491	3040
TR800Wend	A	6921791	404250	3090
TR8cross	A	6921900	404347	
TR8crossend	A	6921790	404250	
TR600W	A	6921826	404501	3030
TR600Wend	A	6921748	404339	3050
TR400W	A	6921795	404545	3000
TR400Wend	A	6921692	404347	3030
TR000W	A	6921714	404642	2970
TR000Wend	A	6921640	404506	2980
TR1200E	A	6921455	404964	2865
TR1200Eend	A	6921401	404849	2870
TR1400E	A	6921450	405034	2830
TR1400Eend	A	6921340	404845	2820
TR-B5	B	6919598	405826	3050
TR-B5end	B	6919484	405742	2960
TR-B4	B	6919500	405883	3020
TR-B4end	B	6919446	405811	2980
TR-B3	B	6919450	405971	2970
TR-B3end	B	6919360	405897	2930
TR-B2	B	6919380	406035	2885
TR-B2end	B	6919300	405914	2880
TR7400E	B	6919354	406155	2780
TR7400Eend	B	6919260	406076	2780
TR7600E	B	6919260	406192	2705
TR7600Eend	B	6919191	406139	2690
TR8000E	B	6919214	406254	2660
TR8000Eend	B	6919154	406204	2615
TR-B7	B	6919387	406436	2650
TR-B7end	B	6919216	406335	2630
TR-B8	B	6919141	406348	2545
TR-B8end	B	6919067	406283	2490
TR-B9	B	6919935	405991	2830
TR-B9end	B	6919868	405922	2890

Name	Zone	Northing	Easting	Elev. (ft)
TR-B10	B	6919828	406029	2820
TR-B10end	B	6919758	405962	2880
TR-B11	B	6920306	405708	3030
TR-B11end	B	6920221	405640	3070
TR-B12	B	6920262	405770	2990
TR-B12end	B	6920153	405698	3030
1978 cat trench	B	6920047	405515	3030
cat trench end	B	6919980	405449	3050
TR950E	C	6922520	406491	2700
TR950Eend	C	6922496	406446	2685
TR1150E	C	6922481	406520	2670
TR1150Eend	C	6922452	406489	2660
TR1450E	C	6922452	406575	2630
TR1450Eend	C	6922405	406540	2615
TR2050E	C	6922274	406690	2395
TR2050Eend	C	6922251	406651	2390
NWTR-1	NW	6923394	402593	2703
NWTR-1End	NW	6923382	402562	2684
NWTR-1a	NW	6923382	402562	2684
NWTR-1aEnd	NW	6923377	402568	2687
NWTR-2	NW	6923385	402551	2676
NWTR-2End	NW	6923401	402507	2645
NWTR-3	NW	6923445	402515	2623

10.0 DRILLING (Figures 6 and 7)

No drilling was conducted in the current program but a total of approximately 4505m of diamond drilling in 28 holes and 1823m of rotary air blast drilling in 30 holes has been completed on the property by United Keno Hill Mines Ltd in 1980 and 1989, respectively. The BQ size core is stored on site in two racks in poor condition at UTM coordinates 6921220mN, 404960mE, Nad 83 datum, Zone 8 projection, just west of the United Keno Hill camp. One rack, leaning badly, holds approximately 1900m of core from holes DDH 80-17 to DDH 80-28. Only a few boxes appear to be missing, although many boxes are deteriorating. The second rack holds approximately 2600m of core from holes DDH 80-01 to DDH 80-17, but is largely collapsed with many overturned boxes and missing core.

The results of the 1980 diamond drill program are not in the public record except for four holes (DDH 80-17, -25, -27 to -28) filed for assessment. It is reported that the program returned significant results with three of the 1980 drill holes returning intersections exceeding 2.5% Cu, including 3.51% Cu, 2.5 g/t Au and 18.4 g/t Ag across 13.5m in DDH 80-14 *(Deklerk, 2009)*. Results for DDH 80-17, which appears to be a step out from DDH 80-14, are reported as 0.15% Cu, 0.18 oz/t Ag, trace Au over 25.4m *(see Fisher and Watson, 1981)*.

From observations made in 2014, it appears that the core in both core racks can be salvaged with some care and the core contains significant mineralized intervals, particularly tenorite bearing sections, which have not been sampled. It should be noted that the original surface exposures at Carmacks Copper were “deceptively uninteresting” until assays were obtained *(Archer, 1970)*.

Diamond drill hole collars, trenches and significant reference locations were surveyed by GPS in the field in 2006 using UTM coordinates, Nad 83 datum, Zone 8 projection. Nineteen of the twenty-five drill holes from the A Zone and the three drill holes from the C Zone were located. The additional sites from the A Zone are approximated from grid co-ordinates. The data is plotted in Figures 5 and 6 and drill hole collars are documented in Table 3 below.

Table 3: Diamond drill hole locations

Drill Hole	Zone No.	UTM Northing	NAD83 Easting	Elev. (m)	Az. (º)	Dip (º)	Depth (m)
80-01	C	6922365.921	406541.015	785.144	026	-50	104.5
80-02 **	A	6921350	405500	863	220	-50	69.5
80-03 *	A	6921446	405022	863	218	-50	167.6
80-04	A	6921753.16	404474.297	909.176	240	-50	121.9
80-05 *	A	6921782	404525	911	240	-50	156.4
80-06	A	6921846.072	404392.073	912.891	240	-50	93.9
80-07	A	6921878.822	404447.686	912.34	240	-50	111.5
80-08 *	A	6921890	404381	910.502	240	-50	120.1
80-09	A	6921967.651	404356.099	915.353	240	-50	135.3
80-10	A	6921921.256	404267.452	921.995	208	-50	137.8
80-11	A	6921997.104	404410.764	910.648	240	-50	204.8
80-12 *	A	6922030	404350	912	240	-50	160.3
80-13	A	6922003.209	404285.099	918.304	240	-50	152.4
80-14	A	6921939.428	404369.969	914.801	240	-50	154.5
80-15	A	6921921.048	404432.934	910.502	240	-50	190.8
80-16	A	6921965.953	404418.051	910.27	240	-50	232.6
80-17	A	6921965.953	404418.051	910.27	242	-72	426.1
80-18	A	6922091.469	404329.235	911.475	240	-48	183.5
80-19	A	6922091.469	404329.235	911.475	240	-57	92.7
80-20	A	6922059.415	404266.536	917.87	-	-89	122.5
80-21	A	6922028.637	404212.854	924.374	-	-90	91.4
80-22 *	A	6922122	404404	912	240	-50	210?
80-23	A	6922208.599	404290.905	911.298	240?	-50	185.9
80-24	A	6922172.78	404223.412	918.483	240?	-50	153.0
80-25	A	6922409.49	404101.31	921.875	220	-50	161.8
80-26	A	6921515.716	404662.036	884.614	240	-50	195.7
80-27	C	6922513.116	406093.277	792.134	030	-50	187.8
80-28	C	6922363.293	406338.785	793.875	028	-50	183.5
TOTAL	**28 drill holes**						**4507.8**

* approximate location, site not located **location very approximate

The rotary drill sites from 1989, primarily drilled in the B Zone with no rotary holes in the A and C Zones, were identified by the presence of a mound of drill cuttings and a metal tag on the ground. Only a few of the tags could be read. The approximate hole collars were recorded by GPS in the field in 2006 using UTM coordinates, Nad 83 datum, Zone 8 projection in 2006 and are shown below in Table 4. The best hole from the rotary drill program was hole SB-6 from Trench 74+00E in the B Zone which returned 0.71% Cu over 5 feet.

Table 4: Rotary drill hole locations

Drill	UTM	NAD83
Hole	Northing	Easting
A	6920049	405494
B	6919561	405803
C	6919505	405895
D	6919507	405871
E	6919469	405980
F	6919463	405976
G	6919395	406050
H	6919386	406051
I	6919205	406334
J	6919125	406246
SB-7	6919314	406127
SB-10	6919332	406142
SC-1	6919202	406363
SC-2	6919251	406242

11.0 INTERPRETATIONS AND CONCLUSIONS

There is excellent exploration potential on the STU property to host copper-gold mineralization similar to that of the Minto and Carmacks Copper deposits, all located within the Carmacks copper - gold belt. The host rocks, structures, mineralization and alteration at STU are similar to the Minto and Carmacks Copper deposits, which are currently described as a variant on the porphyry copper-gold deposit model.

Exploration on the STU property has been hampered by lack of exposure, thick overburden cover, variable but generally poor soil profiles, local cover by magnetic Carmacks basaltic rocks and unavailability of results from previous programs. It is important to note that the original surface exposures at Carmacks Copper were “deceptively uninteresting” until assays were obtained *(Archer, 1970)*.

Mineralization was found to have a direct relationship with the presence of secondary biotite, the presence of magnetite and hematite, and the development of a foliated to gneissic texture, which trends 130º (commonly with 70ºNE dips). Secondary copper minerals such as malachite and azurite are relatively uncommon unless ground is disturbed within mineralized zones. Possible gold was detected from the B and C Zones in the 2008 petrographic study.

The A Zone appears to be the main zone of interest on the property with results of >0.1% Cu to 0.67% Cu and a maximum of 470 ppb Au obtained in 2005 to 2014 from samples over a 400m strike extent and up to 95m width. Malachite has been noted an additional 400m to the southeast. This probably corresponds to the zone 914m long and up to 91m wide that was delineated by United Keno Hill Mines Limited in 1977-79. The zone does not appear to have been completely delineated. It is known that the 1980 program returned significant results with three of the 1980 diamond drill holes returning intersections exceeding 2.5% Cu, including 3.51% Cu, 2.5 g/t Au and 18.4 g/t Ag across 13.5m in DDH 80-14. Results for DDH 80-17, which appears to be a step out from DDH 80-14, are reported as 0.15% Cu, 0.18 oz/t Ag, trace Au over 25.4m. The results from the 1980 diamond drill program are critical in the evaluation of this area.

A new showing (NIC) was discovered in 2014, which extends the A Zone 200m further east. Hand trenching returned results of 0.55% Cu, 1.9 g/t Ag and 0.27 g/t Au over 6m, 0.36% Cu, 1.7 g/t Ag and 0.25 g/t Au over 5m, including 0.49% Cu, 2.2 g/t Ag and 0.33 g/t Au over 3.5m, and 0.36% Cu, 1.3 g/t Ag and 0.16 g/t Au over 4m, primarily limited by exposure. The original grab sample from the NIC showing returned 0.92% Cu, 2.3 g/t Ag and 0.06 g/t Au. Also in 2014, a freshly cleaned out section of Trench 6+00W in the A Zone returned 0.36% Cu, 0.9 g/t Ag and 0.03 g/t Au with 13.3 ppm Mo as a composite grab of rubble over 30m. A subcrop exposure of malachite stained, siliceous foliated biotite granodiorite with Mn or possible tenorite on fractures and minor quartz veining just south of Trench 8+00W in the A Zone returned 0.62% Cu, 0.7 g/t Ag with 10.3 ppm Mo.

Mineralization in the B Zone is often high grade over narrow widths suggesting a distal signature. In 2006 high copper-gold grades in the B Zone were found to be due to the presence of fine grained chalcocite, chalcopyrite and bornite replacing biotite with maximum values of 2.86% Cu and 2.56 g/t Au. Limonite, malachite, chalcocite, and silicification occur along 130º/70ºNE fractures hosted by biotite rich granodiorite. The best hole from the rotary drill program in 1989 was hole SB-6 from Trench 74+00E (B1) in the B Zone which returned 0.71% Cu over 5 feet. Potential exists at depth in the area between Trenches B3 to B6, which returned the best copper-gold-silver results in 2006 to 2008 (maximum 2.86% Cu and 2.56 g/t Au), along strike to the northwest (northeast of the trenches to the north) and to the southeast, where little work has been completed.

Similar mineralization to the A and B Zones is exposed in the C Zone, despite limited exposure. Mineralization was traced over a 110m strike and 25-30m width in 2005 to 2014 with significant maximum results of 1.59% Cu and 3.7 g/t Au associated with 130º/NE trending mineralized fractures. Elevated copper in soils from 2010 suggests that some mineralization may extend 140m further north past the east end of Trench 9+50E. The only foliation measured in the C Zone was found to dip 60ºNE with all three drill holes within the zone located to the southwest of the mineralized horizon. The closest drill hole is DDH 80-1, located 45m southwest of the zone, so would not adequately test the zone unless it steepened. Results from DDH 80-1 would be beneficial in the evaluation of this zone.

Minor elevated copper values in soil were obtained from Trenches 2 and 3 in the NW Zone, and from the northern strike extension of the C Zone. Minor foliated granodiorite was encountered approximately 1 km northwest, 1 km southwest, and 2 km west of the B Zone.

Potential exists on the 207 claims added to the STU Project in 2014. The claims cover the almost 2 km long 4000 zone soil-magnetic-electromagnetic anomaly, the Gran (Zone 3) soil-MMI soil-magnetic-induced polarization anomaly and the Butter MMI soil-magnetic anomaly. Malachite has been noted in aplite near the southern Butter claims. In addition a 40 cm wide quartz vein with bornite and malachite occurs in a trench on the southeastern KOO claims, proximal to the Bonanza Creek Minfile prospect, which occurs on a privately owned lot.

Casselman and Arseneau (2011) report that exploration potential for oxide copper and sulphide resources exists in the Zone 2 area at the Carmacks Copper deposit, which lies <400m south of the STU Project boundary.

Overall, it would appear that a magnetic survey over the property should pick up the alteration zones associated with mineralization as a magnetic low, with a moderate magnetic response over mineralization.

12.0 RECOMMENDATIONS

The access trail on the southern STU claims requires upgrading, particularly to detour around the very steep ATV trail that heads up from Hoochekoo Creek.

If results from the 1980 diamond drill program cannot be obtained from Alexco Resources Limited, the core racks on the STU property should be labelled, unstacked and systematically sampled. Magnetic susceptibility measurements over the entire core can be collected at this time. Even if assay results are obtained the existing core should be salvaged and magnetic susceptibility readings can be collected and additional unsplit mineralized intervals assayed. The collar locations are known and results can then be correlated and interpreted.

Systematic MMI soil and IP geophysics surveys may be useful in tracing mineralization along strike within the three zones, particularly where the drill results are inconclusive due to poor condition of the core, and if the zone is shown to remain open or the drill hole did not adequately test the target. The surveys should be tested over several trenches with mineralization to determine their usefulness and if positive completed along strike of the zones.

Trenching is recommended to trace mineralization to the north and south of existing trenches in the A Zone and further to the east, to test the newly discovered NIC showing. The southern trenches would be situated further west of Trenches 12+00E and 14+00E.

The locations of proposed Trenches C and D have been modified from 2012 to extend further east, past the strike extension of the NIC showing. Proposed Trench A has been modified to extend to the south of an exposure of a previously identified exposure of a mafic unit. In the B Zone infill trenching is recommended between Trenches B3 to B6, which returned the best copper-gold-silver results in 2006 to 2008 (maximum 2.86% Cu and 2.56 g/t Au). Trench B3 should be extended to the northeast. Additional trenches are recommended along strike. Trenching is also recommended north of Trench 11+50E and southeast of Trench 14+50E in the C Zone. Proposed trench locations are shown in Figures 5 and 6 and tabulated below.

Table 5: Proposed trench locations

Name	Zone	Northing	Easting	Az.	Length
		mN	mE	(°)	(m)
PTR-A	A	6922089	404428	250	235
PTR-Aend	A	6922022	404200		
PTR-B	A	6922037	404533	245	245
PTR-Bend	A	6921936	404308		
PTR-C	A	6921760	404837	240	375
PTR-Cend	A	6921577	404509		
PTR-D	A	6921564	404912	240	270
PTR-Dend	A	6921439	404672		
PTR-E	A	6921333	404927	235	150
PTR-Eend	A	6921255	404801		
PTR-F	B	6919832	405556	227	175
PTR-Fend	B	6919714	405624		
PTR-G	B	6919543	406046	040	100
PTR-Gend	B	6919304	406020		
PTR-H	B	6919304	406020	045	180
PTR-Hend	B	6919425	406153		
PTR-I	B	6919353	406221	220	170
PTR-Iend	B	6919228	406107		
PTR-J	B	6919227	406360	225	180
PTR-Jend	B	6919102	406230		
PTR-K	C	6922523	406499	045	100
PTR-Kend	C	6922593	406573		
PTR-L	C	6922409	406723	230	215
PTR-Lend	C	6922274	406553		
TOTAL	**12 trenches**				**2,395**

Rotary air blast drilling may be useful in tracing mineralization along strike in previously untested areas in the A and B Zones. Diamond drilling may be necessary to trace the mineralization if it lies at depth. In the C Zone rotary air blast drilling may be useful in tracing mineralization further north of Trench 9+50E along strike under basaltic cover rocks and overburden to the northwest and overburden further to the southeast in the Trench 20+50E area.

An initial evaluation of the new claims is necessary, with particular emphasis on the 4000 zone, the Gran (Zone 3) and Butter anomalies, the southeastern KOO claims and the northwestern strike extent of Zone 2 from Carmacks Copper.

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APPENDIX I: ROCK SAMPLE LOCATIONS, DESCRIPTIONS AND RESULTS

Assay Tag	Sample No.	Location	Easting	Northing	zone or m	Description	XRF in %
1501001		TR 1450E	406565	6922434	C zone	with 2.5-3 cm wide smoky grey quartz vein, with malachite and chocolate brown oxidized cubes (after chalcopyrite or pyrite?)	0.3-0.8 Cu
1501002		TR 1450E	406551	6922421	C zone	malachite stained biotite rich medium grained granodiorite, magnetite	1.5-2 Cu
1501003		TR 950E	406481	6922513	C zone	lighter coloured, less biotite rich coarser grained granodiorite	0.2-0.96 Cu
1501004	14-STU-TR-01-01	Nic Trench 1	404767	6921746	0-1m	malachite, +/- chalcopyrite bearing foliated granodiorite	2.8-3 Cu
1501005	14-STU-TR-01-02	Nic Trench 1	404768	6921747	1-2m	malachite, +/- chalcopyrite bearing foliated granodiorite	5.1-7.8 Cu
1501006	14-STU-TR-01-03	Nic Trench 1	404769	6921747	2-3m	malachite, +/- chalcopyrite bearing foliated granodiorite	0.3-7 Cu
1501007	14-STU-TR-01-04	Nic Trench 1	404770	6921748	3-4m	malachite, +/- chalcopyrite bearing foliated granodiorite	4.3-8.8 Cu
1501008	14-STU-TR-01-05	Nic Trench 1	404771	6921749	4-5m	malachite, +/- chalcopyrite bearing foliated granodiorite	0.3-1.3 Cu
1501009	14-STU-TR-01-06	Nic Trench 1	404771	6921749	5-6m	malachite, +/- chalcopyrite bearing foliated granodiorite	0.1-0.7 Cu
1501010	14-STU-TR-02-01	Nic Trench 2	404760	6921750	0-1m	broken granodiorite	≤0.015 Cu
1501011	14-STU-TR-02-02	Nic Trench 2	404761	6921750	1-1.5m	broken granodiorite	<0.005 Cu
1501012	14-STU-TR-02-03	Nic Trench 2	404762	6921751	1.5-2m	malachite, +/- chalcopyrite bearing foliated granodiorite	0.9-4.7 Cu
1501013	14-STU-TR-02-04	Nic Trench 2	404763	6921752	2-3m	malachite, +/- chalcopyrite bearing foliated granodiorite	0.6-3.8 Cu
1501014	14-STU-TR-02-05	Nic Trench 2	404764	6921753	3-4m	malachite, +/- chalcopyrite bearing foliated granodiorite	2.2-3.1 Cu
1501015	14-STU-TR-02-06	Nic Trench 2	404764	6921753	4-5m	malachite, +/- chalcopyrite bearing foliated granodiorite	0.7-2.7 Cu
1501016	14-STU-TR-03-01	Nic Trench 3	404752	6921757	rough 0-1m	unmineralized granodiorite	<
1501017	14-STU-TR-03-02	Nic Trench 3	404753	6921757	grab 1-2m	unmineralized mafic dyke	< 0.007 Cu
1501018	14-STU-TR-03-03	Nic Trench 3	404754	6921758	grab 2-4m	unmineralized granodiorite	<
1501019	14-STU-TR-04-01	Nic Trench 4	404773	6921736	0-1m	malachite, +/- chalcopyrite bearing foliated granodiorite	0.78-2.1 Cu
1501020	14-STU-TR-04-02	Nic Trench 4	404774	6921737	1-2m	malachite, +/- chalcopyrite bearing foliated granodiorite	0.5-1 Cu
1501021	14-STU-TR-04-03	Nic Trench 4	404775	6921738	2-3m	malachite, +/- chalcopyrite bearing foliated granodiorite	1-1.6 Cu
1501022	14-STU-TR-04-04	Nic Trench 4	404775	6921739	3-4m	malachite, +/- chalcopyrite bearing foliated granodiorite	1.5-2.5 Cu
1501023	14-STU-GR-LB-03					limonite and clay altered granodiorite with vuggy veins	≤0.06Cu
1501024	14-STU-GR-LB-04	Zone 2	410857	6916689	grab	azurite and malachite stained fine-medium grained granodiorite with less biotite, limonite and Mn or tenorite on fractures, (clay alteration?)	≤3.2 Cu, As, (Au)
1501025	14-STU-GR-LB-05	Zone 2			grab	strong malachite stained fine-medium grained biotite granodiorite, Mn or tenorite on fractures, bornite?	4.8-12 Cu, 0.01 Mo
1501027	14-STU-GR-LB-09	Nic zone	404770	6921740	grab	dark weathering, strong malachite stained medium grained biotite granodiorite, fine disseminated chalcopyrite?	5.5 Cu
1501028	14-STU-GR-LB-10				grab	limonite altered granodiorite with malachite on fractures	0.6-4 Cu
1501029	14-STU-GR-LB-11	A Zone	404411-39	6921791-806	comp grab	malachite stained, strongly silicified foliated biotite granodiorite from newly brushed out section of trench 600W: disseminated chalcopyrite?, chrysocolla?	0.27-2.7 Cu, 1.4K
1501030	14-STU-GR-LB-12	A Zone	404405	6921832	grab	malachite stained, siliceous foliated biotite granodiorite tenorite? on fractures, minor quartz vening	1.5-4 Cu, 1.6K
1501031	14-STU-GR-LB-13				grab	medium-coarse grained with malachite, (±bornite?), limonite and Mn (or tenorite on fractures)	≤2 Cu, 1.1K
1501032	14-STU-GR-LB-14				grab	medium-coarse grained with malachite, (±bornite?), limonite and Mn (or tenorite on fractures)	0.1-2.7Cu, 0.7-1.6K
1501033	14-STU-GR-LB-15				grab	very large grab of limonite altered granodiorite with malachite disseminations and on fractures	1-1.5Cu, 1.2K, As, Au
1501034	14-STU-GR-LB-16				grab	rusty brown weathered fine to medium grained granodiorite with malachite and possible tenorite on fractures	0.6% Cu, 2.57% K, 0.01 As (Au)
1501035	14-STU-GR-LB-01				grab	rusty weathering, well fractured fine grained felsic schist with 5% fine pyrite along fractures, cut by crosscutting pegmatitic quartz-feldspar-biotite veinlets	≤0.07Cu, As, Au
1501036	14-STU-GR-LB-08	Nic zone	404770	6921740	2.6m chip	well foliated, medium grained granodiorite with moderate malachite and possible chrysocolla, 2-3% few mm sized rusty clots, possibly after chalcopyrite; from small hand trench, limited by exposure	0.06Cu
1501037	14-STU-GR-LB-02				grab	quartz-carbonate vein with some Mn on fractures, weak clay alteration	
1501038	14-STU-GR-LB-07				grab	fine to medium grained weakly foliated granodiorite with weak malachite, pyrite, oxidized pyrite, ±chalcopyrite (dark, rusty blebs), black Mn or possible tenorite and chlorite on fractures	0.2 Cu

Bureau Veritas Commodities Canada Ltd.						Final Report				File Created:			26-Feb-15				Client:		Midnight Mining			
Project:	STU		Number of Samples:				37			Received:			16-Feb-15				Job Number:			WHI15000010		
	Method	WGHT	FA430										AQ200									
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	KG	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPB	PPM	PPM	PPM	PPM	PPM	PPM	%	%
Sample	MDL	0.01	0.005	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0
1501001	Rock	0.4	0.067	13.3	2293	11.6	16	9.6	0.6	0.8	68	0.71	0.9	42.6	0.4	17	0.1	0.4	1.7	10	0.08	0.01
1501002	Rock	1.13	0.058	9	4014	5.7	102	2.1	1.9	20	710	2.73	0.5	32.2	6.5	19	0.2	0.2	2	60	0.35	0.09
1501003	Rock	0.62	0.008	0.3	712.3	3.9	98	0.4	1.9	10.4	848	4.4	<0.5	4.9	8.1	21	<0.1	<0.1	0.2	95	0.33	0.09
1501004	Rock	1.34	0.135	0.2	4215	5.2	68	1.2	1.9	6.6	424	2.84	0.9	120	5.6	34	0.1	1.6	0.7	84	0.33	0.1
1501005	Rock	1.71	0.169	0.1	4617	5.2	83	1.5	2.3	7.3	528	2.92	1.2	153	7.1	31	0.2	1.4	1.6	88	0.43	0.11
1501006	Rock	1.49	0.19	0.2	4535	5.4	107	1.5	2.2	6.5	472	2.67	1.1	212	5.7	30	0.2	2.2	2.2	77	0.36	0.1
1501007	Rock	1.89	0.487	0.2	8539	6.6	142	3.2	2.3	7.3	527	2.7	0.9	416	2.9	48	0.3	3.5	4.2	81	0.38	0.1
1501008	Rock	1.92	0.334	0.1	4589	4.4	84	1.5	2.3	7.1	413	2.87	0.6	300	5.5	82	0.2	1.9	0.4	78	0.37	0.1
1501009	Rock	1.23	0.314	0.2	6459	7.6	152	2.5	2.8	7.4	479	2.6	1.3	290	4.6	87	0.2	1.5	1.6	81	0.65	0.11
1501010	Rock	0.54	0.059	0.2	580.2	4.9	61	0.6	2.9	6.7	444	2.25	1.4	109	3.4	34	<0.1	0.7	0.2	50	0.33	0.08
1501011	Rock	0.54	<0.005	0.1	55.7	3.8	49	<0.1	3.4	6.6	499	2.15	1.4	<0.5	2	42	<0.1	0.3	<0.1	50	0.49	0.07
1501012	Rock	1.73	0.24	0.3	4284	4.8	87	1.6	2	6.3	389	2.31	0.9	337	6.4	32	<0.1	1.6	1.2	56	0.29	0.09
1501013	Rock	1.9	0.376	1.2	5051	4.8	89	2.7	2.5	7.3	459	2.76	1	307	6.3	30	0.2	2	1.8	70	0.32	0.11
1501014	Rock	2.54	0.381	1	5455	4.7	82	2.3	2.3	7.1	456	2.68	1.2	302	7.3	25	0.2	3.6	1.6	78	0.31	0.12
1501015	Rock	1.9	0.289	1	4377	3.4	78	2	2.5	7.9	486	3	0.8	247	5.8	33	0.1	1.4	1	86	0.35	0.11
1501016	Rock	0.66	<0.005	0.1	27.3	2.1	41	<0.1	3.2	6.2	407	2.03	0.9	<0.5	2	29	<0.1	0.1	<0.1	50	0.43	0.1
1501017	Rock	2.23	<0.005	<0.1	35.6	2.1	71	<0.1	2.8	9	596	2.83	0.9	1	3.3	51	<0.1	<0.1	<0.1	68	0.65	0.13
1501018	Rock	1.25	<0.005	<0.1	7.6	1.7	44	<0.1	2.6	5.9	397	2	<0.5	2.1	1.9	32	<0.1	<0.1	<0.1	51	0.49	0.09
1501019	Rock	0.48	0.087	<0.1	2364	4.1	69	1.1	2.5	6.6	418	2.66	0.9	80.5	5	31	<0.1	1.5	0.8	83	0.31	0.1
1501020	Rock	1.65	0.126	0.2	2750	2.6	83	1.2	2.4	7.1	479	2.64	0.6	93.4	8.1	26	<0.1	0.9	1.1	77	0.28	0.1
1501021	Rock	2.41	0.273	0.5	5720	3.7	80	1.9	2.3	6.3	444	2.41	0.5	251	3.5	29	0.2	0.5	1.3	66	0.32	0.1
1501022	Rock	1.87	0.149	0.2	3385	2.7	84	1.1	2.4	7.3	506	2.74	<0.5	145	4.1	27	<0.1	0.4	0.9	80	0.31	0.1
1501023	Rock	1.72	0.704	178	990.6	32.6	28	6.1	3.3	3.2	97	1.7	9.5	82.6	0.8	11	0.2	0.6	3.4	11	0.05	0.03
1501024	Rock	0.34	0.25	10	8096	6.1	141	1.1	15.4	12.2	332	3.11	7.9	239	4.9	20	1.2	2.2	1.6	64	0.32	0.11
1501025	Rock	1.34	0.27	24.6	8790	8.2	148	1.6	14.2	13.8	432	2.99	11.4	216	4.6	20	0.7	1.9	2.3	56	0.28	0.1
1501027	Rock	0.61	0.062	1.7	9210	7.4	167	2.3	2.8	16.4	1337	3	2.9	88.2	7.2	107	0.4	<0.1	3.3	75	0.47	0.11
1501028	Rock	1.4	0.02	23.3	4780	55	230	0.8	15.1	17.8	963	3.17	47.5	15.8	3.7	35	1.1	1.3	0.8	72	0.46	0.11
1501029	Rock	0.94	0.032	13.3	3561	40.6	177	0.9	14	14.7	847	3.15	34.3	27.7	3.2	35	0.7	1.1	0.5	74	0.42	0.11
1501030	Rock	0.94	0.007	10.3	6223	28.4	211	0.7	15.7	22.6	857	3.22	30.4	4.5	3.5	36	1	1.2	0.6	69	0.43	0.09
1501031	Rock	1.59	0.012	9.4	2598	23.8	239	0.4	14.6	16	699	3.21	34.4	10.9	3.3	46	1.4	0.8	0.3	75	0.64	0.11
1501032	Rock	1.35	0.019	11.9	2591	53.3	115	0.4	9.1	12.1	541	2.82	24.9	16.9	3.5	28	0.5	0.7	0.4	65	0.38	0.09
1501033	Rock	1.58	0.02	5.6	3832	14.1	176	0.4	18.7	13.1	422	2.9	24.3	10.7	3.1	42	0.9	0.8	0.4	70	0.48	0.11
1501034	Rock	1.21	0.035	12	3952	19.7	187	0.8	15.4	15	579	2.85	18.3	33.9	3.2	33	1.6	0.9	0.8	65	0.39	0.1
1501035	Rock	1.12	<0.005	1.5	65.9	4.4	48	0.2	42.1	15.7	222	2.63	6.3	1.2	1.1	26	<0.1	<0.1	<0.1	56	0.34	0.04
1501036	Rock	2.54	0.039	0.3	802.9	3.3	40	0.3	1.2	3.2	210	1.36	1	25.4	6.8	18	<0.1	<0.1	0.5	35	0.17	0.06
1501037	Rock	0.67	<0.005	4.7	18	2.9	33	0.1	27.7	4.9	500	1.58	12.4	3.8	1.3	203	<0.1	0.2	<0.1	26	4.08	0.01
1501038	Rock	0.29	0.065	31.1	1290	73.1	173	1.7	12.4	12.7	455	3.45	9.6	111	3.2	22	0.3	0.4	1.3	60	0.4	0.12

Bureau Veritas Commodities Canada Ltd.																	
Project:	STU																
								AQ200									
	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	PPM	PPM	%	PPM	%	PPM	%	%	%	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM
Sample	1	1	0.01	1	0	20	0.01	0	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
1501001	<1	3	0.02	20	0	<20	0.09	0.01	0.02	0.2	<0.01	0.3	<0.1	<0.05	<1	<0.5	0.5
1501002	14	4	0.61	127	0.16	<20	1.12	0.05	0.62	0.7	0.01	4.9	0.3	<0.05	5	1.3	<0.2
1501003	19	4	0.87	100	0.21	<20	1.31	0.07	0.96	<0.1	<0.01	4.9	0.4	<0.05	7	<0.5	<0.2
1501004	9	6	0.89	576	0.25	<20	1.41	0.07	0.79	<0.1	0.15	5.7	0.2	<0.05	7	<0.5	0.4
1501005	14	6	0.98	287	0.24	<20	1.52	0.08	0.69	<0.1	0.17	6.2	0.2	<0.05	8	<0.5	0.4
1501006	9	6	0.87	360	0.23	<20	1.33	0.06	0.59	<0.1	0.16	6	0.2	<0.05	7	0.5	0.4
1501007	6	6	0.97	1326	0.22	<20	1.39	0.06	0.52	<0.1	0.3	5.1	0.1	<0.05	7	2.1	0.8
1501008	9	6	0.9	3570	0.24	<20	1.4	0.07	0.73	<0.1	0.15	4.5	0.2	0.09	7	2	0.5
1501009	9	6	0.94	2961	0.24	<20	1.6	0.06	0.36	<0.1	0.15	6.1	0.1	0.07	7	0.9	0.5
1501010	6	5	0.76	99	0.1	<20	1.21	0.06	0.15	<0.1	0.03	3.8	<0.1	<0.05	6	<0.5	<0.2
1501011	10	6	0.66	93	0.12	<20	1.2	0.09	0.12	<0.1	<0.01	3.6	<0.1	<0.05	6	<0.5	<0.2
1501012	10	5	0.8	249	0.1	<20	1.26	0.06	0.43	<0.1	0.25	4.1	0.1	<0.05	6	<0.5	0.4
1501013	9	6	0.99	187	0.13	<20	1.44	0.06	0.49	<0.1	0.39	4.3	0.1	<0.05	7	1.3	0.7
1501014	10	4	0.99	199	0.16	<20	1.52	0.06	0.64	<0.1	0.36	5.3	0.2	<0.05	7	0.9	0.7
1501015	11	6	1.06	330	0.19	<20	1.57	0.07	0.82	<0.1	0.16	5.1	0.2	<0.05	7	1	0.3
1501016	9	6	0.56	184	0.12	<20	0.99	0.09	0.37	<0.1	<0.01	3	0.1	<0.05	4	<0.5	<0.2
1501017	19	5	0.91	418	0.22	<20	1.52	0.11	0.77	<0.1	<0.01	3.4	0.2	<0.05	6	<0.5	<0.2
1501018	9	6	0.53	177	0.13	<20	0.98	0.1	0.4	<0.1	<0.01	3.1	0.1	<0.05	5	<0.5	<0.2
1501019	8	6	0.87	392	0.2	<20	1.43	0.06	0.67	<0.1	0.03	6	0.2	<0.05	7	<0.5	0.3
1501020	10	6	0.91	280	0.18	<20	1.39	0.06	0.77	<0.1	0.02	4.7	0.2	<0.05	6	<0.5	0.3
1501021	8	5	0.82	618	0.15	<20	1.22	0.05	0.46	<0.1	0.25	4.4	0.1	<0.05	5	1.5	0.4
1501022	9	6	0.93	249	0.17	<20	1.46	0.07	0.68	<0.1	0.11	4.3	0.2	<0.05	6	<0.5	0.2
1501023	8	10	0.16	20	0.02	<20	0.21	0.04	0.05	2.5	<0.01	1.1	0.2	0.1	2	3.1	<0.2
1501024	14	48	1.47	110	0.08	<20	1.71	0.06	0.39	0.2	<0.01	6.9	0.4	<0.05	8	0.7	<0.2
1501025	15	40	1.34	377	0.06	<20	1.67	0.05	0.38	0.5	0.01	6	0.4	<0.05	8	0.8	<0.2
1501027	27	6	1.13	4334	0.23	<20	1.37	0.06	0.36	0.8	0.16	5.9	0.2	0.11	8	<0.5	0.4
1501028	17	48	1.33	127	0.09	<20	1.62	0.07	0.24	0.4	<0.01	6.4	0.3	<0.05	7	<0.5	<0.2
1501029	15	47	1.29	113	0.08	<20	1.45	0.07	0.16	0.3	<0.01	6	0.3	<0.05	7	<0.5	<0.2
1501030	15	43	1.06	94	0.09	<20	1.37	0.07	0.17	0.4	<0.01	5.7	0.4	<0.05	7	<0.5	<0.2
1501031	15	45	1.17	122	0.11	<20	1.42	0.09	0.25	0.4	<0.01	5.8	0.4	<0.05	7	<0.5	<0.2
1501032	13	15	0.95	72	0.07	<20	1.11	0.07	0.12	0.2	<0.01	3.9	0.2	<0.05	7	<0.5	<0.2
1501033	16	49	1	346	0.14	<20	1.19	0.09	0.34	0.6	<0.01	5	0.5	<0.05	6	<0.5	<0.2
1501034	16	44	1	333	0.08	<20	1.3	0.07	0.25	0.3	<0.01	5.2	0.4	<0.05	6	<0.5	<0.2
1501035	5	36	0.67	118	0.09	<20	0.87	0.07	0.26	<0.1	<0.01	4.5	<0.1	0.86	5	0.5	<0.2
1501036	10	3	0.42	92	0.1	<20	0.73	0.06	0.49	<0.1	<0.01	2	0.1	<0.05	3	<0.5	<0.2
1501037	7	31	0.67	37	0	<20	0.38	0.01	0.1	<0.1	<0.01	1.9	<0.1	0.19	2	<0.5	<0.2
1501038	18	50	1.6	36	0.05	<20	1.63	0.05	0.14	0.5	<0.01	4.8	0.1	<0.05	9	<0.5	<0.2

	APPENDIX II: SOIL SAMPLE LOCATIONS AND RESULTS									results in ppm unless specified								
Sample No.	**Easting**	**Northing**	**Elev**	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe %	As	Au-ppb	Th	Sr	Cd	Sb
MDL	**Nad 83**	**Zone 8**	**(feet)**	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1
STU14S S1	404740	6921662	2912	0.6	16.9	6.1	64	<0.1	14.6	8.8	478	2.8	6.1	1.3	2.6	19	<0.1	0.2
STU14S S2	404750	6921673	2920	0.8	22.6	7.1	68	<0.1	17.9	8.2	305	3.26	7.6	0.7	2.1	23	<0.1	0.4
STU14S S3	404759	6921681	2920	0.2	4.1	2.1	35	<0.1	3.8	4.1	213	1.5	1.2	<0.5	0.5	14	<0.1	0.1
STU14S S4	404770	6921688	2910	0.4	16.9	4.3	50	<0.1	10.4	6.2	264	2.38	4.6	<0.5	1.4	13	<0.1	0.3
STU14S S5	404778	6921696	2910	0.3	20.7	6.8	69	<0.1	10.2	8.2	441	2.87	4.2	<0.5	2	17	<0.1	0.5
STU14S S6	404789	6921708	2901	0.3	12.8	7	85	<0.1	8	10.2	793	3.22	2.4	<0.5	1.6	35	<0.1	0.6
STU14S S7	404798	6921717	2905	0.1	6.8	2.5	43	<0.1	3.6	6	465	1.79	1.2	<0.5	1.1	19	<0.1	0.1
STU14S S8	404806	6921725	2886	0.4	14.6	4.8	41	<0.1	11.4	5.2	188	2.03	5.6	<0.5	2	12	<0.1	0.3
STU14S S9	404814	6921733	2887	0.6	19.7	6.2	51	<0.1	13.8	6.7	240	2.56	5.2	<0.5	2.1	14	<0.1	0.3
STU14S S10	404825	6921740	2870	0.7	17.7	7.3	63	<0.1	15.6	7.9	300	2.92	6.5	0.8	3.1	18	<0.1	0.3
STU14S S11	404834	6921749	2872	0.6	10	6	60	<0.1	12.1	7.7	301	3.23	5.3	<0.5	1.7	12	<0.1	0.3
STU14S S12	404844	6921757	2868	0.2	8.3	2.6	62	<0.1	7.5	8.8	474	2.58	2.7	<0.5	2.4	20	<0.1	0.1
STU14S S13	404856	6921766	2862	0.4	9.7	4.3	42	<0.1	9.6	5.5	225	2.14	3.8	<0.5	1.5	13	<0.1	0.2
STU14N S1	404679	6921735	2915	1	15.2	6.5	94	<0.1	13.5	16	547	5.62	5.9	<0.5	3.5	21	<0.1	0.6
STU14N S2	404688	6921744	2915	0.7	13.9	5.6	55	<0.1	12.3	7.4	383	2.78	6.1	<0.5	1.6	18	<0.1	0.3
STU14N S3	404695	6921754	2921	0.3	13.2	2.7	49	<0.1	5.2	5.5	383	1.89	1.9	<0.5	1.1	17	<0.1	0.1
STU14N S4	404706	6921760	2918	0.5	20.7	5.9	56	<0.1	11.2	7.6	446	2.71	6.1	<0.5	1.9	18	<0.1	0.3
STU14N S5	404716	6921768	2916	0.8	14.2	6.5	42	<0.1	14.9	6.1	415	2.36	6.7	<0.5	2.1	16	<0.1	0.4
STU14N S6	404724	6921777	2915	0.6	13.9	7.3	54	<0.1	16.7	8.6	311	2.87	7.7	<0.5	2.2	22	<0.1	0.3
STU14N S7	404732	6921785	2915	0.5	18	5.6	51	<0.1	10	7.8	534	2.49	4.8	<0.5	1.3	19	<0.1	0.2
STU14N S8	404742	6921794	2915	0.9	30.4	7.5	54	<0.1	17.6	7.1	267	2.9	7.4	1.4	2.3	17	<0.1	0.4
STU14N S9	404751	6921804	2910	0.6	15.5	7	62	0.2	14	8.4	340	2.98	6	<0.5	2.2	19	<0.1	0.4
STU14N S10	404762	6921811	2903	0.9	19.1	7.2	69	0.1	15.1	9.4	366	3	6.1	2.7	2.2	18	<0.1	0.7
STU14N S11	404769	6921820	2904	0.3	13	4.3	69	<0.1	12.1	9.5	517	3.05	4.6	<0.5	2.2	19	<0.1	0.4
STU14N S12	404779	6921828	2895	0.5	25.8	6.1	54	<0.1	10.8	7.7	396	2.78	5.4	<0.5	1.9	23	<0.1	0.3
STU14N S13	404788	6921838	2859	0.6	8.4	6.3	74	<0.1	8.2	5.6	301	2.73	3.9	<0.5	1.3	13	0.1	0.4
STU14N2 S1	404643	6921777	2921	1.1	22.6	7.7	58	<0.1	17.6	8.1	287	3.08	7.7	<0.5	2.3	15	<0.1	0.4
STU14N2 S2	404652	6921783	2930	0.5	8.9	5.1	70	<0.1	8.5	9.3	445	3.48	3.7	0.6	2.2	22	<0.1	0.2
STU14N2 S3	404659	6921795	2919	0.9	9.4	4.9	32	<0.1	6.8	4.2	184	1.97	4.7	1.5	1.5	19	<0.1	0.3
STU14N2 S4	404668	6921803	2915	1	15.7	7.7	84	<0.1	9.1	12.3	657	4.5	4.7	<0.5	1.8	29	<0.1	0.2
STU14N2 S5	404678	6921810	2913	0.8	16.8	7.3	62	<0.1	11.4	10.1	583	3.47	5.3	<0.5	1.8	24	<0.1	0.2
STU14N2 S6	404690	6921815	2912	0.8	19.4	7.6	36	<0.1	10.2	4.6	195	2.27	5.8	0.6	2.1	18	<0.1	0.3
STU14N2 S7	404696	6921826	2906	0.3	17.4	4.7	42	<0.1	9.2	5.9	301	2.12	2.2	<0.5	1.5	22	<0.1	0.1
STU14N2 S8	404706	6921834	2906	0.6	10.8	4.8	65	<0.1	8.9	9.6	453	3.29	5.1	<0.5	1.5	25	<0.1	0.2
STU14N2 S9	404715	6921842	2907	0.7	15	7.5	54	<0.1	12.2	5.9	224	2.7	5.5	<0.5	2	17	<0.1	0.3
STU14N2 S10	404724	6921852	2904	0.5	14	5.7	46	<0.1	11.4	5.3	181	2.2	5.5	<0.5	1.5	19	<0.1	0.2
STU14N2 S11	404730	6921865	2899	0.5	11.6	4.5	38	<0.1	10.8	5.8	203	2.01	4.7	1.2	1.3	15	<0.1	0.3
STU14N2 S12	404743	6921874	2890	0.6	10.8	5.9	63	<0.1	11.6	9.1	340	3.15	5.4	0.6	1.8	19	<0.1	0.2
STU14N2 S13	404752	6921877	2882	0.5	10.4	7.2	31	<0.1	6.6	4.1	164	1.93	3.9	1.3	1.7	15	<0.1	0.2

	APPENDIX II: SOIL SAMPLE LOCATIONS AND RESULTS												results in ppm unless specified								
Sample No.	Bi	V	Ca %	P %	La	Cr	Mg %	Ba	Ti %	B	Al %	Na %	K %	W	Hg	Sc	Tl	S %	Ga	Se	Te
MDL	0.1	2	0.01	0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
STU14S S1	0.1	69	0.34	0.093	8	22	0.63	178	0.11	1	2.11	0.02	0.15	0.1	<0.01	3.1	0.1	<0.05	7	<0.5	<0.2
STU14S S2	0.1	87	0.24	0.05	7	23	0.6	265	0.127	<1	2.58	0.027	0.13	0.1	<0.01	3.5	0.1	<0.05	9	<0.5	<0.2
STU14S S3	<0.1	36	0.29	0.091	4	6	0.34	65	0.073	<1	0.85	0.03	0.12	<0.1	<0.01	1.3	<0.1	<0.05	5	<0.5	<0.2
STU14S S4	<0.1	59	0.24	0.079	5	14	0.48	111	0.077	<1	1.89	0.028	0.14	0.1	<0.01	2.7	<0.1	<0.05	7	<0.5	<0.2
STU14S S5	<0.1	67	0.37	0.105	7	13	0.71	123	0.102	<1	2.11	0.03	0.18	<0.1	<0.01	3.6	<0.1	<0.05	9	<0.5	<0.2
STU14S S6	<0.1	74	0.63	0.185	8	11	0.94	177	0.126	<1	2.27	0.029	0.1	<0.1	<0.01	5.6	<0.1	<0.05	11	<0.5	<0.2
STU14S S7	<0.1	39	0.45	0.14	6	6	0.55	96	0.084	<1	1.03	0.038	0.14	<0.1	<0.01	2.4	<0.1	<0.05	5	<0.5	<0.2
STU14S S8	<0.1	45	0.16	0.038	7	18	0.42	86	0.061	<1	1.57	0.038	0.09	0.1	<0.01	2.6	<0.1	<0.05	5	<0.5	<0.2
STU14S S9	0.1	68	0.24	0.074	9	21	0.49	116	0.094	<1	1.77	0.021	0.11	0.2	<0.01	2.7	0.1	<0.05	7	<0.5	<0.2
STU14S S10	0.1	77	0.24	0.049	9	26	0.65	133	0.115	<1	2.26	0.021	0.12	0.1	<0.01	3.3	0.1	<0.05	8	<0.5	<0.2
STU14S S11	0.1	79	0.24	0.115	8	20	0.64	84	0.094	<1	2.17	0.013	0.13	0.1	0.01	3.1	<0.1	<0.05	9	<0.5	<0.2
STU14S S12	<0.1	68	0.52	0.161	11	10	0.8	126	0.135	<1	2.1	0.027	0.43	<0.1	<0.01	3	0.2	<0.05	8	<0.5	<0.2
STU14S S13	<0.1	49	0.18	0.039	8	14	0.44	103	0.099	<1	1.62	0.023	0.09	<0.1	<0.01	2.1	<0.1	<0.05	6	<0.5	<0.2
STU14N S1	<0.1	109	0.32	0.073	9	21	0.47	260	0.024	<1	2.49	0.016	0.22	<0.1	0.01	8.7	0.2	<0.05	9	<0.5	<0.2
STU14N S2	0.1	69	0.34	0.089	7	21	0.64	168	0.072	<1	1.72	0.027	0.18	0.1	<0.01	3.3	<0.1	<0.05	7	<0.5	<0.2
STU14N S3	<0.1	42	0.35	0.105	6	8	0.42	104	0.082	<1	1.06	0.033	0.18	<0.1	<0.01	2.4	<0.1	<0.05	6	<0.5	<0.2
STU14N S4	<0.1	70	0.33	0.099	8	16	0.58	151	0.114	<1	1.94	0.027	0.09	0.1	<0.01	3	<0.1	<0.05	8	<0.5	<0.2
STU14N S5	0.1	52	0.18	0.031	8	23	0.42	148	0.072	<1	1.71	0.022	0.08	0.2	<0.01	2.5	<0.1	<0.05	6	<0.5	<0.2
STU14N S6	0.1	76	0.38	0.063	9	23	0.61	161	0.115	<1	2.4	0.027	0.07	0.1	<0.01	3.1	<0.1	<0.05	8	<0.5	<0.2
STU14N S7	<0.1	63	0.39	0.098	7	16	0.57	107	0.097	<1	1.67	0.027	0.07	<0.1	<0.01	2.5	<0.1	<0.05	7	<0.5	<0.2
STU14N S8	0.1	71	0.2	0.063	10	25	0.49	151	0.08	<1	2.11	0.024	0.1	0.1	<0.01	3	0.1	<0.05	7	<0.5	<0.2
STU14N S9	0.1	76	0.33	0.092	12	22	0.66	132	0.116	<1	2.15	0.017	0.15	0.1	0.01	3.2	0.1	<0.05	8	<0.5	<0.2
STU14N S10	0.1	74	0.22	0.046	8	25	0.53	151	0.071	<1	1.97	0.02	0.08	0.1	0.01	3.2	0.1	<0.05	7	<0.5	<0.2
STU14N S11	<0.1	75	0.55	0.201	9	12	0.86	154	0.182	<1	2.32	0.03	0.25	<0.1	0.01	2.3	0.1	<0.05	9	<0.5	<0.2
STU14N S12	0.1	76	0.27	0.065	9	19	0.66	178	0.136	<1	1.75	0.023	0.14	0.1	<0.01	2.7	0.1	<0.05	7	<0.5	<0.2
STU14N S13	0.1	70	0.17	0.102	7	14	0.45	89	0.107	<1	1.72	0.018	0.08	<0.1	0.02	2.3	0.1	<0.05	9	<0.5	<0.2
STU14N2 S1	0.1	80	0.22	0.054	9	28	0.53	170	0.107	1	2.16	0.016	0.13	0.2	0.01	3.2	0.1	<0.05	8	<0.5	<0.2
STU14N2 S2	<0.1	79	0.48	0.123	15	14	0.68	179	0.071	<1	1.72	0.015	0.17	<0.1	0.01	5.2	0.1	<0.05	8	<0.5	<0.2
STU14N2 S3	<0.1	48	0.27	0.043	8	13	0.28	111	0.036	<1	0.92	0.015	0.06	0.1	<0.01	2.4	<0.1	<0.05	5	<0.5	<0.2
STU14N2 S4	<0.1	91	0.49	0.099	8	15	1.14	184	0.042	<1	2.75	0.022	0.1	<0.1	<0.01	6.2	<0.1	<0.05	13	<0.5	<0.2
STU14N2 S5	0.1	88	0.38	0.065	9	19	0.8	166	0.086	<1	2.31	0.017	0.12	<0.1	<0.01	4.3	<0.1	<0.05	10	<0.5	<0.2
STU14N2 S6	0.2	60	0.23	0.037	9	21	0.35	118	0.075	<1	1.3	0.021	0.08	0.1	<0.01	2.4	<0.1	<0.05	6	<0.5	<0.2
STU14N2 S7	<0.1	45	0.44	0.079	12	14	0.62	175	0.074	<1	1.53	0.024	0.09	<0.1	0.02	3.5	<0.1	<0.05	6	<0.5	<0.2
STU14N2 S8	<0.1	84	0.53	0.108	8	15	0.84	121	0.112	<1	2.05	0.027	0.15	<0.1	<0.01	3.9	<0.1	<0.05	9	<0.5	<0.2
STU14N2 S9	0.1	74	0.24	0.054	9	23	0.45	144	0.083	<1	1.65	0.021	0.07	0.2	<0.01	2.7	0.1	0.06	7	<0.5	<0.2
STU14N2 S10	0.1	48	0.25	0.051	7	17	0.38	151	0.074	1	1.44	0.026	0.09	0.1	<0.01	2	0.1	<0.05	6	<0.5	<0.2
STU14N2 S11	0.1	46	0.25	0.066	9	17	0.41	144	0.069	<1	1.54	0.025	0.12	0.1	<0.01	2.3	<0.1	<0.05	5	<0.5	<0.2
STU14N2 S12	0.1	78	0.36	0.096	9	19	0.77	194	0.124	1	2.32	0.02	0.17	0.1	<0.01	3.1	0.1	<0.05	8	<0.5	<0.2
STU14N2 S13	0.2	46	0.25	0.054	11	15	0.36	118	0.068	<1	1.32	0.02	0.1	0.1	<0.01	2.4	0.1	<0.05	6	<0.5	<0.2

APPENDIX III
Statement of Expenditures

Wages: Nicolai Goeppel	July 3-4,13-16,19,27	8 days @ 350.00/day	$2,800.00	
Alexander Goeppel	July 13-14, 16	3 days @ 250.00/day	750.00	
Mike Linley	Oct. 17-18	2 days @ 350.00/day	700.00	
Bill Harris	July 4 15, 19, Oct 15-18	7 days @ 500.00/day	3,500.00	
		Total:		**$7,750.00**

Geological Consulting: JP Exploration Services Inc., Yukon **749.28**
July 15, 2014 Invoice 449STU

Archaeological Survey: Ecofor Consulting Ltd., Whitehorse, Yukon **2,220.00**

Geochemistry:	37 rock samples @ 40 ea. Au, ICP	1,480.00	
	39 soil samples @ 33 ea. Au, ICP	1,287.00	
	shipping	100.00	
	Total:		**$2,867.00**

Equipment Rental:	Truck:	2X7 days @ $50/day	700.00	
	Fuel:		450.00	
	ATV:	2X7 days @ $40/day	560.00	
	Excavator/cat:	1 day @ $4,750/day	4,750.00	
		Total:		**6,460.00**

Daily Field Expense: meals, accommodation, radios, field supplies
20 man days @ $100.00/man day
2,000.00

Niton Survey: Lauren Blackburn, Dawson City, Yukon
38 specimens **700.00**

Preparation, Report, Drafting, Printing: **3,200.00**

GRAND TOTAL: **$25,946.28**

Certificate Filed December 31, 2014	$2,500.00	Report dated May 22, 2015 and data included in this report
Certificate Filed June 25, 2015	$12,100.00	This Report
Certificate Filed July 28, 2015	$11,300.00	This Report
TOTAL:	**$25,900.00**	

APPENDIX IV
STATEMENT OF QUALIFICATION

I, Jean Marie Pautler, do hereby certify that:

1) I, Jean Marie Pautler of 103-108 Elliott Street, Whitehorse, Yukon Territory am self-employed as a consultant geologist and authored this report.

2) I am a graduate of Laurentian University, Sudbury, Ontario with an Honours B.Sc. degree in geology (May, 1980).

3) I am a registered member of the Association of Professional Engineers and Geoscientists of British Columbia, Registration Number 19804.

4) I am a geologist with thirty-five years of experience in the Canadian Cordillera.

5) I was involved in the 2014 program on the STU property and worked on the STU property intermittently since 2006. I have extensive experience throughout the Carmacks copper-gold belt. I have visited the Minto mine and Williams Creek deposit.

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

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

APPENDIX V

ARCHAEOLOGICAL REPORT

ECOFOR
natural and cultural resource consultants

Heritage Resource Overview Assessment
STU Property

Prepared for:

Bill Harris
Box 31347
Whitehorse, YT Y1A 5P7
Tel: (778) 837-4334

Prepared by:

Ecofor Consulting Ltd.
#6B – 151 Industrial Road
Whitehorse, YT Y1A 2V3
Tel: (867) 668-6600

October 10, 2014

Heritage Resource Overview Assessment
STU Properties

Prepared for:

Bill Harris
Box 31347
Whitehorse, YT Y1A 5P7
Tel: (778) 837-4334

Prepared by:

Ecofor Consulting Ltd.
#6B – 151 Industrial Road
Whitehorse, YT Y1A 2V3

Report also submitted to:

Little Salmon/Carmacks First Nation
Selkirk First Nation

CREDITS

Report Authors:	James Mooney, MA, RPA, RPCA
Researchers:	Jacqueline Dale, MA James, Mooney, MA, RPA, RPCA
Editor:	James, Mooney, MA, RPA, RPCA
Mapping:	Margie Massier, BA, B.Sc Laura McKersie, Dipl. Tech.

MANAGEMENT SUMMARY

At the request of Bill Harris, a Heritage Resources Overview Assessment (HROA) was conducted for the STU Property, located northwest of the Carmacks area (see Figure 1).

The objectives of the HROA are to identify and assess the heritage resource potential or sensitivity within these claim blocks - referred to as the Local Study Area (LSA) - and prepare a written report detailing the results. In order to accomplish these objectives, the biophysical, historic, ethnographic, and archaeological documents relative to the LSA were reviewed. In studying the gathered background information, the professional judgment of the author was used to determine potential zones for the occurrence of archaeological sites within the LSA. This methodology is commonly used in cultural resource management and is designed to err on the side of caution. The potential for the occurrence of the following site types was analyzed: permanent habitation sites; temporary habitation or subsistence sites; human remains; fishing sites; quarry sites; rock art sites; trails; Culturally Modified Trees (CMT) sites; and historic sites.

The majority of the potential within the LSA is predicted through the evaluation of landforms in relation to water courses and resource procurement sites, as well as reference to previous studies completed in the area. Under this analysis, areas exhibiting archaeological potential are likely found on ridges; creek terraces; breaks in slope; the tops of south facing slopes; well-drained knolls; and terrain adjacent to creeks and wetlands. The greatest possibility is for the presence of temporary habitation and subsistence sites, trails and historic sites. Other site types, such as permanent habitation sites, quarry sites, rock art sites, human remains and CMT sites, are assessed as having low potential for occurrence.

Based on the results of the HROA a minimum of a Preliminary Field Reconnaissance (PFR) is recommended for any land-altering activities that are located within a mapped area of potential (see Appendix I) and should take place before the land-altering activities occur. A Heritage Resources Impact Assessment (HRIA) may be recommended upon completion of the PFR, depending on the results. Review of this HROA by, and participation of Little Salmon/Carmacks First Nation (LSCFN) and the Selkirk First Nation (SFN), in any future heritage fieldwork is recommended and encouraged.

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LIST OF ACRONYMS

CMT	Culturally Modified Tree
DEM	Digital Elevation Model
FCR	Fire Cracked Rock
HRIA	Heritage Resources Impact Assessment
HROA	Heritage Resources Overview Assessment
LSA	Local Study Area
LSCFN	Little Salmon/Carmacks First Nation
NFW	No Further Work
PFR	Preliminary Field Reconnaissance
SFN	Selkirk First Nation

1. INTRODUCTION

At the request of Bill Harris, a Heritage Resources Overview Assessment (HROA) was conducted for the STU Property (heretofore referred to as the Local Study Area – LSA)

The report begins with a basic outline of the project and the objectives of the work undertaken. The proposed activities and their impacts are discussed in section 2.0. Section 3.0 describes the methods employed in assessing the archaeological potential. Section 4.0 provides a description of the biophysical and cultural environment of the study area. Section 5.0 provides an analysis of the archaeological potential in terms of known site types. A discussion of archaeological resource potential within the Local Study Area (LSA) in terms of the environmental and cultural setting is presented in section 6.0. Finally, section 7.0 outlines the recommendations for further archaeological work to be conducted within the LSA.

1.1 Project Overview

Continued mineral exploration is planned within the STU Property. This would include a program of road/cat trail upgrading, previous camp re-use and construction, core rehabilitation and resampling, cleaning of existing trenches and excavation of new trenches. The specific locations of these proposed components of the exploration are presented by the proponent, however, this HROA covers the entirety of the LSA, whether each area is be planned for exploration or not. This HROA can provide direction for future expansion in the planning process. The areas of archaeological potential identified in this process are based on available mapping and air photography and do not include all areas of potential. The proponent should avoid impacts to other similar knolls, terrace edges, breaks in slope, tops of south facing slopes and level benches near drainages.

1.2 Objectives of the Archaeological Overview Assessment

The scope of this project involves producing an HROA of mineral claim lands held by Bill Harris. The objective of this work is to:

1. Identify and assess heritage resource potential or sensitivity within the LSA through a review of the listings of known archaeological and historic sites, in addition to a review of the biophysical and topographic mapping;
2. Prepare a written report and maps outlining the potential for finding heritage resources within the LSA.

This report documents the methods, analysis, and results of the HROA. The assessment is conducted using existing information and the professional experience of Ecofor's archaeologists. The sole purpose is to determine the potential for archaeological sites within the areas of impact within the LSA. Based on the assessed archaeological potential, cultural resource management recommendations are presented and may include one of three levels of management action: no further work (NFW), a Preliminary Field Reconnaissance (PFR), or a Heritage Resources Impact Assessment (HRIA). While all observations, conclusions, and recommendations made in this report are the result of research undertaken by the research team, this work may be subject to the review or modification by the Heritage Resources Unit, Yukon Government.

The research that forms the back bone of this study was conducted by James Mooney and Jacqueline Dale in October 2014. Research included consulting documents pertaining to the history, archaeology, ethnography, geology, and geography of the LSA and larger surrounding area.

In the Yukon, heritage resources are managed under the provisions of the Yukon First Nations Umbrella Final Agreement (UFA), Chapter 13 and the enabling legislation: the Yukon *Historic Resources Act*, and the Inuvialuit Final Agreement. The Yukon Government is responsible for heritage resource management on non-settlement lands. Archaeological resources are protected under the *Heritage Resources Act*, whether located on public or private land. Protected sites may not be altered without a permit issued by the Minister or designate.

2. PROPOSED ACTIVITIES WITHIN THE STUDY AREA

The intent of the proponent within the LSA is to explore for mineral resources (mainly copper and gold) within the claim areas. The proposed activities within the LSA could include:

- Road/cat trail upgrading;
- reuse and construction improvements of previous camp;
- Core rehabilitation and resampling;
- Cleaning of existing trenches and excavation of new trenches.

Disturbances such as road/cat trail upgrading, reopening existing trenches, and opening new trenches could affect heritage sites. Proper education of all on-site employees and contractors regarding observation, recognition, and preservation of any existing heritage site is strongly encouraged prior to and during exploration in the region. Field inspection by a qualified archaeologist can identify areas where unrecorded subsurface archaeological sites may be present and record any heritage sites that may be in conflict with the proposed development. Once recorded and assessed, archaeological sites with high significance may be excavated, if necessary.

If heritage sites are encountered in these areas, increased access to the sites could result in future vandalism or looting. As such, the exact locations of the sites should not be public knowledge. Records kept at the Heritage Resources Unit will be consulted to determine if any recorded archaeological sites are within the LSA boundaries (See Section 4.2.2). If recorded sites have the potential to be impacted by development, cultural resource management recommendations will be made (see Section 7.0). Predicting, finding, recording, and preservation of heritage sites is the purpose of archaeological assessment. This HROA is the first step toward achieving this goal. The second step is to conduct a field reconnaissance in order to better refine the prediction model and record sites that may be present within the areas of interest.

Figure 1 illustrates the location of the LSA within southwestern Yukon, northwest of Carmacks, accessed by the Freegold Road, then by the trail through the Copper North Property.

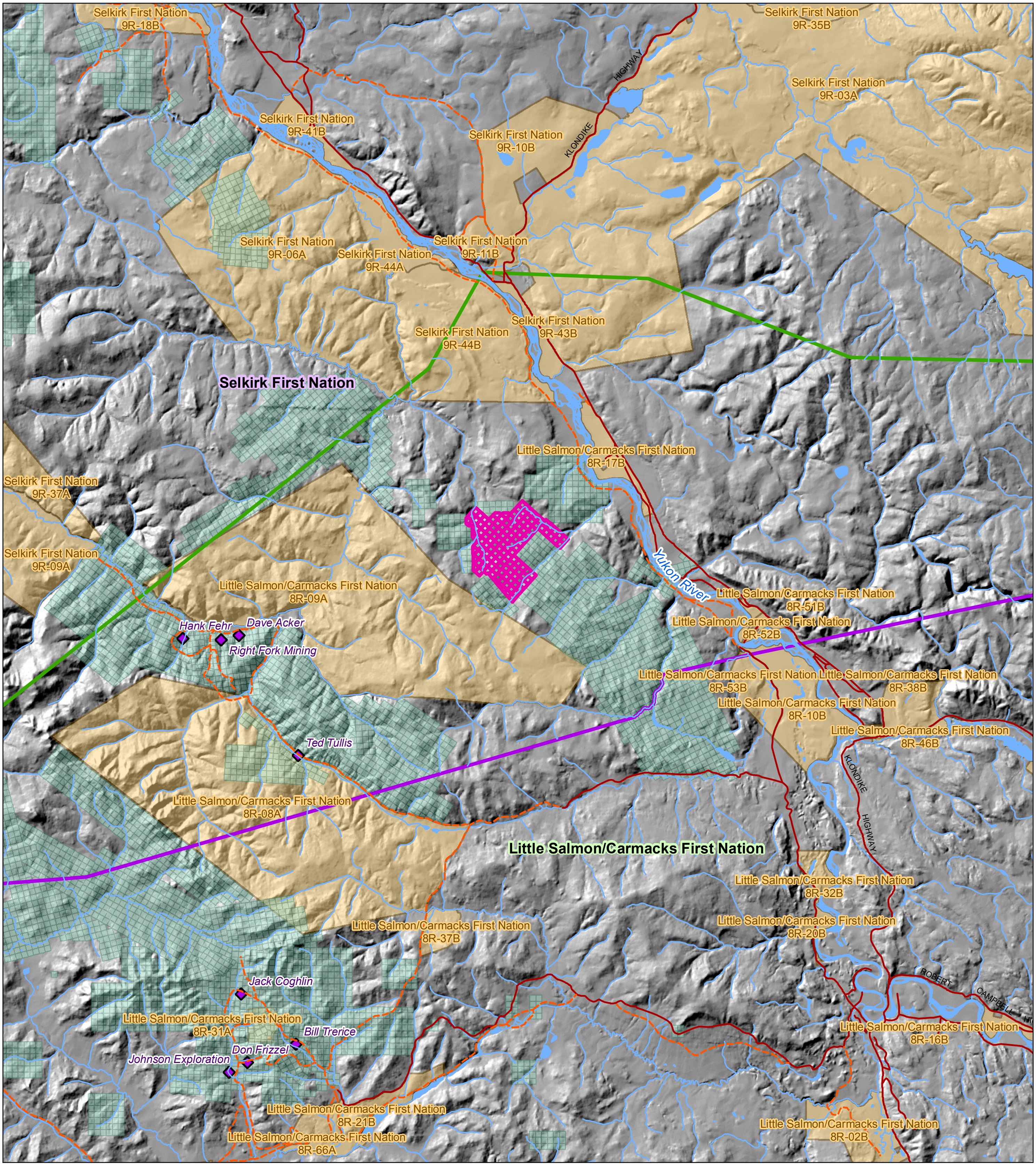
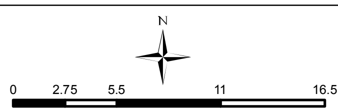


FIGURE 1. STU PROPERTY STUDY AREA OVERVIEW

STU Claims

ECOFOR
natural and cultural resource consultants



NAD 1983 UTM Zone 10
Date: 09/10/2014

LEGEND

- Road
- Trail
- Waterbody
- Watercourse
- Project Area
- Placer Claim
- Active Quartz Claims
- First Nations Settlement Lands
- Selkirk Traditional Territory
- Little Salmon/Carmacks Traditional Territory

3. METHODS

The methods used in this HROA are described below in terms of predicting archaeological potential. Following the determination of the archaeological potential and based on the resulting set of variables, one of three possible recommendations is typically selected; No Further Work (NFW), Preliminary Field Reconnaissance (PFR), or Heritage Resources Impact Assessment (HRIA).Recommendation of the latter is typically accompanied with suggestions pertaining to the possible methodology to be utilized during future study.

In order to predict the occurrence of archaeological material within a proposed area two approaches are taken:

1. The first approach is to evaluate the LSA in terms of descriptive attributes of the physical environment. These attributes are derived from an analysis of the biogeoclimatic zones, topography, hydrology, geology, and forest cover. Geographic entities can be linked to specific settlement patterns and resource use. These include: stream valleys, stream terraces, lake margins, upland grasslands, upland forests, glacial remnant features, terraces, hills or elevated features, remnant dunes and disintegrated moraine features.
2. The second approach is to review the LSA within the context of relevant past research.
    a. Researching patterns of native settlement from ethnographic research of the traditional cultural groups found within the LSA.
    b. Reviewing prehistoric settlement patterns from archaeological research.
    c. Reviewing the historical information of the area to determine what characteristics may be considered good indicators of past settlement and use.

3.1 Physical Environment

The physical environment is evaluated by first determining the general location of the LSA. The area is then assessed based on several attributes that can affect the archaeological resource potential: ecozones, topography, hydrology, geology, and forest cover.

The Yukon has been divided into several ecoregions and ecozones which describe the geographic setting, bedrock geology, watersheds and hydrologic regions, climate, glacial history, surficial geology, permafrost, soils, vegetation and wetlands, wildlife, fish, insects and traditional land use within each region and zone.

The topography of the area is assessed in terms of elevation. Topographic maps and available Digital Elevation Models (DEM) are reviewed to determine archaeological potential. GIS topographic mapping is done by the Ecofor mapping department using MapInfo. Google Maps' 'Terrain' function can also be used for preliminary analysis. Typically, archaeological potential is higher in areas found on high ridges, creek terraces, breaks in slope, tops of south facing slopes, and well-drained knolls. Alpine environments can also exhibit potential for the presence of archaeological and/or ceremonial sites. The professional experience of the research team is used to assess the potential based on topography.

Access to water features is an important indicator of archaeological potential as humans need access to clean water for drinking. Furthermore, humans take advantage of animal use of hydrological features. Large waterways were also important as transportation routes. The hydrology of the area is assessed, including the presence of fish and potable water.

The geology of the area is considered in order to determine the potential of quarry sites and rock art sites. If the geology is typified by the presence of known lithic resources such as chert, basalt, and obsidian (among others) then the potential for quarry sites is assumed. Outcroppings of suitable rock for pictographs or petroglyphs are also assessed.

Forest cover is also evaluated. This information is particularly useful for determining the potential of culturally modified trees, but also for determining well drained areas (typically pine) from poorly drained areas (typically black spruce).

A final component of assessing the physical environment is determining the level of disturbance in the area. If areas have been severely disturbed in the past it reduces the potential of finding intact archaeological remains. Disturbance can include previous activities such as forestry, mining exploration, oil and gas exploration, pipeline construction, etc. Disturbance is determined through analysis of the maps which indicate locations of previous known industrial activities. Professional judgment is used to determine the level of impact the disturbance would have. This is based on the type of disturbance and when it occurred.

3.2 Cultural Environment

The evaluation of the cultural environment is done through background research, including reviews of ethnographies, archival journals by early explorers, native oral histories, and other anthropological information.

The LSA is assessed based on which First Nations' traditional territories cover the area. This is determined by referring to publicly available maps that outline the territories of various First Nations.

An ethnographic study of each of the cultures identified is conducted. The research is done with an emphasis on activities that would reflect archaeologically such as habitation, seasonal round, hunting and gathering, and burial practices.

A thorough review of the known archaeological sites is conducted. Sites within and near the LSA are identified and described. Furthermore, sites within proximity of the larger project area are also identified and assessed. This allows for an understanding of the types of sites found within the larger area. Known archaeological sites are identified by contacting the Yukon Heritage Resources Unit.

A review of the historical activities in the area is conducted using historical documentation and previous historical research. Historical activities include fur trade, early mining activities, religious missionary work, and pioneer settlement. Sites stemming from the historic period are for the most part visible structures such as buildings, or cabins. In areas settled over a long period of time, these entities often have been mapped and documented and may be previously recorded.

4. STUDY AREA

The LSA is located approximately 50 km northwest of Carmacks, YT and is within NTS mapsheet 115I/07. It can be accessed by an all-weather access road - named the Freegold Road - located off the Klondike Highway at Carmacks. The LSA covers approximately 2760 ha and is located within the traditional territory of the Little Salmon/Carmacks First Nation (LSCFN) and the Selkirk First Nation (SFN).

The following sections will describe the study area in terms of the environmental and cultural settings.

4.1 Environmental Setting

4.1.1 Biogeoclimate

The LSA is within the Boreal Cordillera Ecozone, and more specifically the Yukon Plateau – Central Ecoregion. This area is characterized by glaciated plateaus and broad valleys which are surrounded by higher mountain ranges. The Yukon River bisects this ecoregion from south to north and is fed water from the numerous lakes and streams in the area. The Yukon-Plateau reaches as far north as the Tintina Trench and as far south as Lake Laberge. The mean annual temperature for this area is -4°C, with a summer mean of 12°C and a winter mean of -25°C. The most extreme daily temperatures occur in the lowest valley floors and can range from extreme minimums of -60 to -65°C, to extreme maximums near 35°C. Precipitation in the area is usually light, ranging from 250-300 mm a year, with the majority occurring in the summer (Environment Canada 2008).

This ecoregion consists of montane boreal forest. Common flora throughout the Yukon Plateau – Central consists of: black spruce, white spruce, balsam poplar, pine, paper birch, subalpine fir, feathermoss, rose, horsetail, willow, alder, shrub birch, kinnikinnick, grasses, lichen, lingonberry, soapberry, mountain blueberry, crowberry, sagewort, juniper, Labrador tea, shrubby Cinquefoil, Carexaquatilis and aquatic plants, shore marshes - graminoid species. Lodgepole pine and trembling aspen are present at some lower elevations (Smith, Meikle, and Roots 2004).

Wildlife in the Yukon Plateau – Central consists of: shrews, little brown myotis, snowshoe hare, voles, lemmings, muskrats, beaver, porcupine, arctic ground squirrel, grouse, coyote, wolf, red fox, cougar, lynx, wolverine, river otter, marten, mink, black bear, grizzly bear, Dall sheep, stone sheep, moose, elk, mule deer, and caribou (Smith, Meikle, and Roots 2004).

The central and eastern sections of theLSA are dominated by moderately sloped valley walls drained by Hoocheekoo Creek which flows to the northeast into the Yukon River. The northwest section of the LSA is drained by tributaries of Big Creek which flows to the north. The south facing slopes of the valley walls are generally covered in grasses and light vegetation with drier and often more rocky soils. In contrast the north facing sides of these steep valleys are covered in spruce mixed forest with dense mosses in a cooler, darker less stable soil regime.

Paleoclimate reconstruction from the southern Yukon (Farnell *et. al.* 2004) indicates higher temperatures and/or drier conditions from 6,700 to 4,700 BP, followed by a long period of reduced temperatures and/or increased precipitation. A warm period is speculated from 1440 to 1030 BP, followed by the colder temperatures of the Little Ice Age.

This area does have a high frequency of lightning strikes and parts of the northwest section of the LSA has been burned in forest fires of 1995 and 2004. Forest stands are often taken by fire disturbance, with young immature stands more common than mature stands over much of the ecoregion.

4.1.2Topography

Campsites, temporary use sites, and travel routes tend to be located on level, well-drained terrain. Generally, ridge tops and the tops of south-facing aspects have higher archaeological potential, as they receive more sunlight, thereby providing much needed warmth and view sheds. Terraces and breaks in slope associated with water features also tend to have higher archaeological potential. Topographic indicators can also be used to predict the locations of caves or rock shelters. In alpine terrain, ice patches attracted caribou, which in turn attracted human hunters. These ice patches can be a source of well preserved artifacts; examples date back over 8,000 BP (Hare *et. al.* 2004).

The LSA is characterized by a dry climate and extensive grasslands on south aspect slopes. The west boundary of the Yukon Plateau – Central 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.

Elevation within the Project ranges from 1075 m ASL in the higher western peaks to less than 640 m ASL on the eastern lower valleys.

4.1.3 Hydrology

Water availability is the one overwhelming environmental predictors of archaeological site potential. Proximity to water sources is an important indicator of archaeological potential as water is essential for survival. People normally live close to sources of water and will often use watercourses as travel routes.

The largest streams in the LSA consist of Hoocheekoo Creek draining the central and eastern sections and a tributary to Big Creek draining to the north. A small stream named Stu Creek flows southeast into Hoocheekoo and a smaller tributary named Camp Creek flows from Zone A to the east into Stu Creek.

The mouth of Hoocheekoo Creek at the Yukon River was known to contain juvenile salmon but far outside the LSA. There is one record of "suspected Chinook salmon fry" in Hoocheekoo Creek where STU Creek flows into Hoocheekoo Creek to the east of the southeast corner of the STU Property. There is also a record of "salmon" (undetermined species) and longnose suckers low down on a tributary of Big Creek to the north, outside the LSA. Based on stream habitats as visible in Google Earth imagery, and the two points of Federal Fisheries and Ocean data (Fisheries and Oceans Canada, 2014), it should be assumed that:

(1) Adult Chinook salmon (and other salmon) do not go as far up as the STU claim for either Hoocheekoo Creek or the Big Creek tributary, because the streams are too small. Salmon fry go up the creeks an unknown distance (but are presumably too small to be a significant food resource).
(2) Arctic grayling and possibly longnose suckers likely occur in Hoocheekoo Creek as far up as the upstream boundary of the STU claim. Salmon fry may or may not go that far up the stream.
(3) Arctic grayling and possibly longnose suckers likely occur in the Hoocheekoo Creek tributary (STU Creek) as far as the fork in the stream; the streams are likely too small beyond that to support these fish. Salmon fry may or may not go that far up the stream.
(4) Arctic grayling and possibly longnose suckers likely occur in the Big Creek tributary as far as the fork in the stream in the northwest corner of the LSA; the streams are likely too small beyond that to support these fish. Salmon fry are unlikely to get as far upstream as the LSA.

Arctic grayling and longnose suckers (if present) are likely to have low population densities, but (if present) could have been caught in low numbers.

4.1.4 Geology

The geology of the area is considered in order to determine the potential of quarry sites and rock art sites.

The regional geology of the southwest Yukon is represented by a composite of crust blocks including former volcanic island arc and continental shelf depositional environments (Smith, Meikle and Roots 2004). High elevation ridges of this area show characteristic spines and towers (tors) which are bedrock remnants left after 15 million years of weathering.

On the STU property granodiorite of the Granite Mountain Batholith (GMB) is the dominant rock type. Itis cut by aplite, microganite and pegmatite dykes and contains horizons or lenses of copper-bearingquartz-feldspar-biotite gneiss. Locally, outcrops of Carmacks volcanics overlie or intrude the other rocktypes and mafic dykes cut the GMB. 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 (James 2014).

4.1.5 Forest Cover

We observe forest cover in order to determine the potential for culturally modified trees CMTs as well as determining soil drainage. This information informs our assessment of basic archaeological potential based in the understanding that people prefer dry areas to wet.

As previously mentioned, the LSA includes boreal forest in the valleys and low slopes, to alpine and tundra on the ridge crests. Forests tend to be dominated by black and white spruce in both pure and mixed stands**.** Other tree types include balsam poplar, paper birch, water birch, pine, and trembling aspen. Forest fires are common due to the high frequency of lightning strikes which is shown through immature stands being more common than mature stands over much of the ecoregion.

The majority of the LSA is located near and below the tree line and vegetation consists of mosses and shrubs, with spruce and aspen trees located in the valley bottoms and hillsides.

4.1.6 Existing Disturbance

Due to the previous mineral exploration of the area, there are a few abandoned small structural remains from a previous camp within the LSA, and a series of previous trenches excavated in a variety of series of linear transects. There are many access cat trails located throughout the LSA that connect these exploration areas and with the road into Copper North to the south and eventually Freegold Road and southeast to Carmacks. Other than the prior mineral exploration efforts there are little previous disturbances in the LSA.

4.2Cultural Setting

4.2.1First Nations

Prior to European contact, traditional subsistence activities typically featured a seasonal round of winter hunting and summer fishing covering vast areas. In summer, families congregated at lakes and rivers, where fish and plants were collected, dried and stored. In late summer, small groups dispersed throughout the uplands and higher valley systems to hunt in clan-owned territories. Temporary camp sites, situated within a variety of ecological zones, were often reoccupied year after year in order to exploit seasonally available resources.

Contact with neighboring Nations was vital to First Nation's economies. Interior First Nations traded hides, furs and other resources to coastal groups for fish oil, dentalium, woodwork and blankets. Trails were an intrinsic part of this economy and traditional subsistence as a whole.

The project area falls within the traditional territories of the Little Salmon Carmacks First Nation and the Selkirk First Nation. The traditional language of both of these groups of people is the Northern Tutchone language which is within the Athapaskan language family. A great deal of information concerning the Northern Tutchone people was recorded in oral traditions past on through generations and recorded by various researchers (Dobrowolsky 1987; Gotthardt 1987; Legros 1999, 2007; McClellan 1981;McClellan et al., 1987).

The area of Fort Selkirk played a key role as a gathering spot to trade but also for social gatherings and interactions between a wide variety of people. Many First Nations people across the interior would gather there to trade, share stories and information, and build long term relationships including marriages. After Fort Selkirk was established the area continued to serve as a focal point and a somewhat more sedentary meeting place and community. The far reaching seasonal rounds of travel and resource collection continued but the Fort Selkirk community began to grow with the presence of missionaries, government officials, traders, trappers, miners, and cemeteries.

The traditional seasonal rounds of the Northern Tutchone people saw small groups of people in the winter months from approximately November to April. These small family units were very mobile and hunted, trapped, and fished over a large area. Winter food supplies included dried fish, upland game birds, frozen berries, mushrooms, and bear roots, with family units sometimes spending more time ice fishing at lakes with abundant whitefish stocks (Gotthardt 1987).

The spring season of approximately from April to June saw families moving more for hunting, trapping, and resource collection which took advantage of new vegetation, spring water fowl, bird eggs, and sap among others.

The summer season was the most abundant and focused on salmon runs in July and August. A large part of the year's food resources was found in the salmon which was dried for the fall and winter. Moose hunting provided a very significant resource year round. The summer was also a key time for collecting and preparing goods for gatherings to trade with the Tlingit from the coast.

The fall season was critical for large and small game hunting and included a wide variety of resources such as moose, Dall sheep, bears, gopher, and game birds. Short term hunting camps were used across a wide landscape and elevations. Fall was also known as the time to collect and work wood.

4.2.2Archaeological Background

The proximity of known archaeological sites to a particular area of interest is used as an indicator of archaeological potential. However, there have been no archaeological sites recorded within or adjacent to the LSA. Going further away from the current LSA the majority of archaeological investigations carried out have been motivated by development activities, including mining/mineral exploration and road construction.

Some of the closest previous heritage assessment work to STU Property, was done in relation to the Copper North (previously known as the Carmacks Copper) Project to the southeast. An archaeological impact assessment was conducted in the Williams Creek Valley for the proposed project by Antiquus Archaeological Consulting Ltd. (AAC) in August 1992 (Merchant et al 1993). AAC also conducted "An

Archaeological and Heritage Resource Overview Assessment of the Proposed Carmacks Copper 138 kV Transmission Line Project Route Options Near Carmacks" in September, 1994 (Rousseau and Handly 1995). No archaeological sites were identified within the areas proposed for the open pit mine, leach pads, and waste rock dumps. However, two historic archaeological sites were identified and recorded during the 1992 assessment. Site 115I/07/001 and 115I/07/001A are located at the confluence of Williams Creek and one of its tributaries about 1.25 km from the Yukon River. These two sites consist of a partially collapsed log cabin and barn. Sites 115I/07/005, 115I/07/005A, 115I/07/005B, and 115I/07/005C are located on the bank of the Yukon River approximately 1.25 km southeast from the mouth of Williams Creek and consist of a workshop, log cabin, cache, and outhouse.

In 2013, Ecofor completed the Heritage Resources Impact Assessment of the Proposed Transmission line for Copper North (Mooney 2013). This proposed transmission line would tap off at the existing transmission line approximately 47 km north of Carmacks along the west side of the Klondike Highway at McGregor Creek. The line was proposed to head roughly west, across the Yukon River then continue southwest along the north side of Williams Creek to the proposed Copper North mine site. The assessment resulted in the identification of two new pre-historic archaeological sites (KcVb-11 and KcVb-12) and revisiting two previously recorded historic structures (cabin 115I/07/001 and barn 115I/07/001A). KcVb-11 contained one positive shovel test which contained a .44 calibre shell casing (Winchester Repeating Arms Company) above the White River ash or Tephra (WRT) as well as a small collection of prehistoric lithics below the ash from 40 to 55 cm below surface. This depth under the ash also contained charcoal and burned wood. KcVb-12 contained five positive shovel tests, each of which contained prehistoric lithic materials under the WRT. The historic cabin, small barn and associated remains likely reflect an early to mid-1900s use period and association with mineral exploration and mining.

There is a high probability that archaeological sites are present within the current LSA. Sites have a greater probability of being located on the terrace edges, tops of south facing slopes, benches, and knolls associated with the creeks and larger drainages across the area. Sites in the LSA are likely to consist of small scatters of stone tool debitage, fire-cracked rock (FCR) and burned bone fragments. Predominant lithic materials may include chalcedony with pink to orange tints, a variety of cherts, quartzitic materials, and obsidian. Well defined volcanic ash layers will also be present which provide excellent dating references.

4.2.3 Historical Background

During the early years of this period the Russians were exploring along the Pacific coast and up the major rivers of the Alaskan interior, while the British were exploring eastward into what would become Canada’s Northwest and Yukon Territories, and Alaska. In the 1840s, representatives of the Hudson Bay Company (HBC) established trading posts throughout the northern territories. The first was at the confluence of the Yukon and the Porcupine Rivers, where in 1847 John Bell established Fort Yukon. The next year Robert Campbell established Fort Selkirk (approximately 80 km north of the LSA) on the Yukon River and then relocated to an improved location in 1851. This upset the Chilkat native trading population from the coastal area, who had controlled trade to the interior for many generations, and in 1852 they raided post and forced the Anglo traders to flee (Hare and Gotthardt 1996).

In 1867, after the United States purchased Alaska from Russia, the US Army sent Captain Raymond up the Yukon River on the first stern-wheel steamer to reach Fort Yukon (Grauman 1977). Raymond surveyed the location of Fort Yukon and proved that it was within US territory. The British sold the Fort to the US Government and relocated east across the 141st Meridian.

The inland fur industry continued to drive exploration and settlement into the late 1800s, but mining would shift the focus to the placer gold found in streams and alluvial deposits. Mining in the second half of the nineteenth century was a risky but often very lucrative enterprise. The impacts of mining would spread quickly throughout the Yukon Territory and drastically alter the living patterns of the First Nations populations.

Mineral prospecting and mining efforts in the second half of the nineteenth century were in some ways very dependent on the existing infrastructure of the fur trading and missionary efforts. As the competition for the inland fur trade grew, so would the number of stern-wheelers on the Yukon River. These steamers could better supply the small number of trading posts along the Yukon and its tributaries and reduce the risk of prospectors running short of supplies. Therefore more of the fur traders and other explorers turned their attention to search for gold and other minerals.

Three key prospectors to the north were L.S. (Jack) McQueston, Al Mayo, and Arthur Harper. They established outposts along the Yukon River, including Fort Reliance, established in 1874 near the confluence of the Klondike River (what would become Dawson City) (Wright 1976). Harper and another man may have been the first to travel up the Fortymile in search of gold in 1881 (Buzzell 2003). They collected a very rich sample, but were unable to relocate the exact location. In 1886, McQueston, Harper, and Mayo built a post on the confluence of the Stewart and Yukon Rivers. Fortymile was the first town in the Yukon to grow to over a thousand people by the mid 1890s (Buzzell 2003). In 1890, Harper re-established a trading post at the site of the old HBC post at Selkirk. This was followed by Jack Dalton who developed a series of existing First Nation trails from tide water at Haines Alaska, into Fort Selkirk.

Then, on August 16, 1896, George Carmack, Skookum Jim, and Tagish Charlie discovered a very rich claim on Bonanza Creek, a tributary to the Klondike River near Dawson. This discovery sparked one of the largest gold rushes in history.

It would take almost a year for the news of the Klondike gold fields to spread south, even to places relatively close by in southeast Alaska. Most of the prospectors and traders in the Alaskan and Yukon interior had already converged on the Dawson area during the winter and spring, and supplies ran dangerously low. That would quickly change in the summer of 1897 and spring of 1898 as new towns and supply posts sprang up along the Gold Rush routes to cash in on the increased demand.

The population of Dawson City grew very fast and in 1898 reached a peak of over 30,000. However the boom period did not last long and the vast majority of population moved on very quickly with the news of other discoveries and hopes of other bonanzas.

The historic mineral exploration near the LSA begins in 1887 when George Dawson discovers copper at Hoocheekoo Bluff on the Yukon River to the northeast of the STU Property, but was relatively quiet until after 1960 and the discovery of the Casino deposit. The level of exploration efforts picked up quickly in the 1970s and 1980s with staking in the STU Property by a variety of interests.

5. ANALYSIS

Seven broad site types are analyzed for their potential for occurring within the LSA: permanent habitation sites; temporary habitation or subsistence sites; human remains; fishing sites; quarry sites; rock art sites; trail sites; CMT sites and historic sites. These site types analyzed in the context of the environmental and cultural setting described in section 4.0.

5.1 Expected Site Types

Permanent Habitation Sites

Permanent habitation sites would indicate prolonged or repeated occupation of a site. In this area, permanent habitation sites could be considered those sites which are returned to seasonally, such as a summer village. It is unlikely that these types of sites would occur within the LSA, as they tend to be located in close proximity to major lakes or confluences of rivers. The LSA was more likely utilized for temporary or subsistence use (see below).

Temporary Habitation or Subsistence Sites

These sites tend to be associated with resource gathering activities such as hunting and plant gathering. The sites are represented by lithic tools, evidence of tool production/maintenance, hearths, hunting blinds and possibly faunal remains. Ceremonial sites related to puberty and shamanistic rituals may be part of this site type, represented by cairns, isolated hearths and lithics. These site types are at a high potential of being discovered within the LSA as there are abundant areas for hunting ungulates such as deer, moose, and caribou as well as varied landscapes for plant gathering. Sites could be found in the valleys in association with watercourses or in the alpine, where evidence of caribou hunting could be possible.

Human Remains

The potential for human remains within the LSA is low. These types of sites often do not survive in the archaeological record, as organic materials disintegrate quickly in acidic northern soils. After contact and the influences of Christian missionaries, it would become more common for the LSCFN and SFN to bury their dead in graveyards. Graveyards and spirit houses were often located on prominent points or terraces near village/camp sites, or on low, level ground near trails. It is unlikely that such grave sites would be present within the LSA, but there is always a possibility an isolated grave could be present.

Fishing Sites

Fishing sites typically include fish weirs or natural narrowing of major rivers and streams where fish could be caught more easily. Hoocheekoo Creek is likely the most significant watercourse within the LSA for fisheries; however, due to the small size of the stream within the LSA there is low potential for temporary fishing sites on this creek. The other streams have low potential for containing significant amounts of fish and it is unlikely that fishing sites would be found along them.

Quarry Sites

These sites include areas where natural stone was quarried for the fabrication of stone tools. These sites are unlikely within the LSA. The majority of the LSA is covered in colluvium and alluvium that would hide rock exposures. Exposed rock at the higher elevations is mostly sedimentary, which is not a desirable stone for tool manufacture (Kooyman 2000). There is a possibility of the presence of some chert or quartzite layers, which could be desirable for tool manufacture if the material has suitable grain size and silica content. Chert cobbles may also be present in the larger stream beds.

Rock Art Sites

Rock art is man-made markings or etchings/peckings on natural stone surfaces. Rock art tends to be located along major watercourses, trails or at boundaries of traditional territories. In this area, it is unlikely that there are suitable rock faces near Hoocheekoo Creek, or any other tributaries where rock art might be predicted. If suitable sheer rock faces are noted within the LSA, they should be inspected for rock art.

Trails

Trails are pedestrian travel routes that may be marked by a well-worn trail bed, blazes, other CMT types, and/or cairns. It is likely that the STU Property may contain segments of trails and travel corridors. If sections of the trails are found during fieldwork they should be recorded and mapped.

CMTs

The most common type of CMT is a Pine bark stripping. However, these are not normally recorded in the LSCFN and SFN Traditional Territories; and it is unlikely they would be within the LSA. Forested areas of the LSA are mostly composed of white spruce or black spruce, making CMTs unlikely. Other types of CMTs such as blazes, axe or perhaps adze cut stumps, and messages trees may be present.

Historic Sites

European trading began in the region in the 1840s, but it is likely that Europeans stuck closer to their trading routes (rivers and trails), relying on First Nations to procure items from further away. Early prospectors have worked near the LSA, and their presence would likely post-date AD 1880s when the first prospecting was recorded. The most likely historic remains to be found within the LSA would be related to mineral exploration dating to the mid- to late- 20th century. There may also be evidence of 20th century trapping, hunting and guiding activities within the LSA.

6.DISCUSSION OF ARCHAEOLOGICAL POTENTIAL

Based on the analysis presented in Section 5.0, the LSA exhibits areas of high heritage resource potential. It is likely that any sites identified would fall into the temporary habitation/subsistence, trail or historic site types. These sites may be represented by isolated lithics, lithic scatters, cultural depressions, hearths, faunal remains, cairns, trail beds, blazes, trap sets, historic cabins, and hunting blinds. There is little potential for fishing sites given the size of watercourses located in the LSA.

Table 1: Archaeological Potential Summary

Site Type	Potential
Permanent Habitation	Low potential as summer village sites tended to be located around major lakes and on the major rivers.
Temporary Habitation	High potential for sites related to hunting and resource gathering.
Human Remains	Low potential due to disintegration of organic materials; historic isolated graves possible.
Fishing	Little potential for temporary fishing sites in association with Hoocheekoo Creek, and low potential overall due to the size of the watercourses within the LSA.
Quarry	Low potential, although there may be some outcroppings of chert or quartzite.
Rock Art	Low potential, although any suitable sheer rock faces should be examined.
Trails	High potential for locating trails or segments of travel corridors.
CMT	Low potential due to a lack of suitable tree species and coastal influences.
Historic	High potential for late 19th to 20th century sites related to mineral exploration, trapping, or hunting activities.

Potential is assessed and presented based on available air photography and historic mineral exploration mapping. Field assessment may determine that the actual areas of potential cover less than area than that which is mapped, and other small areas of potential are likely present which have not been identified. By erring on the side of caution we reduce the risk of missing any heritage resources. Based on the assessment of the available flora and fauna for subsistence, the topography, hydrology, geology, and forest cover in the cultural context of our understanding of the subsistence, habitation, and activities of the First Nations of the region, we have developed maps illustrating the areas of archaeological potential within the LSA (Appendix I).

Archaeological potential was mapped in Appendix I, using the following criteria:

- Level, terraced or ridged terrain in proximity to watercourses; and/or,
- Elevated ridge lines with views over the valleys.

The mapped areas of potential are meant to err on the side of caution. Follow-up field work may refine the areas of potential to smaller, more precise polygons. Field work may also identify areas of potential outside of the mapped, predicted potential.

7. RECOMMENDATIONS

The objectives of this study were to identify and assess heritage resource potential within the LSA. This was completed through a review of known archaeological sites, biophysical characteristics, and topographic variability in relation to ethnographic and historic sources.

Review of this HROA by the Little Salmon/Carmacks First Nation (LSCFN) and the Selkirk First Nation (SFN) is recommended. If an archaeological field review is conducted by Ecofor, or other organizations, it is recommended that a representative of the LSCFN and the SFN, be consulted and/or present to participate in the field activities.

It is recommended that further archaeological work in the proposed Project area be undertaken, in the form of a Preliminary Field Reconnaissance (PFR) and/or Heritage Resources Impact Assessment (HRIA) on areas planned to be impacted with heritage resource potential areas as shown on Appendix I. This work need only be undertaken in areas that will sustain tree removal and/or ground disturbance from proposed activities. The work needs to be conducted at ground level prior to ground disturbing activities and should include pedestrian traverse of the identified areas. If impacts to these areas of potential can be avoided then no further work is recommended prior to the currently planned exploration efforts. If additional ground disturbances are proposed within marked areas of potential, then those areas should be assessed in the field prior to impacts.

All heritage resource sites that are identified within the LSA should be accurately mapped, recorded, and assigned a unique identification code. All archaeological sites should be registered with the Heritage Resources Unit using the appropriate site forms, and assessed for potential impacts by a qualified archaeologist. A photographic record of each site should be kept and sites should be marked in the field. If sites are found within the proposed development areas, then the following schemes may be employed:

1. Avoidance: Create buffer zones of at least 10 m around the site areas, where no machinery, skid trails, or ground-altering development will be allowed.
2. Relocation of development boundaries: depending on site locations it may be possible to recommend changing development boundaries to avoid the site.
3. Mitigation: Recommend management level, systematic recording of artifacts and features, and data recovery of a site through excavation.

Please note that while the major areas of archaeological potential have been identified as a result of this HROA, additional, smaller areas of archaeological potential may also be present in the LSA.

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APPENDIX I: HROA RESULTS MAPPING

STU Claims

HERITAGE RESOURCE OVERVIEW ASSESSMENT

1:20,000

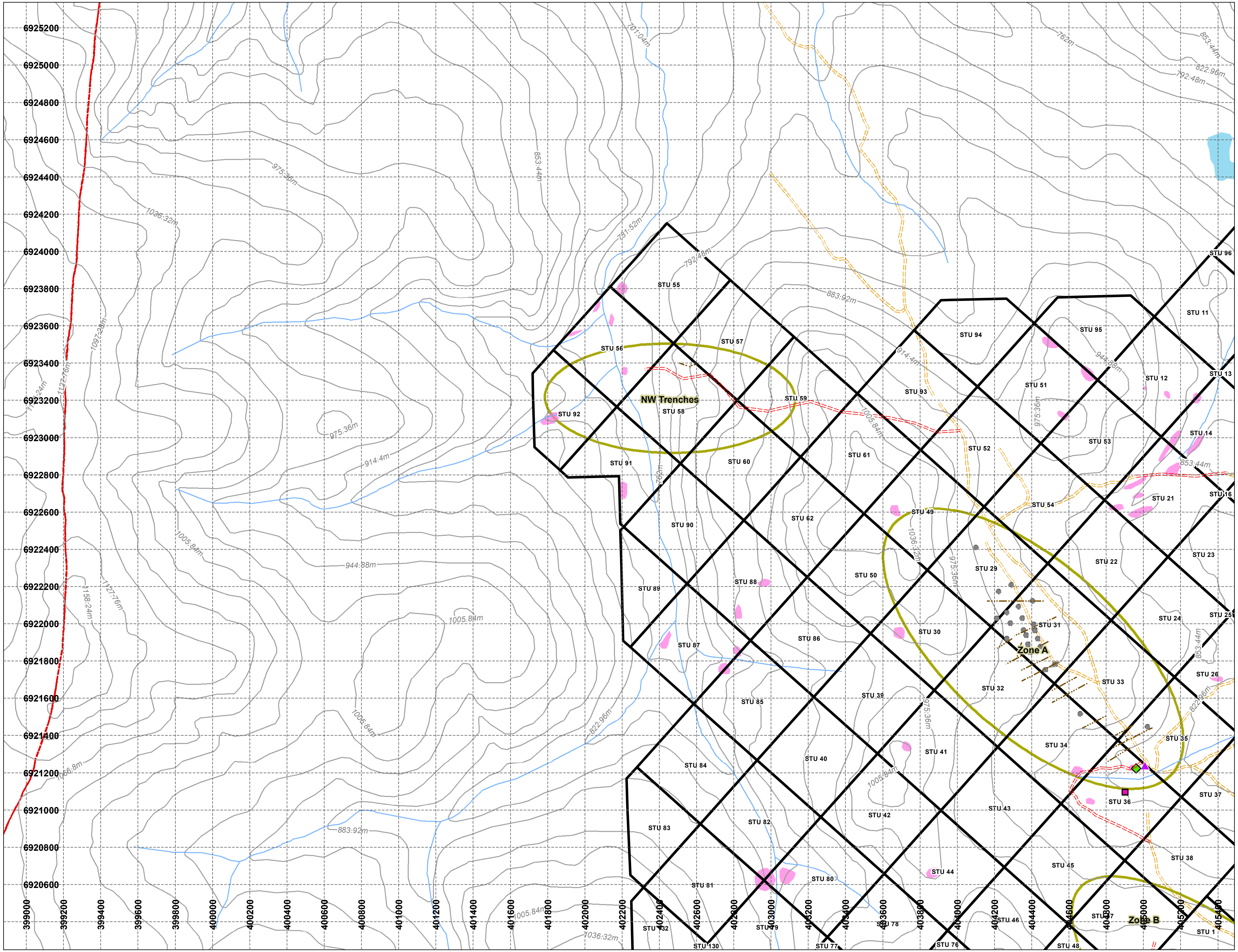
STU Property

Map 1 of 3

N

0 150 300 600 900 1,200m

NAD 1983 UTM Zone 8N
NTS 50k Mapsheet: 115I/07



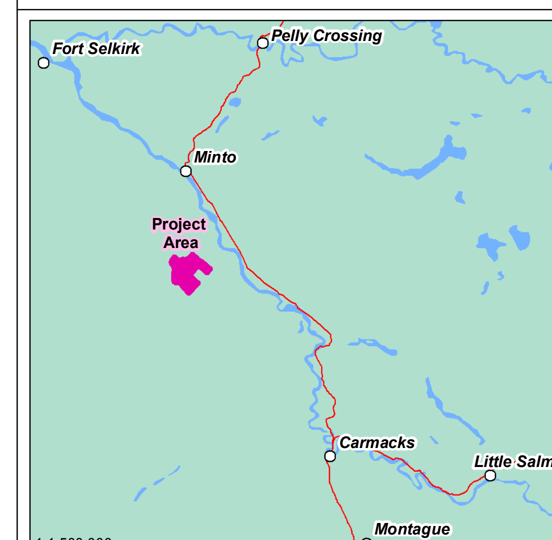
LEGEND

Base Features (50k)
- Contour
- Watercourse
- Waterbody

Land Use
- First Nations Settlement Lands
- Trap Line

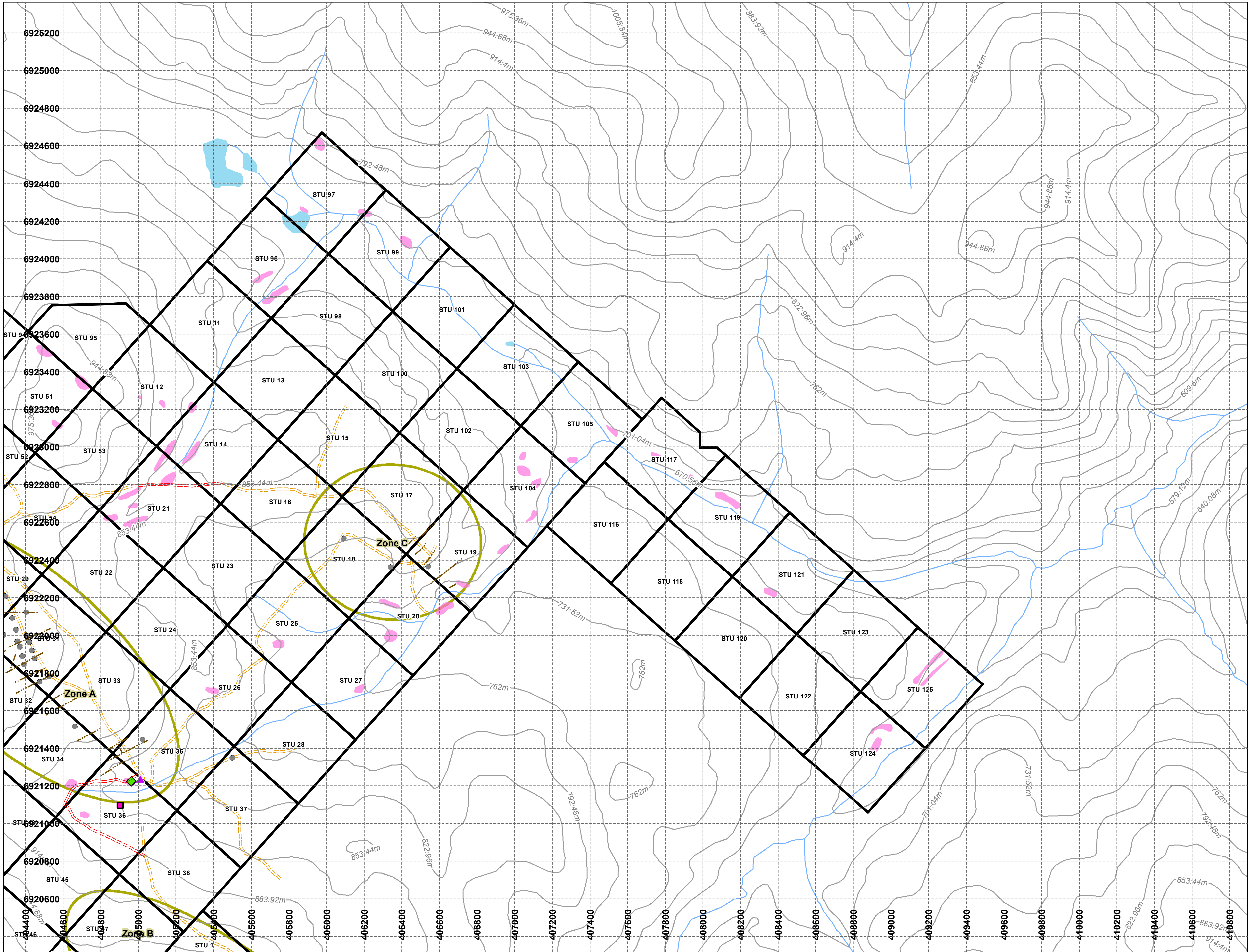
Access
- Forestry Road
- Proposed Road

Assessment Features
- Project Area
- STU Zones
- High Archaeological Potential
- Trenches
- Drillholes
- Camp
- Core Rack
- Ford



ECOFOR
natural and cultural resource consultants

Date: 10/10/2014 (MM)



STU Claims

HERITAGE RESOURCE OVERVIEW ASSESSMENT

1:20,000

STU Property

Map 2 of 3

N

0 150 300 600 900 1,200m

NAD 1983 UTM Zone 8N

NTS 50k Mapsheet: 115I/07

LEGEND

Base Features (50k)

- Contour
- Watercourse
- Waterbody

Land Use

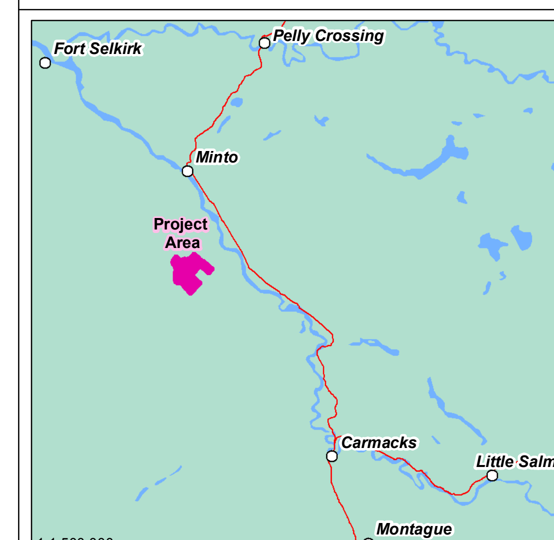
- First Nations Settlement Lands
- Trap Line

Access

- Forestry Road
- Proposed Road

Assessment Features

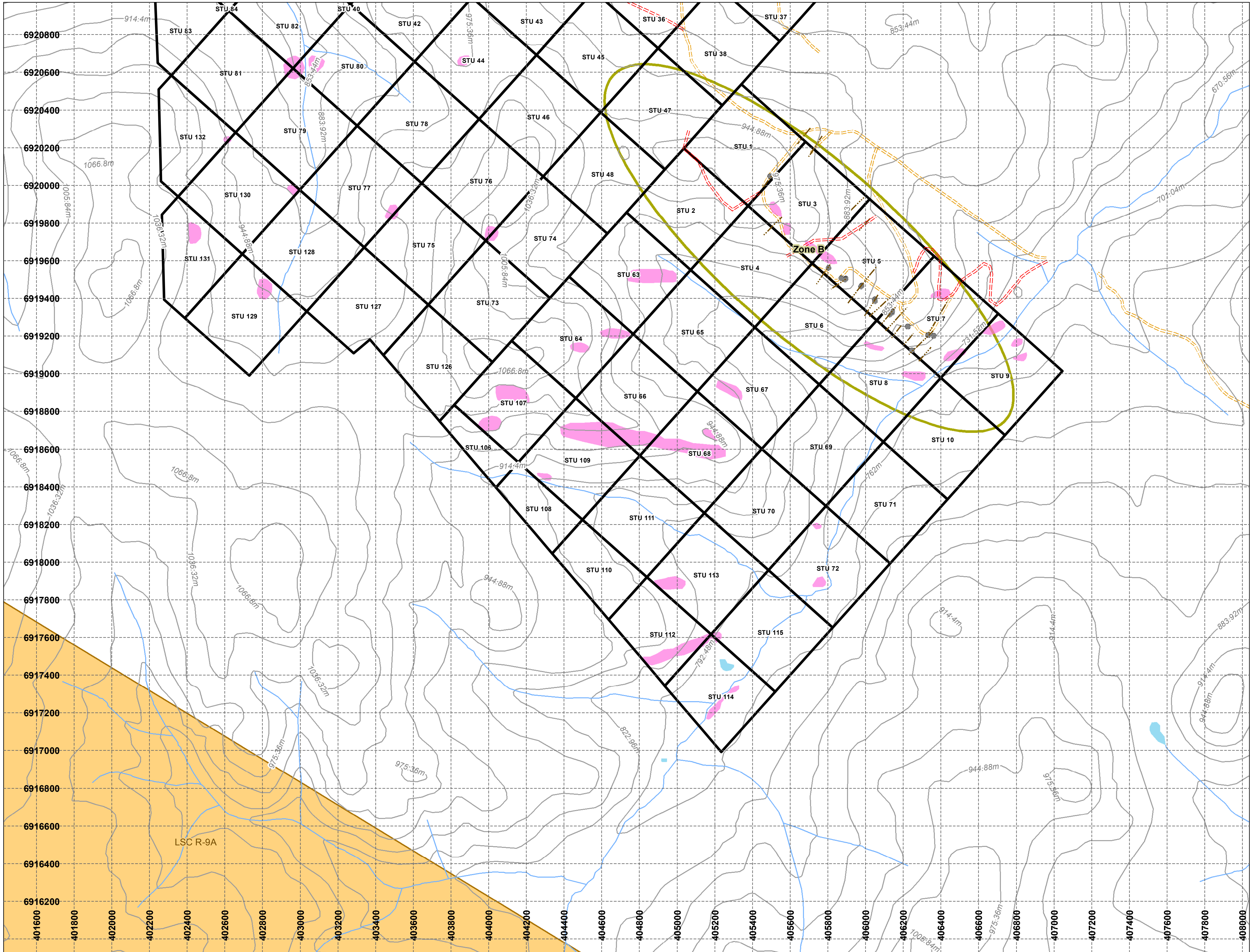
- Project Area
- STU Zones
- High Archaeological Potential
- Trenches
- Drillholes
- Camp
- Core Rack
- Ford



ECOFOR

natural and cultural resource consultants

Date: 10/10/2014 (MM)



STU Claims

HERITAGE RESOURCE OVERVIEW ASSESSMENT

1:20,000

STU Property

Map 3 of 3

0 150 300 600 900 1,200m

NAD 1983 UTM Zone 8N
NTS 50k Mapsheet: 115I/07

LEGEND

Base Features (50k)
- Contour
- Watercourse
- Waterbody

Land Use
- First Nations Settlement Lands
- Trap Line

Access
- Forestry Road
- Proposed Road

Assessment Features
- Project Area
- STU Zones
- High Archaeological Potential
- Trenches
- Drillholes
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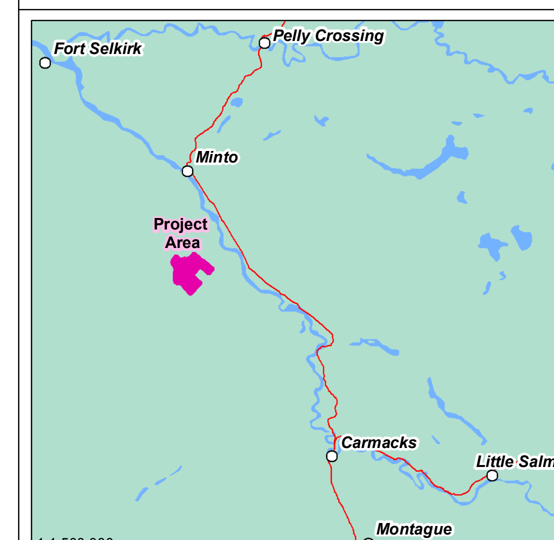

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Date: 10/10/2014 (MM)