

## ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: The 2015 Exploration Program on the HAWK Claim, Cariboo Mining Division, British Columbia: Outcrop Observations, Rock Geochemistry and Stream Sediment Gold Grain Distribution

TOTAL COST: \$14,040.73

AUTHOR(S): Glen Prior SIGNATURE(S):

Glin P-

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): STATEMENT OF WORK EVENT NUMBER(S)/DATE(S ): 5600980 / 2016-APR-28

YEAR OF WORK: 2015 PROPERTY NAME: HAWK CLAIM NAME(S) (on which work was done): HAWK (Title Number 1035789)

COMMODITIES SOUGHT: Gold

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:

MINING DIVISION: Cariboo NTS / BCGS: NTS Map Sheet: 93A/07 LATITUDE: 52° 20' 46" LONGITUDE: 120° 39' 25" (at centre of work) UTM Zone: 10U EASTING: 659500

NORTHING: 5802250 (NAD 83)

OWNER(S): Glen Prior MAILING ADDRESS: 793 Birch Avenue, Sherwood Park, Alberta T8A 1X2

OPERATOR(S) [who paid for the work]: Glen Prior

MAILING ADDRESS: 793 Birch Avenue, Sherwood Park, Alberta T8A 1X2

REPORT KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization,

size and attitude. Do not use abbreviations or codes)

phyllite, Triassic, Quesnel terrane, Nicola Group, Eureka Peak syncline, quartz veins, graphite, pyrite

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: 09751, 12590, 14022, 15778, 16765, 16917, 17746, 20547, 28826, 29750, 32348 (see history section of report for details)

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (in metric units)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of sample	es analysed for …)		
Soil			
Silt			
Rock	13 samples	HAWK	\$525.53
Other			

	1	
DRILLING (total metres, number of holes, size, storage location)		
Core		
Non-core		
RELATED TECHNICAL		
Sampling / Assaying		
Petrographic		
Mineralographic		
Metallurgic		
1:10,000 apx. 45 ha PROSPECTING (scale/area)	HAWK	\$13,515.20
PREPATORY / PHYSICAL		
Line/grid (km)		
Topo/Photogrammetric (scale, area)		
Legal Surveys (scale, area)		
Road, local access (km)/trail		
Trench (number/metres)		
Underground development (metres)		
Other		
	TOTAL COST	\$14,040.73

# The 2015 Exploration Program on the HAWK Claim, Cariboo Mining Division, British Columbia: Outcrop Observations, Rock Geochemistry and Stream Sediment Gold Grain Distribution

Claim: HAWK (Title Number 1035789) Mining Division: Cariboo NTS Map Sheet: 93A/07 Location: 52.346° N Latitude, 120.657° W Longitude Owner: Glen Prior Sherwood Park, Alberta Author: Glen Prior Sherwood Park, Alberta Date Submitted: 2016-July-11 Revision: 2016-October-10 Event Number: 5600980

# **Table of Contents**

Introduction	1			
Location and Access	1			
Claim Description	2			
Physiography and Vegetation	3			
History	4			
History of the Frasergold Deposit Area	4			
History of the HAWK Claim Area	4			
Regional Geology	6			
Geology of the Caribou Gold District	6			
Geology of the Eureka Peak-MacKay River Valley Area	9			
Mineralization	10			
Mineralization at the Frasergold Deposit	10			
Mineralization in the HAWK Claim Area	12			
2015 Exploration Activities	13			
Steam Sediment Gold Grain Panning	13			
Laboratory Methods (Rock Geochemistry)	15			
2015 Exploration Results	15			
Outcrop Observations	15			
Rock Geochemistry	17			
Gold Grain Distribution	17			
Discussion and Conclusions	18			
Recommendations	18			
References	19			
Qualifications	21			
Expenditures				

## Tables

Table 1. Summary of terranes and stratigraphic groups in the HAWK claim area.	9

## Figures

Figure 1. Location of the HAWK claim within British Columbia.	1
Figure 2. Boundary of the HAWK claim.	2
Figure 3. View to southwest of the central part of the HAWK claim area.	3
Figure 4. Geological terranes of British Columbia.	7
Figure 5. Regional geological setting of the Cariboo gold district.	8
Figure 6. Typical gold panning site on HAWK claim.	14
Figure 7. Photo of foliation plane in graphitic, knotted phyllite.	16
Figure 8. Photo showing fresh surface of graphitic, knotted phyllite.	16

# Appendices

Appendix 1: Outcrop and Rock Sample Descriptions					
Appendix 2: Stream Sediment Panning Site Descriptions	30				
Appendix 3: Rock Sample Analytical Results	32				
Appendix 4: Maps	38				
Map 1: Traverses	follows page 38				
Map 2: Outcrop lithology	follows page 38				
Map 3: Outcrop structure	follows page 38				
Map 4: Rock sample geochemistry	follows page 38				
Map 5: Gold grain distribution in stream sediment	follows page 38				

# Introduction

#### **Location and Access**

The HAWK claim is located in east-central British Columbia east-northeast of Williams Lake within NTS map area 93A/07 (Figure 1). The claim may be reached by driving approximately 60 km eastward from the village of Horsefly on gravel roads. Most of this distance is travelled on the Black Creek Road, which follows the Horsefly River. The last part of the journey is along the MacKay River Road, which lies in the valley of the northwest flowing MacKay River, a tributary of the Horsefly River. The village of Horsefly may be reached by driving 52 km northeast on the paved Horsefly Road from 150 Mile House on Highway 97.



Figure 1. Location of the HAWK claim within British Columbia (black star). Base map from B.C. Ministry of Energy and Mines MapPlace.

#### **Claim Description**

The HAWK claim, title number 1035789, consists of 22 cells and covers an area of 434.46 hectares within the Cariboo Mining Division. The recording data was April 29, 2015. The HAWK claim is owned (100%) by Glen Prior of Sherwood Park, Alberta. The name is derived from Hawkley Creek, which lies to northeast of the claim.

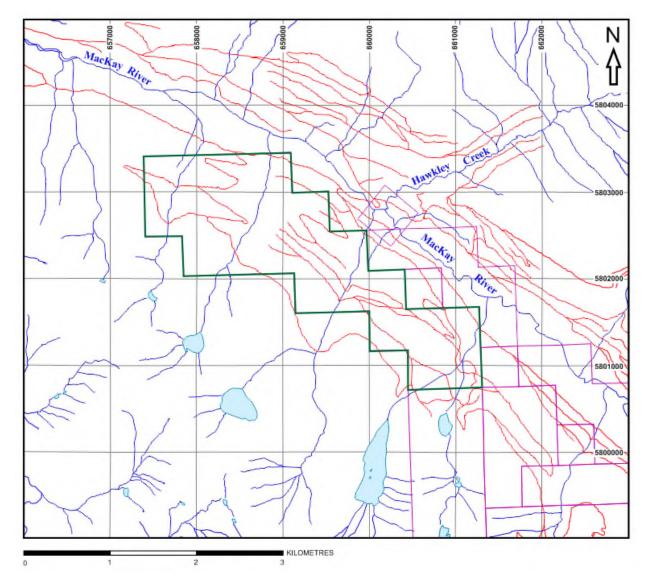


Figure 2. Boundary of the HAWK claim (green). The outlines of other claims are shown in magenta. Base map from B.C. Ministry of Energy and Mines MapPlace.

## Physiography and Vegetation

The HAWK claim lies in an area of significant topographic relief within the Quesnel Highland near the western flank of the Caribou Mountains. Eureka Peak, with an elevation of 2426 m (7959 ft) lies about 2.5 km south of the southeastern end of the HAWK claim.

The HAWK property lies on the northeast flank of a northwest trending ridge that includes Eureka Peak. The northwest flowing MacKay River, a tributary of the Horsefly River, lies in the bottom of the valley below the HAWK claim. Elevations across the claim range from 1200 m to 1700 m. Four relatively significant but unnamed streams flow in a northeast direction across the claim and into the MacKay River. Hawkley Creek, for which the claim is named, flows into the MacKay River on the opposite side of the valley.

Timber in the area consists mainly of spruce, pine, balsam and poplar with dense undergrowth (Leishman, 1987a; Wetherup, 2011). Treeline in this area occurs between 1650 m and 1850 m. Much of the MacKay River valley, including the HAWK claim area, has been logged (Figure 3).



Figure 3. View to southwest of the central part of the HAWK claim area. The MacKay River is hidden in valley between photographer and forested slope. Steep ridge in far distance lies southwest of the HAWK claim.

# History

## History of the Frasergold Deposit Area

The HAWK claim lies northwest of the Frasergold (Eureka) deposit along the same regional stratigraphic trend.

"The first recorded work in this district was in 1902 when minor placer activity took place on Frasergold Creek .... In the late 1970's Mr. Cliff Gunn prospected the area and obtained anomalous gold values in soils and silt in and adjacent to Frasergold Creek." (Dawson. 1984, p.3). Subsequent work revealed the existence of a large soil geochemistry anomaly with apparent stratigraphic control that is now known to lie above the Frasergold deposit. (Dawson, 1984, p. 5; Campbell et al., 1987, p. 7).

Considerable exploration work, including underground exploration, has been undertaken at and near the Frasergold deposit since the late 1970's. "Between 1980 and 2007 it is estimated that \$11.26 million has been expended on the exploration of the Frasergold property. A total of 39,582 meters of drilling in 344 holes has been completed on the property, along with 298 meters of underground drifts to provide access for bulk sampling and metallurgical testing" (Sparling, 2008, p. 13).

Work on the Frasergold deposit is summarized in Belik (1981), Campbell et al. (1987), Boronowski and Sebert (2003) and Sparling (2008a).

Due to its proximity to the Frasergold deposit, the ground underlain by the HAWK claim has been staked and explored for similar mineralization at various times in the past.

## History of the HAWK Claim Area

A large, grid-based soil sampling program (2050 soil samples) undertaken for Keron Holding Ltd. in 1981 extended northwestward from the area of the Frasergold deposit to the ground now held by the HAWK claim. In addition to soil anomalies to the southeast, a few spotty gold anomalies were detected in the HAWK claim area along with somewhat larger areas characterized by elevated Ag, Pb, Zn and Cu (Belik, 1981).

In addition to soil sampling, the 1981 program included geological mapping and rock sampling. Rock sample 81 Bf 145A, collected from northwest part of present HAWK claim, returned 5700 ppb Au, 136 g/t Ag (3.98 oz/t Ag) and 4135 ppm Pb from "rusty qtz float (near situ) with py and galena (very localized); sample taken of "high grade" (Belik, 1981, p. 49). These were the highest values of Au, Ag and Pb returned for rock samples from the entire grid area which included the Frasergold deposit area.

In 1984 a soils survey was completed on the LL-1 claim, which covered an area approximately equivalent to the northwestern third of the HAWK claim. "Results show two parallel, northwest-trending zones of weak to strongly anomalous gold values. The erratic and spotty nature of these anomalous zones is inferred to be the result of local concentrations of heavy overburden. Similar conditions were observed to give erratic anomalous results on the adjacent Eureka-Frasergold property" (Dawson. 1984, p.6). "... these anomalous zones could represent on-strike extensions of the gold mineralization found to the

southeast on the Eureka-Frasergold property." (Dawson, 1984, p. 4). The most promising cluster of anomalous gold values lies near the northwest end of the HAWK claim near the 1370 m (4500 foot) contour. High values in soil samples from this area include 940 ppb Au and 605 ppb Au (Dawson, 1984).

In 1985 one line of induced polarization surveying (line 2+00W) was completed on ground that now lies within the southeastern part of the HAWK claim. This was part of a program for Eureka Resources Inc. that focused on I.P surveying in the vicinity of the Frasergold deposit to the southeast. The I.P. anomaly map included with the report indicates definite I.P anomalies beneath line 2+00W (Cartwright, 1985).

In 1985 soil sampling for Eureka Resources Inc. extended northwestwards onto what is now the southeastern third of the HAWK claim. Anomalous gold in soil values from the HAWK claim area include 390, 190 and 165 ppb Au (Kerr, 1985). Six trenches/pits were dug with an excavator in this area to depths of 6 m and failed to reach bedrock (Kerr, 1985).

Soil sampling in 1986 and 1987 on the MAC 10 claim, which covered part of the ground now held in the northwest part of the HAWK claim, returned anomalous gold values that may represent a northwestern extension of the bedrock zone hosting the Frasergold deposit. Values of up to 1100 ppb Au in soil were obtained (Leishman, 1987a and b). "The work completed in 1987 confirmed the previous work by Eureka. A number of anomalous gold values in soils (up to 1,100 ppb) were outlined. Thick overburden over the Mac 10 claim area prevented the outlining of a clearly defined anomalous zone. However the number of anomalous values and their scattered clusters indicates that, although dispersed, they are probably related to bedrock mineralization" (Leishman, 1987a, p. 1). "Consideration should be given that there has probably been some downslope dispersion of the gold in the soils" (Leishman, 1987a, p. 8).

In 1988 two trenches were completed on the MAC 10 claim, which was located over part of the ground now covered by the northwest part of the HAWK claim. Fourteen rock chip samples were collected and all returned less than 0.03 g/t (0.001 oz/ton) Au (Rowan, L.G., 1989).

In 1990 three diamond drill holes (DDH 90-152, DDH 90-153 and DDH 90-154) were drilled for Eureka Resources Inc. and Asarco Exploration Company of Canada Ltd. within or very near what is now the extreme southeastern part of the HAWK property (along with additional holes farther southeast). The best gold intersection obtained from these three holes was 0.51 g/t (0.015 oz/ton) Au over 1.5 m from 196.5 m to 198.0 m in DDH 90-153 (Schatten, 1990).

Jenkins (2007) presents data for three silt samples collected near the SW border of the HAWK claim as part of a large geochemical survey centred west of the HAWK claim.

Aeroquest International Advanced Airborne Geophysics, on behalf of Hawthorne Gold Corporation, undertook a high resolution helicopter borne AeroTEM II time domain survey, which recorded electromagnetic, magnetic and radiometric data (Sparling, 2008b). This survey provides data for nearly all of the ground now covered by the HAWK claim with the exception being the extreme northwest part of the claim.

Airborne geophysical data (DIGHEM and magnetic surveys) obtained by Bullion Gold Corp. provides coverage of the extreme northwest part of the HAWK claim (Wetherup, 2011).

# **Regional Geology**

## Geology of the Caribou Gold District

The HAWK claim and the Frasergold deposit lie within Triassic sedimentary rocks of the Quesnel terrane near the southern end of the Cariboo gold district (Figures 4 and 5; Table 1). "Bedrock in most of the northern and eastern parts of the area comprises middle-greenschist to lower amphibolite-grade, polydeformed metamorphic rocks of the Barkerville terrane (the northern extension of the Kootenay terrane) and the structurally overlying Cariboo terrane, which are juxtaposed along the north east-dipping Pleasant Valley thrust fault.... The Barkerville and Cariboo terranes are 'pericratonic' in character, comprising mainly metamorphosed equivalents of continent derived siliciclastic protoliths with interlayered marble units and granitic orthogneiss, and are thought to have formed in close proximity to the western margin of Laurentia. Structurally overlying both the Barkerville and Cariboo terranes in the northern part of the area are mafic volcanic rocks and associated pelagic sedimentary units of the oceanic Antler allochthon, which forms part of the Slide Mountain terrane. The south western margin of the Barkerville terrane is structurally overlain along the Eureka thrust by much less deformed and less metamorphosed volcanic and sedimentary strata of the Quesnel terrane, which in this area consists of mainly Middle-Late Triassic volcanic rocks and phyllitic siliciclastic units. The Crooked amphibolite ... occurs as a discontinuous, strongly deformed and metamorphosed lens of mafic metavolcanic rocks and minor serpentinite along the Eureka thrust between the Quesnel terrane and the underlying Barkerville terrane" (Rhys et al., 2009, p. 50).

"The Quesnel terrane in this area mainly comprises a package of weakly deformed, variably phyllitic, carbonaceous siliciclastic rocks ... with minor mafic volcanic and volcaniclastic interlayers. This lower, dominantly metaclastic package is overlain along the Spanish thrust ... by mafic to intermediate volcanic rocks assigned to the Late Triassic Nicola Group. The sedimentary package has yielded Middle–Late Triassic fossil ages" (Rhys et al., 2009, p. 50). The lower sedimentary unit of the Nicola Group is thought to be 2500 to 4000 m thick in the Spanish Lake and Eureka Peak areas (Panteleyev et al., 1996).

"The present geological configuration of the Quesnel Lake area is believed to be a result of a Jurassic convergent event during which the allochthonous assemblages of the Quesnel Terrane were thrust eastwards over the North American craton" (Bloodgood, 1990, p. 3).

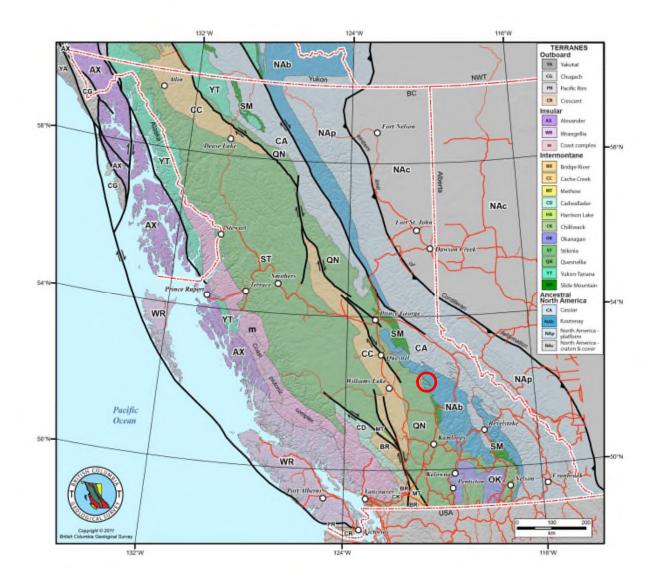


Figure 4. Geological terranes of British Columbia (from Colpron and Nelson, 2007). The HAWK claim lies near centre of red circle.

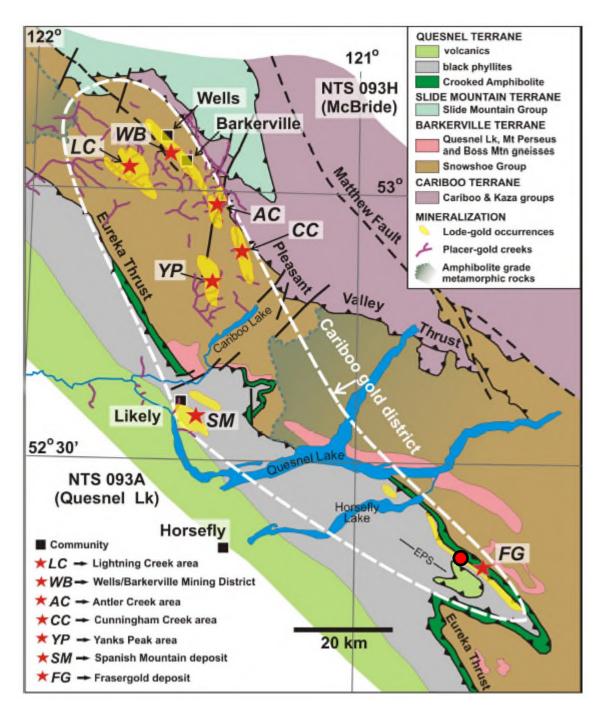


Figure 5. Regional geological setting of the Cariboo gold district, east-central British Columbia, showing principal terranes and major lithological packages. Areas of known lode-gold occurrences are shaded in yellow, and placer-gold producing creeks are indicated by thick purple lines. Principal known gold-producing areas in the Barkerville terrane are in areas of greenschist-grade metamorphism, and do not extend into amphibolite-grade domains. Abbreviation: EPS, Eureka Peak syncline. From Mortensen et al. (2011). Location of HAWK claim indicated by red circle.

Terrane	Unit	Age	Dominant Lithologies
Quesnel	Nicola Group (upper) or	Late Triassic to Early	mafic to intermediate volcanic rocks
(Quesnellia)	Takla Group (upper)	Jurassic	
Quesnel	Nicola Group (lower) or	Middle to Late Triassic	black graphitic phyllite and slate,
(Quesnellia)	Takla Group (lower)		siltstone, micaceous quartzite (basal
			unit)
Slide	Slide Mountain Group*	Pennsylvanian - Permian	mafic metavolcanic rocks and minor
Mountain*	(Crooked amphibolite)		serpentinite
Kootenay	Snowshoe Group	Late Proterozoic	quartzose schist, micaceous quartzite,
(Barkerville)	_	(Hadrynian) to mid-	feldspathic schist, metasiltite and
		Paleozoic (Devonian –	phyllite
		Mississippian ?)	

Table 1. Summary of terranes and stratigraphic groups in the HAWK claim area compiled from Bloodgood (1990), Panteleyev et al. (1996) and Rhys et al. (2009). Note that the Nicola Group has also been referred to as the Quesnel River, Horsefly or Takla Group (Panteleyev et al., 1996). The HAWK claim is underlain almost entirely by Middle to Late Triassic sedimentary rocks of the lower Nicola Group. \* An alternate interpretation is that the Crooked amphibolite is the basal unit of the Quesnel Terrane (Bllodgood, 1990).

### Geology of the Eureka Peak-MacKay River Valley Area

"Mineralization at Frasergold is hosted by ... a fine-grained turbidite sequence that is dominated by black carbonaceous phyllite with local thin interbeds of metasiltstone, and more rarely, fine-grained metasandstone." (Rhys et al., 2009, p. 66).

The northwest trending, shallowly plunging Eureka syncline is the dominant structure in the area. "Well developed, northeast striking, near vertical extension joints are clearly manifested in the drainage pattern of the Eureka syncline. Towards the nose of the syncline, southeast of the project area, the syncline becomes overturned to the southwest with axial planes dipping steeply northeast, northeast of the MacKay River the northeast limb is also overturned to the southwest, however the syncline is upright in the area of the property. The core of the Eureka Syncline is occupied by Takla Group basic volcanic rocks consisting of basalt, augite porphyry flows, tuffs and volcanic breccias that have been metamorphosed to a low grade." (Sparling, 2008a, p. 11). Note that the Takla Group and Nicola Group have been used interchangeably in this area and are considered to be time equivalent lithostratigraphic units (Bloodgood, 1990; Panteleyev et al., 1996).

"All of the pre-Tertiary rocks in the area are affected by regional dynamothermal metamorphism, with the lowest grades exposed along the Horsefly River road where clastic textures are preserved. In the Eureka Syncline, the metamorphic grade of all units increases towards the Perseus and Boss Mountain anticlines. Large areas reach medium grade amphibolite facies metamorphism and some rocks in the cores of the nearby anticlines reach the kyanite-staurolite-fibrolite zone and are associated with pegmatites. The age of the folding and metamorphism is considered to be Jurassic to early Cretaceous" (Sparling, 2008a, p. 11).

The Upper Triassic lustrous, black phyllites in the area of the Frasergold deposit have been regional metamorphosed to the greenschist facies (Campbell et al., 1987).

"The northwest trending MacKay River valley appears to mark a major zone of vertical or near vertical fracturing. At this location the upper Triassic Quesnel River Group is sandwiched between two more competent units; younger intrusives and volcaniclastics to the south and older amphibolites, schists and gneisses to the north and east. Shearing and faulting appears to have been concentrated in the incompetent phyllite units striking along the valley" (Sparling, 2008a, p. 11). Note that the Quesnel River Group and Nicola Group have been used interchangeably in this area (Panteleyev et al., 1996).

The geological map of the Frasergold property by Belik (1981) shows much of the Frasergold Property at low to moderate elevations southwest of the MacKay River, including the Frasergold deposit area, to be underlain by the Middle Unit ("dark grey to black, lustrous phyllite, minor limestone") of the Triassic Lower Phyllite Metavolcanic Sequence. A distinctive facies of the phyllite characterized by abundant porphyroblasts of sideritic carbonate host the gold-bearing quartz veins of the Frasergold deposit (Campbell et al., 1987).

## Mineralization

The Frasergold deposit and HAWK claim area fall within the Caribou gold district (CGD; Rhys et al., 2009). "Gold-bearing veins and replacement deposits in the CGD are classed as orogenic systems ... because there is evidence for strong structural control and the mineralization does not appear to be spatially or temporally related to intrusive rocks." (Mortensen et al., 2011, p. 97).

## Mineralization at the Frasergold Deposit

"Gold mineralization is hosted by quartz and quartz carbonate veins ranging from 2 to 20 centimetres in thickness and extending 1 to 10 metres along strike. They are generally parallel to subparallel to  $S_0$  and  $S_1$  structures occurring as discontinuous lenses, rolls and saddle reefs.... The formation of the quartz veins is synchronous with regional metamorphism and deformation. Deformed and undeformed veins occur on all scales, along the limbs and within the hinge regions of folds. The vein fillings are believed to represent fluids generated during dewatering reactions associated with the Jurassic metamorphic event.... The mineralized vein at the main showing on the Frasergold property was sampled and yielded a potassiumargon age date of  $152 \pm 5$  Ma, which is compatible with the regional metamorphic and deformational event" (Bloodgood, 1990, p. 29-30).

"Gold mineralization on the Frasergold property occurs within, or is spatially associated with stratabound sets of white quartz>iron-carbonate+muscovite+pyrite veins that are developed in the 'knotted' iron-carbonate porphyroblastic carbonaceous phyllite unit" (Rhys et al., 2009, p. 66).

"The Frasergold gold-quartz zone is hosted within graphite rich (5-40%) phyllitic sediments and is located on the east limb of the syncline.... The Frasergold zone mineralization appears to fit the orogenic lode-gold deposit type; gold tends to occur in quartz veins with coarse particulate gold occurring in segregations of stringers, veins, boudins and mullions. Gold has also been commonly observed as fine anhedral grains set in quartz often near the margins of veins. The gold also appears to be associated with

sulphides, including pyrrhotite, pyrite and minor chalcopyrite and sphalerite. Petrographic studies show that a major part of the gold occurs with medium to coarse grained pyrite and pyrrhotite aggregates throughout the mineralized zone. Overall the sulphide content of the Frasergold zone varies from Tr-12% sulphides, and averaging about 2-3% sulphides. Pervasive low grade gold mineralization is also found within the knotted phyllite strata where quartz is absent, however the gold also appears to be associated with sulphides within the phyllitic strata. In most or all cases the phyllitic metasediments are graphite rich, with Tr-3% chlorite alteration." (Sparling, 2008a, p. 14-15).

"Gold mineralization on the Frasergold property is vein hosted and occurs within the metasedimentary sequence. It is localized along the moderately southwest-dipping northern limb of the Eureka Peak syncline and concentrated near the basal contact of a distinctive porphyroblastic phyllite with underlying graphitic banded phyllites. The dominant porphyroblasts within the unit are siderite, ankerite and chloritoid; the porphyroblasts are commonly flattened within the plane of foliation and range in size from 1 to 20 millimetres" (Bloodgood, 1990, p. 29).

"The carbonaceous phyllite in the Frasergold deposit area, ... is characterized by the presence of coarse iron-carbonate porphyroblasts. Foliation (both S1 and S2 ...) wraps around the porphyroblasts, creating a bumpy to dimpled 'knotted' texture to foliation surfaces. The porphyroblasts may represent a broad alteration envelope to the mineralizing system, as in other sediment-hosted districts globally" (Rhys et al., 2009, p. 66). The knotted phyllite unit is approximately 200 m thick in the Frasergold deposit area (Bloodgood, 1990).

At the Frasergold deposit, the "... highest grades (>3 g/t Au) commonly occur associated with the larger veins where they contain ... abundant clots of iron-carbonate+pyrite, which may be aligned in discontinuous lenses of bands parallel to vein walls..." (Rhys et al., 2009, p. 69). The quartz is usually massive and examination of polished sections shows that the gold is closely associated with sulphides, which include pyrite and pyrrhotite. (Bloodgood, 1990).

The near surface destruction of sulphides (+/- Fe-carbonate) by weathering has been noted by previous workers:

- "Bright reddish brown, powdery limonite patches formed from decayed iron sulphides are quite common" (Gruenwald, 1980, p. 9).
- "Down to a depth of 5 10 meters, quartz veins are strongly oxidized, below which the veins may contain up to 10 15% pyrrhotite and pyrite" (Dawson. 1984, p.4).

"The mineralization in the central work area has a drill indicated average total width (down to about 50 m vertical depth) of 17.6 m with an average grade of 0.071 oz/ton Au. This zone has been drilled at 25 and 50 m intervals over a strike length of 750 m. Contained within the zone is an enriched horizon, at least 225 m long, averaging 11.3 m width and 0.155 oz/ton Au." (Campbell et al., 1987, summary).

"Historic resource estimates of the Main Zone were completed in 1991 by Campbell et al (3,396,970 tons at 0.05 oz/T Au) and James Askew and Associates (6,612,675 tons at 0.055 oz/T Au). These estimations are not compliant with the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") standards of

definition, and therefore do not fulfill NI 43-101 reporting standards, and should not be relied upon" (Campbell, K.V. and Giroux, G.H., 2015).

"Other Au occurrences of a similar style occur along strike to the south east and north west of the Frasergold deposit in the same belt of Triassic phyllite. The Kusk occurrence (093A 061; Belik, 1988) is located approximately 4 km south-south east of Frasergold, and the Forks occurrence (093A 092; Howard, 1989) is just south of the east end of Horsefly Lake, approximately 20 km north west of Frasergold. At both the Forks and Kusk occurrences, like the Frasergold deposit, Au occurs in variably deformed and boudinaged quartz veins within grey carbonaceous phyllite with iron-carbonate porphyroblasts. Collectively, these occurrences and the Frasergold deposit define a mineralized corridor that is nearly 35 km long." (Rhys et al., 2009, p. 67).

## Mineralization in the HAWK Claim Area

Rock sample 81 Bf 145A, collected in 1981 from northwest part of the present HAWK claim, returned 5.70 g/t Au, 136 g/t Ag and 4135 ppm Pb from a selected sample of rusty quartz float (near situ) with very localized pyrite and galena (Belik, 1981, p/49). These were the highest values of Au, Ag and Pb returned for rock samples collected during 1981 Keron Holding Ltd. program, which included rock sampling in the Frasergold deposit area.

## **2015 Exploration Activities**

Exploration activities on the HAWK claim in 2015 consisted primarily of prospecting for potentially gold-bearing rock, rock sampling, outcrop observations, and panning of stream sediments to detect the presence (or absence) of visible gold grains. Outcrop and rock sample descriptions are presented in Appendix 1, stream sediment panning site descriptions, including gold grain counts, are presented in Appendix 2 and rock sample analytical results are presented in Appendix 3.

Traverse areas are shown in Map 1. Location information was obtained using a Garmin GPSMAP 64st instrument. Outcrop locations and lithologies are shown in Map 2, outcrop structure (foliation) is shown in Map 3, and rock sample locations and geochemical values are shown in Map 4. All rock samples collected in 2015 were grab samples of outcrop or float and all rock sample analyses were performed by TSL Laboratories Inc. in Saskatoon, Saskatchewan. Panning site locations and gold grain values are shown in Map 5.

#### **Stream Sediment Gold Grain Panning**

Due to the topography across the HAWK claim area, all stream sediment samples were collected in relatively high-energy environments, generally at locations where preferential deposition of gold grains may have occurred (e.g. material accumulated on the downstream side of a mid-channel boulder). The sediment was collected using a small shovel or, more commonly, a trowel from the stream bottom. This material was sieved through a metal mesh screen with square openings 2.5 mm across and collected in a gold pan. A 36 cm (14") plastic Garrett gold pan (Garrett gravity trap) was used. The inside dimension at the top of this pan is 34 cm, it is 7 cm deep, and has a flat (drop) bottom that is 15 cm across. The drop bottom is 0.5 cm deep and the pan has three riffles on one side. Sieving was stopped when the pan was about one half to three quarters full (about 3 to 4 kg of sediment). The sediment was then panned until the volume of material in the pan was reduced to the point that gold grains, if present, could be counted. The number of pans of sediment panned at each site varied from one to three (Appendix 2; Figure 6).



Figure 6. Typical gold panning site on HAWK claim (site HK042). Hammer near centre of photo shows where sample was collected. Two pans of stream sediment at this site yielded 5 gold grains.

### Laboratory Methods (Rock Geochemistry)

### Sample Preparation

Samples received at TSL Laboratories Inc. in Saskatoon, Saskatchewan were opened, sorted and dried prior to preparation. Rock samples were crushed using a primary jaw crusher to a minimum 70% passing 10 mesh.

A representative split sample was obtained by passing the entire sample through a riffler. The 250 gram sub-sample thus obtained was pulverized to a minimum 95% passing 150 mesh.

## Gold Analysis

Gold was determined on a 30 g subsample by fire assay procedure (production of Dore bead) followed by dissolution of the bead in aqua regia and analysis by atomic absorption spectrophotometry. The lower detection limit with this method is 5 ppb Au and the upper detection limit is 1000 ppb Au.

## Multi-Element Analysis

A 0.5 gram sample was digested with 3 ml of aqua regia (3:1 HCl/HNO<sub>3</sub>) at 95°C for 1 hour and then diluted to 10 ml with deionized water. The solution was analyzed by inductively coupled plasma mass spectrometry (ICP-MS) for 36 elements. Aqua regia digestion may fail to liberate significant proportions of several of the reported elements (depending on sample mineralogy) including Al, B, Ba, Ca, Cr, Fe, Ga, K, La, Mg, Mn, Na, P, Sn, Sr, Th, Ti, V and W.

## **2015 Exploration Results**

## **Outcrop Observations**

Most of the outcrops observed consist of variably graphitic phyllite without Fe-carbonate porphyroblasts ("knots"). However, six outcrops of knotted graphitic phyllite were located that contain abundant Fecarbonate porphyroblasts (Figures 7 and 8; Map 2). These observations indicate that the knotted phyllite horizon that hosts the Frasergold mineralization is also present on the HAWK property. The elevations of the knotted graphitic phyllite outcrops range from 1356 m to 1495 m with most lying between 1422 m and 1431 m.

Some quartz veins were characterized by vugs that are commonly partly or completely filled by reddishbrown, limonitic Fe-oxide. This was noted in some outcrops and in float. This is thought to be due to near-surface weathering of iron sulphides  $\pm$  Fe-carbonate.

Foliation on the HAWK claim generally strikes northwest and dips at moderate to steep angles to the southwest (Map 3). Two instances of northerly trending foliation were observed near the centre of the claim. At one of these sites (HK074) outcrop-scale folding occurs with a fold axis plunge of 40° to 235°.



Figure 7. Photo of foliation plane in graphitic, knotted phyllite. Note abundance of knots (Fe-carbonate porphyroblasts) and lustrous sheen of surface. Scale bar is in centimetres.



Figure 8. Photo showing fresh surface of graphitic, knotted phyllite broken across foliation. Note orange-brown Fecarbonate porphyroblasts. Scale bar is in centimetres.

### **Rock Geochemistry**

Analytical results are presented in Appendix 3 for 13 rock samples collected during the 2015 field program and sample descriptions are presented in Appendix 1. Sample locations along with values of Au, Ag and Pb are shown in Map 4 (gold values obtained by fire assay/AA are shown).

Two quartz-rich float samples from the northwestern part of the HAWK claim returned elevated metal values. Sample HK15013 returned 50 ppb Au, 6.2 ppm Ag and 555.6 ppm Pb. Sample HK15021 returned 10 ppb Au, 10.7 ppm Ag and 460 ppm Pb.

## **Gold Grain Distribution**

The distribution of gold grains observed in panned stream sediment (heavy mineral) concentrates is shown in Map 5 and site information is provided in Appendix 2. The numbers shown in Map 5 represent the average number of grains per pan (approximately 3 to 4 kg of sieved sediment).

In general, higher gold grain counts were obtained below 1425 m. Thus, gold grains in stream sediments tend to occur at or downslope of the elevation at which the knotted graphitic phyllite horizon crosses the HAWK claim. It is of note that the three stream sediment (silt) samples collected from streams draining the HAWK claim area during regional government surveying were all strongly anomalous in gold (B.C. Ministry of Energy and Mines MapPlace - Exploration Assistant).

## **Discussion and Conclusions**

The geological setting of the HAWK claim is similar to that at the Frasergold deposit, which lies 6 km to the southeast. The distinctive knotted graphitic phyllite unit that hosts gold mineralization at the Frasergold deposit underlies the HAWK claim where it has been observed at a maximum elevation 1495 m. Elevated gold grain counts in stream sediments, detected by panning, tend to occur downslope of this elevation. Anomalous gold concentrations in soils samples (up to 1,100 ppb Au) have been identified by previous exploration of the ground now covered by the HAWK claim (Belik, 1981; Dawson, 1984; Kerr, 1985; Leishman, 1987a and b). These relationships suggest that, similar to the Frasergold deposit, the knotted graphitic phyllite beneath the HAWK claim is gold bearing and that the weathering of these rocks is releasing gold grains into surficial sediments.

Gold at the Frasergold deposit occurs primarily in quartz ( $\pm$  Fe-carbonate) veins where the gold occurs in close association with pyrite and pyrrhotite (Bloodgood, 1990; Sparling, 2008a; Rhys, et al., 2009). The near surface destruction of sulphides by weathering to depths of 5 to 10 m, leaving behind bright reddish - brown, powdery limonite patches is common in the Frasergold area (Gruenwald, 1980; Dawson, 1984) and has also been observed in the HAWK claim area. Sulphide weathering would help liberate associated gold and may contribute to the anomalous concentrations of gold in soils and stream sediments. However, the loss of gold from near-surface rocks would mean that low gold values in surface rock samples may not preclude gold mineralization in similar rocks at depth. Therefore, soil and stream sediment sampling may be better initial (surface) exploration strategies than rock sampling for finding another deposit similar to Frasergold. It is worth noting that the Frasergold deposit discovery resulted from the initial detection of gold in stream sediments followed by outlining anomalous gold values in soils.

## Recommendations

Future exploration of the HAWK claim should include geological mapping, prospecting and geochemical sampling to better define the location of the potentially gold-bearing knotted phyllite horizon. In addition, all previous work, including airborne geophysical data and soil geochemical results, needs to complied to guide exploration efforts. Favourable results may guide the selection of drilling targets.

# References

Belik, G.D. (1981): Geological and geochemical Report on the Frasergold Property. Report prepared for Keron Holdings Ltd., Assessment Report 09751, 40 p.

Bloodgood, M. A. (1990): Geology of the Eureka Peak and Spanish Lake map areas, British Columbia. British Columbia Geological Survey Branch, Paper 1990-3, 36 p.

Boronowski, A. and Sebert, C.S. (2003): Recommendations for further explorations on the Frasergold property, south central British Columbia. Report prepared for Mr. J.J. O'Neill, Assessment Report 27269B, 31 p.

Campbell, K.V., MacKean, B.E, and Leishman, D.A. (1987): Report on the geology and results of the 1987 exploration on the Frasergold property. Report prepared for Eureka Resources, Inc., Assessment Report 16765A, 65 p.

Campbell, K.V. and Giroux, G.H. (2015): Frasergold Exploration Project. NI43-101 Technical Report prepared for Eureka Resources Inc., 86 p.

Cartwright, P.A. (1985): Phoenix Geophysics Limited report on the induced polarization and resistivity survey on the Fraser Gold property. Report for Eureka Resources, Inc., Assessment Report 14022A, 12 p.

Colpron, M. and Nelson, J.L. (2011): A digital atlas of terranes for the northern cordillera; British Columbia Ministry of Energy and Mines, BCGS GeoFile 2011-11.

Dawson, J.M. (1984): Geochemical Report on the LL #1 Claim. Report for Valhalla Minerals Inc., Assessment Report 12590, 6 p.

Gruenwald, W. (1980): Geochemical and geological report on the Kay #1 - #9 Claims. Report for Keron Holdings Ltd., Assessment Report 08325, 14 p.

Jenkins, D. (2007): The geochemical exploration of the Addie 2 property west of Eureka Peak. Report for Kajin Resources Corp., Assessment Report 28826, 30 p.

Kerr, J.R. (1985): Geochemical Report on the Mac and Kay claims. Report for Eureka Resources Inc., Assessment Report 14022B, 17 p.

Leishman, D.A. (1987a): Geochemical report on the Mac 10 claim group. Report for Eureka Resources Inc., Assessment Report 16917, 11 p.

Leishman, D.A. (1987b): Geochemical report on the Mac 10 claim group. Report for Eureka Resources Inc., Assessment Report 15778, 10 p.

Mortensen, J.K., Rhys, D.A. and Ross, K. (2011): Investigations of orogenic gold deposits in the Cariboo gold district, east-central British Columbia (parts of NTS 093A, H): final report; *in* Geoscience BC Summary of Activities 2010, Geoscience BC, Report 2011-1, p. 97–108.

Panteleyev, A., Bailey, D.G., Bloodgood, M.A. and Hancock, K.D. (1996): Geology and mineral deposits of the Quesnel River – Horsefly map area, central Quesnel Trough, British Columbia. British Columbia Geological Survey Branch, Bulletin 97, 156 p.

Rowan, L.G. (1989). Summary report on June 1988 program on Mac 10 claim. Report for Sirius Resources Corporation, Assessment Report 17746A, 13 p.

Rhys, D.A., Mortensen, J.K. and Ross, K. (2009): Investigations of orogenic gold deposits in the Cariboo gold district, east-central British Columbia (parts of NTS 093A, H): progress report; *in* Geoscience BC Summary of Activities 2008, Geoscience BC, Report 2009-1, p. 49–74.

Schatten, M. (1990). Assessment report 1990 drill program. Report prepared for Eureka Resources, Inc., Assessment Report 20547, 25 p.

Sparling, J. (2008a). Geochemical sampling, trenching and diamond drilling assessment report for 2007 Frasergold property, Williams Lake area, British Columbia. Report prepared for Hawthorne Gold Corporation. Assessment Report 30397A, 66 p.

Sparling, J. (2008b): Airborne geophysical assessment report for 2007 Frasergold property, Williams Lake area, British Columbia. Report prepared for Hawthorne Gold Corporation. Assessment Report 29750, 28 p.

Wetherup, S. (2011). Airborne DIGHEM and magnetic survey, Horsefly property. Report for Bullion Gold Corp., Assessment Report 32348, 34 p.

# Qualifications

I, Glen Prior, of 793 Birch Avenue, Sherwood Park, Alberta do hereby certify that:

- I graduated from Laurentian University in Sudbury, Ontario, with a B.Sc. (Honours) degree in geology in 1982, from Laurentian University in Sudbury, Ontario, with a M.Sc. degree in geology in 1987 and from Carleton University in Ottawa, Ontario, with a Ph.D. degree in geology in 1996.
- I practiced my profession full-time from 1986 to 1991 and continuously since 1996.
- I am a Professional Geologist registered with the Association of Professional Engineers and Geoscientists of Alberta.
- I am the sole owner of the HAWK claim (Title Number 1035789).
- This report is based upon field work that I undertook during the 2015 field season.

July 11, 2016

Sherwood Park, Alberta

Glen Prior

Glin P\_\_\_\_

# Expenditures

Item	Comment	Cost	Subtotal
4x4 pick-up	Valemount to HAWK claim (return)	1040 km @ \$0.68/km	\$707.20
InReach	Communication device	14 days @ \$10.00/day	\$140.00
Forestry road radio	Rental	14 days @ \$2.00/day	\$28.00
Field work	G. Prior	12 days @ \$650.00/day	\$7,800.00
Travel	G. Prior	2 days @ 650.00/day	\$1,300.00
Report writing	G. Prior	3 days @ 650.00/day	\$1,950.00
Field work	J. Prior (engineering student/assistant)	2 days @ \$240.00/day	\$480.00
Travel	J. Prior (engineering student/assistant)	1 day @ \$240.00/day	\$240.00
Food and camp costs	G. Prior	14 days @ \$50.00/day	\$700.00
Food and camp costs	J. Prior (engineering student/assistant)	3 days @ \$50.00/day	\$150.00
Rock analyses	TSL (Saskatoon)	13 samples @ \$40.43	\$525.53
Rock shipment	To TSL (Saskatoon)		\$20.00
Total:			\$14,040.73

Field work dates G. Prior: July 31; August 1, 2, 3, 15, 16, 30, 31; September 1, 6, 11, 12

Travel dates G. Prior: July 30; August 17

Field work dates J. Prior: August 15, 16

Travel dates J. Prior: August 17

Instrument dates (InReach and road radio): July 30, 31; August 1, 2, 3, 15, 16, 17, 30, 31; September 1, 6, 11, 12

# Appendix 1

# **Outcrop and Rock Sample Descriptions**

Coordinates: UTM, NAD 1983, Zone 10U

Site Number	East	North	Elev (m)	Outcrop Description	Rock Sample	Rock Sample Description
HK001	659943	5802518	1257	phyllite; graphitic; dark grey to black (fresh and weathered surfaces); strongly foliated rock interlayered with less foliated intervals at cm scale; foliation at 285°/58°S; local, very weak Fe-oxide stain; more strongly foliated rock is more graphitic; outcrop exposed where stream flowing toward 020° crosses logging road	no	
HK002	659942	5802474	1244	phyllite/schist; dark grey to black (fresh and weathered); moderately graphitic; sericite noted on some foliation planes; foliation at 282°/70°S; minor amount of milky quartz veins (appear barren); very weak reaction to dilute HCl	no	
НК003	659878	5802362	1299	phyllite; dark grey to black; strongly graphitic; weak disseminated to pervasive reaction to dilute HCl; strongly foliated but generally not schistose; foliation at 285°/68°S; small scale kink bands present	no	
HK006	659779	5802072	1360	phyllite/schist; dark grey to black; strong foliation at 356°/46°W, strongly graphitic; trace amount of disseminated pyrite; small kink bands common; NW side of stream	no	
HK008	661002	5800976	1405	phyllite; dark grey to black (fresh surface); weathers dark grey to black to rusty brown; strongly graphitic; foliation at 313°/58°W; trace to 2% disseminated pyrite; minor amount of quartz veins; moderate to strong disseminated and fracture- controlled dilute HCL reaction	no	
HK009	660997	5800962	1412	phyllite/schist; strongly graphitic; dark grey to black (fresh surface); weathers rusty brown to dark grey; foliation at 266°/86°N; 2 to 4% disseminated pyrite; several quartz veins and lenses up to 10 cm across	HK15001	7 cm thick quartz vein/lens parallel to foliation; 1 to 3% (locally up to 5%) pyrite (fracture controlled and disseminated)
HK010	660995	5800957	1410	no outcrop	HK151002	boulder in stream (30x25x20 cm); quartz vein; weathers orange-brown; 1 to 3% (locally to 5%) disseminated pyrite; contains 10-20% graphitic wallrock fragments (randomly distributed);
HK011	660967	5800903	1436	sericitic phyllite; minor chlorite; light green-grey (fresh surface); weathers light grey; foliation at 091°/70°S; large outcrop about 10 m southeast of creek	no	
НК023	661049	5801320	1372	phyllite/schist; dark grey to black (fresh surface); weathers dark grey to rusty brown (Fe-oxide stain); foliation at approximately 294°/70°S; foliation distorted by small scale open folds (0.1 to 1 m scale); strongly graphitic; 1 to 3% disseminated pyrite; no reaction to dilute HCl; several quartz lenses up to 10 cm wide parallel to foliation (appear barren); small outcrop on west side of road	no	

Site Number	East	North	Elev (m)	Outcrop Description	Rock Sample	Rock Sample Description
HK024	660958	5801264	1393	banded phyllite; moderately graphitic; not schistose; fresh surfaces are medium grey (average of light and dark bands); foliation at 290°/54°S; weathers medium grey to rusty brown; alternating foliation-parallel bands of dark grey, graphitic, very fine grained material and very light grey, Fe-carbonate (+/- quartz) bearing bands (layers); layers are laterally continuous; weak to moderate dilute HCl reaction on light layers; 1 to 3% disseminated pyrite; quartz lenses up to 3 cm wide are present (appear barren); small outcrop on south side of road	no	
НК025	660783	5801389	1411	phyllite/schist; strongly graphitic; foliation at 312°/64°S; fresh surfaces are medium to dark grey; weathers dark grey to orange-brown (Fe-oxide stain); trace to 1% disseminated pyrite; very weak reaction to dilute HCl; 1 to 5% foliation parallel, rusty weathering layers up to 1 mm thick - locally occur as lenses up to 10x1 mm (possibly incipient "knots")	no	
HK026	660707	5801453	1422	phyllite/schist (knotted phyllite); strongly graphitic; very fine grained to aphanitic (as are all previously described rocks); foliation at 292°/68°S; colour banding on mm scale from lighter to darker; overall dark grey; weathers dark grey to rusty brown (Fe-oxide stain); no reaction to dilute HCl; light coloured mm- scale bands commonly weather rusty-brown - possibly oxidized Fe-carbonate; trace to 2% disseminated pyrite; foliation surfaces display 1 to 5 mm rusty-brown patches or lenses - these may be weathered Fe-carbonate; these "spots" can cover up to 20% of foliation surfaces (knotted phyllite); trace amounts of disseminated pyrite; quartz veins up to 6 cm wide occur parallel to foliation	no	
HK027	660531	5801575	1431	phyllite/schist; extremely graphitic; dark grey (fresh surface); weathers dark grey to rusty brown; no sulphides observed in phyllite/schist; foliation at 278°/74°S; several quartz lenses locally up to 40 cm across that are parallel to foliation and discontinuous along strike; some quartz veins contain trace to 1% disseminated and fracture-controlled pyrite; large outcrop on south side of road	no	
HK028	660315	5801661	1427	phyllite/schist (knotted phyllite); strongly to extremely graphitic; foliation at 288°/68°S; no sulphides observed; dark grey (fresh surface); weathers dark grey; rusty brown blebs from 1 to 10 mm across are strongly apparent on foliation planes (also visible on fresh surfaces but less noticeable); no response to dilute HCl; blebs are probably oxidized Fe- carbonate; blebs (knots) commonly cover 5 to 20% of foliation surfaces; large outcrop on south side of road	no	

Site	East	North	Elev	Outcrop Description	Rock	Rock Sample Description
Number	ļ!		( <b>m</b> )		Sample	
HK029	660123	5801666	1431	phyllite/schist (knotted phyllite); strongly to extremely	HK151003	sample of 5 cm wide, foliation parallel quartz vein with
				graphitic; no sulphides noted; dark grey to black (fresh surface);		wallrock breccia fragments; 5 to 10% orange-brown
				weathers dark grey; up to 20% dark rusty-brown (Fe-oxide)		rusty zones (possibly oxidized Fe-carbonate); weak
				blebs most readily observed on foliation surfaces; foliation at		reaction to dilute HCl; trace disseminated pyrite
	1700.40		1 1 2 2	308°/70°S; large outcrop on south side of road		
HK030	659840	5801744	1428	phyllite (knotted phyllite); dark grey on fresh surfaces broken	no	
				across foliation; dark silvery grey (lustrous sheen) on		
				unweathered foliation planes; weathers dark grey; strongly		
				graphitic (but more silvery (lustrous) and less black than		
				previously described outcrops); foliation at 302°/50°S; no		
				sulphides noted; no reaction to dilute HCl to very weak spotty		
				reaction; up to 30% rusty orange brown (fresh and weathered)		
				blebs, 1 to 3 cm across, round to oval (elongation parallel to		
				foliation planes); most blebs are rusty orange brown (fresh and weathered) and soft - probably weathered Fe-carbonate; some		
				blebs are white on freshly broken surfaces, are less soft, and these exhibit a very weak reaction to dilute HCl - probably Fe-		
				carbonate; very small scale kink bands impart lineation to foliation surfaces; orange-brown blebs prominent on weathered		
				and fresh surfaces (blebs quite prominent on fresh surfaces);		
				numerous quartz veins and lenses in lower part of outcrop up to		
				10 cm thick and mainly foliation parallel; large outcrop on		
				south side of road with blasted exposure (probably a quarry for		
	ľ			road fill)		
HK041	658140	5803374	1297	phyllite; dark grey to black (fresh); weathers dark grey to rusty	no	
-				brown; strongly graphitic; 2 to 4% disseminated pyrite;	-	
				foliation at 282°/24°S; no reaction to dilute HCl; small outcrop		
				on south side of logging road/trail		
HK043	658422	5803078	1356	phyllite (knotted phyllite); fresh surfaces are dark grey to black	no	
				with rusty orange-brown blebs except for foliation planes,		
				which have a silver-grey sheen; weathers medium grey to		
				silver-grey; graphitic (silver-grey rather than black); no reaction		
				to dilute HCl; foliation at 271°/53°S; rusty orange-brown		
				blebs/lenses have oval shapes and are commonly 2 to 5 mm		
				across by 1 to 3 cm thick with short axis perpendicular to		
				foliation; largest lens observed in 35 m across by 4 mm thick		
				(large lenses such as this are uncommon); blebs/lenses (knots),		
				which form 5 to 20% of rock, are probably weathered Fe-		
				carbonate; small outcrop on south side of logging road/trail		

Site Number	East	North	Elev (m)	Outcrop Description	Rock Sample	Rock Sample Description
НК053	658310	5802693	1457	no outcrop	HK151011	angular float ~ 15x10x5 cm; located in ditch (small stream) along uphill (south) side of old logging road (road is overgrown and very hard to follow); quartz and Fe-carbonate vein up to 5 cm thick with outer edges of phyllite; weak, spotty reaction to dilute HCl
НК054	658169	5802707	1478	phyllite; moderately graphitic; no blebs (knots); foliation somewhat irregular with an average attitude of 075°/44°S; minor amounts of quartz veins and lenses; small outcrop on south side of overgrown road	no	
HK056	657733	5802993	1419	no outcrop	HK151012	subround float ~ 25x15x10 cm in stream; quartz - Fe- carbonate vein material; white quartz cut by veinlets of faintly yellowish-white Fe-carbonate (weathers rusty- brown); 1 to 5% fracture-controlled and disseminated pyrite - mainly anhedral but some pyrite cubes up to 5 mm across; no apparent relationship between pyrite and carbonate; graphitic phyllite along margins of vein material
HK057	657687	5802786	1473	no outcrop	HK151013	subangular float ~ $15x10x5$ cm in stream; quartz vein material; one galena-rich "clot" apx. 5 mm across plus associated fracture-controlled, very fine-grained galena; minor Fe-carbonate; overall less than 0.25% galena; trace amounts of very-fine grained pyrite (not associated with galena)
HK061A	658109	5802713	1494	phyllite; graphitic; trace disseminated pyrite; foliation at 292°/62°S	HK151014	angular rubble ~ 10x5x5 cm lying near outcrop of graphitic phyllite; sample (rubble) is quartz - Fe-oxide vein (probably originally quartz - Fe-carbonate) with margins of graphitic phyllite; trace to 2% very-fine to medium grained, disseminated pyrite.
HK061B	658109	5802713	1494	same as HK061A	HK151015	angular rubble ~ 20x10x10 cm very near location of sample HK151014; quartz vein with graphitic phyllite margins; orange-brown Fe-oxide stain along fractures; 2% to locally up to 15% (overall ~ 5%) very-fine to medium pyrite - fracture controlled, disseminated and in irregular pyrite-rich blebs up to 5 mm across; some pyrite occurs as cubes
HK064	657936	5802673	1534	outcrop apx. 10 m x 5 m of barren-appearing quartz vein (no Fe-carbonate); margins of vein not exposed; long axis of outcrop trends 310°; minor amounts of Fe-oxide on hairline fractures	no	

Site Number	East	North	Elev (m)	Outcrop Description	Rock Sample	Rock Sample Description
HK065	658078	5802729	1494	phyllite; graphitic; black (fresh surface); dark grey to rusty- brown weathering; foliation at 090°/60°S; small amount of spotty Fe-oxide (blebs up to 1 mm across) that were probably originally Fe-carbonate; 2 to 4% very-fine to fine grained, disseminated pyrite; small outcrop; very overgrown (~ east - west) road (?) on down slope side of outcrop	HK151016	same as outcrop description
HK071A	658107	5802718	1504	no outcrop	HK151021	angular rubble/float ~ 25x20x10 cm apx. 5 m NW of site HK061; quartz vein material with ~ 5% Fe- carbonate in lenses up to 5 mm across; lens of very- fine to fine grained galena ~ 5 mm across noted (and sampled); galena appears to be fracture controlled; quartz vein material has graphitic margins
HK071B	658107	5802718	1504	no outcrop	HK151022	angular, tabular rubble/float ~ 15x10x3 cm.; second piece of rubble near sample location HK151021; graphitic, "knotted" phyllite/schist with abundant orange-brown blebs commonly to 1 mm across; strongly foliated. strongly to intensely graphitic (5 to 15% graphite on foliation planes); 1 to 2% disseminated very-fine to fine grained pyrite
HK072	658065	5802730	1495	knotted phyllite; graphitic; fresh surface is black with orange- brown blebs; weathers dark grey; well foliated at 286°/56°S; 10-30% orange-brown, competent blebs/lenses that are apx. spherical to slightly elongate and commonly 1 to 2 mm across (probably somewhat oxidized Fe-carbonate); not magnetic; no reaction to dilute HCl; small outcrop uphill from old road	no	
НК073	659844	5801765	1434	see HK030 for description of nearby outcrop	HK151023	angular rubble ~ 35x20x20 cm at base of pit blasted into knotted phyllite beside logging road; quartz vein with minor Fe-carbonate lenses in knotted phyllite with 20 to 30% orange-brown, weakly elongate lenses commonly 1 to 3 mm across (probably oxidized Fe- carbonate); knotted phyllite is graphitic and probably chloritic as well; phyllite is crosscut by medium green sericite veinlets up to 3 mm wide; phyllite also contains minor (trace to 0.5%) fracture-controlled pyrrhotite (magnetic) +/- pyrite, quartz vein contains trace to 0.25% disseminated and fracture-controlled pyrite +/- pyrrhotite; sample is ~ 50% vein and 50% wallrock (phyllite)

Site	East	North	Elev	Outcrop Description	Rock	Rock Sample Description
Number			( <b>m</b> )		Sample	
HK074	659363	5801946	1468	outcrop ~ 20 m long on south (uphill) side of logging road; phyllite, dark grey to black (fresh surface); weathers dark grey to locally rusty brown; graphitic (moderate to strong); no "knots"; apx. 2 to 4% quartz veins and lenses up to 10 cm wide; foliation at east end of outcrop is ~ $265^{\circ}/62^{\circ}$ S; foliation at west end of outcrop is $006^{\circ}/76^{\circ}$ W; outcrop is tightly folded about antiform with axis plunging $40^{\circ}$ to $235^{\circ}$	HK151024	sample is of ~ 10 cm wide quartz vein that pinches and swells with an orientation of 065°/80SE°, which is apx. parallel to the local, contorted foliation, vein contains ~ 5% soft, orange-brown Fe-oxide (probably oxidized Fe-carbonate) and trace to 1% very-fine grained to medium grained pyrite (some very pale) - striation noted on surface of one pyrite crystal
HK076	659172	5802065	1488	phyllite/schist; very strongly graphitic; 1 to 2% quartz $\pm$ Fe- carbonate veins and lenses up to 5 cm thick; average foliation at 270°/66°S; some small scale folding; outcrop on uphill side of road	no	
HK077	659116	5802095	1490	phyllite; strongly graphitic; dark grey to black (fresh surface); weathers dark grey to rusty brown (Fe-oxide); trace to 1% disseminated pyrite; foliation at 070°/48°S; long outcrop along uphill side of road	no	
HK079	658809	5802302	1488	phyllite; strongly graphitic; trace to 1% pyrite (disseminated and along foliation planes); foliation at 286°/66°S; large outcrop (> 50 m long) along uphill side of road	no	

## Appendix 2

## **Stream Sediment Panning Site Descriptions**

Coordinates: UTM, NAD 1983, Zone 10U

		Elev (m)	Collection Site Description	Stream Flow	Pans	Gold Grains	Grains per Pan	
HK002	659942	5802474	1244	near bedrock	very fast	1	0	0.00
HK003	659878	5802362	1299	sand on bedrock (1st pan), trap behind bedrock drop (2nd and 3rd pans)	very fast	3	6	2.00
HK004	659872	5802181	1322	behind boulders	very fast	1	2	2.00
HK012	660865	5800887	1461	boulder trap		1	0	0.00
HK013	660546	5800664	1540		very fast	1	0	0.00
HK015	660985	5800608	1469		very fast	1	0	0.00
HK019	661260	5801417	1272	3 m above upper end of culvert at downstream end of longitudinal, midstream boulder bar		3	4	1.33
HK020	658874	5803419	1198	5 m upstream from logging road	fast to very fast	2	5	2.50
HK032	659602	5801653	1460	midstream boulder trap (behind huge boulder)		1	0	0.00
HK042	657965	5803410	1304	transverse bar composed of boulders and logs; steep, boulder-rich section of stream	very fast	2	5	2.50
HK044	657773	5803045	1402	20 m upstream from logging road/trail; transverse boulder trap; steep, boulder-rich section	very fast	1	0	0.00
HK052	658620	5802591	1425	transverse boulder trap ("step" in stream)	fast	1	2	2.00
HK058	657680	5802590	1527	boulder trap (very large boulder) just below uphill split of stream into two branches	fast	1	1	1.00

Appendix 3

**Rock Sample Analytical Results** 



2 - 302 48th Street • Saskatoon, SK • S7K 6A4 P (306) 931-1033 F (306) 242-4717 E info@tsllabs.com

Company: Geologist:	Mr. Glen Prior G. Prior
Project:	G. Pho
r rojeot.	

TSL Report: Date Received:	S52931 Mar 14, 2016
Date Reported:	Mar 16, 2016
Invoice:	73537

#### Remarks:

Sample Type: Rock	Number 13	Size Fraction Reject ~ 70% at -10 mesh (1.70 mm) Pulp ~ 95% at -150 mesh (106 µm)	Sample Preparation Crush, Riffle Split, Pulverize
Pulp	0		None

Pulp Size requested ~ 250 g

#### Standard Procedure:

Samples for Au Fire Assay/AA (ppb) are weighed at 30 grams. Samples for Au Fire Assay/Gravimetric (g/tonne) are weighed at 1 AT (29.16 grams).

Element Name Au	Unit	Extraction Technique Fire Assay/AA	Lower Detection Limit 5	Upper Detection Limit 1000
Au	g/tonne	Fire Assay/Gravimetric	0.03	100%

.

Results are representative of samples submitted for testing. Test reports may be reproduced, in their entirety, without our consent. Liability is limited to the analytical cost for analyses.



SAMPLE(S) OF

#2 - 302 48" Street · Saskatoon, SK · S7K 6A4 P (306) 931-1033 F (306) 242-4717 E info@tsllabs.com

### CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM Mr. Glen Prior 793 Birch Avenue Sherwood Park, Alberta TSA 1X2

> G. Prior Project: HK

REPORT No. S52931

13 Rock/0 Pulp

INVOICE #:73537 P.O.:

File Au Aul ppb ppb Name HK151001 15 S52931 S52931 HK151002 <5 S52931 HK151003 <5 S52931 HK151011 <5 HK151012 <5 S52931 HK151013 50 S52931 S52931 HK151014 < 5 S52931 HK151015 10 HK151016 <5 5 S52931 \$52931 HK151021 10 S52931 HK151022 <5 S52931 <5 HK151023 S52931 HK151024 20 GS-2K 1800 S52931

COPIES TO: INVOICE TO: G. Prior, Alberta

Mar 16/16

SIGNED

Mark Acres - Quality Assurance

Page 1 of 1



2 - 302 48th Street • Saskatoon, SK • S7K 6A4 P (306) 931-1033 F (306) 242-4717 E info@tsilabs.com

Company: Geologist: Project: Purchase Order:	Mr. Glen G. Prior HK	n Prior	TSL Repor Date Recei Date Repor Invoice:	ved:	S52931 Mar 14, 2016 Mar 29, 2016 73537
Sample Type: Rock	Number 13	Size Fraction Reject ~ 70% -10 mesh (1.7 Pulp ~ 95% -150 mesh (10			le Preparation , Riffle Split, Pulverize
Pulp	0	Pup - 55% - 156 mean (16	o pin)	None	

### ICP-MS Aqua Regia Digestion HCI-HNO<sub>3</sub>

The Aqua Regia Leach digestion liberates most of the metals except those marked with an asterisk where the digestion will not be complete.

Element Name	Lower Detection Limit	Upper Detection Limit	Element Name	Lower Detection Limit	Upper Detection Limit
Ag Al* As Au Bi Ca Cd Co Co Co Co Fe A Ga K K K K Mg K	0.1 ppm 0.01 % 0.5 ppb 1 ppm 0.1 ppm 0.1 ppm 0.1 ppm 0.1 ppm 0.1 ppm 0.1 ppm 0.1 ppm 0.01% 1 ppm 0.01% 1 ppm 0.01%	100 ppm 10 % 10000 ppm 2000 ppm 2000 ppm 2000 ppm 2000 ppm 2000 ppm 10000 ppm 10000 ppm 10000 ppm 1000 ppm 1000 ppm 10 % 1000 ppm 30 %	Mn* Mo* Ni Pb Sb Sc Sc Sr* Te Th* Ti U V V W Zn	1 ppm 0.1 ppm 0.001% 0.1 ppm 0.05 % 0.1 ppm 0.5 pm 1 ppm 1 ppm 1 ppm 0.1 ppm 1 ppm 0.1 ppm 0.1 ppm 1 ppm 0.1 ppm 1 ppm 0.1 ppm 1 ppm	10000 ppm 2000 ppm 10 % 10000 ppm 10 % 2000 ppm 100 ppm 1000 ppm 2000 ppm 2000 ppm 2000 ppm 2000 ppm 1000 ppm 10000 ppm 10000 ppm 10000 ppm 10000 ppm 10000 ppm

.

Results are representative of samples submitted for testing. Test reports may be reproduced, in their entirety, without our consent. Liability is limited to the analytical cost for analyses.

						01/7
S52931 9, 2016		0. %	0.004 0.016 0.009 0.043 0.148	0.008	0.068 0.037 0.018 0.019	0.072
S52931 March 29, 2016		N mgd	8.9 14.0 17.3 13.4	8.1 24.5 17.0 20.6 6.2	65.0 40.3 14.2 60.1	72.3
		۳×	0.003 0.009 0.012 0.018 0.019	0.004 0.016 0.007 0.032 0.032	0.041 0.033 0.017 0.017	0.064
Report No: Date:		om ppm	2.8 5.9 1.9 2.3 0.7	0.6 0.6 0.8 0.9	0.4 0.5 0.1	12.3
8 O		um Mg	86 11 33 23 86 11 33 23	763 433 70 44	435 811 241 239 239	879 391
		¶ N	0.01 0.01 0.03 0.08 0.02	0.05 0.04 0.07 0.59	0.30 1.10 0.04 0.04	0.75
		ppm b	2°7°7	⊽∞≈≂⊽	1,237	16
		× %	0.03 0.07 0.01 0.02	0.02 0.03 0.12 0.12	0.10 0.08 0.02 0.02	0.32
		₿¥ dd	0.02	0.00 0.00 0.00 0.00 0.00	0.01 0.05 0.07 0.07 0.07	0.28
7K 6A4	8	Ga ppm	****	⊽⊽⊽₹⊽	∾ৰ⊽⊽⊽	4 12
VC. ewan, S 2.4717	MULTIELEMENT ICP-MS ANALYSIS Aqua Regia Digestion	е.%	0.81 1.08 0.67 1.20 1.88	0.75 1.63 3.12 3.56 0.29	5.10 4.46 0.39 1.00	2.65
IES II askatch 306) 24;	IS AN, tion	DD Cr	161.3 28.9 34.2 14.8 104.4	4.8 22.3 29.7 21.1 9.0	52.3 71.7 13.6 13.7 <0.1	149.4 641.8
ATOR atoon, S Fax: ()	EMENT ICP-MS / Aqua Regia Digestion	ۍ Ma	158 137 125	173 146 147 47 186	21 155 155 155 155 155 155 155 155 155 1	47 777
<b>BOR</b> st, Saski 31-1033	MENT qua Reg	Sed	3.2 3.4 7.3 7.3 7.3	1.8 7.6 10.5 1.0	23.3 25 2.4 2.4	12.0
TSL LABORATORIES INC. Sth Street East, Saskatoon, Saskatchewan, Tel: (306) 931-1033 Fax: (306) 242-4717	A	PE	0.2 0.6 1.7 0.4	0.000 0.0000 0.000000	0.4 0.3 0.8 0.1	2.8
TSL LABORATORIES INC. 2 - 302 48th Street East, Saskatoon, Saskatchewan, S7K 6A4 Tel: (306) 931-1033 Fax: (306) 242-4717	LIUM	5×	0.01 0.03 0.10 0.34	0.26	0.17 1.77 0.05 0.04	1.04
2 - 302		18 mdd	00000 4-040	10.4 0.3 15.5	29525	12.6
		Ba ppm	7 88 128 7 88 128	27 53 23	75228	398 136
		B mod	88888	88888	88888	88
		Ppb b	200 200 84 84	50.3 8.9 3.3 9.7	0.8 1.1 0.5 0.5 0.5	86.8 43.4
		As	43 43 43 43	26 26 56 56 56	112 112 05 05	44.6
		₹%	0.04 0.05 0.05 0.03	0.09 0.17 1.34 0.01	0.91 1.42 0.09 0.01	0.96 2.91
	0 Pulp	ppm ppm	1.9 0.6 2.5	6.2 0.6 0.7 10.7	0.000	2.1
Mr. Glen Prior Attention: G. Prior Project: HK	Sample: 13 Rock/0 Pulp	Ĕø	001 002 011 012	013 014 015 021	HK151022 HK151023 HK151024 RE HK151024 BLK	STD DS10 STD OREAS45EA
Mr. Attent Projec	Samp	Element Sample	HK151001 HK151002 HK151003 HK151011 HK151011	HK151013 HK151014 HK151015 HK151016 HK151016 HK151016	HK151022 HK151023 HK151024 RE HK1511 BLK	STD DS10 STD OREA

-

A 0.5 g sample is digested with 3 ml 3:1 HCI-HNO3 at 95C for 1 hour and diluted to 10 ml with DI H2O.

Page 1 of 2

.

Mark Acres - Quality Assurance

Signed

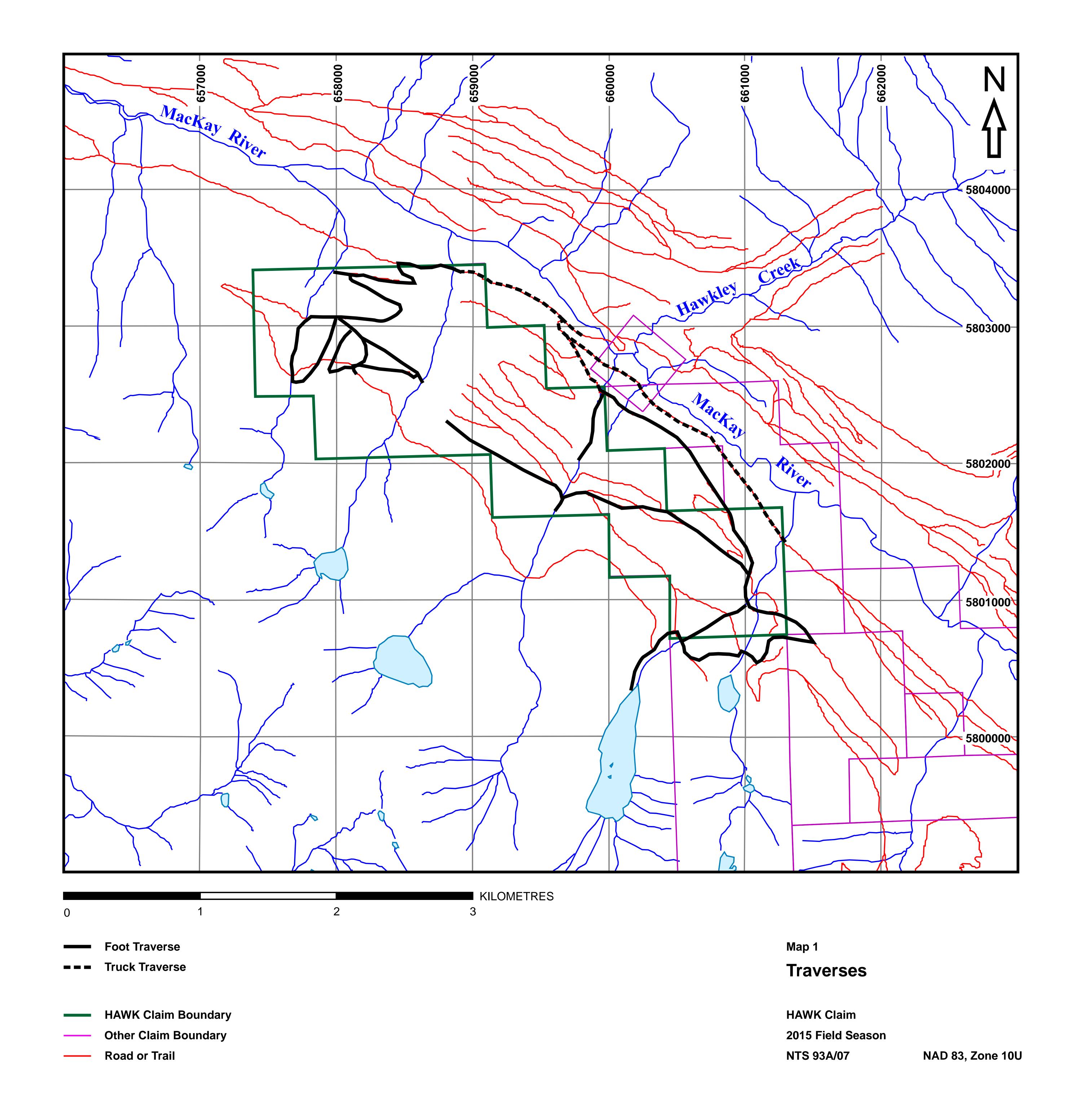
Report No: S52931 Date: March 29, 2016								Mork, Arrive - Chailty Assurgation
Repor Date:								Signed:
6A4								
TSL LABORATORIES INC. 2 - 302 48th Street East, Saskatoon, Saskatchewan, S7K 6A4 Tel: (306) 931-1033 Fax: (306) 242-4717	MULTIELEMENT ICP-MS ANALYSIS Aqua Regia Digestion	uZ mdd	1988 1988 1997 1997	8 14 23 52 5	588885 1 88885	357 29		
IES II askatch 306) 245	IS AN/ tion	N mdd	000000	000000	66666	3.0		
ATOR atoon, S Fax: (	ICP-N ia Diges	> mqq	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	88058	ဆစ်းကားကပေးပြီ	39 286		Pare 2 of 0
<b>BOR</b> st, Saska 31-1033	EMENT ICP-MS A Aqua Regia Digestion	L mqq	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	000000	66666	5.6		d
TSL LABORATORIES INC. 8th Street East, Saskatoon, Saskatchewan, Tel: (306) 931-1033 Fax: (306) 242-4717	TIELE	Ë %	<pre>60.001 60.001 60.001 60.001 60.001 60.001</pre>	60.001 0.001 0.001 0.001 0.001	0.001 0.001 0.001 0.001 0.001	0.068		
7 2 48th : Tel:	MUL	ff Hdd	0.3 0.1 0.5 0.1	0.10,00,00,00,00,00,00,00,00,00,00,00,00,0	0.3 0.9 0.9 0.1	7.6		
2 - 30		ppm	88888	07 07 07 07 07 07 07 07 07 07 07 07 07 0	05202 0222 0222 0222 0222 0222 0222 022	4.6		
		ις m	32 166 32	8 y y y y y y	86 8 33 8 6 6 6 5	63		
		Se	8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	5.4 3.6 9.2	4,4 6,5 8,6 7,8 7,6 7,6 7,6 7,6 7,6 7,6 7,6 7,7 8,6 7,6 7,7 8,6 7,7 8,7 6,7 8,7 6,7 8,7 6,7 7,6 7,7 8,7 6,7 7,6 7,7 6,7 7,6 7,7 6,7 7,6 7,7 6,7 7,6 7,7 8,7 7,6 7,7 7,6 7,7 7,7 7,7 7,7 7,7 7,7 7	22		8
		S Edd	0.7 0.7 1.9 0.3	0.5 1.1 0.2 0.2	818 913 15	2.7		HCHN03
		dS mqq	0.0 0.1 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0	0.0001	0.02	6.5		3 ml 3:1
		w %	0.55 0.52 0.05 1.69	<pre>&lt;0.05 0.23 0.52 0.52 0.05</pre>	0.62 0.39 0.13 0.13	0.27 <0.05		tied with
<b>1</b> 5	/0 Pulp	£ 6	18.5 5.4 18.9 30.9 30.9	555.6 14.0 5.1 2.4 460.0	3.2 9.3 17.0 16.8 ≤0.1	154.1 14.9		e is diger
Mr. Glen Prior Attention: G. Prior Protoct: HK	Sample: 13 Rock/0 Pulp	Element Sample	HK151001 HK151002 HK151003 HK151011 HK151011	HK151013 HK151014 HK151015 HK151016 HK151016 HK151021	HK151022 HK151023 HK151024 RE HK151024 BLK	STD DS10 STD OREAS45EA		A 0.5 g sample is digested with 3 ml 3.1 HCHH00 as 050 feat bound of investigation of 0.0 ml units 10.4000

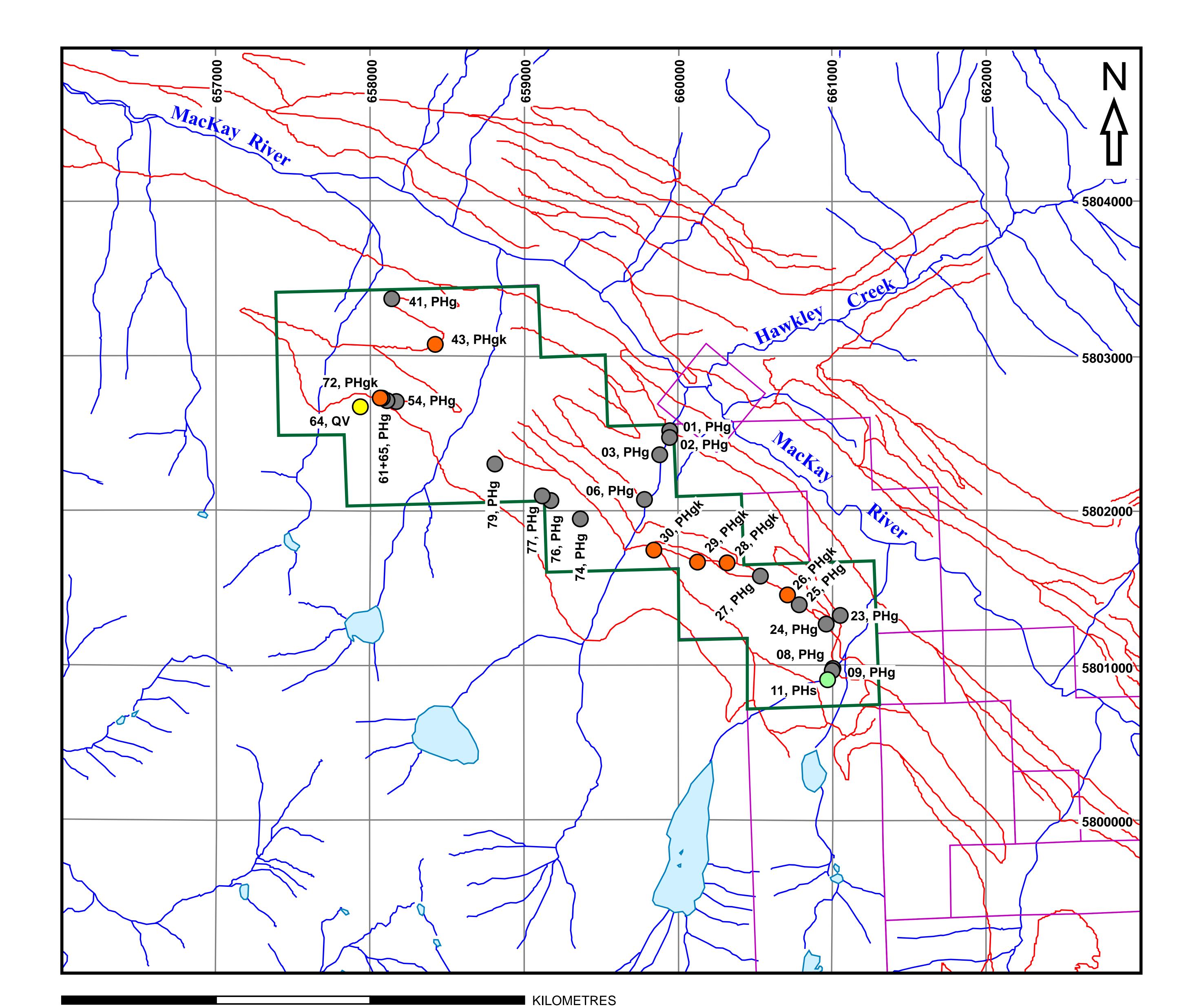
## Appendix 4

## Maps

Base maps from B.C. Ministry of Energy and Mines MapPlace

Coordinates: UTM, NAD 1983, Zone 10U





# **41, PHg** Outcrop Location, Site Number, Rock Code (Site Number Prefix "HK0" Removed)

2

- QV Quartz Vein
- PH Phyllite

0

- g Graphitic
- k Knotted (Fe-carbonate porphyroblasts)
- s Sericitic

Quartz Vein (QV)
 Graphitic Phyllite (PHg)
 Knotted Graphitic Phyllite

3

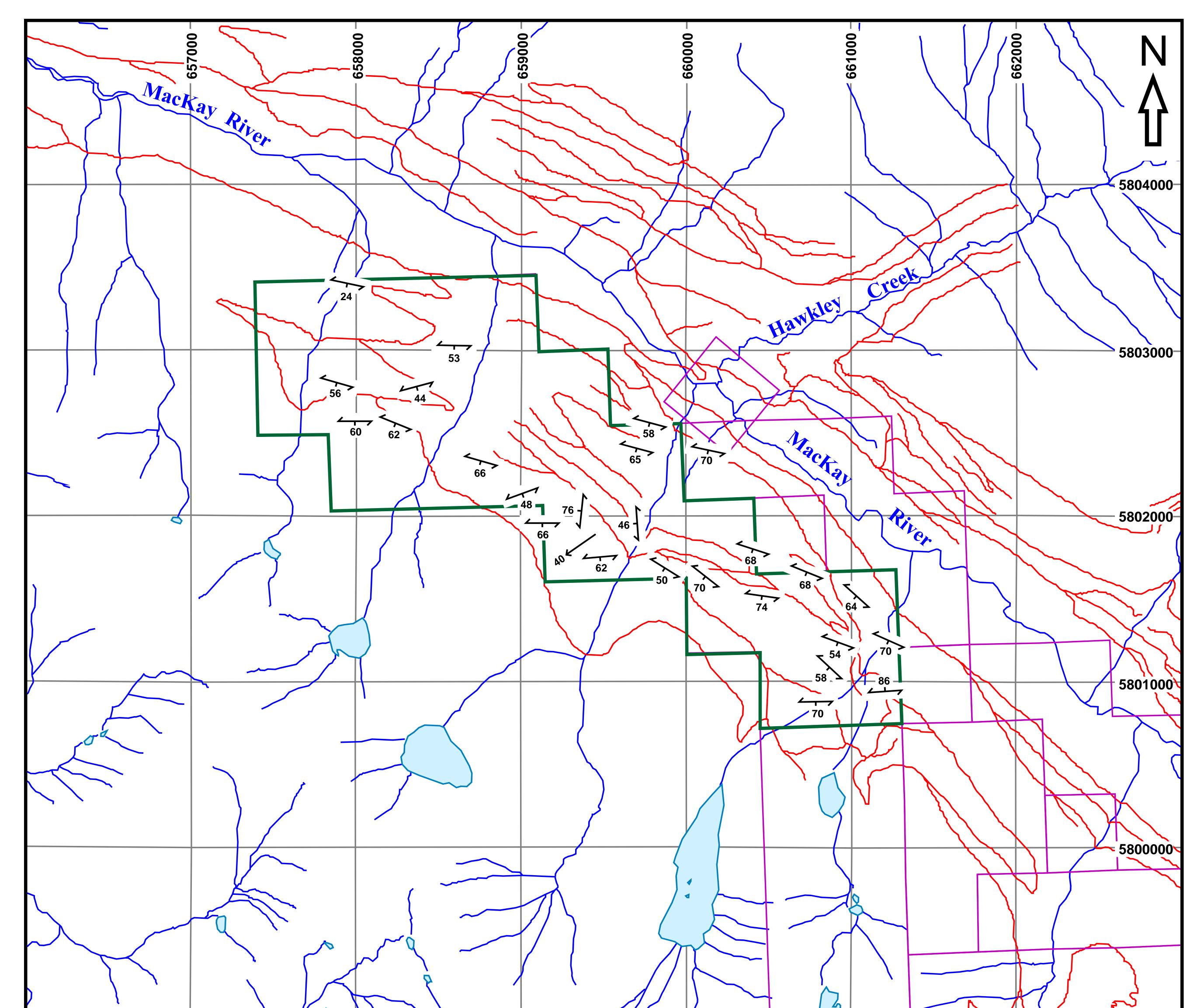
 $\bigcirc$ 

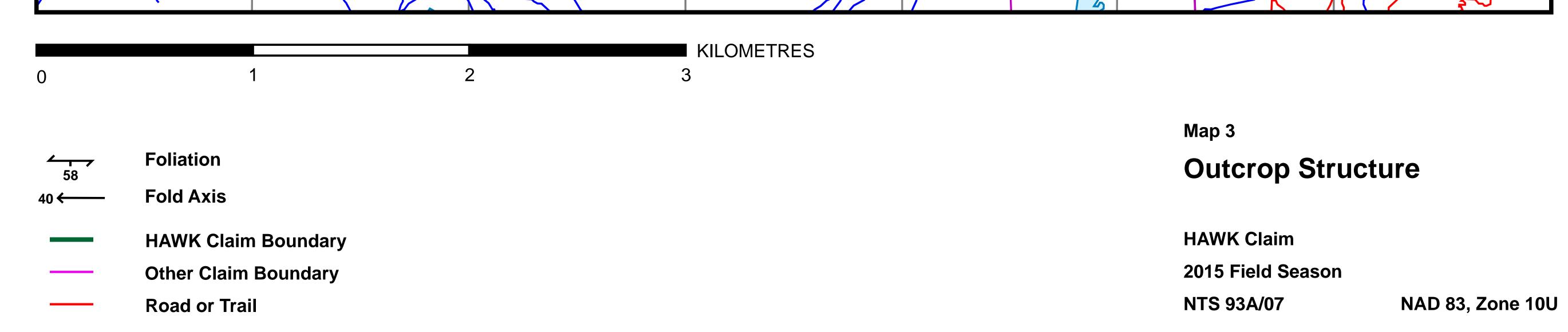
Knotted Graphitic Phyllite (PHgk) Sericitic Phyllite (PHs)

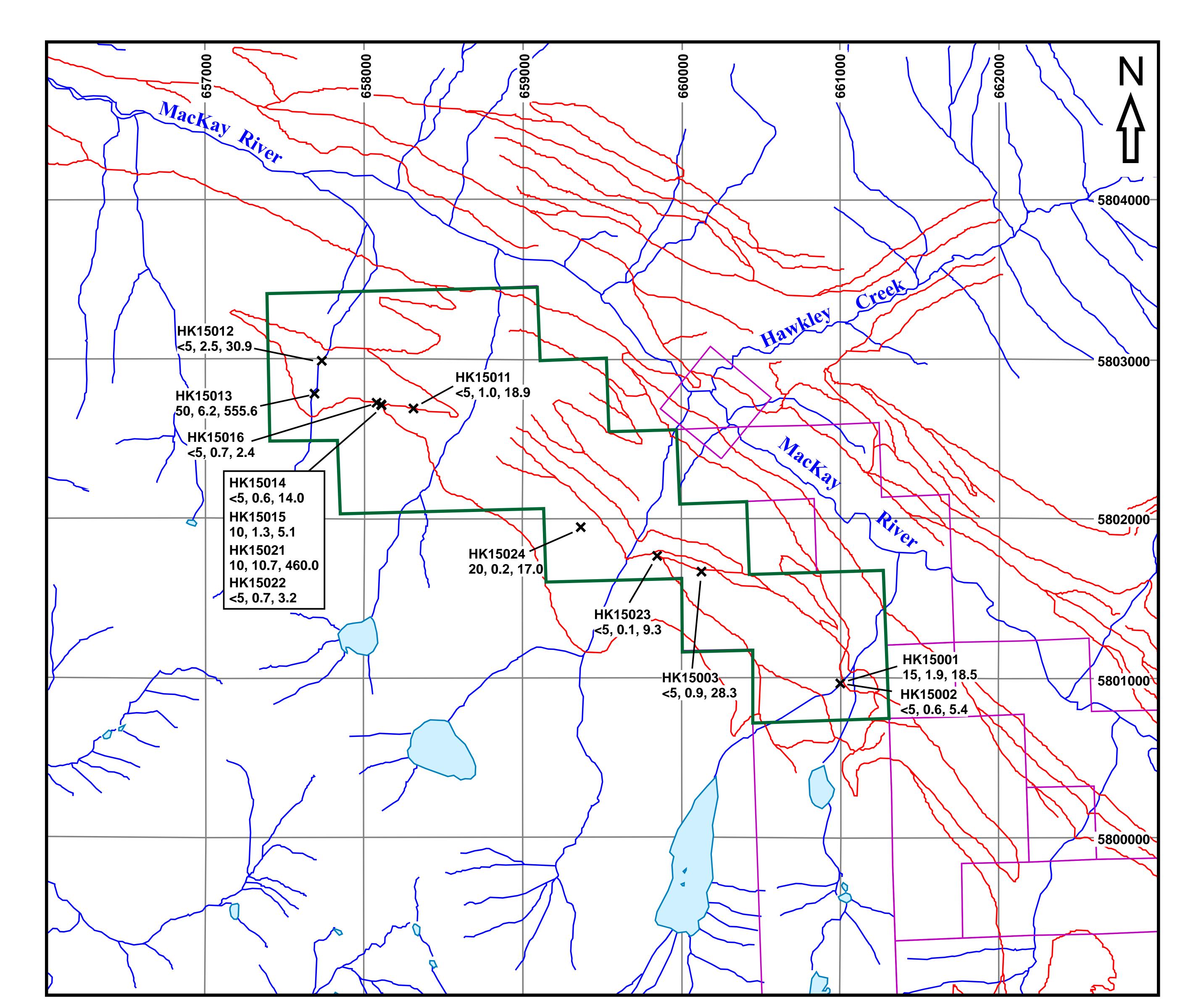
HAWK Claim Boundary

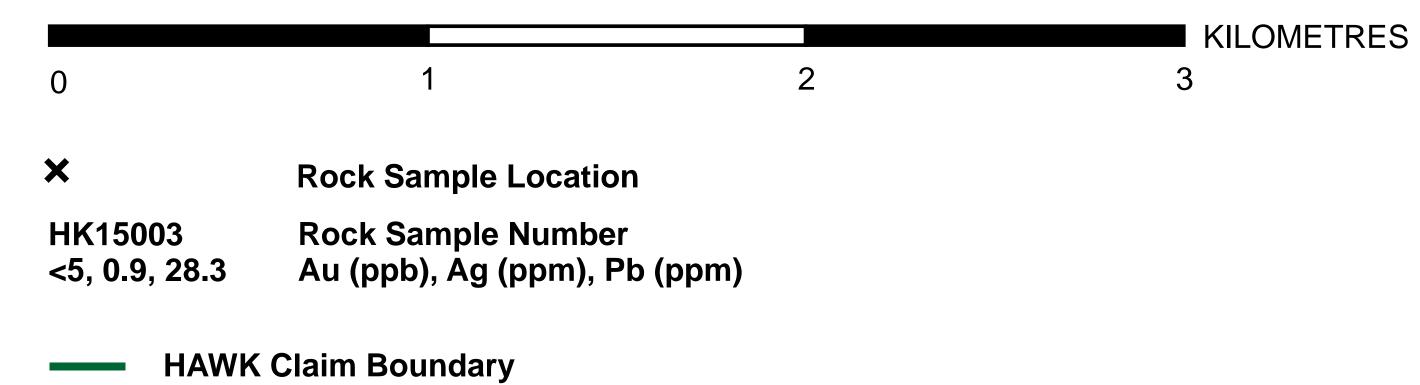
- Other Claim Boundary
- Road or Trail

Map 2 Outcrop Lithology HAWK Claim 2015 Field Season NTS 93A/07 NAD 83, Zone 10U







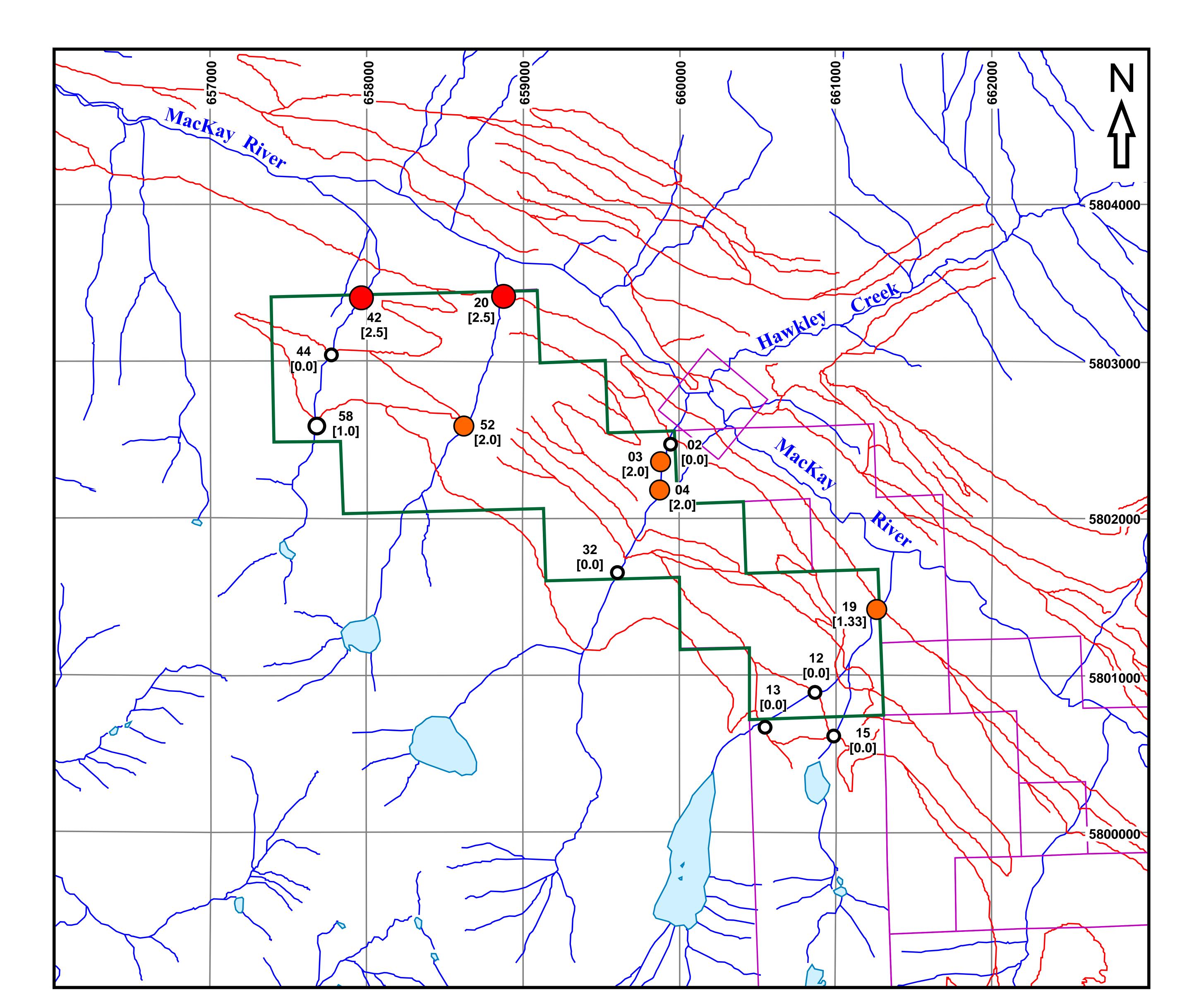


**Other Claim Boundary** 

— Road or Trail

Map 4 Rock Sample Geochemistry

HAWK Claim2015 Field SeasonNTS 93A/07NAD 83, Zone 10U



# Millometres 0 1 2 3

52Panning Site Location, Site Number,[2.0]Average Number of Gold Grains per Pan<br/>(Site Number Prefix "HK0" Removed)

HAWK Claim Boundary

**Other Claim Boundary** 

— Road or Trail

>2 to 3
> 1 to 2
> 0 to 1
0

Average Number of Gold Grains per Pan

Map 5 **Gold Grain Distribution in Stream Sediment** HAWK Claim 2015 Field Season NTS 93A/07 NAD 83, Zone 10U