

**NORANDA/KUROKO-TYPE SULPHIDE MINERALIZATION
ON THE SCOTCH CREEK PROPERTY**

Map-staked Claims

Claim Name	Area	Claim Number
MARION	162.86 ha (402.26 A)	604866
PENNY	81.43 ha (201.13 A)	604872
GLORIA	81.43 ha (201.13 A)	604873
KARALEE	162.82 ha (402.17 A)	604938
MARION 2	366.36 ha (904.91 A)	605310
SOUTHERN CROSS 1	183.12 ha (452.31 A)	794642
SOUTHERN CROSS 2	101.76 ha (251.35 A)	794662
SOUTHERN CROSS 3	244.34 ha (603.52 A)	801662
Total Property Area	1,384.12 ha (3,418.78 A)	

Location:

Kamloops Mining Division
N.T.S.: 82 L/13 + L/14 B.C.: 082L 093
50° 57' 15"N., 119° 29' 26" W.
U.T.M.: 5,647,460 N., 324,480 E.

Owner:

Signal Exploration Inc.
1021 Kilmer Road, North Vancouver, British Columbia, V7K 1P9

A Technical Report Written for:

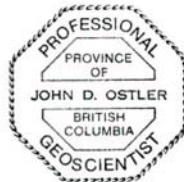
Signal Exploration Inc.
1021 Kilmer Road, North Vancouver British Columbia, V7K 1P9

A Technical Report written by the Qualified Person:

John Ostler; M.Sc., P.Geo., Consulting Geologist

As of the Effective Date: **March 15, 2011**

As Amended: **July 30, 2011**



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NORANDA/KUROKO-TYPE SULPHIDE MINERALIZATION ON THE SCOTCH CREEK PROPERTY

SUMMARY

The Scotch Creek property comprises 8 map-staked claims covering 1,384.12 hectares (3,418.78 acres) in the Kamloops Mining Division and in the Kamloops Land District in Shuswap Highland in south-central British Columbia on N.T.S. map sheets 82 L/13 and L/14, and on B.C. map sheet 082L 093. The current expiry dates of these claims ranges from June 18, 2018 to November 25, 2020.

The registered owner of the claims is Signal Exploration Inc. which owns 100% interest in and to the claims comprising the property. No parts of the Scotch Creek property cover private land. The nearest native land is the Scotch Creek No. 4 Indian Reserve, located 0.75 km (0.46 mi) south of the southeastern corner of the SOUTHERN CROSS 3 (801662) claim. The area from Shuswap to Adams Lake is within the traditional territory of the Adams Lake, Little Shuswap, and Neskonlith native bands. Consultation with those bands will be necessary during mine development on the Scotch Creek property. Signal has not made contact with any of those native bands.

There is no plant or equipment, inventory, mine or mill structure on these claims. It is anticipated that damage bonds of \$5,000 and \$10,000 respectively will be required for the first and second phases of recommended exploration. Application for a permit to conduct the first phase of the recommended work program is in progress.

The Scotch Creek property occupies a southeasterly facing slope adjacent with the southeastern part of Adams Plateau. Elevations on the property range from 1,375 m (4,511 ft) at its northwestern corner on the MARION 2 (605310) claim to 950 m (3,117 ft) on the PENNY (604872) claim at the southeastern corner of the property-area. Adequate fresh water for a mining operation could be drawn by gravity from Corning (Lee) Creek from a location about 1.2 km (0.73 mi) northwest of the northwestern corner of the property.

The Scotch Creek property hosts a second-growth forest comprised mostly of cedar, spruce, fir, and cottonwood trees which is in various states of growth. There is insufficient timber suitable for mining on the claims.

Two parallel, high-voltage power transmission lines cross the southeastern parts of the PENNY (604872), SOUTHERN CROSS 2 (794662), and SOUTHERN CROSS 3 (801662) claims in the property's southeastern part. A three-phase power transmission line services residences along Lee Creek Road, within 2.2 km (1.34 mi) of the southern boundary of the property.

The Scotch Creek area experiences cold winters and hot, dry summers. Winter snow falls in the property area by late November and stays on the ground until April in open areas, and until June on shady slopes at higher elevations in the north-western part of the claim-area. Surface work can be conducted on the property from April to November during a normal year.

The property is accessible by road from the south, west, and east. The easterly route up the 670 and 671 roads is the easiest route and is navigable by 2-wheel drive vehicles in dry summer weather. The 670 road diverges from the Scotch Creek-Celista road west of the village of Scotch Creek north of Shuswap Lake. That road connects with the Squilax-Adams Lake road that diverges from B.C. Highway 1 at Squilax, between Shuswap and Little Shuswap lakes. Most of the property-area is accessible via a system of old logging roads that are in various conditions.

The village of Scotch Creek, located about 20 km from the claims, is the nearest supply and service center to the property. Services at Scotch Creek are sufficient to support surface exploration programs such as prospecting, mapping, or soil sampling. The town of Chase, located on B.C. Highway 1 about 50 km (30.5 mi) southwest of the property, hosts the nearest helicopter base and a rail yard where mineral products can be loaded into rail cars for transport to a smelter. The city of Kamloops, located on B.C. Highway 1 about 99 km (60.4 mi) southwest of the property, is the nearest regional service and supply centre. Kamloops has services necessary to support a mining operation.

Current geologic (2010) mapping has revealed that the metasedimentary and metavolcanic rocks in the Scotch Creek property-area are an upright succession that represent various coeval facies resulting from two concurrent eruptions into a shallow marine basin. The eruption responsible for the greatest deposition of volcanic material in the current property-area emanated from a vent-area north of it. That eruption produced rhyolitic to dacitic pyroclastic rock that is barren of mineralization. A secondary eruption from a vent-area

located east-northeast of the current property was more trachytic in composition and was responsible for the mineralization exposed in the property-area.

Noranda/Kuroko-type massive and disseminated mineralization was deposited in a single stratigraphic interval hosted in chloritic ash and fine-grained crystal tuff during a lull in the east-northeasterly eruption. It is located about 30 m (98.4 ft) stratigraphically above the upper contact of a distinctively blue-grey-weathering, trachytic ash tuff. Consequently, the general location of mineralization is easy to predict on the ground in areas of significant outcrop.

On the open palaeo-sea-floor, sulphide deposition is about 25 cm (0.82 ft) thick. Where sulphide-bearing brines have pooled in low areas “basins”, massive sulphide thicknesses exceed 1 m (3.05 ft). Maximum massive sulphide thickness remains unknown due to sparse outcrop and drill data. Four “basins” have been identified in the southern part of the property-area by current work augmented by the results of previous surveys and old drill data. Stratigraphy has been folded twice which may have resulted in flow and thickening of sulphide mineralization in fold-hinge areas.

Current (2010) soil survey results indicate that sulphide mineralization is zoned with regard to copper and zinc contents in the southeastern part of the property-area. Of particular interest, are copper-rich areas within the northeastern and southeastern basins, and with a lesser intensity in the southwestern basin. These areas of high soil-copper contents are interpreted to be reflections of copper-rich zones within more extensive zinc-rich sulphide accumulations. Areas of anomalous soil-silver concentrations within soil-zinc anomalies are deemed to represent zones of high lead and silver concentration in sulphide accumulations assuming that most silver is associated with galena (PbS).

Thrust faulting after the second phase of folding has cut outcrop into extensive panels resulting in the repetition of stratigraphy and the semblance of numerous sulphide-bearing horizons across the property-area.

A two-phase exploration program is recommended. The first phase comprises geological mapping, prospecting, and soil survey in conjunction with line cutting, electromagnetic, ground magnetic, and 3-dimensional, induced polarization surveys. The results of the first-phase work program should produce an assessment of the rock to a depth of about 300 m (984 ft) in the southern and central parts of the property-area. It is expected that this assessment will be sufficiently detailed to enable location of the best target-areas to drill for massive sulphide mineralization.

If reasonable encouragement is generated by the results of the first-phase program, it should be followed by a second-phase program comprising 2,000 m (6,561 ft) of NQ or NT diamond core drilling. The estimated costs of the two recommended phases of exploration are as follow:

Program	Estimated Cost inc. H.S.T. + Contingency
1st Phase: geological mapping, prospecting, soil and geophysical surveys	\$ 272,481
2nd Phase: 2,000 m (6,561 ft) of NQ or NT drilling	\$ 387,883
Total Estimated Cost:	\$ 660,364

NORANDA/KUROKO-TYPE SULPHIDE MINERALIZATION ON THE SCOTCH CREEK PROPERTY

1.0 INTRODUCTION

1.1 Acknowledgment

The author would like to thank the management and staff of Discovery Consultants Ltd. of Vernon, British Columbia for generously opening their property files and providing copies of unpublished reports regarding the Scotch Creek Property-area.

1.2 Introduction

The author, John Ostler; M.Sc., P.Geo., was commissioned by Signal Exploration Inc. through Cassiar East Yukon Expediting Ltd. to conduct exploration on the Scotch Creek property, and to write this report entitled “Noranda/Kuroko-type Sulphide Mineralization on the Scotch Creek Property” dated effective March 15, 2011 and amended July 30, 2011 to comply with changes in National Instrument 43-101 and 43-101F1 which became effective on June 30, 2011.

This report was written to produce a current Technical Report regarding the Scotch Creek property, Signal Exploration Inc.’s major asset, in order to provide some of the documentation necessary to support an initial public offering of the company’s shares.

This report is based upon published and unpublished records of the results of previous exploration in the Scotch Creek property-area, of property examinations and regional geological mapping conducted by geologists of the British Columbia Geological Survey and of the Geological Survey of Canada, and the results of the current (2010) exploration program on the Scotch Creek property which was conducted and supervised by the author. Citations of that work are in standard format (section 12.0, this report).

1.2.1 Current Personal Inspection

The author personally supervised or conducted all of the current (2010) exploration program on the Scotch Creek property which comprised: geological mapping, prospecting, and soil survey. He was on the property from May 31 to June 3, June 11 to 15, August 30 to September 17, and September 21 to October 2, 2010. Also, the author examined various parts of the 2010 exploration area on several occasions during his work on a near-by property from June 3 to 17 and from June 24 to July 9, 2011, and that his attendance on the property during June and July, 2011 represents a Current Personal Inspection of the Scotch Creek property in

compliance with part 6.2 of National Instrument 43-101.

1.3 Reliance Upon Other Experts

The author has relied upon information provided by the government of British Columbia in matters of land tenure, security of title, and regulations that may affect one's ability to develop the Scotch Creek property.

1.4 Property Description and Location

The Scotch Creek property comprises 8 map-staked claims covering 1,384.12 hectares (3,418.78 acres) in the Kamloops Mining Division and in the Kamloops Land District. The property is located on N.T.S. map sheets 82 L/13 and L/14, and on B.C. map sheet 082L 093 (Figures 1 and 2). The centre of the property-area is at 50° 57' 15" north latitude and at 119° 29' 26" west longitude (U.T.M.: 5,647,460 N., 324,840 E.) (Table 3).

The registered owner of the mineral claims comprising the Scotch Creek property is Signal Exploration Inc. which owns 100% interest in and to the claims comprising the property.

The tenures of the claims comprising the Scotch Creek property (Figure 2) are as follow:

Table 1
Map-staked Claims

Claim Name	Record No.	Area: hectares (Acres)	Record Date	Expiry Date	Owner
MARION	604866	162.86 (402.26)	May 22, 2009	Nov. 22, 2020	Signal Exploration Inc.
PENNY	604872	81.43 (201.13)	May 22, 2009	Nov. 22, 2020	Signal Exploration Inc.
GLORIA	604873	81.43 (201.13)	May 22, 2009	Nov. 22, 2020	Signal Exploration Inc.
KARALEE	604938	162.82 (402.17)	May 25, 2009	Nov. 25, 2020	Signal Exploration Inc.
MARION 2	605310	366.36 (904.91)	June 2, 2009	Dec. 2, 2020	Signal Exploration Inc.
SOUTHERN CROSS 1	794642	183.12 (452.31)	June 18, 2010	June 18, 2018	Signal Exploration Inc.
SOUTHERN CROSS 2	794662	101.76 (251.35)	June 18, 2010	June 18, 2018	Signal Exploration Inc.
SOUTHERN CROSS 3	801662	244.34 (603.52)	June 28, 2010	June 28, 2018	Signal Exploration Inc.
Total Property area		1,384.12 (3,418.78)			

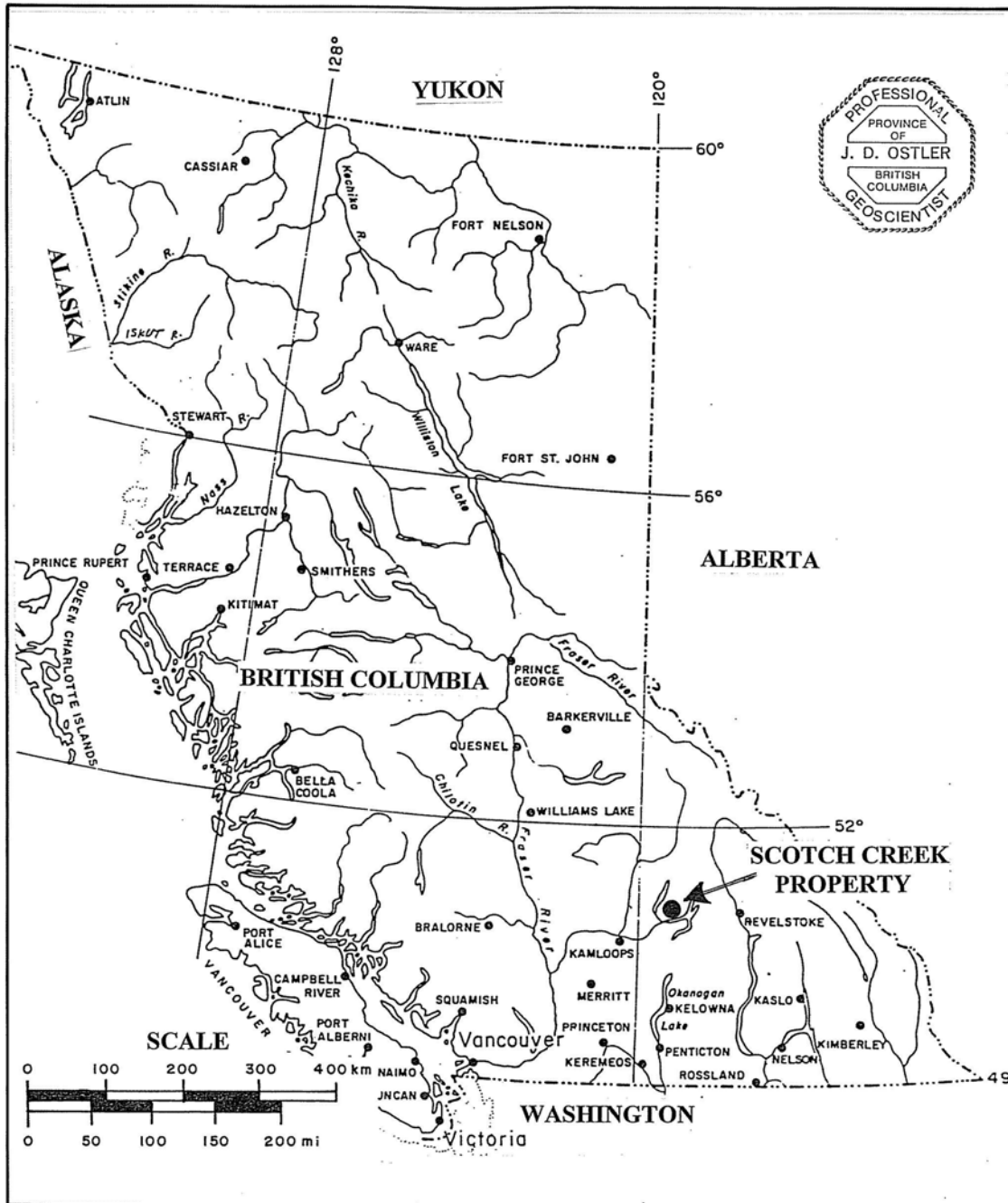


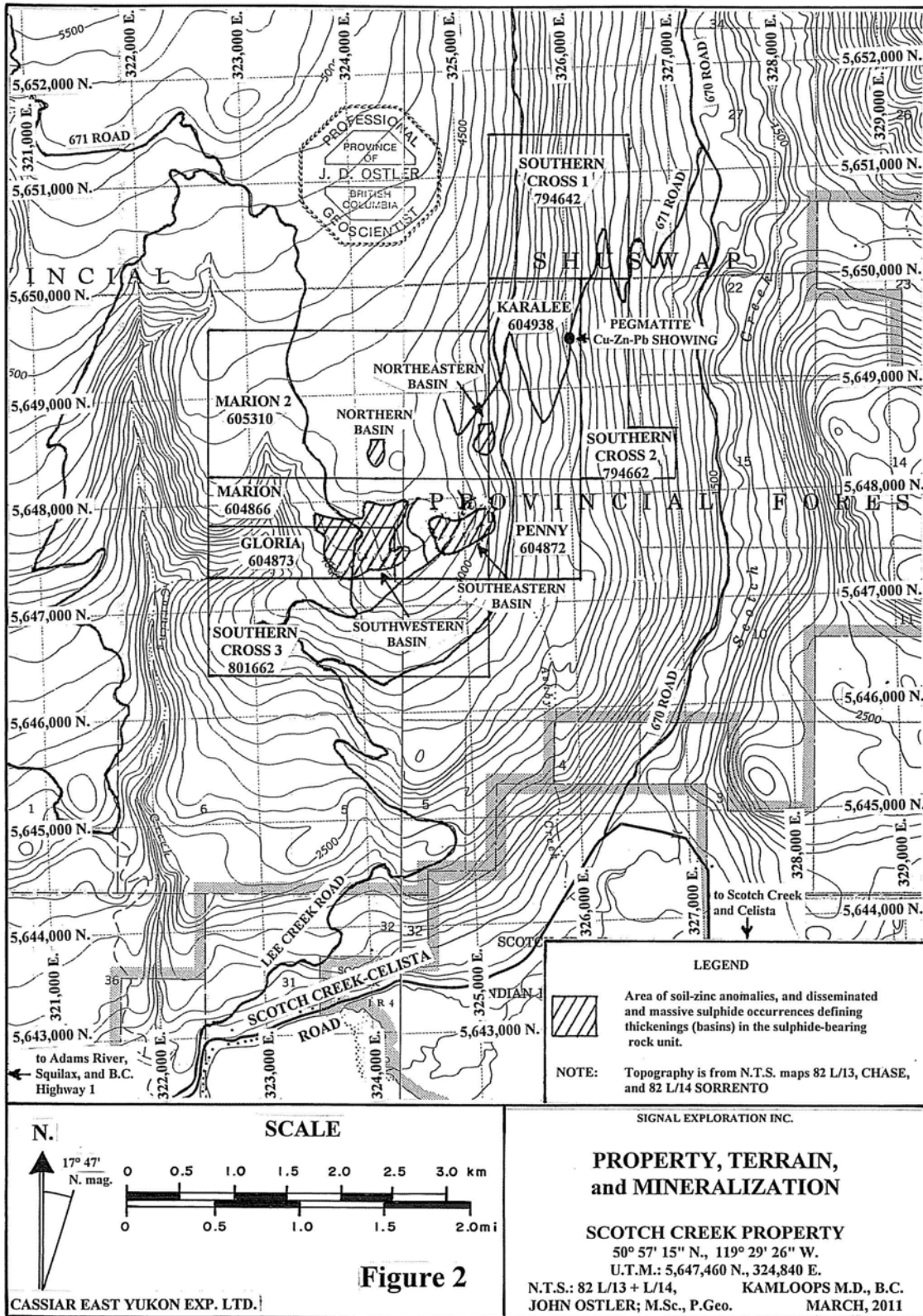
Figure 1

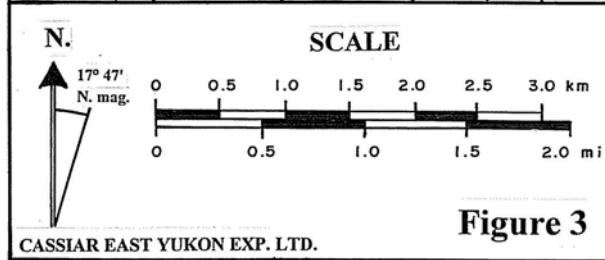
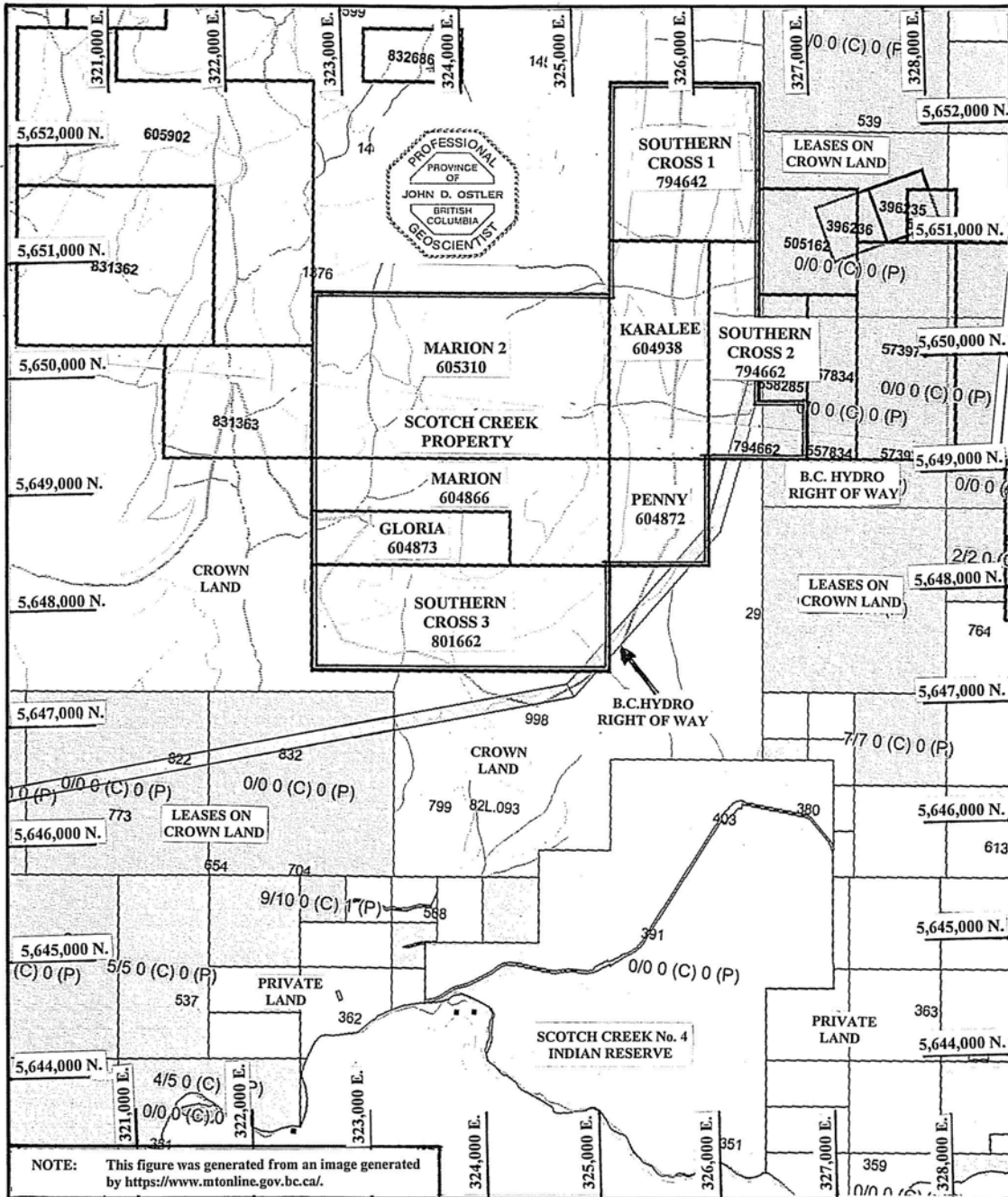
CASSIAR EAST YUKON EXP. LTD.

SIGNAL EXPLORATION INC.

GENERAL LOCATION

SCOTCH CREEK PROPERTY
 50° 57' 15" N., 119° 29' 26" W.
 U.T.M.: 5,647,460 N., 324,840 E.
 N.T.S.: 82 L/13 + L/14, KAMLOOPS M.D., B.C.
 JOHN OSTLER; M.Sc., P.Geo. MARCH, 2011





SIGNAL EXPLORATION INC.

SURFACE TENURE

SCOTCH CREEK PROPERTY
 50° 57' 15" N., 119° 29' 26" W.
 U.T.M.: 5,647,460 N., 324,840 E.
 N.T.S.: 82 L/13 + L/14, KAMLOOPS M.D., B.C.
 JOHN OSTLER; M.Sc., P.Geo. MARCH, 2011

Map-staked mineral claims in British Columbia are endowed with metallic and some industrial mineral rights but no surface rights. Surface rights can be obtained during production permitting.

Currently in British Columbia, a mineral claim holder must do and record a minimum of \$4 worth of assessment work or pay \$4 cash in lieu of work per year for each hectare within a claim to maintain that claim in good standing for the first three years of its tenure. From the 4th year onward, a minimum of \$8 worth of assessment work or cash in lieu of work must be submitted per hectare to keep a mineral claim in good standing each year.

On November 2, 2010 sufficient assessment work was filed to extend the expiry dates of the claims to dates ranging from June 18, 2018 to November 25, 2020 (Mineral Titles event No. 4,806,511). Extending the expiry dates of the claims for one year would cost as follows:

Table 2
Annual Cost of Assessment Work and Filing Fees

Year	Property Area (ha) Requiring Work for 1 Year Expiry Extension	Work @ \$8/ha	Filing Fees @ \$0.40/ha	Total Annual Cost
2011 to 2016	0			\$ 0.00
2017 to 2019	529.22	\$ 4,233.76	\$ 211.69	\$ 4,445.45
2020 and subsequent years	1,384.12	\$ 11,072.96	\$ 553.65	\$ 11,626.61

These are map-staked claims that are located on the provincial virtual mineral tenure grid. No posts or lines exist on the ground; thus, there is no uncertainty regarding the area covered by the claims. Also, there are no natural features and improvements relative to, and affect the location of the outside property boundaries. However, there are conditions that may affect the design of future exploration and development programs on the property (Figure 3). Leases (SID (PIN) 90021761 and 3341900) secure a B.C. Hydro power line right of way above the southeastern parts of the PENNY (604872), SOUTHERN CROSS 2 (794662), and SOUTHERN CROSS 3 (801662) claims. This right of way is located about 1.2 km (0.73 mi) southeast of the primary exploration target area on the property (Figures 2 and 3).

According to information provided by the government of British Columbia through the Tantalus Gator system and the Integrated Land Resource Registry, available at www.mtonline.bc.ca and at www.ILRR.ca, no parts of the Scotch Creek property cover private land. The nearest native reserve to the Scotch Creek property is the Scotch Creek No. 4 Indian Reserve, located 0.75 km (0.46 mi) south of the southeastern corner of the property (Figure 3). The area between Shuswap and Adams lakes is within territory of the Adams Lake, Little Shuswap, and Neskonlith native bands. Consultation with those bands would be necessary during mine development. There is no plant or equipment, inventory, mine or mill structure on these claims.

All Noranda/Kuroko-type sulphide mineralization on the property is hosted by a single stratigraphic unit. Four areas of comparatively thick sulphide accumulation “basins” have been identified tentatively by current (2010) soil survey and geological mapping. The locations of the property center and significant exploration areas within the property area, including the four “basins”, are as follow (Figures 2 and 18):

Table 3
Locations of Significant Areas on the Scotch Creek Property

Center of Entity	U.T.M. Co-ordinates	Longitude and Latitude
property centre	5,647,460 N., 324,840 E.	50° 57' 15" N., 119° 29' 26" W.
Centre of anomalies and previous main drilling area on the MARION (604866) claim	5,647,483 N., 324,938 E.	50° 57' 17" N., 119° 29' 44" W.
Pegmatitic scarn sulphide mineralization on the 671 road on the northeastern KARALEE (604938) claim	5,649,465 N., 326,022 E.	50° 58' 20" N., 119° 28' 48" W.
Approximate centre of the 2010 soil anomalies defining the northeastern sulphide basin	5,648,400 N., 325,200 E.	50° 57' 38" N., 119° 29' 21" W.
Massive sulphide intersection in DDH SC-3 near the centre of the southeastern sulphide basin	5,647,695 N., 324,970 E.	50° 57' 15" N., 119° 29' 32" W.
Disseminated sulphide intersection in SC-4 near the centre of the southwestern basin	5,647,440 N., 323,895 E.	50° 57' 06" N., 119° 30' 26" W.
Approximate centre of the 2010 soil anomalies defining the northern sulphide basin	5,648,400 N., 324,000 E.	50° 57' 37" N., 119° 30' 22" W.
0.91 tonne (1-ton) boulder of massive sulphide containing up to 10% copper found during 1970 prospecting on the current GLORIA (604873) claim	5,647,735 N., 322,940 E.	50° 57' 15" N., 119° 31' 16" W.

At the date of the amendment of this Technical Report, being July 30, 2011, the author knows of no royalties, back-in rights, payments, or agreements and encumbrances to which the Scotch Creek property is subject. The Scotch Creek property is subject to no environmental liabilities from previous exploration or mining activities.

Permits from the British Columbia government and environmental bonds will be required to conduct the recommended exploration program. It is anticipated that the cost of bonds for the first and second phases of that program will be \$5,000 and \$10,000 respectively. Application for a permit to conduct the first phase of the recommended work program is in progress.

1.5 Accessibility, Climate, Local Resources, Infrastructure, and Physiography

The Scotch Creek property occupies a southeasterly facing slope adjacent with Adams Plateau. Elevations of the property range from 1,375 m (4,511 ft) at its northwestern corner on the MARION 2 (605310) claim to 950 m (3,117 ft) on the PENNY (604872) claim at the southeastern corner of the property-area. The northwestern part of the property-area is occupied by gentle slopes generally less than 10°; its southeastern part hosts steep slopes averaging 30° (Figure 2).

The Scotch Creek property hosts a second-growth forest comprised mostly of cedar, spruce, fir, and cottonwood trees which is in various states of growth. There is insufficient timber suitable for mining on the claims.

The property is accessible by road from the west, south, and east. The eastern route is the easiest way to gain access to the property. Directions are as follow:

Between Little Shuswap and Shuswap lakes, leave B.C. Highway 1 and take the Squilax Road for about 3 km (1.8 mi) northward to near Adams River where the road divides. At the divide, turn to the right onto the Scotch Creek-Celista road and follow it for 10.4 km (6.3 mi) to the 670 (Scotch Creek Main) road. Leave the pavement by turning left onto the 670 road. The logging roads in this area are maintained by Federated Co-operatives Limited which uses F.M. radio frequency 157.320 to control road traffic. At about 7.1 km (4.3 mi) up the 670 road turn left (north-westward) up the 671 road toward the high-voltage power line. The Scotch Creek property is crossed by the 671 road from about 6 to 13 km (3.7 to 7.9 mi) along it. Most of the property-area is accessible via a system of old logging roads that are in various conditions.

The village of Scotch Creek, located on the Scotch Creek-Celista road about 20 km from the claims, is the nearest supply and service center to the property. Services at Scotch Creek are sufficient to support surface exploration programs such as prospecting, mapping, or soil sampling. The town of Chase, located on B.C. Highway 1 about 50 km (30.5 mi) southwest of the property, hosts the nearest helicopter base and a rail yard where mineral products can be loaded for rail transport to a smelter. The city of Kamloops, located on B.C. Highway 1 about 99 km (60.4 mi) southwest of the property, is the nearest regional service and supply centre with services necessary to support a mining operation.

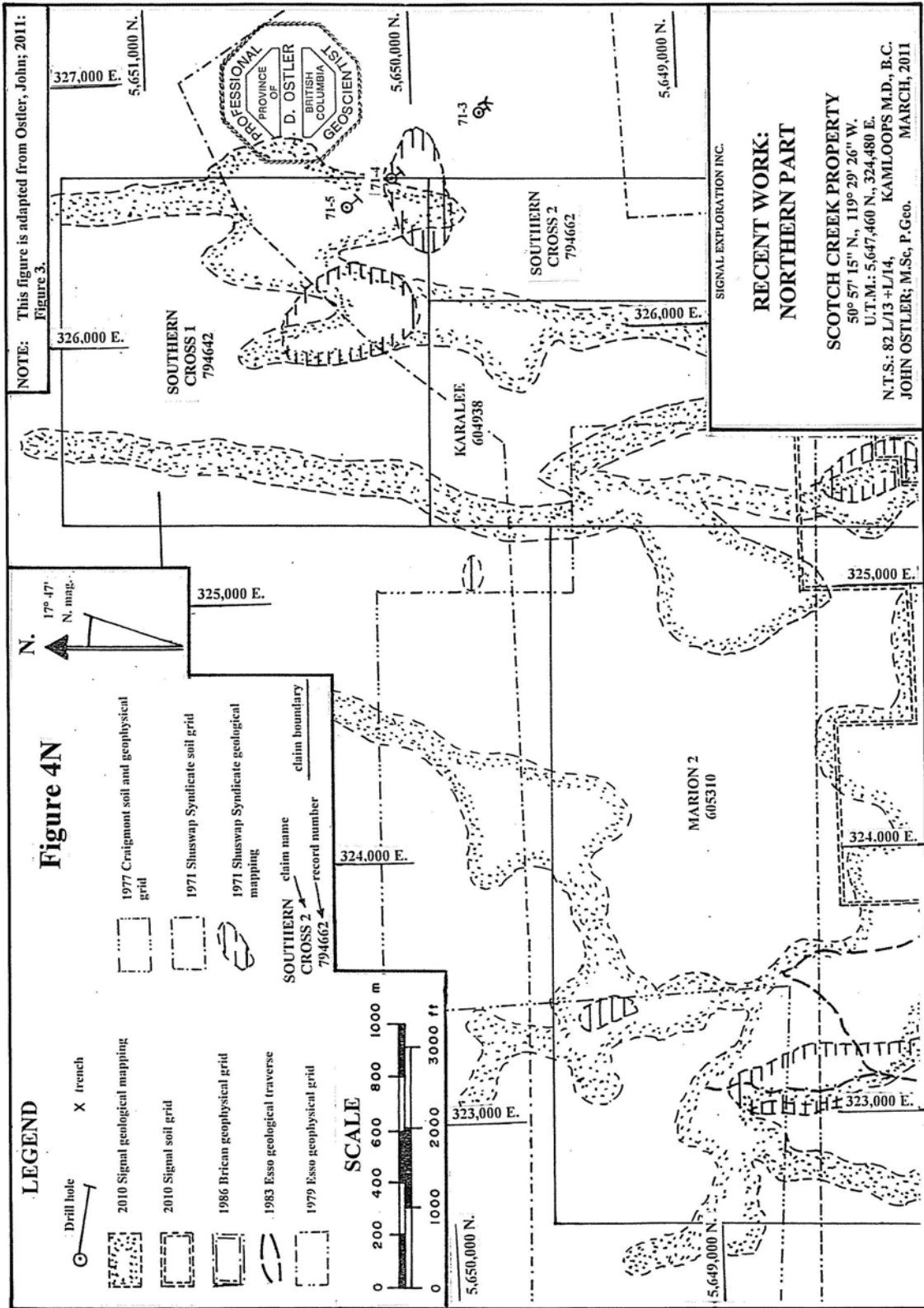
The Scotch Creek area experiences cold winters and hot, dry summers. Winter snow falls in the property area by late November and stays on the ground until April in open areas, and until June on shady slopes at higher elevations in the north-western part of the claim-area. Surface work can be conducted on the property from April to November during a normal year.

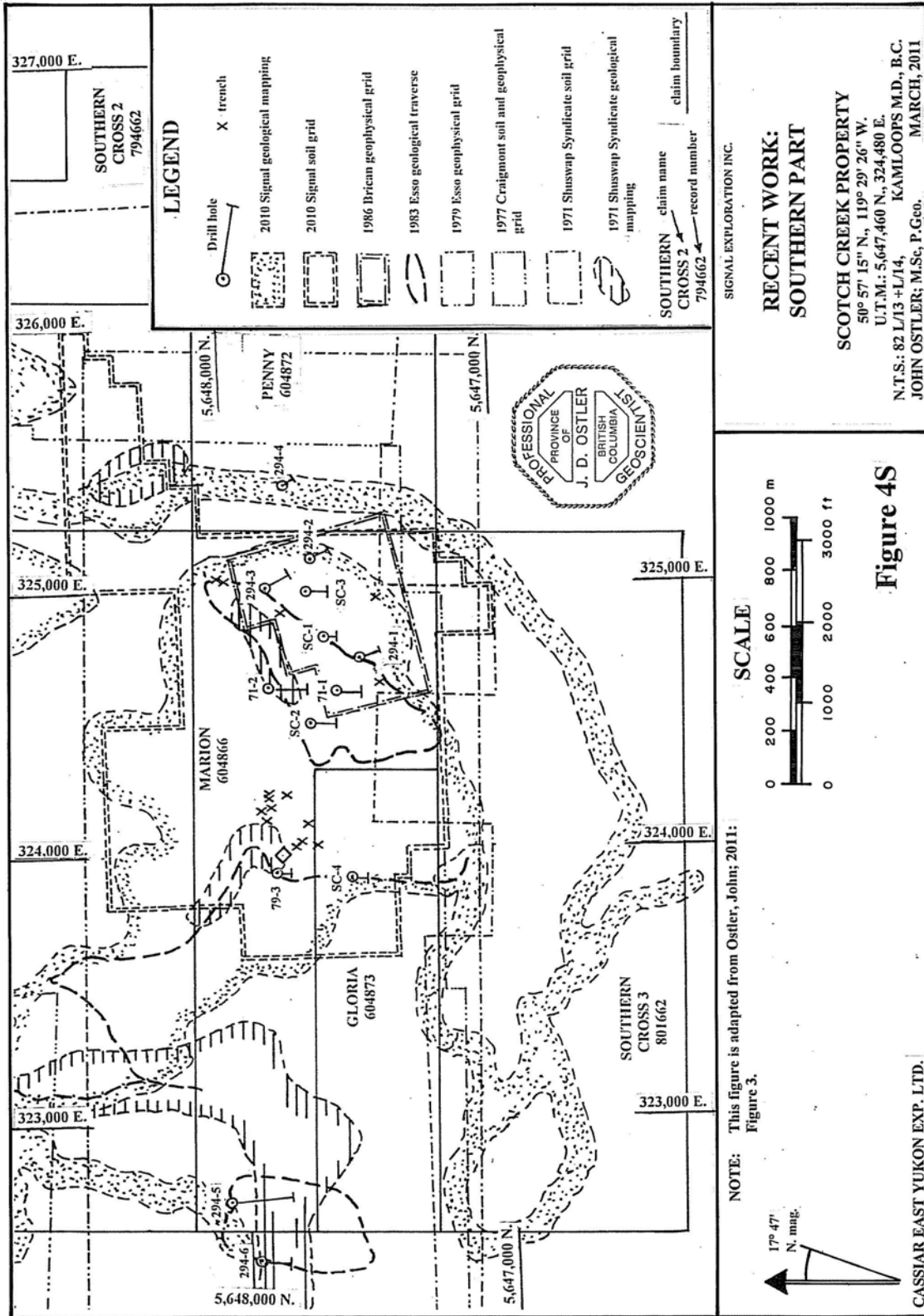
The current exploration targets on the property are on crown land with no special restrictions on development thereon (Figures 2 and 3). Upon development permitting, one normally is able to secure surface rights necessary to conduct a permitted mining operation. The author knows of no legal impediment to Signal Exploration Inc. being able to secure such surface rights as part of the permitting process.

Two parallel, high-voltage power transmission lines cross the southeastern part of the property (Figure 3). A three-phase power transmission line services residences along Lee Creek Road, within 2.2 km (1.34 mi) of the southern boundary of the property. Adequate fresh water for a mining operation could be drawn by gravity from Corning (Lee) Creek from a location about 1.2 km (0.73 mi) northwest of the northwestern corner of the property (Figures 2 and 3).

Both the mining business and the pool of professionals and skilled tradesmen who serve it are international and mobile. The Adams Plateau area has already demonstrated that it was able to attract personnel to work at mines in the area. That area has sufficient amenities to attract the people needed to operate a new mine.

There is adequate, reasonably flat area appropriate for erecting an mill and developing a tailings pond on the MARION (604866) and MARION 2 (605310) claims (Figures 2).





2.0 HISTORY

2.1 Chronology of Ownership and Exploration of Claims in the Scotch Creek Property-area

Pre-1927

During the 1920s, Adams Plateau became known for its numerous zinc-lead-silver showings. The area was intensively prospected.

1927 The Elsie and Wallace zinc-lead-silver occurrences were discovered on the slope above the eastern shore of Adams Lake.

1928 Granby Mining Smelting and Power Company optioned the Elsie and conducted an extensive program of prospecting, trenching, and drilling on it (B.C. Min. Mines, Ann. Rept.;1928: p. C 210.). This greatly increased prospecting activity across Adams Plateau.

Probably at about the same time, a series of at least 10 hand-trenches were dug to explore disseminated and massive sulphide mineralization in chloritic felsic crystal tuff east and south of the horse logging camp on the central part of the current MARION (604866) claim (Figure 5C). It is assumed that all of the current property-area was prospected by the late 1920s.

The author found a massive sulphide block weighing in excess of 90 kg (198 lb) close to the doorway of the ruined bunkhouse in the logging camp (Figure 5C). The block had not moved for several decades and was assumed to have been placed there about the time that the hand trenches were dug. The author broke it with a sledge and sampled it. A composite chip sample (S23-1) contained: 456 ppm copper, 0.545% lead, 178 ppm zinc, >1% arsenic, 47.6 gm/mt (1.39 oz/ton) silver, and 2.05 gm/mt (0.06 oz/ton) gold (Table 7). The block was comprised of mostly pyrrhotite, arsenopyrite, pyrite, with minor amounts of sphalerite and galena.

1930 Several zinc-lead-silver occurrences had been discovered along Scotch Creek including the Iron Pot located on Acid (Ruby) Creek about 300 m (984.3 ft) east-southeast of the northeastern corner of the current SOUTHERN CROSS 2 (794662) claim (Figure 5E). By 1930, two short adits had been driven into mineralization at the showings area. H.G. Nichols, Resident Mining Engineer for the Central Mineral District, described the Iron Pot occurrences as follows:

Iron Pot This claim, opened by W. Henstridge of Celistia, covers a mineral-exposure on the bank of a small creek flowing into Scotch Creek from the west at a distance of about 6 miles (9.7 km) north of Shuswap lake at an elevation of about 2,000 feet (609.6 m). A number of quartz-seams and mineralized leads are exposed in the bed of the creek, with an east-west strike and dip to the south. The mineralization is represented chiefly by pyrrhotite, but there is some lead and zinc associated with quartz. These bodies of mineral lie within a zone of about 400 feet (121.9 m) wide and the best showing is at the highest point on the side on the hill on the foot-wall side of the zone. Two short tunnels have been driven at this point on a lead which has a width of about 2 feet (0.61 m), but no values (probably gold concentrations) were obtained on sampling. It is reported that some fair gold values (concentrations) have been obtained from the lower seams and that nickel is also found with the pyrrhotite.

B.C. Min. Mines, Ann. Rept.;1930: pp. A 188 - A 189.

1930 to 1970

K.L. Daughtry (1986) reported that during the 1960s, claims were staked by major companies to cover copper showings on Nikwikwaia Creek, located about 5 km (3.1 mi) northwest of the northwestern corner of the current MARION 2 (605310) claim. He reported that no significant exploration was conducted on those claims.

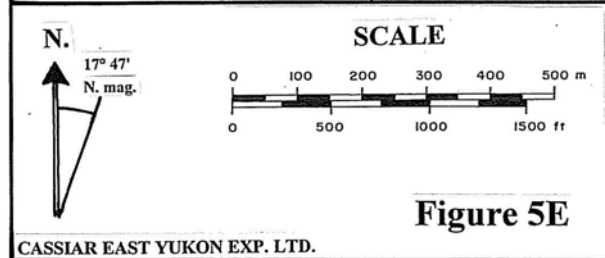
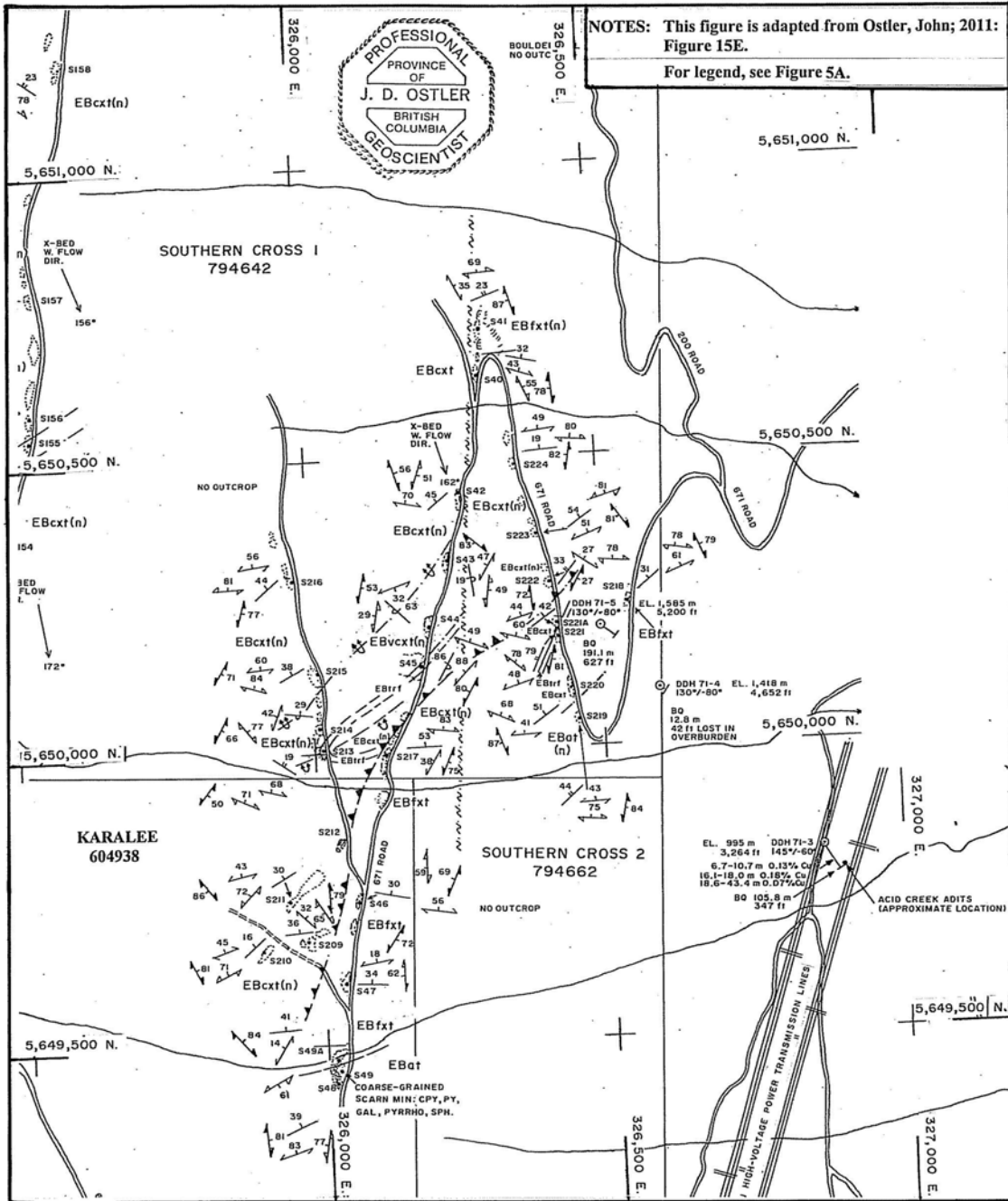


Figure 5E

CASSIAR EAST YUKON EXP. LTD.

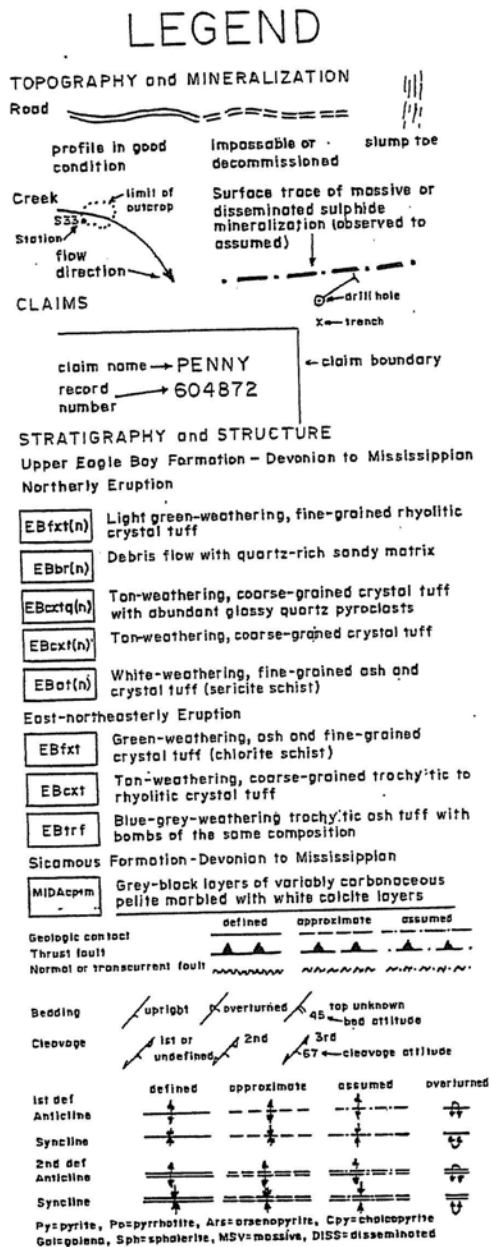
SIGNAL EXPLORATION INC.

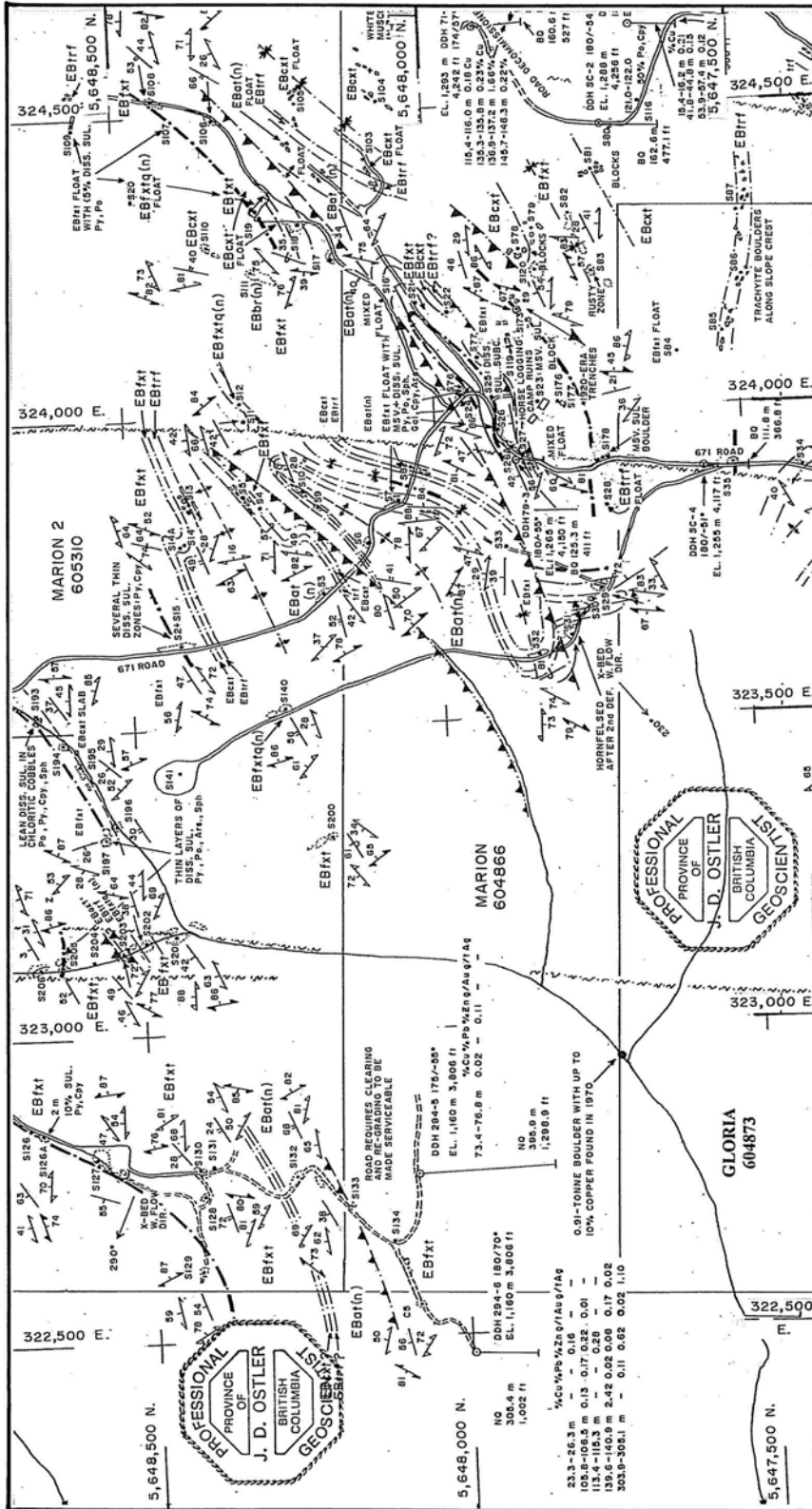
**DRILL HOLES:
EASTERN GROUP**

SCOTCH CREEK PROPERTY
 50° 57' 15" N., 119° 29' 26" W.
 U.T.M.: 5,647,460 N., 324,480 E.
 N.T.S.: 82 L/13 + L/14, KAMLOOPS M.D., B.C.
 JOHN OSTLER; M.Sc., P.Ge. MARCH, 2011

Figure 5A

Legend to Figures 5E, 5C, and 5W





SIGNAL EXPLORATION INC.
**DRILL HOLES:
 WESTERN GROUP**
 SCOTCH CREEK PROPERTY
 50° 57' 15" N., 119° 29' 26" W.
 U.T.M.: 5,647,460 N., 324,480 E.
 N.T.S.: 82 L/13+L/14, KAMLOOPS M.D., B.C.
 JOHN OSTLER; M.Sc, P.Geo. MARCH, 2011

SCALE
 0 100 200 300 400 500 m
 0 500 1000 1500 ft

Figure 5W

NOTES: This figure is adapted from Ostler, John, 2011:
 Figure 155W.
 For legend, see Figure 5A.

PROFESSIONAL
 PROVINCE OF
 BRITISH COLUMBIA
 J. D. OSTLER
 GEOSCIENTIST

CASSIAR EAST YUKON EXP. LTD.

1970 K.L. Daughtry (1986) reported upon the exploration activity in the current Scotch Creek property-area as follows:

In 1970, during the course of a regional exploration project, strong geochemical anomalies in copper and zinc were detected in stream sediments on Corning and Nikwikwaia Creeks. Follow-up prospecting resulted in the discovery of massive and disseminated stratabound pyrrhotite-pyrite-chalcopyrite-sphalerite mineralization on Nikwikwaia, Corning and Acid Creeks. The most attractive mineralization found at this stage was a 1-ton (0.91 tonne) boulder of massive sulphide mineralization discovered on the east fork of Corning Creek (Table 3, Figure 5W). A grab sample of this boulder contained over 10% copper. Two hundred claims were staked to cover the potentially favourable geological setting.

Daughtry, K.L.; 1986: p. 4.

1970 to 1971

A total of 177 claims comprising the Nik, West, Corn, East, South, and Acid groups were recorded on maps produced by Derry, Michener, and Booth. The Nik group of 8 claims was staked on the upper west fork of Nikwikwaia Creek on November 9, 1970. The Acid group of 8 claims covering the area around the old Acid Creek adits was staked on November 17, 1970. Claims between those two groups were staked from January 4 to 23, 1971. The South 1 to 4 claims were staked on July 15, 1971 to cover anomalies on ground currently covered by the northeastern part of the SOUTHERN CROSS 3 (801662) claim. That property covered a roughly rectangular area of about 32 km² (11.9 mi²).

1971 A grid comprising 66 km (41 mi) of line was flagged over a 28-km² (10.4-mi²) area covering most of the 1971 claim group (Figures 4N and 4S). Lines were an average of about 450 m (1,476 ft) apart producing what K.L. Daughtry and A. Wynne (1987) described as a reconnaissance-scale grid. Soil and magnetometer surveys were conducted over most of the grid. Geological mapping traverses were made over a total of about 92 ha (227.2 A) around the headwaters of the eastern fork of Nikwikwaia Creek, on both forks of Corning Creek, along the ridge crest across the eastern part of the current MARION (604866) claim, and near the Acid Creek adits across the current SOUTHERN CROSS 1 (794642) claim.

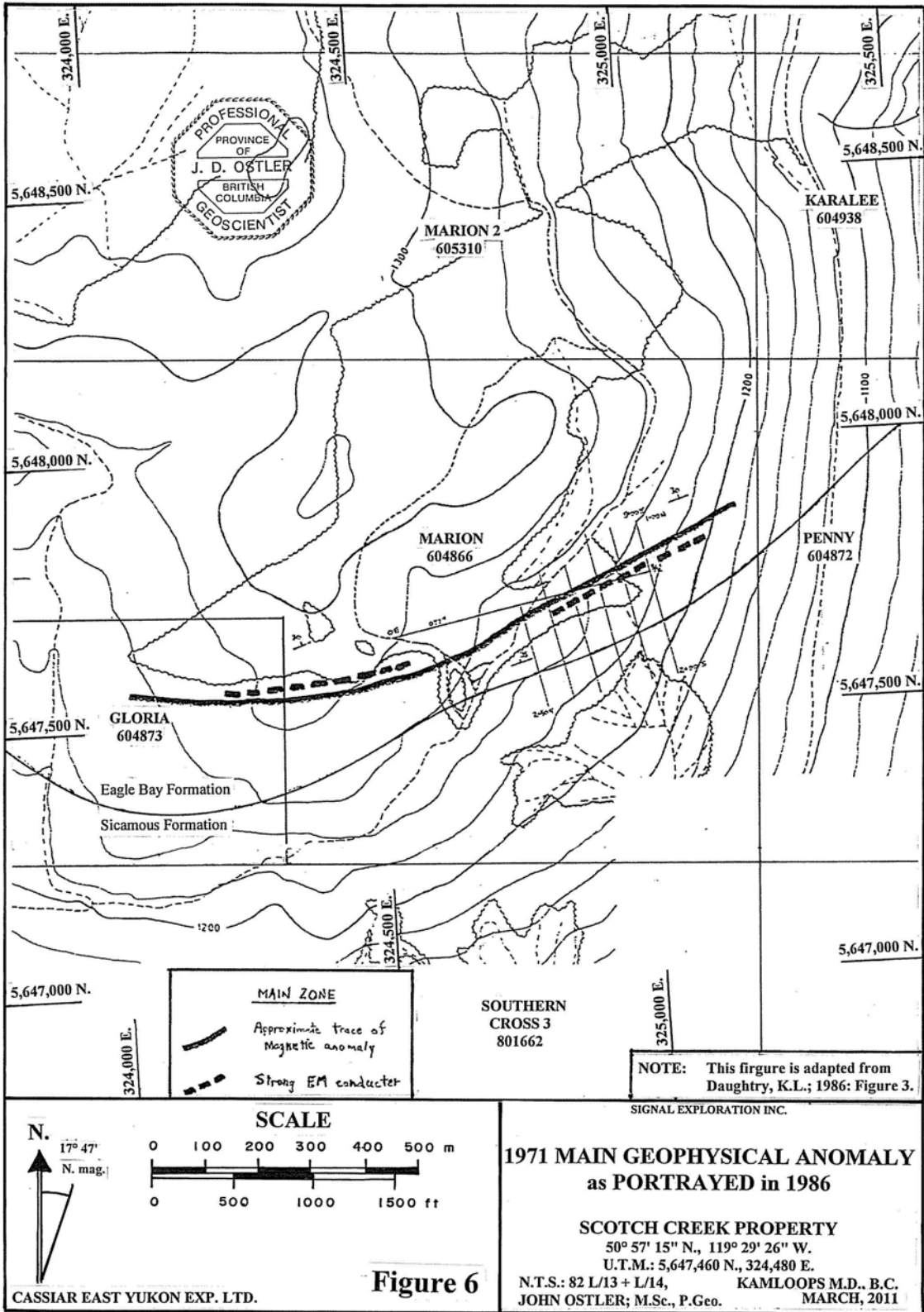
Despite significant problems in that data (Section 7.0, this report), K.L. Daughtry (1986) reported the following results:

... This work indicated the presence of a 10,000-foot (3,048-m) long magnetically anomalous zone (on the present PENNY (604872), MARION (604866), and GLORIA (604873) claims) (Figure 6) which was co-incident with anomalous copper and zinc values (concentrations) in soils. The magnetic anomaly appeared to lie parallel with the stratigraphy and was correlative with a sulphide-bearing sequence of phyllites...

Daughtry, K.L.; 1986: p. 4-5.

From August 29 to September 29, 1971 Derry, Michener and Booth Ltd. conducted a drill program for the Shuswap Syndicate. A total of 622.4 m (2,042 ft) of BQ drilling was done.

Holes 71-1 and 71-2 were drilled in the eastern part of the current MARION (604866) claim (Figures 4S and 5C). They were collared along a north-south trending soil line at locations about 250 and 500 m (820 and 1640 ft) north of the surface trace of the main magnetic anomaly respectively. Those holes were drilled southward at about -60°. Hole 71-1 intersected three sections containing minor amounts



**Table 4
Significant Drill Intersections**

Drill Hole No. and U.T.M. Location	On Current Claim	Orientation	Elevation m ft	Length m ft	Interval m ft	Cu %	Pb %	Zn %	Au gm/mt oz/t	Ag gm/mt oz/t
71-1 5,647,652 N., 324,625 E.	MARION 604866	180/-59°	1,242 4,074.8	152.4 500.0	15.4-16.2 51.0-53.0 41.8-44.8 137.0-147.0 53.9-57.4 177.0-178.0	0.21 0.15 0.12	? ? ?	? ? ?	Trace Trace Trace	2.40 0.07 Trace Trace
71-2 5,647,910 N., 324,630 E.	MARION 604866	174/-57°	1,293 4,242.1	160.6 527	115.4-116.0 378.5-380.5 135.3-135.8 444.0-445.5 136.9-137.2 449.0-450.0 145.7-146.3 478.0-480.0 150.4-151.0 493.5-495.5 152.1-152.6 499.0-500.5 152.6-153.2 500.5-502.5	0.18 0.23 1.66 0.22 0.26 4.65 0.20	? ? ? ? ? ? ?	? ? ? ? ? ? ?	Trace 0.17 0.005 0.34 0.010 0.34 0.010 Trace 1.37 0.04 Trace	Trace 2.06 0.06 6.86 0.20 1.37 0.04 Trace 16.5 0.48 Trace
71-3 5,649,812 N., 326,865 E.	312 m (1,023.6 ft) east of property	145/63°	995 3,264.4	105.8 347.0	18.6-20.4 61.0-67.0 20.4-21.3 67.0-70.0 21.6-23.2 71.0-76.0 24.7-26.2 81.0-86.0 26.2-27.7 86.0-91.0 29.1-31.2 95.5-102.5 40.1-40.7 131.5-133.5	0.12 0.14 0.13 0.14 0.10 0.22 0.13	? ? ? ? ? ? ?	? ? ? ? ? ? ?	0.17 0.005 Trace Trace Trace Trace Trace Trace	1.37 0.04 1.03 0.03 1.03 0.03 0.69 0.02 0.69 0.02 0.69 0.02 1.37 0.04
71-4 5,650,090 N., 326,595 E.	SOUTHERN CROSS 1 794642	130/-60°	1,418 4,652.2	12.8 42.0	lost in overburden at 12.8 42.0					
71-5 5,650,205 N., 326,500 E.	SOUTHERN CROSS 1 794642	130/-80°	1,585 5,200.1	191.1 627	No significant intersections					
SC-1 5,647,650 N., 324,795 E.	MARION 604866	180/-55°	1,245 4,084.6	100.0 328.1	No significant intersections					
SC-2 5,647,705 N., 324,464 E	MARION 604866	180/-54°	1,288 4,225.7	162.6 477.1	121.0-122.0 397.0-400.3 50% po, cpy				metal content unknown	
SC-3 5,647,695 N., 324,970 E.	MARION 604866	180/-55°	1,223 4,012.5	134.6 441.6	19.0-22.0 62.3-72.2 71.0-80.5 232.9-264.1 94.0-102.0 308.4-334.6 105.0-106.0 344.5-347.8	0.99 0.32 0.24 0.03	Trace Trace Trace Trace	0.05 Trace 0.11 1.27	0.34 0.010 0.17 0.005 0.17 0.005 0.27 0.008	16.1 .047 10.3 0.30 8.57 0.25 13.0 0.38

NOTES: Significant intersections are defined as those containing more than 0.1% copper, lead, or zinc.
Po = pyrrhotite, Py = pyrite, Cpy = chalcopyrite, Gal = galena, sph = sphalerite, ars = arsenopyrite

**Table 4 Continued
Significant Drill Intersections**

Drill Hole No. and U.T.M. Location	On Current Claim	Orientation	Elevation m ft	Length m ft	Interval m ft	Cu %	Pb %	Zn %	Au gm/mt oz/t	Ag gm/mt oz/t
SC-4 5,647,440 N., 323,895 E.	GLORIA 604873	180/-51°	1,255 4,117.4	111.8 366.8	No significant intersections					
79-3 5,647,868 N., 323,933 E.	MARION 604866	180/-55°	1,265 4,150.0	125.3 411.1	No significant intersections					
294-1 5,647,502 N., 324,693 E.	MARION 604866	160/-46°	1,255 4,117.4	117.6 385.8	No significant intersections					
294-2 5,647,670 N., 325,095 E.	MARION 604866	160/-48°	1,220 4,002.6	136.9 449.1	No significant intersections					
294-3 5,647,860 N., 324,970 E.	MARION 604866	160/-50°	1,255 4,117.5	157.3 516.1	95.9-98.0 314.6-321.5 107.1-109.5 351.4-359.3 143.3-144.1 470.1-472.8 147.9-153.4 485.2-503.3	0.19 0.24 0.13 Trace	Trace Trace Trace Trace	0.01 0.01 0.05 0.10	0.02 0.001 0.01 <0.001 0.04 0.001 Trace	Trace Trace Trace Trace
294-4 5,647,810 N., 325,380 E.	PENNY 604872	160/-56°	1,115 3,658.1	107.5 352.7	No significant intersections					
294-5 5,648,074 N., 322,765 E.	MARION 604866	175/-55°	1,160 3,805.8	395.9 1,298.9	73.4-76.8 240.8-252.0	0.02	Trace	0.11	Trace	Trace
294-6 5,647,995 N., 322,469 E.	98 m (321.5 ft) west of property	180/-70°	1,160 3,805.8	305.4 1,002.0	23.3-26.3 76.4-86.3 105.8-106.5 347.1-349.4 113.4-115.3 372.1-378.3 139.6-140.9 458.0-462.3 303.9-305.1 997.1-1001.0	Trace 0.13 Trace 2.42 Trace	Trace 0.17 Trace 0.02 0.11	0.16 0.22 0.28 0.08 0.62	Trace 0.11 0.003 Trace 0.17 0.005 0.02 0.001	Trace Trace Trace 0.02 0.001 1.10 0.032

NOTES: Significant intersections are defined as those containing more than 0.1% copper, lead, or zinc.
Po = pyrrhotite, Py = pyrite, Cpy = chalcopyrite, Gal = galena, sph = sphalerite, ars = arsenopyrite

of copper (Table 4). Lead and zinc concentrations were not reported. The best intersection, from 15.4 to 16.2 m (51 to 53 ft), contained: 0.8 m (2 ft) of 0.21% copper, a trace of gold, and 2.40 gm/mt (0.07 oz/ton) silver. Although hole 71-2 was farther from the main anomaly, it contained 7 significantly mineralized intersections (Table 4). The best, being from 152.1 to 152.6 m (499.0 to 500.5 ft), hosted 0.5 m (1.5 ft) containing: 4.65% copper, 1.37 gm/mt (0.04 oz/ton) gold, and 16.46 gm/mt (0.48 oz/ton) silver.

Hole 71-3 was drilled from a location about 50 m (164 ft) northwest of the Acid Creek adits and about 300 m (984.2 ft) east-southeast of the northeastern corner of the current SOUTHERN CROSS 2 (794662) claim (Figures 4N and 5E). That hole was at an orientation of 145/-60° in order to test the rock beneath and northwest of the adits. A total of seven significantly mineralized sections were cut in that hole (Table 4). The best intersection was 2.1 m (7 ft) from 29.1 to 1.2 m (95.5 to 102.5 ft) that contained: 0.22% copper, a trace of gold, and 0.69 gm/mt (0.02 oz/ton) silver. The drill was moved to a location about 400 m (1,312.3 ft) northwestward up the slope at the eastern boundary of the current SOUTHERN CROSS 1 (794642) claim. The hole at that location, 71-4 was lost in 12.8 m (42 ft) of overburden.

The drill was moved another 200 m northwestward up the slope onto the current SOUTHERN CROSS 1 (794642) claim where hole 71-5 was drilled at an orientation of 130/-80° (Figures 4N and 5E). That hole was 191.1 m (627 ft) long and seems to have been designed to intersect the Acid Creek zone at depth. No significantly mineralized zones were intersected in hole 71-5.

1972 to 1975

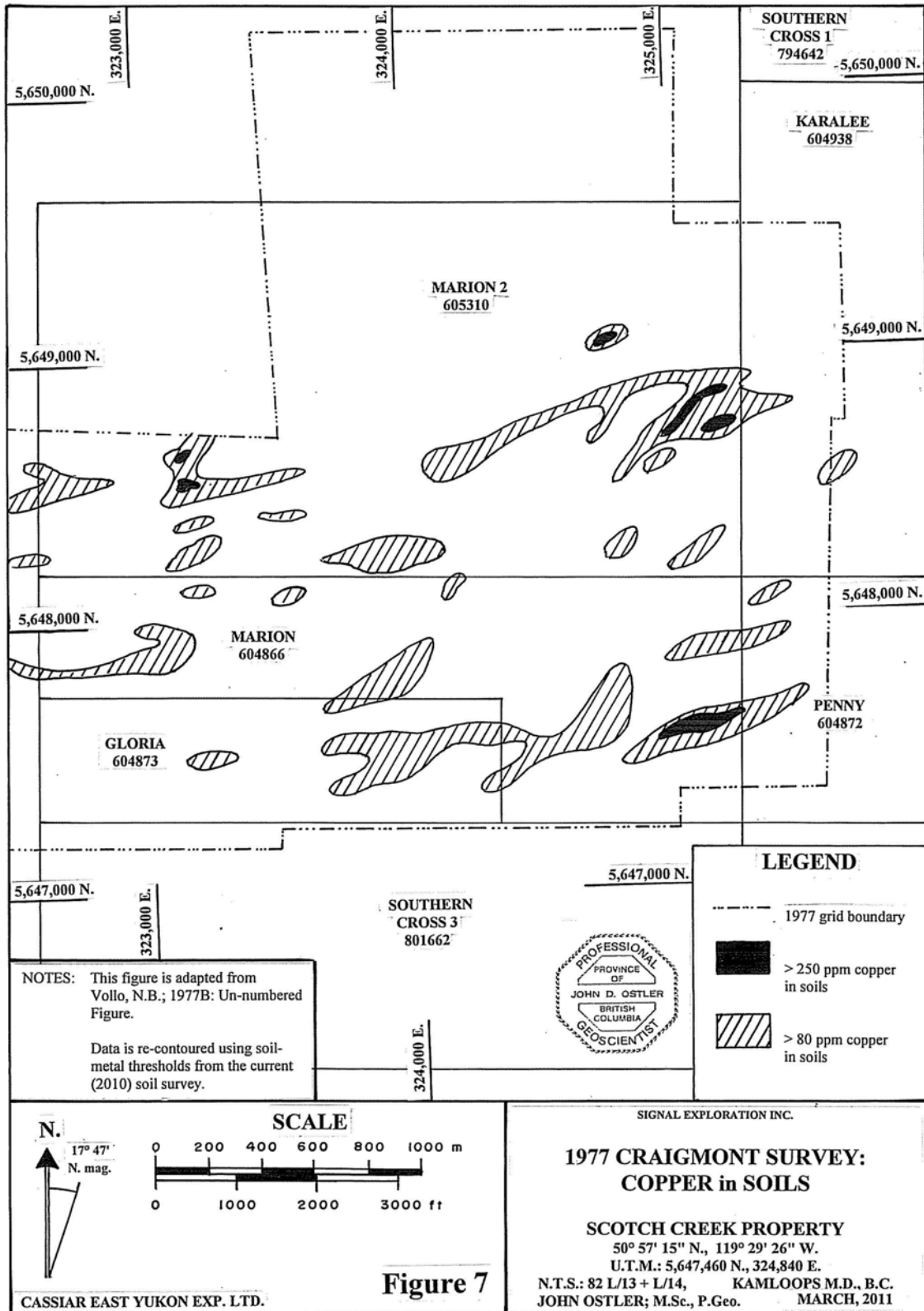
Work on the Shuswap Syndicate's property ceased and the claims comprising it lapsed.

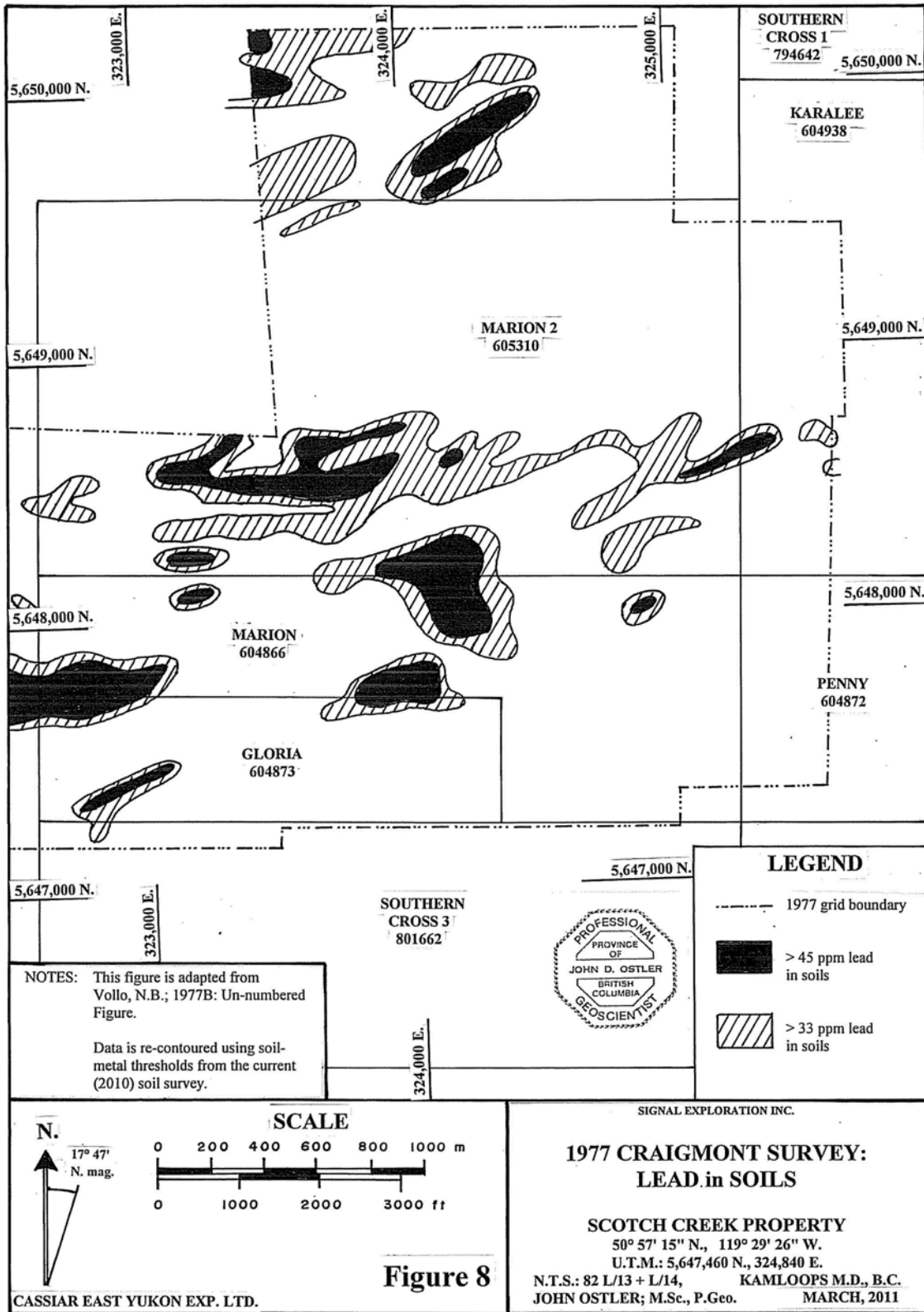
1976 In May, 1976, K.L. Daughtry staked the SCOTCH (371) claim comprising 15 units covering 375 ha (926.3 A) to cover the main 1971 geophysical anomaly (Figure 6). He sold the claim to Brican Resources Ltd., through a non-arms-length transaction. Brican optioned it to Craigmont Mines Ltd. K.L. Daughtry and A. Wynne (1987) reported that an additional 6 claims comprising 104 claim units, the SC1 to SC6, covering 2,600 ha (6,422 A), had been staked during 1976. Craigmont commissioned an airborne DIGHEM survey of an extensive area that included the 1976-era SC claim group (Fraser, 1976) (not available).

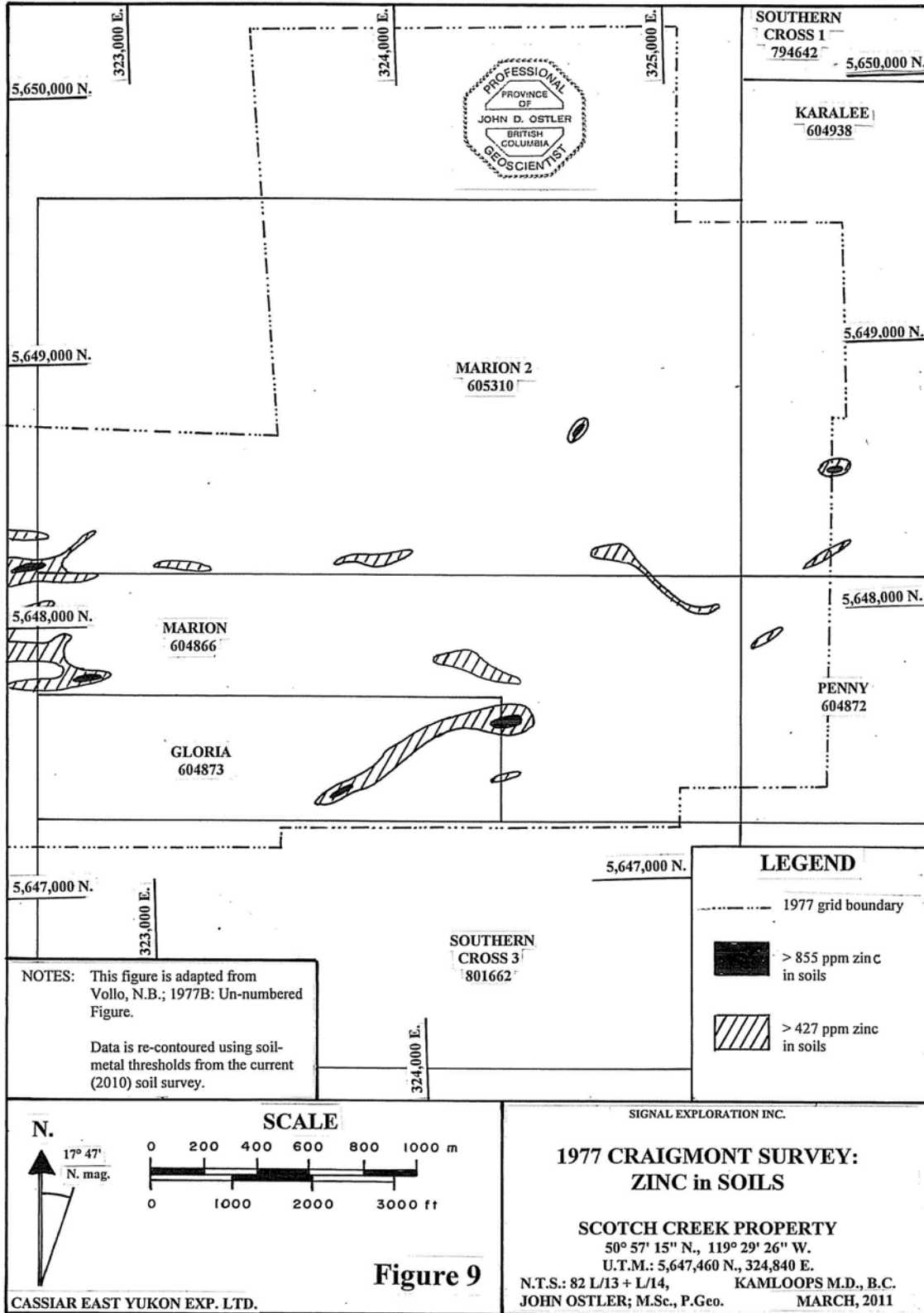
1977 A grid comprising 48 km (29.3 mi) of line and covering 9.4 km² (3.5 mi²) was cut in an area that covered most of the current Scotch Creek property (Figures 4N and 4S). K.L. Daughtry and A. Wynne (1987) reported that soil geochemical, magnetometer and very low frequency electromagnetic surveys were conducted over the whole grid area. Only the results of the soil survey were filed for assessment credit by N.B. Vollo (1977B).

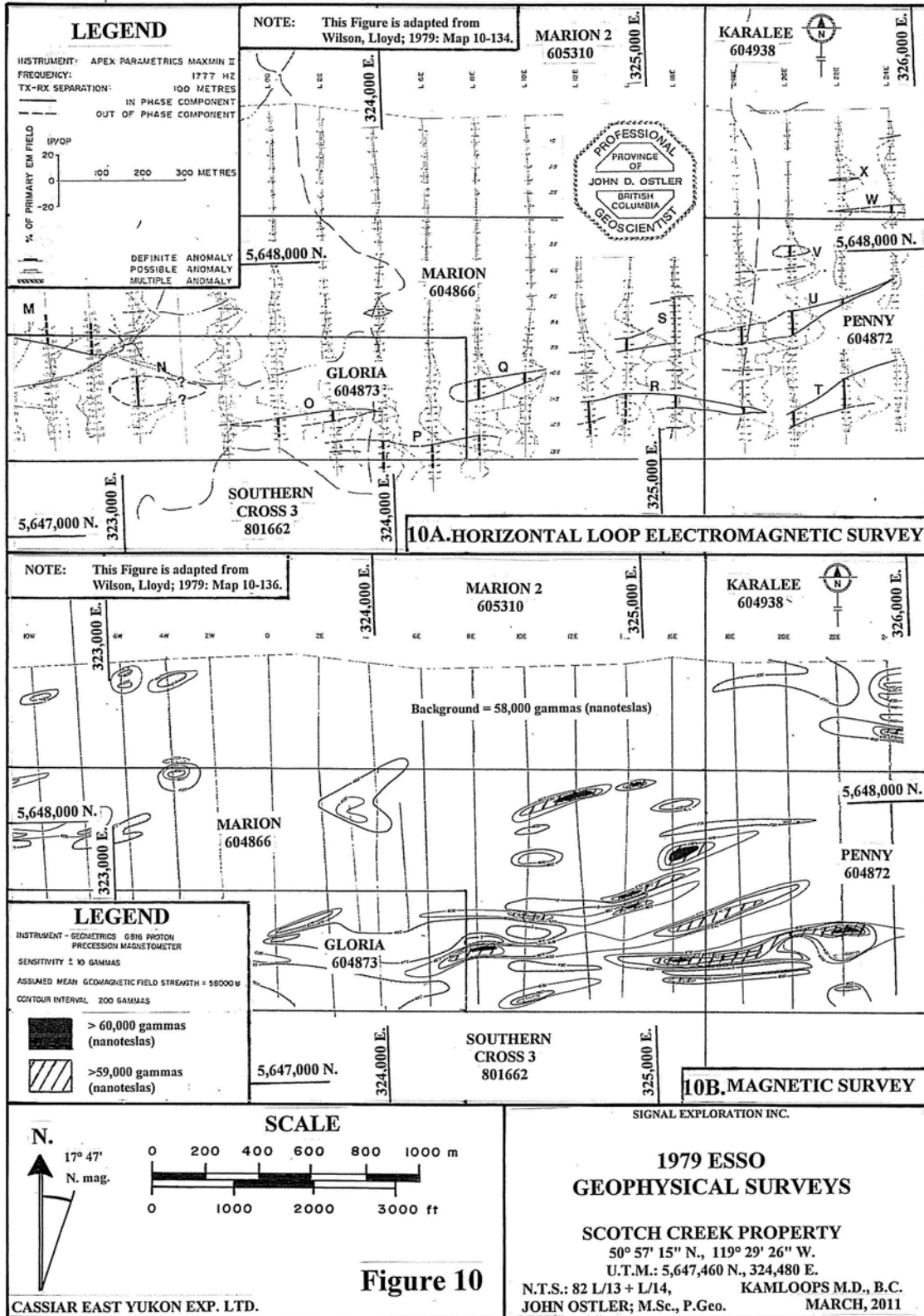
The north-south lines of the 1977 Craigmont grid were about 200 m (656.2 ft) apart. Soil-copper, lead and zinc concentrations were plotted on Vollo's (1977B) maps. The author re-contoured the 1977 soil survey data using the thresholds of the current 2010 survey so that they could be compared directly (Figures 7 to 9, and 19 to 23).

From May 16 to June 10, 1977, Craigmont conducted a diamond drill program of 509 m (1,669.9 ft) of BQ core drilled in four holes. Holes SC-1 and SC-2 were drilled north of the road that extends along the slope crest in the eastern part of the current MARION (604866) claim. They flanked the Shuswap Syndicate's holes 71-1 and 71-2 on the east and west respectively. Drill hole SC-3 was drilled down hill from the road at a location about 190 m (623.4 ft) east-northeast of hole SC-1. Drill hole SC-3 penetrated the most intense part of the 1971 geophysical anomaly. Drill hole SC-4 was drilled beneath the 671 road in the eastern part of the current GLORIA (604873) claim. SC-4 tested what was perceived to be the western extension of a single east-west trending anomaly (Daughtry and Wynne, 1987) (Figure 6).









In his unpublished notes on drilling, K.L. Daughtry wrote that hole SC-1 intersected minor sulphides in concentrations up to 5% pyrrhotite, pyrite, chalcopyrite, and sphalerite. He noted that SC-2 intersected 1 m (3.3 ft) of massive pyrrhotite and chalcopyrite. Such an intersection was recorded without assays from 121 to 122 m (397.0 to 400.3 ft) in the SC-2 drill log. Drill hole SC-3 was the most successful hole of the 1977 program. It intersected four significantly mineralized zones including 3 m (9.8 ft) from 19 to 22 m (62.3-72.2 ft) containing: 0.99% copper, 0.05% zinc, 16.1 gm/mt (0.47 oz/ton) silver, and 0.34 gm/mt (0.01 oz/ton) gold. Farther down that hole, two other long intersections containing 0.32% and 0.24% copper respectively were reported in the SC-3 drill log (Table 4). Hole SC-4 intersected only weak mineralization.

1978 No further work was conducted on the SCOTCH claim group. Craigmont Mines Limited dropped its option on the property on September 30, 1978. The SC-1 to SC-6 claims were allowed to lapse. The SCOTCH 2 (1587) claim of 18 claim units covering 450 ha (1,080 A) was staked adjacent to the western boundary of the SCOTCH (371) claim. The renewed 2-claim property covered a total of 825 ha (2,037.5 A).

1979 Activity in the current Scotch Creek property-area in 1979 was described as follows:

Esso Resources Canada Ltd. optioned the SCOTCH property from Brican in March, 1979 and conducted further ground magnetometer and electromagnetic Max Min (horizontal loop) surveys. This work confirmed the presence of strong magnetic anomalies with significant apparent displacement from the location defined by Craigmont. One short hole was drilled by Esso to test one of the conductors. This hole intersected both sulphide mineralization and graphitic schist.

Daughtry, K.L and Wynne A.; 1987: p. 6.

A grid comprising 42.3 km (25.8 mi) of line and covering an area of 7.8 km² (2.98 mi²) was cut for Esso by Scope Exploration Services from May 15 to June 7, 1979 (Figure 4S). The eastern and central parts of the 1979 grid covered the southern and central parts of the current Scotch Creek property. MAX-MIN horizontal-loop, electromagnetic, and ground magnetic surveys were conducted over the grid from June 14 to 22, 1979 (Figure 10). The ground magnetic data were corrected for diurnal variation in magnetic flux. Lloyd Wilson (1979) wrote the following interpretations regarding the 1979 Esso geophysical surveys:

INTERPRETATION

HORIZONTAL LOOP EM SURVEY (Figure 10A)

The horizontal loop EM survey results indicate a broad zone of anomalous conductivity extending from east to west across the southern portion of the Scotch grid corresponding to an area mapped as graphitic argillites and thinly bedded limestones of the Sicamous Formation ...

The broad, anomalous EM responses in the area ... are probably related to thin, closely spaced bands of graphitic material ...

Zones V, W, and X (on the southern part of the current KARALEE (604938) claim) occur within an area mapped as Eagle Bay Formation and may be of interest ... Zone W ... appears to be the strongest of these conductors ...

MAGNETOMETER SURVEY (Figure 10B)

Over half of the contoured map is rather featureless and there is no indication of a consistent magnetic horizon to assist in distinguishing volcanics of the Eagle Bay Formation from graphitic argillites of the Sicamous Formation, both of which are mapped in the survey area.

Numerous one-station anomalies of 200-400 gammas (nanoteslas) intensity with no certain strike direction are indicated ...

In the southeast corner of the survey area, several parallel, dyke-like features occur along an interpreted magnetic horizon within the Sicamous Formation. These magnetic features generally strike east-west. However a change in strike direction (to the northeast) is indicated in the vicinity of Lines 14E to 20E.

The positive magnetic features outlined by this survey have no coincident electromagnetic responses and are probably caused by magnetite bearing dykes in the area.

Wilson, Lloyd; 1979: pp. 3-4.

Esso Resources Canada Limited drilled one 125.3-m (411.1-ft) long hole from July 18 to 20, 1979. Drilling was done at west side of the 671 road in the central part of the MARION (604866) claim (Figure 5C). The hole tested a short electromagnetic conductor that was identified by the 1979 survey. Several thin and lean sulphide-bearing zones were penetrated in tuffaceous volcanic rocks above a graphitic sedimentary layer encountered at the bottom of the hole. Alfred Stewart (1979) described the results of that drilling as follows:

The diamond drill hole intersected a thick section of meta-volcanic and meta-sedimentary derived schists ... A graphite-bearing conductive schist was intersected at 122.2 m (400.9 ft) depth. This is believed to be the cause of the observed geophysical response. The hole was stopped at 125.3 m (411.1 ft).

Stewart, Alfred; 1979: p. 2.

1980 to 1982

No work was recorded from the current property-area.

1983 Esso Resources Canada Limited commissioned J.M. Marr (1984) to conduct a program of reconnaissance mapping, silt and rock-chip sampling across the 1979 Esso grid which extended from the eastern part of the current MARION (604866) claim-area westward to the main branch of Corning Creek. The eastern two-thirds of that program was conducted in the area of the current Scotch Creek property (Figures 4N, 4S, and 11). Marr walked a total of 7.6 km (4.6 mi) in three traverse-areas including the ridge across the northeastern part of the MARION (604866) claim, along the 671 road and in the eastern fork of Corning Creek on the MARION (604866), GLORIA (604873) and MARION 2 (605310) claims, and near the western boundary of the current MARION (604866) claim.

1984 By April 25, 1984 when J.M. Marr (1984) filed the 1983 work for assessment credit, the SCOTCH 2 (1587) claim had been allowed to lapse, reducing the property to the original SCOTCH (371) claim. Subsequently, Esso Resources terminated its option to acquire the SCOTCH property.

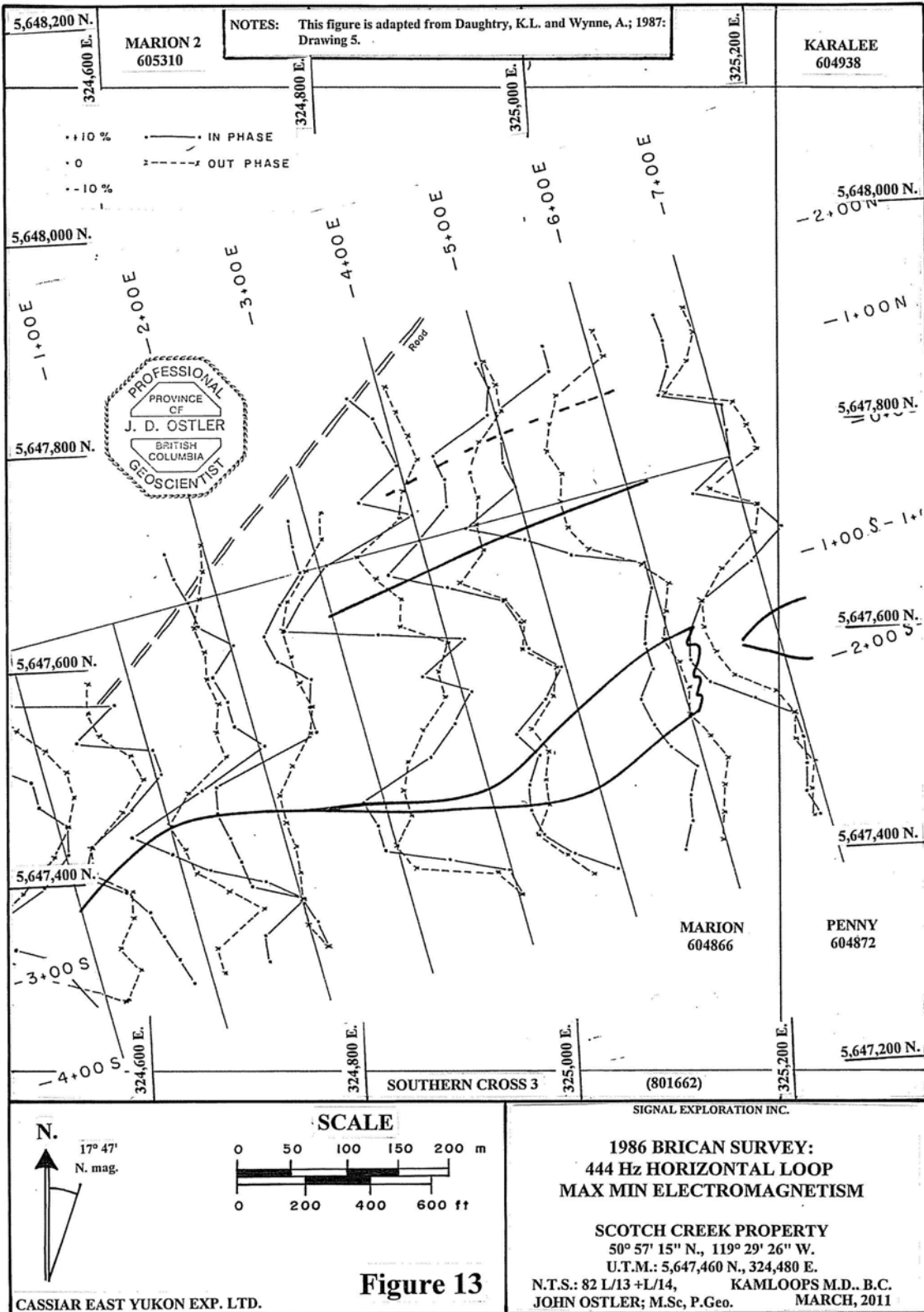
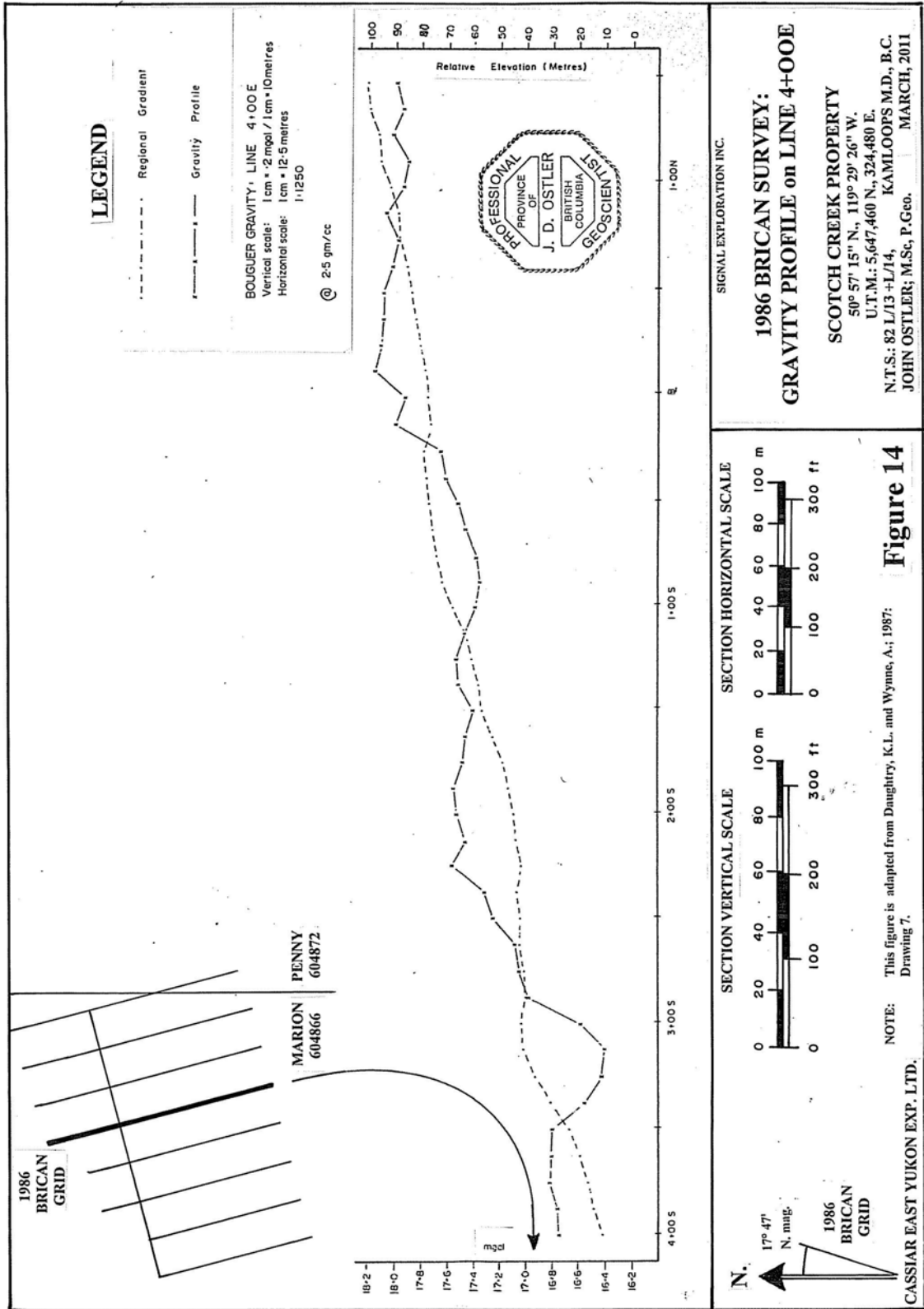


Figure 13



The results of the 1985 Brican trenching program were re-tabulated by the author from K.L.

Daughtry's notes as follow:

Table 5
Results of the 1985 Brican Trenching Program

Trench No.	Length m ft	Width m ft	Depth m ft	Volume m ³ ft ³ yd ³	K.L. Daughtry's Comments
1	3.0 9.8	2.5 8.2	1.5 4.9	11.3 393.8 14.6	1 m overburden, 0.5 m rock (black L.S.), <u>1</u> sample
2	3.0 9.8	1.0 3.3	3.0 9.8	9.0 316.9 12.1	1.5 m overburden, 1.5 m rock (black L.S.), <u>2</u> sample
3	2.0 6.6	1.5 4.9	2.0 6.6	6.0 213.4 7.9	overburden
4	2.5 8.2	1.5 4.9	0.5 1.6	1.9 64.3 2.4	rock (chlorite schist), <u>4</u> sample
5	30.0 98.4	1.0 3.3	0.5 1.6	15.0 519.6 19.2	overburden, (sericite schist) (TUFF), <u>5</u> sample
6	12.0 39.4	1.5 4.9	3.0 9.8	54.0 1892 70.1	overburden
7	1.0 3.3	2.0 6.6	0.5 1.6	1.0 34.9 1.3	0.5 m rock (OTCP)
8	8.0 26.2	1.0 3.3	3.0 9.8	24.0 847.3 31.4	overburden
9	3.0 9.8	3.0 9.8	2.0 6.6	18.0 633.9 27.0	1.5 m overburden, 0.5 m rock
10	2.0 9.8	2.0 6.6	1.5 4.9	6.0 213.4 7.9	1.5 m overburden
Tl. Vol.				146.2 5129.5 193.5	

1986 Brican Resources Ltd. cut a grid over the most intense part of the 1971 geophysical anomaly in the area surrounding the location of drill hole SC-3 in the eastern part of the current MARION (604866) claim (Figure 4S). That grid comprised 1.82 km (1.11 mi) of line in 7 lines oriented at 165°-345° and spaced 50 m (164 ft) apart. The grid covered 7.5 ha (18.5 A) of which 6.0 ha (14.8 A) was covered by a magnetic survey (Daughtry, 1986). Later that summer, the grid was expanded to comprise 4.2 km (2.56 mi) in 8 lines of the same orientation spaced 100 m (328 ft) apart (Daughtry and Wynne, 1987). The ground magnetic survey was re-done (Figure 12). Also a MAX-MIN horizontal-loop, electromagnetic survey was conducted over the whole expanded grid (Figure 13). A gravity survey conducted by MWH Geophysics Ltd. of Sydney, B.C. along line 4 + 00 E, resulted in the production of a single gravity profile (Figure 14).

1987 During June, 1987, the area west of the SCOTCH (371) claim that was covered by the SCOTCH 2 (1587) claim during the early 1980s was re-staked as the 18-unit SCOTCH 2 (7097) claim. The property was returned to its pre-1985 size of 825 ha (2,037.5 A).

1988 From January 23 to February 25, 1988, Brican Resources Ltd. conducted a program that resulted in the drilling of a total of 1,220.4 m (4,003.9 ft) of NQ core in 6 holes.

Drill holes 294-1 to 294-3 comprising a total of 411.8 of core was drilled into the 1986 Brican grid-area in the eastern part of the current MARION (604866) claim (Figure 4S and 5C). Drill hole 294-1 tested the western extension of the area of the most intense anomalies in the 1986 grid-area (Kyba, 1988). Drill hole 294-2 tested the electromagnetic anomaly in the southeastern part of the grid-area which K.L. Daughtry and A. Wynne (1987) thought was due to a contact of metavolcanic and

metasedimentary rocks. Their opinion was confirmed. Neither hole 294-1 nor hole 294-2 penetrated any significantly mineralized sections (Table 4). Drill hole 294-3 was located on the road along the ridge crest in the northeastern part of the 1986 Brican grid. It tested an northeastward strike extension of the mineralized rock intersected in hole SC-3 that was drilled in 1977. Hole 294-3 had four significantly mineralized intersections the best of which was crossed from 107.1 to 109.5 m (351.4 to 359.2 ft) and contained: 0.24% copper, 0.01% zinc, and traces of lead, gold and silver.

Drill hole 294-4 was located on the 671 road east of the 1971 main geophysical anomaly to test an electromagnetic anomaly near the eastern boundary of the 1986 grid. It penetrated 107.5 m (352.7 ft) of unmineralized, fine-grained meta-tuff and metasedimentary rocks.

Drill holes 294-5 and 294-6 were located on co-incident soil-geochemical and geophysical anomalies that had been identified by 1971 to 1979 surveys between the main and eastern branches of Corning Creek. Hole 294-5 was drilled on the current MARION (604866) claim near its western boundary (Figures 4S and 5W). Hole 294-6 was drilled at a location about 98 m (321.5 ft) west of the current Scotch Creek property. Hole 294-5 cut one significant intersection from 73.4 to 76.8 m (240.8 to 252.0 ft) that contained 0.02% copper and 0.11% zinc. Hole 294-6 cut five significantly mineralized intervals. The one with the highest base-metal concentration was from 139.6 to 140.9 m (458.0 to 462.3 ft) which contained: 2.42% copper, a trace of lead, 0.08% zinc, 0.17 gm/mt (0.005 oz/ton) gold, and 0.02 gm/mt (0.001 oz/ton) silver. B.W. Kyba (1988) came to the following conclusions and made recommendations regarding the 1988 Brican drill program:

CONCLUSIONS

... The six drill holes did not fully test the entire strike length of the coincident geophysical and geochemical anomalies (presumably the 1971 main anomaly). They did encounter weakly developed massive sulphide type mineralization in the metavolcanic sequence that conformably overlies a thinly interbedded sequence of graphitic metasediments. The only anomalous gold values were contained in a quartz chalcopyrite vein in a large fault zone seen in hole 294-6 (from 139.6 to 140.9 m or from 458.0 to 462.3 ft) (Figures 4S and 5C) (Table 4).

The magnetic anomaly may have been caused by disseminated and stringers of pyrrhotite in the metavolcanics (up to 2% over large intervals).

The EM anomaly appears to have been caused by the large amount of graphite in the metasediments.

The large lead soil anomaly (threshold of 40 ppm) appears to have been caused by the elevated background in the metasediments (35 ppm).

RECOMMENDATIONS

A large portion of the strike length of the coincident geophysical and geochemical anomalies (the 1971 main geophysical anomaly) (Figure 6) remains untested. The six drill holes of this program confirmed the presence of a favourable geological setting for a massive sulphide type deposit within this large anomalous zone. Further testing of this zone is recommended.

The large lead anomaly to which B.W. Kyba (1988) referred is located on and west of the current MARION (604866) and GLORIA (604873) claims (Figure 8).

1989 to 2009

No exploration activity in the current Scotch Creek property-area from this time is known to the author. Assessment credit generated from the 1988 drilling program would have run out by 1998. Probably, the two claims of Brican's SCOTCH property lapsed that year.

2009 Joseph T. Lawrence and his son Bruce M. Squinas map-staked the MARION (604866), PENNY (604872), GLORIA (604873), KARALEE (604938), and MARION 2 (605310) claims from May 22 to June 2, 2009. Those claims formed the core of the current Scotch Creek property. That summer, the claims were presented to the author for initial examination. Upon review, the author determined that geological input into previous exploration had been minimal. Previous operators had lacked sufficient understanding of the stratigraphy and rock structure that determined the location and orientation of mineralization. Consequently, previous exploration results were sporadic. The author concluded that the property hosted significant untested merit; he presented it to several clients. Response was minimal until the 2009 international financial crisis passed.

2010 On February 23, 2010 Barry Hartley secured an option from Joseph Lawrence and Bruce Squinas to acquire 100% ownership of the Scotch Creek property for a total of \$12,000 (\$6,000 for each optionor) and for providing \$342 to pay current assessment filing fees. Hartley exercised the option and the MARION (604866), PENNY (604872), GLORIA (604873), KARALEE (604938), and MARION 2 (605310) claims were transferred to him on July 20, 2010.

Bruce Squinas, Joseph Lawrence and two associates conducted a prospecting program in the property-area comprising 20 man-days of work from April 17 to 22, 2010. The results of that program were described as follow:

One occurrence of pegmatitic scarn mineralization comprising coarse-grained pyrite, pyrrhotite, sphalerite, chalcopyrite, and galena was found in the northeastern part of the property area. Four occurrences of disseminated pyrite, pyrrhotite, chalcopyrite, sphalerite and galena mineralization were found in the property's southern and eastern parts. All of the disseminated sulphide mineralization was hosted by chloritic schist.

Squinas, B.M. with Ostler, John; 2010: p. 20.

The author made two brief trips to examine and map some of the geology on the Scotch Creek property on May 31 to June 3, and on June 11 to 15, 2010. At that time it was discovered that massive and disseminated mineralization was hosted in a single zone produced by a trachytic eruption with a vent area located east-northeast of the property-area. Since Barry Hartley was out of communication, the author map-staked the SOUTHERN CROSS 1 (794642) and SOUTHERN CROSS 2 (794662) claims on June 18, 2010 to cover un-staked ground east of the property. Those claims were transferred to B. Hartley at cost, on June 24, 2010. Barry Hartley map-staked the SOUTHERN CROSS 3 (801662) claim on June 28, 2010 to cover the ground down-hill of, and adjacent to the southern boundaries of the MARION (604866), and GLORIA (604873) claims, in order to protect a possible portal location for a trackless decline into mineralization hosted on those claims. The main part of the current 2010 exploration program was conducted by the author from August 30 to October 2, 2010. All of the author's 2010 exploration on the Scotch Creek property is the subject of this report. During November, 2010, the author assisted Bruce Squinas in the production of his assessment report on the April, 2010 prospecting program.

- 2011** On May 27, 2011, the claims comprising the Scotch Creek property were transferred from Barry Hartley to Signal Exploration Inc.

The author examined various parts of the 2010 exploration area on the Scotch Creek property at several occasions during his work on a near-by property from June 3 to 17 and from June 24 to July 9, 2011, and that such attendance on the property during June and July, 2011 represents a Current Personal Inspection of the Scotch Creek property in compliance with part 6.2 of National Instrument 43-101.

2.2 Historical Mineral Resource and Reserve Estimates, and Production from the Scotch Creek Property-area

No historical estimates of mineral resources or reserves related to the Scotch Creek property, or historical production from the Scotch Creek property-area are known to the author.

3.0 GEOLOGICAL SETTING AND MINERALIZATION

3.1 Regional Geology

The area northwest of Shuswap Lake was mapped and interpreted by A.V. Okulitch (1979) of the Geological Survey of Canada, from 1972 to 1974 (Figure 15).

An account of the history of orogenic events in the area now covered by south-central British Columbia was recorded by A.V. Okulitch (1979) as follows:

Intrusive rocks ... and meagre but widespread stratigraphic and structural evidence suggest that two orogenic events affected the Eastern Cordillera during Palaeozoic time. The first of these ... (that may have) occurred in the Late Ordovician, is the Cariboo Orogeny. At its type locality in the Cariboo Mountains a major break occurs between the Upper Cambrian and Upper Middle Ordovician strata ... Metamorphism of the Lardeau Group at 479 +/- 17 Ma ..., a widespread mid-Ordovician unconformity in the Rocky Mountain Thrust Belt ... and effusion of volcanic rocks in the Lardeau Group and Eagle Bay Formation suggest considerable orogenic activity along the continental margin ... earliest structures in units of the Lardeau assemblage are interpreted to have formed during the Ordovician Cariboo Orogeny. Early structures in the Shuswap Complex may have also formed at this time.

The second Palaeozoic event is represented by a profound unconformity below middle Devonian strata in the Rocky Mountain thrust belt ..., a stratigraphic break in the Cariboo Mountains between Silurian and late Devonian units ... and an unconformity between the Milford and Lardeau groups in the Kootenay Arc ... and possibly west of Adams Lake. Formation of this unconformity coincided with Late Devonian plutonism and uplift. Greatest uplift, where the Devonian-Mississippian unconformity cuts below the mid-Ordovician one, corresponds generally with known exposures of Devonian plutons.

Permo-Triassic orogenic events (Sonoman) comprise deformation, low grade metamorphism, plutonism, uplift and erosion that effected rocks as young as Permian and preceded deposition of strata as old as Late Triassic in and south of the project-area and as old as Middle Triassic to the southeast near Grand Forks ...

Figure 15A
Legend to Figure 15

- PROTEROZOIC
CENOZOIC
- TERTIARY OR QUATERNARY
PLIOCENE OR PLEISTOCENE
- TQa** CONGLOMERATE (NEAR VERNON); BASALTIC ANDHITE, BRECCIA, RUBBLE, CONGLOMERATE (ALONG NORTH THOMPSON AND CLEARWATER RIVERS).
- TERTIARY
MIOCENE AND/OR PLEIOCENE (MAY INCLUDE PLEISTOCENE)
- mTv** PLATEAU LAVAS; OLIVINE BASALT, ANDESITE, RELATED ASH AND BRECCIA; BASALTIC ANDHITE; MINOR BASAL SEDIMENTS; (MAY INCLUDE YOUNGER VALLEY BASALTS).
- Eocene and (?) Oligocene
KARLOPS GROUP (SPENCER GROUP IN SOUTHWEST CORNER); SKULL HILL FORMATION ALONG NORTH THOMPSON RIVER).
- eTev** ANDESITE, BASALT, DACITE, TRACHYTE FLOWS AND DYKES, BRECCIA, TUFF, AGGLOMERATE.
KARLOPS GROUP (CNU) ONIA FORMATION ALONG NORTH THOMPSON RIVER; TRANQUILLE BEDS NEAR WESTERMOST SOUTH THOMPSON RIVER; INCLUDES UNIT Tcg ON MAP A3.
- eTes** SANDSTONE, CONGLOMERATE, SHALE; MINOR COAL, TUFF ANDISE, UNIFORMITY
- PALEOCENE OR EOCENE
- pTy** SYENITE, GRANITE; MINOR MONZONITE, SHONKINITE.
- MESOZOIC
CRETACEOUS
- Kg** GRANITE, GRANDIODORITE; LESSER QUARTZ MONZONITE AND QUARTZ DIORITE.
BALDY BATHOLITH AND SATELLITIC STOCKS.
- Kqm** QUARTZ MONZONITE, GRANDIODORITE; MINOR PEGMATITE.
EARLY CRETACEOUS
SALMON ARM, DEEP CREEK, WISCONSIN AND SCOTCH CREEK PLUTONS.
- eKgd** GRANDIODORITE, GRANITE, QUARTZ MONZONITE; MINOR DIORITE, GABBRO, QUARTZ, DIORITE.
BAFT BATHOLITH
- eKqm** QUARTZ MONZONITE, GRANDIODORITE; MINOR PEGMATITE AND DIORITE.
- JURASSIC OR CRETACEOUS
- Jgn** SYENITE AND FELSITE DYKES.
- JURASSIC
- Jgn** MASSIVE AND FOLIATED, SYNTECTONIC PEGMATITE, APLITE, LEUCOCRATIC GRANITE AND QUARTZ MONZONITE BORDERING AND WITHIN SHANAP METAMORPHIC COMPLEX AND DEARBANKAN PLUTONIC AND METAMORPHIC COMPLEX; SILVER STAR INTRUSIONS; (MAY INCLUDE OROGENESIS OF PALAEOZOIC AND PROTEROZOIC AGES).
- LATE JURASSIC
VALMUELA PLUTONIC ROCKS
- lJgd** GRANDIODORITE, GRANITE; MINOR GABBRO, DIORITE, QUARTZ DIORITE.
- EARLY JURASSIC
LONG RIDGE PLUTON
- eJg** FOLIATED, LINEATED GRANITE (MAY INCLUDE PALAEOZOIC PLUTONIC ROCKS).
- NELSON PLUTONIC ROCKS; TRINA BATHOLITH AND SATELLITIC STOCKS.
- eJgd** QUARTZ DIORITE, GRANDIODORITE; MINOR DIORITE, GRANITE, AMPHIBOLITE, GABBRO AND ULTRAMAFIC ROCKS.
- eJdi** DIORITE; MINOR QUARTZ DIORITE AND GABBRO.
- eJy** SYENITE AND MONZONITE.
- INTRUSIVE CONTACT
- TRIASSIC AND JURASSIC
UPPER TRIASSIC AND LOWER JURASSIC
TIGELA GROUP (POSSIBLY INCLUDES SLOCAN GROUP NEAR SOUTHEAST EDGE OF AREA).
- TJnw** ANDESITE AND BASALT FLOW ROCKS, PORPHYRYTIC ANDITE, BRECCIA, TUFF, AGGLOMERATE, GREENSTONE, CHLORITIC PHYLLITE; MINOR ARGILLITE, LIMESTONE, SERICITIC SCHIST.
- UPPER TRIASSIC
KARBIAN AND HOBAN
TIGELA GROUP
- uBns** BLACK SHALE, ARGILLITE, CONGLOMERATE, LIMESTONE, SILTSTONE; MINOR TUFF AND PHYLLITE.
- uBnc** LIMESTONE
- SLOCAN GROUP
SICAMOUS FORMATION
- uBsc** SERICITIC, GRAPHITIC AND ARGILLACEOUS LIMESTONE; CALCAREOUS PHYLLITE, ARGILLITE.
- uBsp** SHALE, ARGILLITE, MASSIVE SILTSTONE, PHYLLITE, TUFF AND CALCAREOUS PELITE; MINOR CONGLOMERATE, LIMESTONE, GREENSTONE, CHLORITIC PHYLLITE AND AIDALUCITE -, STAUROLITE - AND KYANITE - BEARING SCHIST.
- uBscg** CONGLOMERATE.
- PALAEOZOIC AND MESOZOIC
DEARBANKAN PLUTONIC AND METAMORPHIC COMPLEX (MAY INCLUDE METAMORPHIC EQUIVALENTS OF UNIT CP1a AND/OR OLDER ROCKS, AND TRIASSIC GREISSIC GRANITE).
- P1Mn** HORNBLende AND BIOTITE GNEISS, PARAGNEISS; MINOR SCHIST, MARBLE, QUARTZITE AND AMPHIBOLITE.
- P1Mm** DIORITIC GNEISS, AMPHIBOLITE.
- P1sc** MARBLE.
- P1sb** QUARTZ MICA SCHIST.
- PALAEOZOIC
PENNIAN AND (?) PENNSYLVANIAN
KASLO GROUP
- P1vb** MASSIVE AND FOLIATED GREENSTONE, CHLORITIC PHYLLITE, AMPHIBOLITE; MINOR ULTRAMAFIC ROCKS.
- P1vb** SERPENTINIZED ULTRAMAFIC ROCKS.
- SLIDE MOUNTAIN GROUP
FENNEL FORMATION
- Pf** PILLON LAVA FLOWS, MASSIVE AND FOLIATED GREENSTONE, GREENSCHIST, ARGILLACEOUS CHERT; MINOR AMPHIBOLITE, LIMESTONE, BRECCIA.
- Pf1** CHERT
- Pfp** ARGILLITE, SILTSTONE
- Pfcg** CONGLOMERATE
- Pfvb** SERPENTINIZED ULTRAMAFIC ROCKS.
- SALMON FORMATION
- P1** GREENSTONE, CHLORITE PHYLLITE, AMPHIBOLITE; MINOR BLACK SHALE, LIMESTONE, MARBLE.
- P1vb** SERPENTINIZED ULTRAMAFIC ROCKS.
- P1c** MASSIVE, WHITE LIMESTONE.
- P1cg** FOLIATED AND STRETCHED QUARTZ PEBBLE CONGLOMERATE.
- P1m** AMPHIBOLITIC GNEISS.
- P1sc** GREY, DIOPSIDIC MARBLE.

Figure 15A Legend to Figure 15 Continued

- CARBONIFEROUS AND PERMIAN (MAY INCLUDE TRIASSIC)
CHESTERIAN - MURKIN AND VOLCANICIAN-GUADALUPIAN (MAY INCLUDE KANNAN - HORIAN).
JIMMISON ASSEMBLAGE (MAY INCLUDE UNIT UJNS).
- CP1a** UNDIVIDED.
 - CP1as** SILICEOUS ARGILLITE, VOLCANICLASTIC SANDSTONE, QUARTZITE, SILTSTONE; MINOR LIMESTONE, SHEARED CONGLOMERATE, BRECCIA AND GREENSTONE.
 - CP1aw** GREENSTONE, TUFF.
 - CP1ac** MASSIVE, CRYSTALLINE WHITE AND GREY LIMESTONE; MINOR CHERT PEBBLE CONGLOMERATE, ARGILLACEOUS LIMESTONE AND CHERT.
 - CP1ad** CONGLOMERATE WITH LIMESTONE MATRIX.
- CARBONIFEROUS
MILFORD GROUP
- CM1s** SILTSTONE, SANDSTONE, SHALE; MINOR QUARTZ GRANULE CONGLOMERATE.
 - CM1p** BLACK SHALE, ARGILLITE; MINOR SANDSTONE.
 - CM1d** GREENSTONE, CHLORITIC PHYLLITE.
- MISSISSIPPIAN
OSAGEAN - PERMOCIAN
MILFORD GROUP
- MMc** FINE GRAINED GREY LIMESTONE; MINOR DOLOMITE AND SHALE.
 - MMcg** GRANULE TO BOULDER CONGLOMERATE, SOME WITH LIMESTONE AND GREENSTONE CLASTS.
- MISSISSIPPIAN (?) OR OLDER
OLD DAVE INTRUSIONS (INCLUDES ULTRAMAFIC ROCKS ASSOCIATED WITH UNITS COBw AND BJW).
- Pub** SERPENTINITE AND SERPENTINIZED ULTRAMAFIC ROCKS; MINOR PROKONITE AND PERIDOTITE.
- CHAPPELTON GROUP
- PCv** CHLORITIC PHYLLITE, GREENSTONE, MICACEOUS SCHIST; MINOR LIMESTONE AND ULTRAMAFIC ROCKS.
- DEVONIAN
LATE DEVONIAN
MOUNT FOXLER BATHOLITH, SOUTH FOOTHILL PLUTONIC
- LDgn** FOLIATED AND LIGATED LEUCOCATIC GRANITE, GRANITIC FELDSPAR PORPHYRY, QUARTZ MONZONITE, GRANODIORITE, MINOR PEGMATITE AND QUARTZ DIORITE.
- ORDOVICIAN
LATE ORDOVICIAN
LITTLE SHUWAP GNEISS
- LOgn** LEUCOCATIC GRANITE GNEISS, QUARTZ MONZONITE GNEISS, GRANODIORITE GNEISS; MINOR DIORITE GNEISS.
- CARBONIAN AND ORDOVICIAN
EAGLE BAY FORMATION
- COBw** FOLIATED ACID VOLCANIC ROCKS, CHERT, SILICEOUS PHYLLITE; SHEARED AND ALTERED QUARTZ FELDSPAR PORPHYRY AND/OR QUARTZ GRANULE CONGLOMERATE; GNEISSIC ACID IGNEOUS ROCKS NEAR SHUWAP LAKE.
 - COBv** GREENSTONE, CHLORITIC PHYLLITE; MINOR ASGLOMERATE, SERICITIC PHYLLITE, QUARTZITE, LIMESTONE AND TUFF.
 - COBq** SERICITIC, SILICEOUS PHYLLITE, SERICITIC QUARTZITE, QUARTZ BIOTITE SCHIST, QUARTZ BIOTITE GARNET SCHIST; MINOR TUFF AND LAYERS OF UNITS COBw, COBc.
 - COBp** BLACK ARGILLITE, ARGILLACEOUS PHYLLITE, SHALE; MINOR LIMESTONE.
 - COBc** MASSIVE WHITE CRYSTALLINE LIMESTONE, DARK GREY FOLIATED LIMESTONE; MINOR LIMESTONE WITH CHERT NODULES.
 - COBd** CONGLOMERATE, SOME WITH BLACK QUARTZ CLASTS; MINOR BRECCIA AND ASGLOMERATE.
 - COBt** ISHMAKER LIMESTONE MEMBER
 - COBz** MASSIVE WHITE CRYSTALLINE LIMESTONE; MINOR GREENSTONE AND GREENSCHIST.
- SILVER CREEK FORMATION
- COsc** QUARTZ BIOTITE, SERICITE AND GARNET SCHIST; MINOR QUARTZ-FELDSPATHIC BIOTITE GNEISS, PEGMATITE, AMPHIBOLITE, MARBLE.
- CHASE QUARTZITE MEMBER
- COsc** QUARTZITE, SILICEOUS MARBLE, CRYSTALLINE LIMESTONE; MINOR PELITIC SCHIST.
- PROTEROZOIC AND PALAEOZOIC (MAY INCLUDE ARCHAEOAN)
SHUWAP METAMORPHIC COMPLEX
- BPns** UNDIVIDED; GRANITOID GNEISS, PARAGNEISS, SCHIST; MINOR QUARTZITE, MARBLE, AMPHIBOLITE.
 - BPsb** QUARTZ MICA SCHIST, COMMONLY GARNET-AND SILLIMANITE-BEARING.
 - BPsq** QUARTZITE; MINOR PELITIC SCHIST.
 - BPsc** MARBLE, DIOPSIDIC MARBLE; MINOR CALCIUM SILICATE GNEISS AND AMPHIBOLITE.
 - BPm** AMPHIBOLITE, AMPHIBOLITIC GNEISS, MINOR HORNBLende BIOTITE SCHIST.
 - BPqc** SILICEOUS MARBLE, CALCAREOUS QUARTZITE, CALCIUM SILICATE GNEISS; MINOR PELITIC SCHIST.
 - BPzd** GRANODIORITE, DIORITE AND TONALITE GNEISS; GNEISS.

--- GEOLOGICAL BOUNDARIES (APPROXIMATE, ASSUMED).

FAULTS

- NUCLEONITE ZONES (TEETH ON HANGING WALL).
- THRUST FAULTS (APPROXIMATE, ASSUMED); TEETH ON HANGING WALL.
- HIGH ANGLE FAULTS (APPROXIMATE, ASSUMED).

PLANAR STRUCTURES

- BEDDING (TOPS KNOWN); INCLINED, OVERTURNED.
- BEDDING (TOPS UNKNOWN); HORIZONTAL, INCLINED, VERTICAL.
- FOLIATION, SCHISTOSITY; GNEISSIC LAYERING OR CLEAVAGE (HORIZONTAL, INCLINED, VERTICAL); EARLIEST OR ONLY OBSERVED.
- AXIAL PLANES (INCLINED, VERTICAL) OF MESOSCOPIC FOLDS OBSERVED TO HAVE DEFORMED BEDDING; EARLIEST OR ONLY OBSERVED.
- AXIAL PLANES (INCLINED, VERTICAL) OF LATER MESOSCOPIC FOLDS OBSERVED TO HAVE DEFORMED BEDDING, FOLIATION OR PRE-EXISTING STRUCTURES.
- AXIAL PLANES (INCLINED, VERTICAL) OF LATEST MESOSCOPIC FOLDS OBSERVED TO HAVE DEFORMED BEDDING AND TWO PHASES OF PRE-EXISTING STRUCTURES.

LINEAR STRUCTURES

- LINEATIONS (PLUNGING, HORIZONTAL) FORMED BY FOLD AXES (F), BEDDING/FOLIATION INTERSECTION (E), MINERAL ALIGNMENT OR RODDING (R) AND RODDING AXES (A); (UNDETERMINED LINEATIONS NOT LABELLED); EARLIEST OR ONLY OBSERVED.
- LINEATIONS (PLUNGING, HORIZONTAL) OBSERVED TO BE ASSOCIATED WITH LATE FOLDS OR SUPERIMPOSED UPON PRE-EXISTING STRUCTURES.
- LINEATIONS (PLUNGING, HORIZONTAL) OBSERVED TO BE ASSOCIATED WITH LATEST FOLDS OR SUPERIMPOSED UPON TWO PHASES OF PRE-EXISTING STRUCTURES.

FOLDS

- EARLY AXIAL TRACE (ANTIFORM); UPRIGHT, OVERTURNED OR RECUMBENT.
- EARLY AXIAL TRACE (SYNFORM); UPRIGHT, OVERTURNED OR RECUMBENT.
- LATE AXIAL TRACE (ANTIFORM, SYNFORM).

The Columbian Orogeny, occurring during Early Jurassic to mid-Cretaceous time, was the major event affecting rocks in the project-area. Most of the polyphase (early (second phase), and late) folding, regional metamorphism and faulting took place at this time. Extensive plutonism accompanied and followed deformation ...

Within the project-area, radiometric data ... suggest that ... waning regional metamorphism and deformation took place at least 130 to 155 Ma (Early Cretaceous to Middle Jurassic). Early Jurassic rocks ... were affected by most deformational phases of the orogeny; Early Cretaceous plutons are post-tectonic.

Uplift and erosion followed the Columbian Orogeny... Movement along northerly trending faults and latest warping preceded or accompanied extrusion of (early Tertiary plateau basalts). Numerous feeder dykes followed fracture and fault planes. Such tensional features may be induced by post-orogenic erosion, uplift and cooling of the crust ...

Post Eocene uplift and faulting took place predominantly in the Shuswap Complex and resulted in erosion of (early Tertiary Kamloops Group volcanics) and further exposure of the metamorphic terrane.

Okulitch, A.V.; 1979: G.S.C., Open File 637,
Notes to Map B: Stratigraphy and Structure.

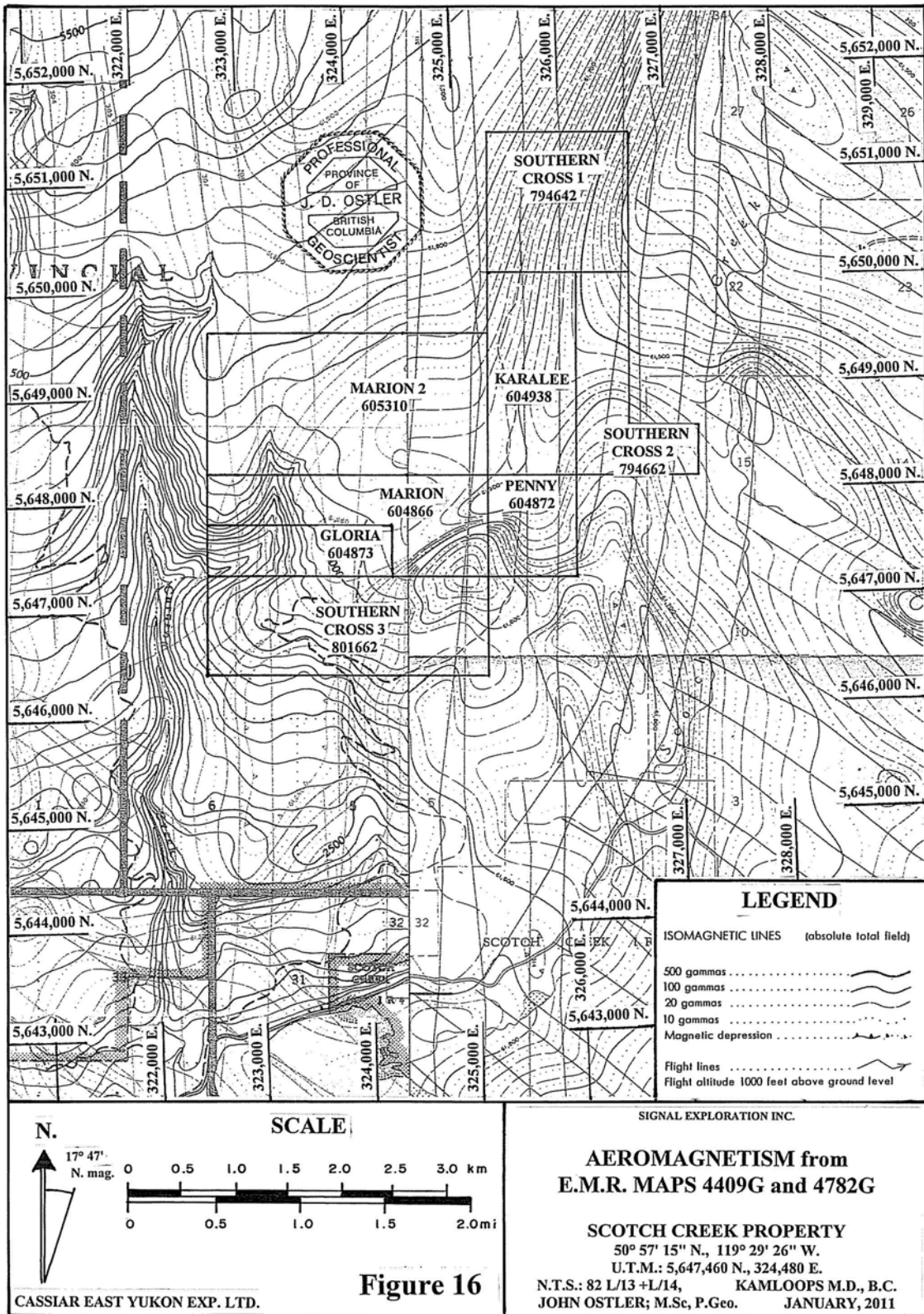
Trygve Hoy (1998) of the British Columbia Geological Survey wrote a summary paper regarding the stratigraphy of Adams Plateau northwest of the Scotch Creek area. Many of his conclusions can be applied to the property-area. The oldest Eagle Bay-Formation rocks on Adams Plateau are a series of Grenvillian to Cambrian-age mafic volcanic rocks that Hoy (1998) correlated to the Index Formation of the Lardeau Group in the Kootenay Arc. Overlying the mafic volcanic succession, is one of gritty sedimentary rocks that Hoy (1998) correlated with the Ordovician to Silurian-age Jowett Formation of the Lardeau Group. The uppermost stratigraphic succession that Trygve Hoy (1998) identified, was one of intermediate to felsic volcanic strata intercalated with variable carbonaceous and carbonate-bearing pelitic meta-sedimentary. He equated those rocks to the Devonian to Mississippian-age Milford Group which is a record of the final miogeosynclinal filling of the Cordilleran Geosyncline. The intermediate to felsic meta volcanic rocks of this succession were considered by some other stratigraphers to have been the uppermost rock units of the Eagle Bay Formation; the pelitic metasedimentary rocks were previously assigned to the Sicamous Formation.

Equivalents of Hoy's (1998) felsic volcanic rocks and metasedimentary rocks are exposed on the current Scotch Creek property, where the two rock units represent facies of one depositional event. A table of geological events and lithological units around the northwestern end of Shuswap Lake is as follows:

Table 6
Table of Geologic Events and Lithologic Units in the Scotch Creek Property-area

Time	Formation or Event
Recent 0.01-0 m.y.	Valley rejuvenation: Down cutting of stream gullies through till, development of soil profiles.
Pleistocene 1.6-0.01 m.y.	Glacial erosion and deposition: Removal of Tertiary-age regolith, deposition of till and related sediments at lower elevations, smoothing of the Tertiary-age land surface.
Eocene to Pliocene 57.1-1.6 m.y.	Erosion, and unroofing of the rocks, incision of the land surface: MINERALIZATION: Release of free gold from sulphides during deep weathering and its deposition in small placers in Scotch Creek.
Eocene 56.5-35.4 m.y.	Tensional faulting: Deposition of the Kamloops Group flood basalt on the erosional surface
Late Cretaceous to Eocene 97-57.1 m.y.	Disruption of stratigraphy by northerly trending transcurrent faults, onset of regional erosion. Transcurrent and normal faulting of Upper Eagle Bay and Sicamous Formation rocks MINERALIZATION: Development of the pegmatite showing on the SOUTHERN CROSS 2 (794662) claim
Early to Middle Cretaceous 146-97 m.y.	Thrust and transcurrent faulting, and deformation of the Cache Creek terrane: Thrust faulting of Upper Eagle Bay and Sicamous Formation rocks
Early Jurassic to Middle Cretaceous 200-130 m.y.	Columbian Orogeny: Deformation of Cache Creek rocks in a northeastward dipping subduction zone, accretion of Nicola Group rocks to North America: progressive deformation and regional metamorphism, overriding of Cache Creek and Quesnel terrain rocks onto Kootenay Arc strata, intense deformation, uplift, regional metamorphism culminating in extensive plutonism in Kootenay Arc rocks. The orogeny progressed from east to west. First and second phase of folding in Upper Eagle Bay and Sicamous Formation rocks
Late Triassic (Rhaetian) 209.6-200 m.y.	Deposition of the Nicola Group, and associated alkalic intrusions: mafic volcanics, associated sediments, and coeval dioritic sub-volcanic intrusions cut by monzonitic to dioritic stocks in an island arc environment.
Late Permian to Early Triassic 256-241 m.y.	Mild orogenic event in southern British Columbia: Deformation, low-grade metamorphism, plutonism, uplift and erosion.
Late Devonian to Triassic 355-251 m.y.	Deposition of the Kaslo and Milford Group clastic sediments in the Cordilleran Miogeosyncline. These rocks were deposited on an erosional surface resulting in a major unconformity between them and the underlying eugeosynclinal rocks.
Late Devonian to Mississippian 355 to 314 m.y.	Deposition of Upper Eagle Bay Formation felsic volcanic rocks and Sicamous Formation pelitic and carbonate sedimentary rocks deposited on an erosional on Middle Eagle Bay stratigraphy. MINERALIZATION: Deposition of disseminated and massive sulphide mineralization across the current Scotch Creek property-area during a trachytic eruption
Late Devonian 383-355 m.y.	Regional Uplift and Plutonism: An erosional surface developed on the Middle Eagle Bay, Slocan and Lardeau group rocks.
Early to Middle Ordovician 490-460 m.y.	Cariboo Orogeny: Early deformation and regional metamorphism of the Lower to Middle Eagle Bay Formation, Slocan and Lardeau groups.
Cambrian to Devonian 544-355 m.y.	Deposition of the Lower to Middle Eagle Bay Formation mafic volcanic and meta-sedimentary rocks, and the Lardeau and Slocan group volcanics and sediments in the Cordilleran Eugeosyncline.
	m.y. = million years ago

NOTE: Data for this table was compiled by the author from various sources including Okulitch (1979), Hoy (1998), and Douglas ed. (1970).



3.2 Regional Geophysics

From June to August, 1965, the federal Department of Mines and Technical Surveys conducted a fixed-wing airborne aeromagnetic survey over the central part of the Shuswap Lake area. Energy, Mines, and Resources Map 4782G covering N.T.S. map-area 82 L/14 was one of the aeromagnetic maps produced. During June of the same year, another fixed-wing aeromagnetic survey was conducted adjacent with and to the west of the Shuswap Lake-area survey. One of the maps produced from that survey was Energy, Mines, and Resources Map 4409G covering N.T.S. map-area 82 L/13 (East half). The current Scotch Creek property-area straddles the boundary of those two maps. Both maps were re-scaled to 1:50,000 to produce parts of Figure 16.

The plateau area covering the northwestern part of the property-area is magnetically flat with intensities ranging from about 61,800 to 62,000 nanoteslas (gammas). The northeastern part of the property area covers the western slope of the Scotch Creek valley. That slope corresponds with a decrease in magnetic intensity that culminates in a magnetic “low” of about 61,200 nanoteslas (gammas) near the creek about 1.8 km (1.1 mi) northwest of the SOUTHERN CROSS 1 (794642) claim.

The most important regional magnetic feature in the property-area is an intense magnetic “high” that is centred on the 1986 Brican grid-area at the boundary between the eastern parts of the MARION (604866) and SOUTHERN CROSS 3 (801662) claims. Previous exploration results indicate that massive sulphide mineralization may be responsible for this regional magnetic feature.

3.3 Property Geology including Current Mapping

3.3.1 Stratigraphy

At the commencement of the current (2010) exploration program there was no reliable geological map of the Scotch Creek property-area (Section 7.0, this report).

Current geologic mapping has revealed that the metasedimentary and metavolcanic rocks in the Scotch Creek property area are an upright succession that represent various coeval facies resulting from two concurrent eruptions into a shallow marine basin (Figures 17N and 17S) (Ostler, John; 2011).

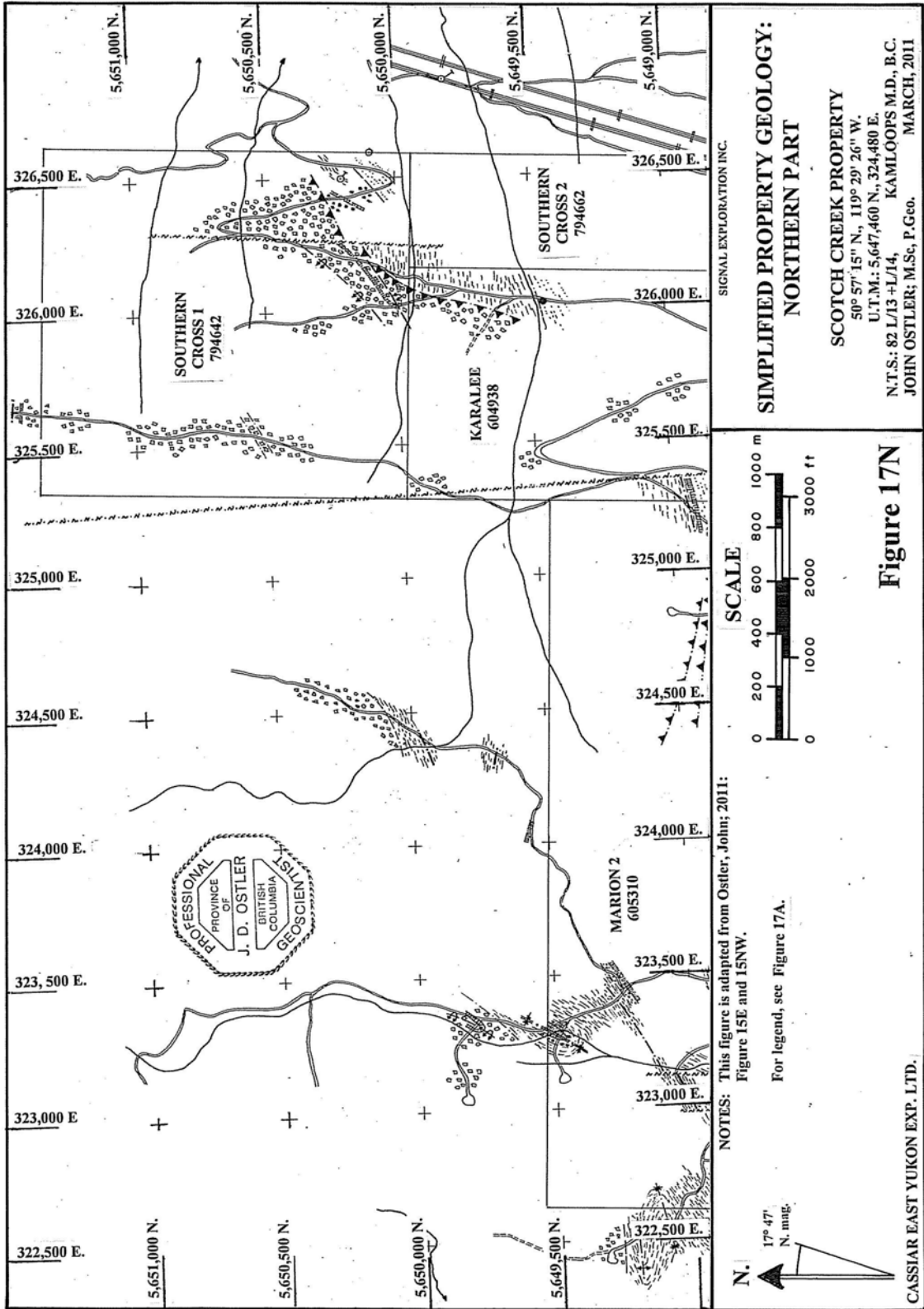
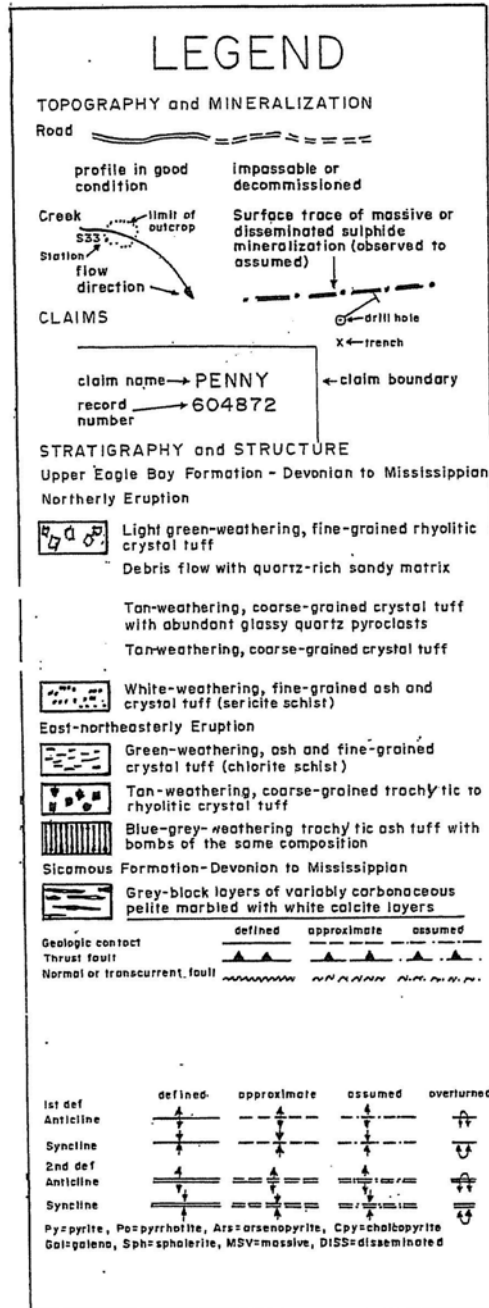
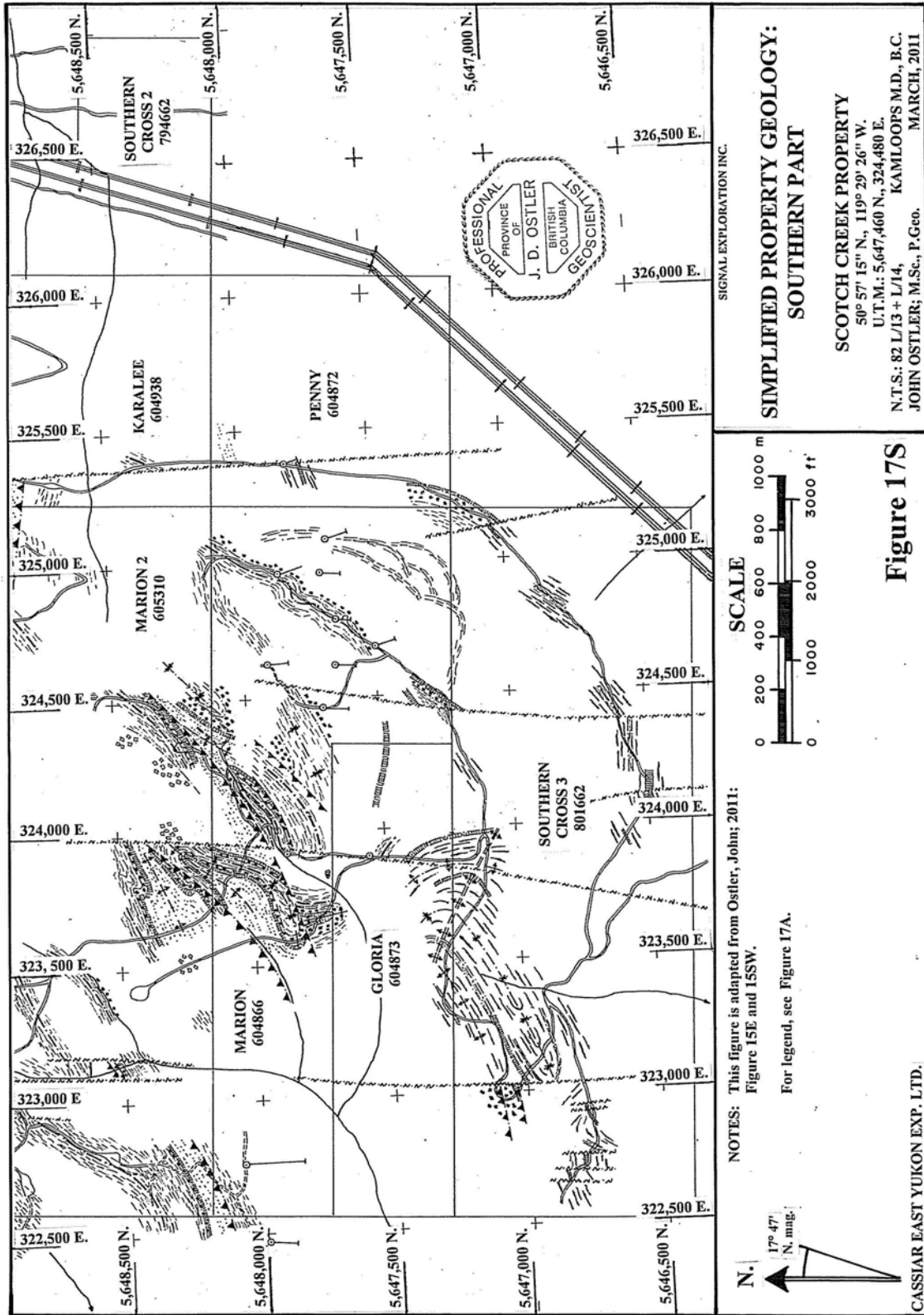


Figure 17A
Legend to Figures 17N and 17S





The eruption responsible for the greatest deposition of volcanic material emanated from a vent-area north of the property-area. It produced a thick pile of rhyolitic to dacitic crystal tuff that was barren of mineralization.

A secondary eruption from a vent-area located east-northeast of the current Scotch Creek property-area was more trachytic in composition and was responsible for all of the Noranda/Kuroko-type mineralization exposed in the property-area. All of the volcanic stratigraphy mapped to date in the property-area is sub-aqueous.

The most important stratigraphic marker bed on the property is a trachytic tuff that is the basal unit of the east-northeasterly eruption. It is comprised of about 70% feldspar, predominantly orthoclase, and about 30% green-black biotite and hornblende. This tuff was deposited as a single graded bed up to 4.5 m (14.8 ft) thick in the eastern part of the property area. Its thickness declines to about 1 m (3.1 ft) in the southern and western boundary areas of the Scotch Creek property. This increase in thickness to the east-northeast indicates that the vent from which it emanated was located in that direction.

The pyroclastic emission that formed this tuff bed was a single event probably lasting only a few hours. Consequently, the tuff is a precise time-stratigraphic marker defining a single day in geologic history. Not only is this rock-unit located at the base of the stratigraphy of the east-northeasterly eruption, it occurs within the stratigraphy of the northern eruption on the SOUTHERN CROSS 1 (794642) claim (Figure 17N) and out into the metasedimentary stratigraphy in the southwestern part of the property-area. This reveals that the east-northeasterly eruption and the mineralization with which it was associated was deposited during the progress of the northerly eruption, and both eruptions were spewing pyroclastic debris into the surrounding marine basin while other sediments were being deposited there. All of the rocks on the Scotch Creek property are coeval. A coarse-grained trachytic to rhyolitic crystal tuff lies conformably on, and in sharp contact with the trachytic tuff. The coarse-grained crystal tuff weathers to a light tan colour and forms distinctive resistant outcrops. It was deposited in a series of graded beds up to 3 m (9.8 ft) thick. Commonly, beds more than 1 m (3.3 ft) thick are associated with cross-beds that resulted from a large volume of sea-water being pushed out of the way of the pyroclastic material that was being quickly dumped into it.

The contact between the coarse-grained and fine-grained crystal tuff that overlies it is conformable and gradational, and reflects the waning of an eruptive cycle. The fine-grained tuff was deposited as a series of graded beds that contained progressively more ash and fewer and smaller pyroclasts up-section. This fine-grained crystal tuff is the most chloritic rock-unit in the property-area, making it a distinctive green colour. Other common platy minerals in this rock-unit are sericite, muscovite, and biotite which gives it a shistose character. Adjacent to the mineralized horizon, the fine-grained tuff becomes quite chloritic and is commonly Lincoln green, both on fresh and weathered surfaces. Some of this could be an inter-volcanic, sedimentary bed; however, metamorphism has made that difficult to discern.

Blebs and ribbons of sulphide minerals occur throughout the chloritic part of this rock-unit. Mineralization culminates in a layer or series of layers that were deposited in a narrow stratigraphic interval in relatively quiet water above and around the flanks of lenses of the coarse-grained crystal tuff (Figures 5C and 17S). Disrupted traces of the mineralized horizon are exposed a just above the trachytic tuff north of the SOUTHERN CROSS 1 (794642) claim boundary (Figure 17N), indicating that sulphide mineralization occurred over an extensive area during the progress of the northern eruption.

Sulphide deposition occurred in a single, relatively uncontaminated layer in the southern part of the property-area. Farther north on the MARION 2 (605310) claim, it was diluted by pyroclastic material from the northern eruption. In some places, mineralization is split into several beds by intervening ash layers (Figures 5C, 5W, and 17S). For details of the mineralized layer, see section 3.4.1 of this report.

Fine-grained, chloritic tuff beds exposed above the interval of sulphide deposition indicates that mineralization occurred during a lull in the east-northeasterly eruption and not at its conclusion.

Variably carbonaceous and carbonate-rich pelite and marble are exposed across much of the southwestern part of the property-area. These rock-units have been correlated with the Sicamous Formation (Okulitch, 1979 and others) and as the uppermost unit of the Eagle Bay Formation (Hoy, 1998, and others). They represent background sedimentation in a relatively shallow marine basin fairly close to carbonate banks or reefs. Thin bands of dark grey biotite and graphite-rich layers are flow-folded with white calcite to produce a wispy, marbled texture on outcrops. The high calcite content make these rock-units soft and easily weathered.

Top determinations can be made only when crystal tuff layers are present in these rock-units.

3.3.2 Deformation and Metamorphism

Rocks in the Scotch Creek property-area have been subjected to at least two episodes of folding, followed by thrust faulting and then transcurrent faulting. Both the first and second phases of folding are presumed to be related to the Columbian Orogeny that progressed from the Early Jurassic to Middle Cretaceous Period.

First-phase folds in the Upper Eagle Bay formation felsic volcanic rocks are close to tight and upright, with east-west trending axial traces. Probably, the axial planes of these folds were nearly vertical when they formed. Most of these folds extend for about 500 m (1,640.4 ft) from limb to limb.

During this phase of deformation, the comparatively competent volcanic pile was shoved against adjacent and intercalated sedimentary rocks of the Sicamous Formation. That mudstone and carbonate detritus thickened by the development of small scale flow-folds preferentially in the least competent beds. Regional greenschist metamorphism resulted in dehydration of strata and re-crystallization of reef detritus to calcite and organic material to graphite. All of these processes contributed to compaction of Sicamous Formation rocks. Competent volcanic beds within the sedimentary stratigraphy were broken into slabs and panels to accommodate thickening. Most local disruptions in the trachyte tuff bed within the sedimentary stratigraphy in the southern part of the property-area may have occurred during the first phase of plastic deformation (Figure 17S).

The second phase of deformation produced upright, open folds with mostly northwesterly trending fold axes. The orientations of these folds indicates that the principle compressive stress direction rotated from north-south to northeast-southwest between the first and second phases of folding. Discrete minor structure sets related to the two phases of folding and the rotation of a first-phase cleavage around second-phase fold limbs suggest to the author that plastic deformation was more poly-phase than progressive. Second-phase folds are up to 800 m (2,624.7 ft) from limb to limb.

Unroofing late during the Columbian Orogen may have been responsible for reductions in temperature and confining pressure which resulted in a change in deformation style from ductile to brittle. This was

accompanied by another change in the orientation of the principle stresses. The principle compressive stress rotated to a northwest-southeast orientation. High-angle thrust faults developed as felsic volcanic stratigraphy from the east-northeasterly eruption was pushed southeastward over metasedimentary rocks. Coarse-grained crystal tuff stratigraphy related to the northerly eruption was shoved up over rocks from the east-northeasterly eruption. Although this thrust-faulting occurred at moderately low confining pressures, local roll-front folds were formed in quite competent strata in upper fault plates adjacent to these thrusts. These local folds attest to the slow progression of thrusting, and represent a local third phase of folding.

From the Late Cretaceous Period to the Eocene epoch, northwesterly transcurrent faults developed throughout southern British Columbia. In the Scotch Creek property-area, this deformation is represented by a series of northerly trending normal and transcurrent faults. Faulting related to this brittle phase of deformation is most prevalent in the eastern part of the property-area on the western slope of the Scotch Creek valley. The valley may be related to a graben that was formed at this time.

Regional metamorphism attained a maximum of middle amphibolite grade during the second phase of plastic deformation. Metamorphic green-black biotite is common throughout rocks in the property-area. Basaltic hornblende can be found in most outcrops of the trachytic ash tuff. Small almandine garnet porphyroblasts are common in finer grained interbeds within the coarse-grained crystal tuff of the east-northeasterly eruption.

White milky quartz segregations and veins occur after the culmination of second-phase folding and metamorphism. These may be related to thrust faulting. Commonly, these quartz bodies are associated with a significant amount of epidote in the coarse-grained crystal tuffs from the northerly eruption.

Near third-phase, normal, and transcurrent fault planes, silica alteration and bleaching is common. Marcasite production and the pegmatite mineralization on the property is associated with fluids moving along these faults.

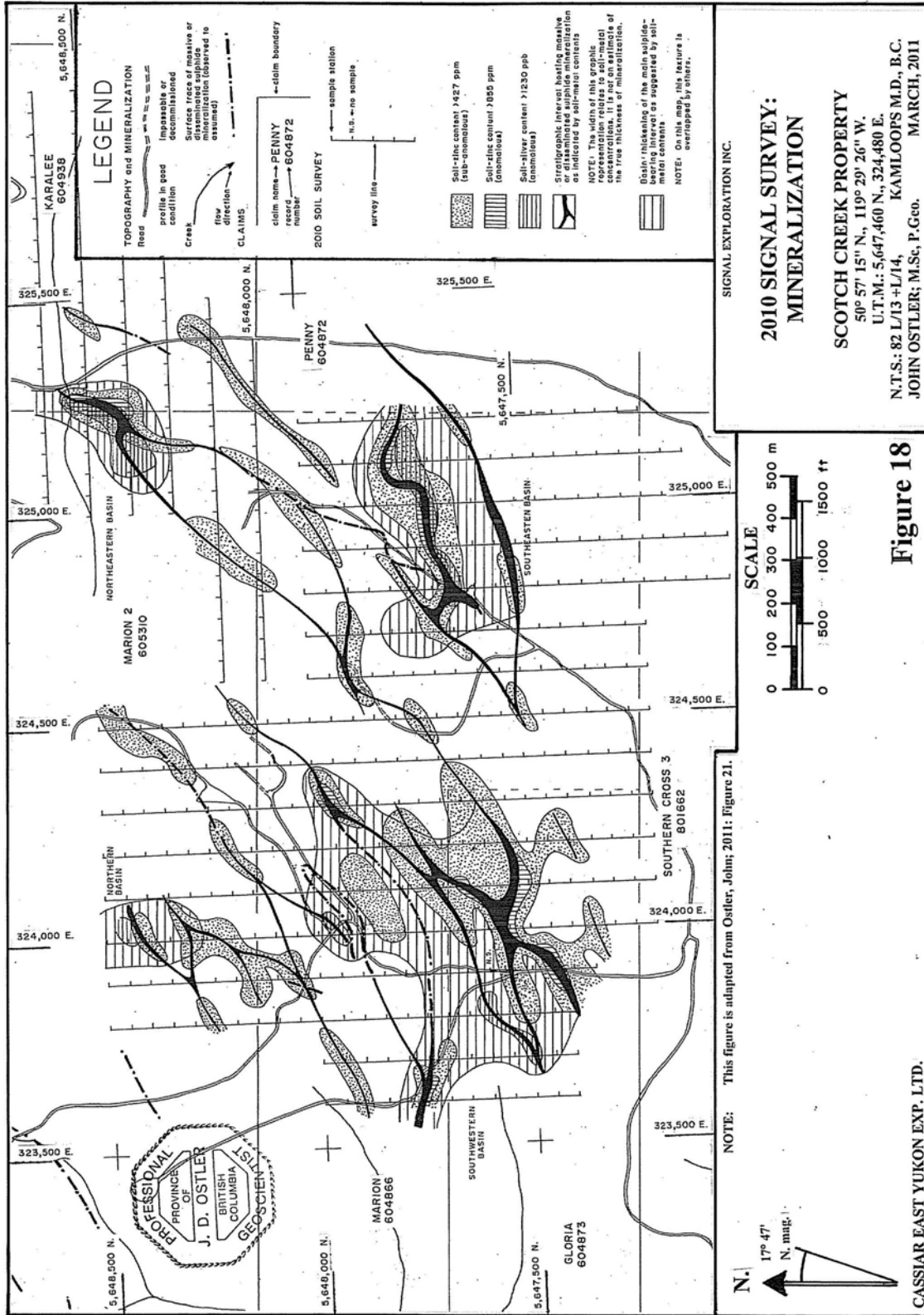
3.4 Mineralization

3.4.1 Volcanogenic Massive and Disseminated Sulphide

Although occurrences of this type of mineralization are plentiful in the Scotch Creek property-area, all of them are exposures of a single, extensive, sulphide-bearing, stratigraphic interval. The interval is hosted by a chloritic ash and fine-grained crystal tuff that was deposited during a lull in the primarily trachytic, east-northeasterly eruption. The sulphide-bearing interval is about 30 m (98.4 ft) stratigraphically above the contact between a distinctively blue-grey-weathering trachytic ash bed and a tan-weathering, coarse-grained, orthoclase, crystal tuff. Both of those rock-units are resistant marker beds. Consequently, the general location of the sulphide-bearing interval is easy to predict on the ground in areas of significant rock outcrop.

While the east-northeasterly eruption was waning and the sulphide-bearing interval was being deposited, rhyolitic crystal tuffs were being deposited by an eruption with a vent-area north of the SOUTHERN CROSS 1 (794642) claim. Material from the northerly eruption variously contaminated sulphide deposition which was the background sedimentation on the sea floor at that time. Contamination and disruption of the sulphide-bearing layer decreases from extreme, north of the SOUTHERN CROSS 1 (794642) claim, to moderate and variable on the Marion 2 (605310) claim, to negligible on the MARION (604866) and GLORIA (604873) claims in the southern part of the property-area. Near the northwestern corner of the MARION 2 (605310) claim at station S126A (northwest corner of Figure 5W), the sulphide-bearing interval occurs as thin layers of disseminated and massive sulphide mineralization over a 2-m (6.56-ft) thickness. These laminae are separated by at least three fine-grained, rhyolitic tuff layers.

Undiluted sulphide deposition averages about 25 cm (0.82 ft) in thickness in much of the southern part of the property-area. Thickness increases to more than 1 m (3.05 ft) where sulphide-bearing brines have ponded in depressions on the palaeo-sea-floor. Four such "basins" are indicated by soil-metal anomalies and geological mapping during the current (2010) program augmented by the results of previous surveys and by old drill data (Figure 18). Differential sulphide-layer thickening may have been accentuated by sulphide mineral flow into fold hinges during the two phases of plastic deformation. Maximum massive sulphide thickness is not known yet, partly due to sparse data.



Current (2010) soil survey results on the eastern part of the MARION (604866) claim indicate that massive sulphide deposition is zoned with regard to copper and zinc contents (Figures 19 and 21). Of particular interest, are copper-rich areas within the northeastern and southeastern basins, and with a lesser intensity in the southwestern basin (Figure 18). These areas of high soil-copper contents are interpreted to be reflections of copper-rich zones within more extensive zinc-rich sulphide accumulations. Areas of anomalous soil-silver concentrations within soil-zinc anomalies are deemed to represent zones of high lead and silver concentration in sulphide accumulations assuming that most silver is associated with galena (PbS).

Where sulphide mineralization was thin, metamorphism has been able to penetrate and re-crystallize it. Platy segregations and crystals of pyrite, pyrrhotite, chalcopyrite, sphalerite, galena, and arsenopyrite are normally oriented in local cleavage planes. Sulphides in these areas are comparatively pyrite-rich and deficient in pyrrhotite and arsenopyrite in comparison to thicker massive sulphide sections. This may be due to the replacement of pyrrhotite and arsenopyrite by pyrite and a loss of arsenic during metamorphism. The comparative effects of metamorphism on sulphide mineralization relating to the first and second phases of plastic deformation have not been studied.

Where massive sulphide mineralization is more than 50 cm (1.64 ft) thick, it has been almost impermeable to metamorphic fluids; original sedimentary textures and mineralization have been better-preserved. Arsenopyrite and silica separated from the fluid first. Both formed small segregations and beads, commonly less than 1 cm (0.4 inch) long. Arsenopyrite blebs commonly are concentrated in planes parallel with the enclosing bedding planes. Silica blebs are more randomly dispersed throughout the sulphide mass. Chalcopyrite, pyrite, and pyrrhotite all appear to have crystallized next, forming layers and segregations throughout the sulphide mass. Sphalerite and galena form a fine-grained groundmass that fills the voids left after crystallization of other minerals. Results of the author's 2010 sampling are as follow:

**Table 7
Ostler's 2010 Sampling Results**

S. No.	U.T.M. Location	Claim	Description	Interval m ft.	Cu ppm	Pb ppm	Zn ppm	As ppm	Au gm/mt oz/t	Ag gm/mt oz/t
S1-1	5,648,842 N., 323,367 E.	MARION 2 605310	Ribbons of Py, sph, variably weathered in EB fxt	0.5 1.64 Composite chip	23.2	9.7	22	0.9	0.02 <0.001	0.10 <0.01
S2-1	5,648,380 N., 323,623 E.	MARION 2 605310	chlorite-sericite schist (EB fxt) with several zones containing diss sulphide mineralization	50.0 164 composite chip	110.5	16.1	66	1.1	0.02 <0.001	0.19 <0.01
S2-2	5,648,380 N., 323,583 E.	MARION 2 605310	diss sulphide layer 0.8 m thick	grab	328	27.0	17	5.8	0.01 <0.001	0.33 0.01
S7-3	5,648,072 N., 323,847 E.	MARION 604866	float boulder of diss to msv sulphide	grab	840	46.7	6210	<5	<0.01 <0.001	1.93 0.06
S8-1	5,648,063 N., 323,872 E.	MARION 604866	Cobble of msv Po, Py, Ars, Gal, Sph on the 671 road	grab	637	1.26%	3.53%	>1%	0.43 0.013	14.35 0.42
S8-3	5,648,063 N., 323,872 E.	MARION 604866	cobble with ribbons of Po, Ars, Sph, Gal	grab	427	1925	1.395%	2010	0.03 <0.001	4.48 0.13
S8-4	5,648,083 N., 323,878 E.	MARION 604866	Rusty EB fxt (chloritic schist) subcrop	composite chip	10.0	79.7	256	257	<0.01 <0.001	0.13 <0.01
S11-1	5,648,380 N., 323,583 E.	MARION 2 605310	Rusty EB fxt (chloritic schist)	composite grab	61.1	6.2	62	2.4	0.01 <0.001	0.05 <0.01
S11A-1	5,648,286 N., 323,998 E.	MARION 2 605310	Rusty EB fxt (chloritic schist)	composite grab	23.0	7.0	32	3.5	<0.01 <0.001	0.6 0.02
S12-1	5,648,326 N., 324,018 E.	MARION 2 605310	EB fxt with hematite + quartz ribbons	grab	28.5	17.4	336	3.0	0.01 <0.001	0.07 <0.01

NOTES: This table is from Ostler, John; 2011: Table 6.

Rock units from the east-northeasterly eruption: EB fxt = fine-grained chloritic crystal and ash tuff, EB cxt = coarse-grained trachytic to rhyolitic crystal tuff

For locations of most samples, see Figures 5E, 5C, and 5W.

Py = pyrite, Po = pyrrhotite, Cpy = chalcopyrite, Ars = arsenopyrite, Gal = galena, Sph = sphalerite, msv = massive, diss = disseminated

**Table 7 Continued
Ostler's 2010 Sampling Results**

S. No.	U.T.M. Location	Claim	Description	Interval m ft.	Cu ppm	Pb ppm	Zn ppm	As ppm	Au gm/mt oz/t	Ag gm/mt oz/t
S15-1	5,648,380 N., 323,583 E.	MARION 2 605310	S2-2 layer re-sampled 80-cm th layer of diss sulphide	0.8 2.6 Composite chip	84.0	11.7	52	7.8	0.02 <0.001	0.16 <0.01
S19-1	5,648,287 N., 324,348 E	MARION 2 605310	EB fxt float with <5% diss Po, Py, Sph Cpy	composite grab	68.5	32.3	88	3.3	0.01 <0.001	0.30 0.01
S23-1	5,647,830 N., 324,006 E	MARION 604866	Large block of msv Po, Py, Ars, Sph, Gal at doorway to bunkhouse in old logging camp	composite chip	23.0	5450	178	>1%	2.05 0.060	47.6 1.39
S25-1	5,647,914 N., 324,025 E	MARION 604866	Siliceous subcrop with minor diss Po, Py, Cpy	composite grab	107.0	42.1	133	6.3	<0.01 <0.001	0.31 0.01
S32-1	5,647,848 N., 323,679 E	MARION 604866	EB fxt float with <3% diss Py, Po, Sph, Cpy	composite grab	98.2	7.1	152	1.4	<0.01 <0.001	0.10 <0.01
S35-1	5,647,535 N., 323,915 E	GLORIA 604873	EB fxt float with <10% diss Py, Po, Sph, Cpy	composite grab	2660	45.9	1220	3.7	0.02 <0.001	2.13 0.06
S49-1	5,649,465 N., 326,025 E	KARALEE 604938	composite grab across whole pegmatite showing	grab	653	9.7	55	1.4	0.01 <0.001	0.50 0.01
S49-2	5,649,465 N., 326,025 E	KARALEE 604938	chips containing coarse- grained Sph, Gal in quartz	grab	305	25.2	124	49.7	0.01 <0.001	0.46 0.01
S49A-1	5,649,485 N., 326,022 E	KARALEE 604938	EB fxt with abundant hematitic bands	3.0 9.2 composite chip	54.2	6.4	27	1.8	0.01 <0.001	0.06 <0.01
S54A-1	5,648,355 N., 325,391 E.	KARALEE 604938	Boulders of hornfelsed EB fxt with diss Py, Po	grab	15.0	28.5	246	5	0.01 <0.001	0.21 <0.01
S54A-2	5,648,355 N., 325,391 E.	KARALEE 604938	Boulders of hornfelsed EB fxt with diss Py, Po	grab	12.2	158.0	288	0.5	0.01 <0.001	0.09 <0.01

NOTES: This table is from Ostler, John; 2011: Table 6.

Rock units from the east-northeasterly eruption: EB fxt = fine-grained chloritic crystal and ash tuff, EB ext = coarse-grained trachytic to rhyolitic crystal tuff

For locations of most samples, see Figures 5E, 5C, and 5W.

Py = pyrite, Po = pyrrhotite, Cpy = chalcopyrite, Ars = arsenopyrite, Gal = galena, Sph = sphalerite, msv = massive, diss = disseminated

**Table 7 Continued
Ostler's 2010 Sampling Results**

S. No.	U.T.M. Location	Claim	Description	Interval m ft.	Cu ppm	Pb ppm	Zn ppm	As ppm	Au gm/mt oz/t	Ag gm/mt oz/t
S62-1	5,646,879 N., 324,880 E.	SOUTHERN CROSS 3 801662	Boulder of chloritic EB fxt in 671 road bed with lightly diss Py, Po, Cpy, Sph	grab	808	29.6	252	60.1	0.05 0.001	0.72 0.02
S62-2	5,646,879 N., 324,880 E.	SOUTHERN CROSS 3 801662	Boulder of chloritic EB fxt in 671 road bed with lightly diss Py, Po, Cpy, Sph	grab	113.5	22.6	722	1.6	<0.01 <0.001	0.19 <0.01
S76-1	5,647,965 N., 324,019 E.	MARION 604866	Subcrop of EB fxt in 671 road ditch with diss Py, Cpy	composite chip	198.0	86.0	>1.0%	79.9	0.07 0.002	1.34 0.04
S79-1	5,647,835 N., 324,307 E.	MARION 604866	rusty ribbons in EB fxt close to EB ext	composite chip	245	51.5	463	30.0	0.03 <0.001	1.26 0.04
S93-1	5,647,588 N., 324,763 E.	MARION 604866	ribbons of diss Py, Cpy, Sph in chloritic EB fxt boulder	composite chip	534	4.1	380	1.0	<0.01 <0.001	0.13 <0.01
S95-1	5,647,744 N., 324,861 E.	MARION 604866	20 cm thick layer of lightly diss Py, Cpy, Sph in chloritic EB fxt	0.2 0.6 Channel	266	10.9	327	25.0	<0.01 <0.001	0.39 0.01
S107-1	5,648,414 N., 324,494 E.	MARION 2 605310	EB fxt float siliceous with <3% diss Py, Po	composite grab	50.4	56.4	146	0.5	<0.01 <0.001	0.28 0.01
S126-1	5,648,693 N., 322,854 E.	MARION 2 605310	boulder of EB fxt with <10% diss Po, Py, Cpy	grab	74.2	6.7	37	1.6	0.04 0.001	0.06 <0.01
S126 A-1	5,648,675 N., 322,850 E.	MARION 2 605310	2.0 m of EB fxt with ribbons of diss + msv Po, Py, Cpy	2.0 6.6 composite chip	1535	9.0	65	19.5	0.06 0.002	1.09 0.03
S131-1	5,648,374 N., 322,785 E.	MARION 2 605310	rusty EB fxt subcrop	grab	372	12.9	205	14.3	0.01 <0.001	0.73 0.02
S135-1	5,648,116 N., 322,542 E.	MARION 604866	boulder with silica ribbons + diss Py, Po, Sph, Gal	grab	86.6	781	1960	12.8	<0.01 <0.001	1.66 0.05

NOTES: This table is from Ostler, John; 2011: Table 6.

Rock units from the east-northeasterly eruption: EB fxt = fine-grained chloritic crystal and ash tuff, EB ext = coarse-grained trachytic to rhyolitic crystal tuff

For locations of most samples, see Figures 5E, 5C, and 5W.

Py = pyrite, Po = pyrrhotite, Cpy = chalcopyrite, Ars = arsenopyrite, Gal = galena, Sph = sphalerite, msv = massive, diss = disseminated

**Table 7 Continued
Ostler's 2010 Sampling Results**

S. No.	U.T.M. Location	Claim	Description	Interval m ft.	Cu ppm	Pb ppm	Zn ppm	As ppm	Au gm/mt oz/t	Ag gm/mt oz/t
S161-1	5,648,984 N., 323,000 E.	MARION 2 605310	Pebbles of EB fxt light diss Py, Cpy in kill zone	composite grab	746	21.8	113	19.9	0.02 <0.001	0.96 0.03
S166-1	5,648,862 N., 325,155 E.	MARION 2 605310	boulder of chloritic EB fxt with Py, Cpy, Po	grab	2710	12.8	129	3.3	0.01 <0.001	1.29 0.04
S172-1	5,649,668 N., 324,326 E.	North of property	subcrop with thin layer containing <10% diss Py, Po, Sph	composite grab	141.5	56.2	343	2.0	<0.01 <0.001	0.26 <0.01
S173-1	5,647,862 N., 324,164 E.	MARION 604866	3 cm thick band of diss Py, Ars, Sph in chloritic EB fxt in old trench	0.03 0.1 Channel	39.0	19.9	283	18.0	0.02 <0.001	0.31 <0.01
S177-1	5,647,738 N., 324,007 E.	MARION 604866	blocks of diss Py, Po, Cpy in old road below old trench	composite grab	1035	52.0	100	4.0	0.02 <0.001	0.81 0.02
S178-1	5,647,722 N., 323,915 E.	MARION 604866	Boulder of msv sulphide in ditch of 671 road	grab	1240	2.75%	4.12%	63.8	0.21 0.006	56.1 1.64
S184-1	5,649,951 N., 324,389 E.	North of property	Diss Gal, Sph, Cpy, Py, Po in float boulders in road bed	composite grab	590	1860	235	8	0.04 0.001	10.35 0.30
S193-1	5,648,657 N., 323,515 E.	MARION 2 605310	Chloritic EB fxt cobbles with <3% diss Po, Py, Cpy	composite grab	517	95.8	90	6	0.02 <0.001	1.15 0.03
S198-1	5,648,719 N., 323,199 E.	MARION 2 605310	cobbles of msv to diss Py, Po, Cpy, Gal, Sph	composite grab	691	354	735	6.2	0.01 <0.001	2.22 0.06
S205-1	5,648,630 N., 323,110 E.	MARION 2 605310	15 cm rusty section of EB fxt with diss Py, Po, Cpy	0.15 0.5 composite chip	229	27.3	414	3.9	0.02 <0.001	0.47 0.01

NOTES: This table is from Ostler, John; 2011: Table 6.

Rock units from the east-northeasterly eruption: EB fxt = fine-grained chloritic crystal and ash tuff, EB cxt = coarse-grained trachytic to rhyolitic crystal tuff

For locations of most samples, see Figures 5E, 5C, and 5W.

Py = pyrite, Po = pyrrhotite, Cpy = chalcopyrite, Ars = arsenopyrite, Gal = galena, Sph = sphalerite, msv = massive, diss = disseminated

Only a small fraction of the total extent of massive sulphide mineralization in the property-area that is indicated by the 2010 soil survey and historic drilling has been observed and sampled. Thus, average textures and abundances of various sulphide minerals throughout the sulphide-bearing interval can not be determined accurately yet. The 2010 sampling (Table 7) represents only the mineralization that could be found in outcrop during current mapping. It is insufficient to be used to predict the tenor or true thickness of unexposed mineralization.

3.4.2 Pegmatite and Fault-related Mineralization

Thrust faulting after the second plastic deformation seems to have occurred quite slowly, as is demonstrated by rolling of competent rock-units on the upper plates of several of the thrusts. Any mineralizing fluids that may have been present, had adequate time to disperse without concentrating any sulphide mineralization. Re-deposition of sulphide minerals in the property-area appears to be related to north-south-trending, normal and transcurrent faults related to the third phase of deformation. In the southern part of the property-area on the SOUTHERN CROSS 3 (801662) claim, marcasite float occurs at the assumed traces of late normal faults along the 671 road. Marcasite is a low-temperature, normally gold-poor form of pyrite.

Coarse-grained pegmatite mineralization in quartz segregations occurs beside the 671 road near the eastern boundary of the KARALEE (604938) claim. The showing was blasted and opened up with a bulldozer to form a 200 m² (2,152.8 ft²) pad along the west side of the road (Station S49, Figure 5E).

Mineralization comprises irregular blebs of pyrrhotite, pyrite, galena, and sphalerite in quartz segregations. Sample S49-1 was a composite grab sample taken of average rock across the whole bulldozed showing-area; sample S49-2 was a composite grab sample from the same area of quartz containing coarse-grained sulphide minerals. Neither sample contained much sulphide mineralization (Table 7).

The host rock is fine-grained crystal tuff of the east-northeasterly eruption that is interpreted to have been bleached by fluids migrating along a third-phase, northerly trending fault in that area. Adjacent unbleached, fine-grained, crystal tuff at station S49A is typical of that rock-unit. It is chloritic and has somewhat elevated base metal contents (Sample S49A-1, Table 7). Because the metal contents of samples S49-1, S49-2, and S49A-1

are quite similar, the showing is interpreted to have been the result of local coarsening of sulphides already present in the fine-grained tuff with little or no large-scale metal transport. Consequently, that showing is deemed to be of no economic importance.

4.0 DEPOSIT TYPE SOUGHT ON THE SCOTCH CREEK PROPERTY

4.1 Deposit Type Sought: Noranda/Kuroko-type Massive Sulphide Deposit

The mineral exploration target on the Scotch Creek property is a Noranda/Kuroko type massive sulphide deposit.

Noranda/Kuroko massive sulphide deposits were described by Trygve Höy (1995) as follows:

NORANDA/KUROKO MASSIVE SULPHIDE Cu-Pb-Zn G06

IDENTIFICATION

SYNONYM: Polymetallic volcanogenic massive sulphide.

COMMODITIES (*BYPRODUCTS*): Cu, Pb, Zn, Ag, Au (*Cd, S, Se, Sn, barite, gypsum*)

EXAMPLES (British Columbia (MINFILE # - *Canada/ International*):

Homestake (082M025), Lara (092B001), Lynx (092B129), Myra (092F072), Price (092F073), H-W (092F330), Ecstall (103H011), Tulsequah Chief (104K011), Big Bull (104K008), Kutcho Creek (104J060), Britannia (092G003); Kidd Creek (Ontario, Canada), Buchans (Newfoundland, Canada), Bathurst-Newcastle district (New Brunswick, Canada), Horne-Quemont (Québec, Canada), Kuroko district (Japan), Mount Lyell (Australia), Rio Tinto (Spain), Shasta King (California, USA), Lockwood (Washington, USA).

GEOLOGICAL CHARACTERISTICS

CAPSULE DESCRIPTION:

One or more lenses of massive pyrite, sphalerite, galena, and chalcopyrite commonly within felsic volcanic rocks in a calcalkaline bimodal arc succession. The lenses may be zoned, with a Cu-rich base and a Pb-Zn-rich top; low-grade stockwork zones commonly underlie lenses and barite or chert layers may overlie them.

TECTONIC SETTING:

Island arc; typically in a local extensional setting or rift environment within, or perhaps behind, an oceanic or continental margin arc.

DEPOSITIONAL ENVIRONMENT / GEOLOGICAL SETTING:

Marine volcanism; commonly during a period of more felsic volcanism in an andesite (or basalt) dominated succession; locally associated with fine-grained marine sediments; also associated with faults or prominent fractures.

AGE OF MINERALIZATION:

Any age; In British Columbia typically Devonian; less commonly Permian-Mississippian, Late Triassic, Early (and Middle) Jurassic, and Cretaceous.

HOST / ASSOCIATED ROCK TYPES:

Submarine volcanic arc rocks; rhyolite, dacite associated with andesite or basalt; less commonly, in mafic alkaline arc successions; associated epiclastic deposits and minor shale or sandstone; commonly in close proximity to felsic intrusive rocks. Ore horizon grades laterally and vertically into thin chert or sediment layers called informally "exhalites".

DEPOSIT FORM:

Concordant massive to banded sulphide lens which is typically metres to tens of metres thick and tens to hundreds of metres in horizontal dimension; sometimes there is a peripheral apron of "clastic" massive sulphides; underlying crosscutting "stringer" zone of intense alteration and stockwork veining.

TEXTURE / STRUCTURE:

Massive to well layered sulphides, typically zoned vertically and laterally; sulphides with quartz, chert or barite gangue (more common near the top of the deposit); disseminated, stockwork and vein sulphides (footwall).

ORE MINERALOGY (Principal and *subordinate*):

Upper massive zone: pyrite, sphalerite, galena, chalcopyrite, *pyrrhotite*, *tetrahedrite-tennantite*, *bornite*, *arsenopyrite*. Lower massive zone: pyrite, chalcopyrite, *sphalerite*, *pyrrhotite*, *magnetite*.

GANGUE MINERALOGY:

Barite, chert, *gypsum*, *anhydrite* and *carbonate* near top of lens, carbonate, quartz, chlorite and sericite near the base.

ALTERATION MINERALOGY:

Footwall alteration pipes are commonly zoned from the core with quartz, sericite or chlorite to an outer zone of clay minerals, albite and carbonate (siderite or ankerite).

ORE CONTROLS:

More felsic component of mafic to intermediate volcanic arc succession; near centre of felsic volcanism (marked by coarse pyroclastic breccias or felsic dome); extensional faults.

ASSOCIATED DEPOSIT TYPES:

Stockwork Cu deposits; vein Cu, Pb, Zn, Ag, Au.

EXPLORATION GUIDES

GEOCHEMICAL SIGNATURE:

Zn, Hg and Mg halos, K addition and Na and Ca depletion of footwall rocks; closer proximity to deposit - Cu, Ag, As, Pb; within deposit - Cu, Zn, Pb, Ba, As, Ag, Au, Se, Sn, Bi.

GEOPHYSICAL SIGNATURE:

Sulphide lenses usually show either an electromagnetic or induced polarization signature depending on the style of mineralization and the presence of conductive sulphides. In recent years borehole electromagnetic methods have proven successful.

OTHER EXPLORATION GUIDES:

Explosive felsic volcanics, volcanic centres, extensional faults, exhalite (chert) horizons, pyritic horizons.

ECONOMIC FACTORS

GRADE AND TONNAGE:

Average deposit size is 1.5 million metric tonnes (1.65 million tons) containing 1.3% Cu, 1.9% Pb, 2.0% Zn, 0.16 g/t (0.047 oz/ton) Au and 13 g/t (0.38 oz/ton) Ag ... British Columbia deposits range from less than 1 to 2 million metric tonnes (1.1 to 2.2 million tons) to more than 10 million metric tonnes (11 million tons). The largest are the H-W 10.1 million metric tonnes (11.1 million tons) with 2.0% Cu, 3.5% Zn, 0.3% Pb, 30.4 g/t (0.89 oz/ton) Ag and 2.1 g/t (0.061 oz/ton) Au, and Kucho with a combined tonnage of 17 million metric tonnes (18.7 million tons) of 1.6% Cu, 2.3% Zn, 0.06% Pb, 29 g/t (0.85 oz/ton) Ag and 0.3 g/t (0.009 oz/ton) Au.

IMPORTANCE:

Noranda/Kuroko massive sulphide deposits are major producers of Cu, Zn, Ag, Au and Pb in Canada. Their high grade and commonly high precious metal content continue to make them attractive exploration targets.

Høy, Trygve

in:

Lefebure, D.V. and Ray, G.E. ed.; 1995, pp. 53-54.

4.2 Some Massive Sulphide Deposits on Adams Plateau

Attributes of some of the most notable massive sulphide deposits in the Adams Plateau area were summarized by M.J. van de Guchte (1993) as follow:

The Eagle Bay rocks are host to numerous mineral occurrences including stratabound massive and semi-massive sulphides, disseminated sulphides, and replacement and/or vein-type mineralization. Known (massive sulphide) deposits include the ... Samatosum Mine, located in mafic volcanics, that contained approximately 640,000 tonnes (704,000 tons) of 1,035 g/t (30.19 oz/ton) Ag, 1.9 g/t (0.055 oz/ton) Au, 1.2% Cu, 3.6% Zn, and 1.7% Pb, and the Homestake deposit, hosted in felsic volcanics, which has an historic geological resource estimated at 1,000,000 tonnes (1,100,000 tons) of 200 g/t (5.83 oz/ton) Ag, 2.5% Pb, 4.0% Zn, 0.55% Cu and 28% barite ...

Van de Guchte; 1993: p. 5.

Both the Samatosum mine (MINFILE 082M244) and the Homestake deposit (MINFILE 082M025) are located about 36 km (22 mi) northwest of the Scotch Creek property.

The Noranda/Kuroko massive sulphide occurrence on the Scotch Creek property is recorded as the Scotch prospect (MINFILE 082LNW046) in the British Columbia Mineral Inventory. Dozens of other occurrences of Noranda/Kuroko massive sulphide mineralization are listed for N.T.S. map sheets 82 L and M.

They range in size from small showings to million-ton deposits like the Homestake deposit. Most of these occurrences are associated with Upper Eagle Bay Formation volcanic rocks.

5.0 EXPLORATION AND DRILLING

5.1 Summary of Exploration Conducted by the Author and Signal Exploration Inc. in the Scotch Creek Property-area

During the summer of 2009, the author examined the published literature regarding the area currently covered by the Scotch Creek property.

On April 15, 2011, the author examined published and unpublished documents regarding the property-area in the Discovery Consultants Ltd. Property files located in Kelowna, British Columbia (see Section 1.1, this report).

Bruce Squinas, Joseph Lawrence and two associates conducted a prospecting program in the property-area comprising 20 man-days of work from April 17 to 22, 2010 (Squinas with Ostler, 2010). The prospectors found indications of three Noranda/Kuroko-type sulphide mineralization and one occurrence of pegmatite fault-related mineralization. Subsequently, those four mineral occurrences were confirmed by the author in the presence of Bruce Squinas.

The author conducted exploration on the Scotch Creek property from May 31 to June 3, June 11 to 15, August 30 to September 17, and September 21 to October 2, 2010. The main part of Signal Exploration Inc.'s current (2010) exploration on the Scotch Creek property was conducted from August 30 to October 2, 2010 (Ostler, 2011). The writer conducted a Current Personal Inspection of the property at several times while conducting exploration on a near-by property from June 3 to 17 and from June 24 to July 9, 2011.

5.2 Procedures and Parameters of the Current (2010) Exploration Program

During the current (2010) geological mapping program, a total of 482 ha (1,190.5 A) were mapped at a scale of 1:5,000 across most of the property-area (Ostler, 2011) (Figures 17N, and 17S). Base maps were generated through black-line blow-ups of parts of the 1:20,000-scale B.C. Topographic Map No. 082L 093: Scotch Creek. Station locations were established using a Garmin XL12 GPS unit; structural measurements were taken with a Brunton Compass. A total of 42 samples of mineralization were taken (Table 7)

(Sections: 3.3, 3.4, 5.3 and 6.0, this report).

An estimated 100 hectares (247 acres) of area was prospected with varying degrees of intensity in numerous areas throughout the property-area. Prospecting was conducted as an adjunct to geological mapping in several areas in order to locate old workings, drill sites, mineralization, and outcrop. Standard prospecting methods were employed.

Soil survey was conducted over a grid comprising a total of 22.95 km (14.0 mi) of survey line and 2.4 km (1.5 mi) of base line for a total of 25.35 km (15.5 mi) of line (Ostler, 2011) (Figures 19 to 23). Lines were laid out along U.T.M. grid lines using a Brunton Compass and hip-chain. At about 90% of the stations locations within a few metres could be established using GPS units. Lines were laid out at 100-m (328-ft) spacings and samples were taken at 50-m (164-ft) intervals along each line. A total of 481 soil samples were taken from illuviated 'B' horizons (Sections 5.3, 5.4.2, and 6.0, this report).

5.3 Sampling Method and Approach

A total of 481 soil samples were taken from illuviated 'B' horizons and put into un-dyed kraft paper bags. Generally throughout the 2010 soil grid, a soil sample was taken at the centre of a 100 X 50-m (328 X 656-ft) rectangle. The author considers that sampling density to be appropriate at the current stage of exploration. Sampling was conducted by an experienced crew who understood the value of minimizing sample biases through the rigorous employment of standard sampling techniques. The writer opines that biases in the current (2010) soil sample data are insignificant.

A total of 42 samples of mineralization (Table 7) were taken by the author. They comprised chip, composite chip, grab, and composite grab samples were taken to establish the existence of sulphide mineralization within a specific stratigraphic interval at locations throughout the property-area. At the current stage of exploration, knowledge regarding details of thickness and mineral tenor are insufficiently defined to justify the detailed sampling protocols that are normally employed to convert indicated and measured resources into reserves. The author considered such protocols as the taking of multiple samples and conducting analysis at several laboratories to be an unjustified waste of both funds and energy at the current stage of exploration on the Scotch Creek property.

There is significant variation among the rock-sample results from the Scotch Creek property. The author opines that this variance is due primarily to local variations in mineral concentration that are largely unexposed. When a greater amount of the sulphide-bearing stratigraphic interval is exposed and sampled, the population of samples will increase and more closely reflect the distribution and tenor of sulphide mineralization throughout that rock unit. Also, it should be remembered that the current stage of exploration at the Scotch Creek property, a few high assay results from a few small mineral showings is of little importance compared with the task of locating the thickest and richest accumulations of massive sulphide mineralization throughout the property-area.

5.4 Results and Interpretation of the Current (2010) Exploration Program

5.4.1 Geological Mapping, Prospecting, and Examinations of Mineralization

Results of the current (2010) geological mapping form section 3.3 of this report. Descriptions of Noranda/Kuroko-type massive and disseminated sulphide mineralization, and fault-related mineralization form sections 3.4.1 and 3.4.2 of this report respectively. Sampling results are contained in Table 7. Prospecting was conducted as a support function to geological mapping and is not reported upon separately.

5.4.2 Soil Surveys

The methods of Claude Lepeltier (1969) were used to establish soil-metal thresholds from the current (2010) sample populations of copper, lead, zinc, silver, and arsenic. Soil-gold contents were low and erratic; they were not contoured. Soil-metal thresholds that were established were as follow:

**Table 8
Soil-metal Thresholds**

Soil-metal threshold	Copper ppm.	Lead ppm	Zinc ppm	Silver ppb	Arsenic ppm
Anomalous 2nd positive Standard D. (excludes 97.5% of data)	250	45	855	1,230	9.3
Sub-anomalous 1st positive Standard D. (excludes 84% of data)	80	33	427	720	6.3

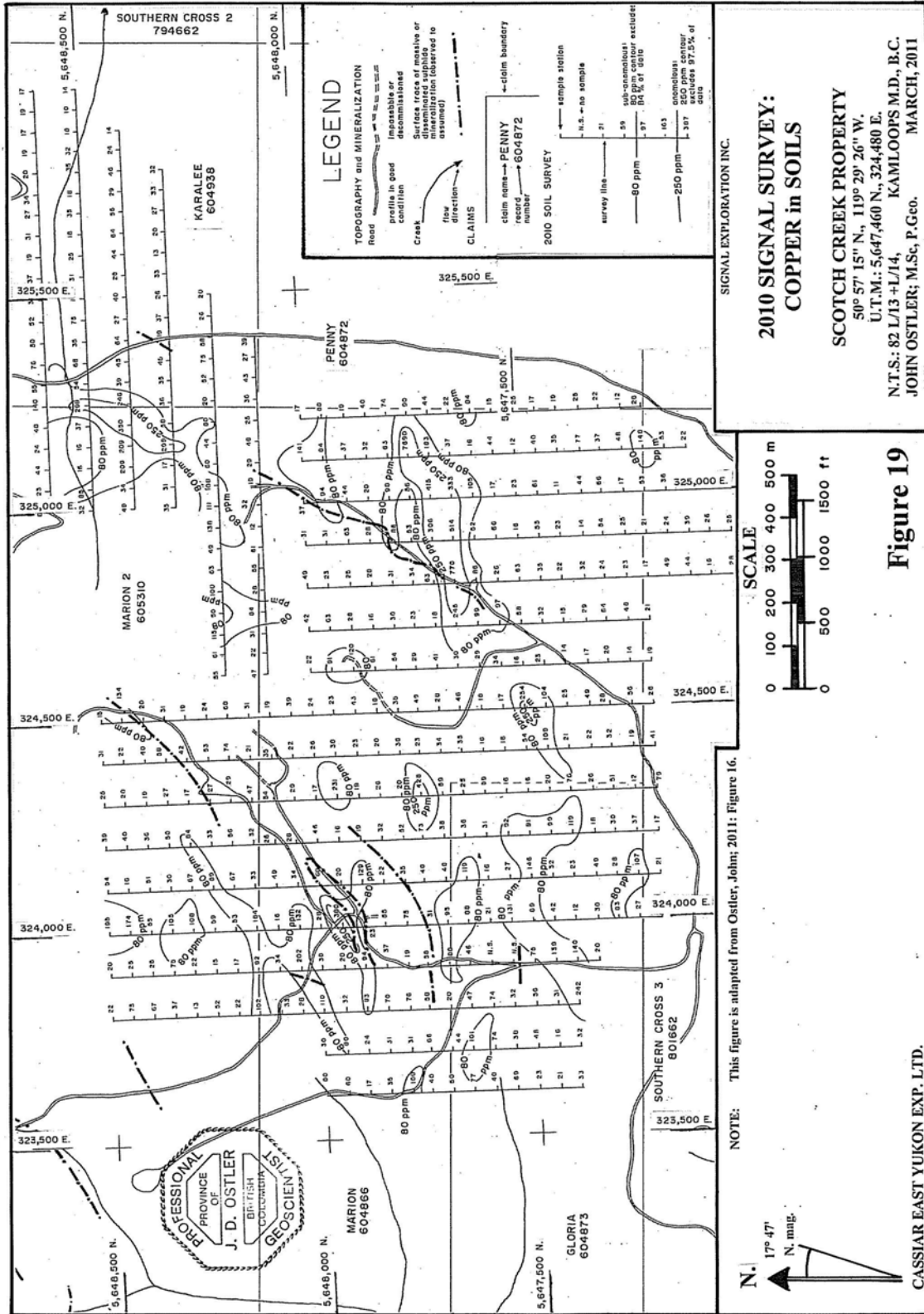
Soil-zinc concentrations are the most useful in discerning the locations of sulphide mineralization in

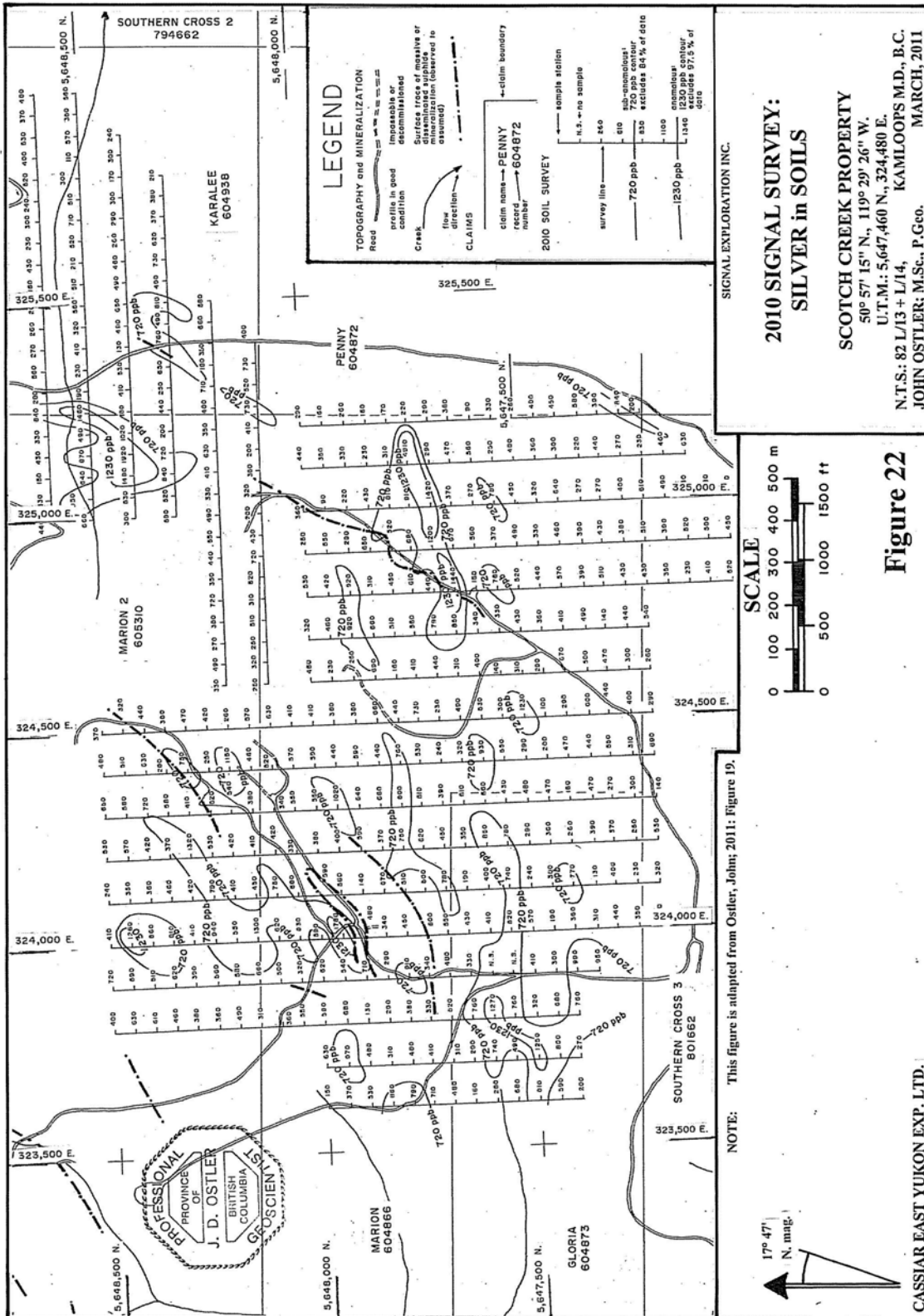
covered areas (Figure 21). This is deemed to be due to the comparative lack of mobility of zinc in soil profiles combined with zinc-rich targets. Because soil-zinc distributions matched the pattern of mineralized outcrops quite well, they were used as a primary indicator of the locations of the potentially thickest accumulations of buried massive sulphide mineralization. Four such “basins” were defined across the 2010 Signal grid-area (Figure 18) (Section 3.4.1, this report).

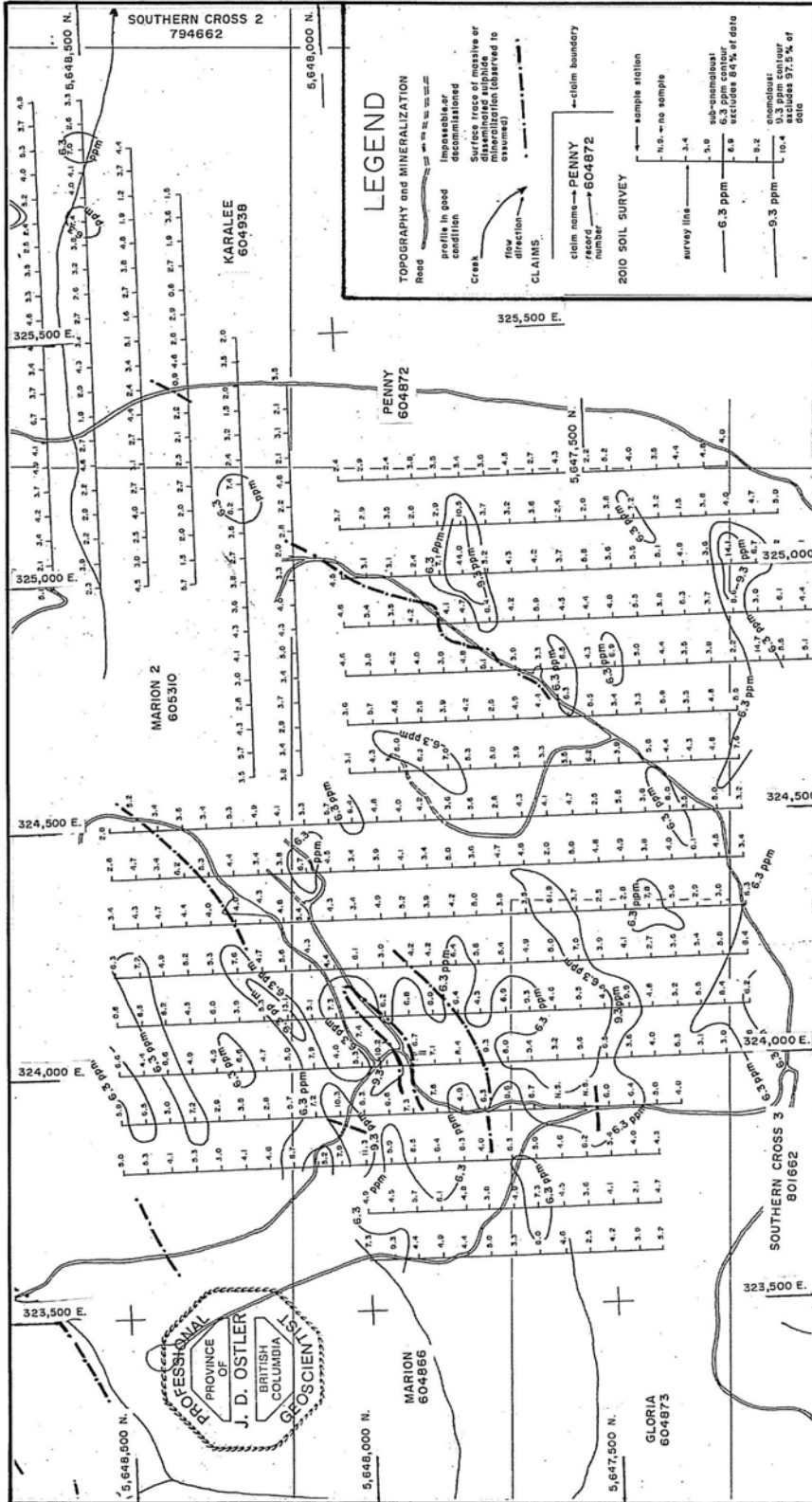
High soil-copper concentrations occur mostly as nodes within areas of high soil-zinc concentrations (Figures 19 and 21). Of particular interest, are copper-rich areas within the northeastern and southeastern basins, and with a lesser intensity in the southwestern basin (Figure 18). These areas of high soil-copper contents are interpreted to be reflections of copper-rich zones within more extensive zinc-rich sulphide accumulations.

The distribution of anomalous soil-silver concentrations is similar to those of soil-copper (Figures 19 and 22). It is assumed that most silver is associated with galena in the sulphide mineralization on the property-area. Thus, it is assumed that the distribution of anomalous soil-silver concentrations reflect lead-rich parts of sulphide bodies. Anomalous soil-silver contents have been used in conjunction with anomalous and sub-anomalous soil-zinc concentrations to define thick areas “basins” of sulphide deposition in the 2010 Signal grid-area (Figure 18). Sub-anomalous soil-silver distributions are less diagnostic because of the extreme mobility of silver in soils (Figure 22). On slopes of less than 10° in the northern part of the grid-area, sub-anomalous soil-silver is concentrated in low-lying areas. On the steeper slopes in the property’s southeastern part, silver has been flushed from soils leaving intense local anomalies surrounded by apparently barren areas.

The distributions of lead and arsenic in soils are not very useful for defining the locations of sulphide mineralization due to their mobility in soil profiles (Figures 20 and 23). Although significant lead and arsenic anomalies co-inside with other anomalies in the southeastern basin-area (Figures 18, 20, and 23) those anomalies can not be readily distinguished from anomalies due to illuviation and attraction to organic soil profiles in swamps in other parts of the grid-area without independent verification from soil-copper or soil-zinc anomalies.







LEGEND

TOPOGRAPHY and MINERALIZATION

Road

Creek

flow direction

CLAIMS

claim name → PENNY
number → 604872

claim boundary

2010 SOIL SURVEY

sample station

1.5 - no sample

3.4

3.8

6.3 ppm

8.8

9.3 ppm

sub-omnibus
excludes 8.8% of data

0.2

0.3 ppm contour
excludes 97.5% of data

10.4

10.4

10.4

**2010 SIGNAL SURVEY:
ARSENIC in SOILS**

SCOTCH CREEK PROPERTY
50° 57' 15" N., 119° 29' 26" W.
U.T.M.: 5,647,460 N., 324,480 E.
N.T.S.: 82 L/13 +L/14, KAMLOOPS M.D., B.C.
JOHN OSTLER; M.Sc, P. Geo. MARCH, 2011

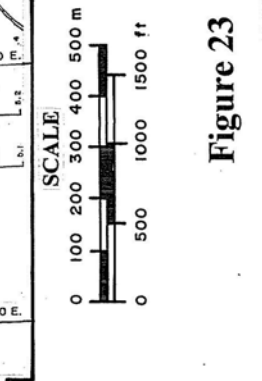


Figure 23

NOTE: This figure is adapted from Ostler, John; 2011; Figure 20.

CASSIAR EAST YUKON EXP. LTD.

17° 47'
N. mag.

5.5 Exploration Managers and Contractors

Table 9
Contractors for the Current (2010) Exploration Program

Contractor	Activities
Cassiar East Yukon Expediting Ltd. 1015 Clyde Avenue West Vancouver, British Columbia V7T 1E3 (604) 926-8454	Field work, research and reporting
A.L.S. Canada Ltd. 2103 Dollarton Highway North Vancouver, British Columbia V7H 0A7 (604) 984-0221	Assay and analysis of rocks and soil samples
Arcprint and Imaging 4305 Dawson Street Burnaby, British Columbia V5C 4B4 (604) 293-0029	Scale changes, scans and copy of maps, figures, and text

Cassiar East Yukon is a private exploration service company owned by the author. A.L.S. Canada Ltd. is part of an international laboratory group that does contract work for a variety of industries. Arcprint and Imaging is a privately owned photocopy and print company that has no specific orientation toward the mineral exploration industry. None of these three contractors have any interest in the Scotch Creek property or in the securities of Signal Exploration Inc. All are independent of Signal Exploration Inc. as defined by Part 1.5 of National Instrument 43-101.

All of the current (2010) exploration was funded by Signal Exploration Inc.

5.6 Drilling

No drilling was conducted during the current (2010) exploration program.

6.0 SAMPLE PREPARATION, ANALYSIS, AND SECURITY

No aspect of sample preparation of samples from the current (2010) exploration program was conducted by and employee, officer, director, or associate of Signal Exploration Inc, “the issuer”.

The 481 soil samples were collected in un-dyed “kraft” paper bags and dried for up to two weeks in the crew cabin prior to being trucked to ALS Canada Ltd. in North Vancouver, B.C. The consistency among

the results of the current (2010) soil survey and those of previous soil surveys (Section 7.0, this report) indicates to the author that the 2010 sampling crew did not “salt” the 2010 soil samples.

At the lab, samples were dried, weighed, then crushed until 70% of their mass would pass through a < 2 mm screen. Crushed samples were split in a riffle splitter, then pulverized so that 85% of it passed through a 180-um screen. Sample splits were analyzed using ALS Chemex Code ME-ICP61 analysis: 15-gram samples were digested in 90 ml of aqua regia at 95° C. for 1 hour, diluted to 300 ml, and analyzed for 48 elements using Induced Coupled Plasma (ICP) method ME-MS61 and Atomic Emission Spectrometry (ICP-AES) method (ALS Chemex Code OG62). Samples with over-limit metal concentrations were subjected to four-acid digestion and analyzed by fire assay. Gold concentrations in samples were determined by assay and atomic absorption techniques (ALS Chemex Code AA025).

A total of 42 samples of mineralization (Table 7) were taken by the author and locked in plastic bags that were kept under the author’s exclusive control until they were delivered to ALS Canada Ltd. in North Vancouver, B.C. There, they were dried, weighed, then crushed until 70% of their mass would pass through a < 2 mm screen. Crushed samples were split in a riffle splitter, then pulverized so that 85% of it passed through a 75-um screen. Sample splits were analyzed using ALS Chemex Code ME-ICP61 analysis: 15-gram samples were digested in 90 ml of aqua regia at 95° C. for 1 hour, diluted to 300 ml, and analyzed for 48 elements using Induced Coupled Plasma (ICP) method ME-MS61 and Atomic Emission Spectrometry (ICP-AES) method (ALS Chemex Code OG62). Samples with over-limit metal concentrations were subjected to four-acid digestion and re-analyzed by atomic absorption and fire assay: Pb-AA62, Zn-AA62 and Au-AA25.

The A.L.S. lab did not report periodic re-analyses or comparisons with standards in the certificates of assay and analysis. The analysis of one rock was deemed to be questionable by the assayers. It was re-analyzed; the results of the two analyses were similar.

The samples were analyzed at the ALS Chemex laboratory at 2,103 Dollarton Highway in North Vancouver, British Columbia, the Minerals Division of the ALS Laboratory Group. ALS Chemex is accredited under ISO 9001:2000 (No. 0007629) and ISO 17,025. It is independent of Signal Exploration Inc., as defined in Part 1.5 of National Instrument 43-101. The author is confident that the rock and soil samples from the

current (2010) exploration program have been processed at that laboratory in a proper and secure manner, and that the results of the analyses of those samples as reported by ALS Chemex are true and accurate.

All of the current (2010) exploration program was personally conducted or supervised by the author. The goal of that program was to establish the location of mineralization and its relation to volcanic stratigraphy and not the conversion of mineral resources into reserves. The author had confidence in the current (2010) data and was of the opinion that collecting and analyzing it once was sufficient was sufficient and adequate.

7.0 DATA VERIFICATION

All available data from both the current (2010) and past exploration programs has been reviewed by the author who is the Qualified Person for the Scotch Creek project as described in Part 1.1 of National Instrument 43-101.

Much of the historic exploration results were not filed for assessment credit and thus were not entered into the public record. Fortunately, some of those results survived in the files of Discovery Consultants Ltd. of Vernon, British Columbia. The author is grateful for the opportunity to view those files.

K.L. Daughtry (1986) reported that in 1970, the Shuswap Syndicate conducted a silt-geochemical and prospecting program that resulted in the discovery of massive and disseminated sulphide mineralization on Nikwikwaia and Corning creeks. The most notable mineral occurrence was a 0.91-tonne (1-ton) boulder of massive sulphide from which a grab sample contained greater than 10% copper. No reports from that program are available to the author. However, the location of the massive sulphide boulder is recorded on a 1971 geological map produced by Derry, Michener and Booth presumably for the Shuswap Syndicate. The estimated location of the boulder is recorded in Table 3 and in Figure 5W of this report.

From 1970 to 1972, the Shuswap syndicate staked 177 claims and conducted geological mapping, soil and ground magnetic surveys over a broad area that included the current Scotch Creek property-area (Figures 4N and 4S). Three progress reports dated from 1970 to 1972 written by K.L. Daughtry for the Shuswap Syndicate and for Derry, Michener and Booth Ltd. were listed in the references of K.L. Daughtry (1986) (Section 12.0, this report). Those reports were not available to the author. However, he was able to gain possession of 1:9,600-scale ground-magnetic, soil-copper, soil-zinc, and geological maps recording some of

the 1971 work from the Discovery Consultants property file.

Data from the ground magnetic survey was not corrected for diurnal variation in the solar flux. Consequently, differences in recorded magnetic intensities due to diurnal variations were far greater than those generated by differences in the magnetism of local stratigraphy over most of the grid, rendering that data of little use. The 450-m (1,476-ft) line spacings were so great that neither magnetic nor soil geochemical data could be contoured among them with any confidence. However, areas of high soil-copper and zinc concentrations crossed by the 1971 lines corresponded with those areas with high soil-metal concentrations as identified by subsequent surveys.

The 1971 geological mapping crew seems to have focused on major creek gullies and locations where outcrops had been reported by the soil-survey crew (Figures 4N and 4S). Although the mappers diligently recorded the metamorphic minerals that they saw in outcrop, they did not “see” through the metamorphism to discern original stratigraphy. Consequently, their interpretations were inconsistent and not very useful. For example, coarse-grained crystal tuffs were described as anything from quartz-diorite gneiss to quartz-eye greywacke. However, their observations were consistent, and upon re-mapping some of their mapping stations, the author could translate most of their rock descriptions into either volcanic or sedimentary rock types (Figures 5E, 5C, 5W, 17N, and 17S) (Section 3.3, this report). The most obvious planar attitude of each outcrop was recorded as a cleavage; no structural interpretation was attempted.

The author is of the opinion that a combination of uncorrected magnetic data, sparse soil data, and a lack of understanding of the structural geology and pre-metamorphic stratigraphy of the area by the 1971 exploration crew resulted in the simplistic assumption that mineralization was hosted in a monoclinical succession of schists and phyllites that had an east-west strike and a northerly dip (Figure 6). That fallacious assumption misguided exploration for the next 15 years.

From August 29 to September 29, 1971 Derry, Michener and Booth Ltd. conducted a drill program for the Shuswap Syndicate. A total of 622.4 m (2,042 ft) of BQ drilling was done. Holes 71-1 and 71-2 were drilled in the eastern part of the current MARION (604866) claim (Figures 4S and 5C). Holes 71-3 to 71-5 were drilled up hill from the Acid Creek adits and on the current SOUTHERN CROSS 1 (794642) claim

(Figure 5E). Although the author has seen no reports of the 1971 drilling, he did find a copy of the original drill logs in the Discovery Consultants property file. Rock types were logged by the metamorphic minerals present. No structural or structural interpretations were present. Although no certificates of analysis or assay were present, results of analyses of higher-grade sections were recorded in the logs (Table 4). The author estimated drill hole locations from pencil additions to the 1971 geological map (Figures 5E and 5C) (Table 4). The author has seen no core from this drilling. Results of the 1971 Derry, Michener and Booth drilling were not confirmed.

By 1976, some of the current Scotch Creek property-area was covered by the SC claim group. That group was owned by Brican Resources Ltd. which optioned it to Craigmont Mines Ltd. Craigmont commissioned an airborne DIGHEM survey of an extensive area that included the 1976-era SC claim group (Fraser, 1976). No report of that survey was available to the author, thus the results of it remain unknown to the author.

A grid comprising 48 km (29.3 mi) of line and covering 9.4 km² (3.5 mi²) was cut in an area that covered most of the current Scotch Creek property (Figures 4N and 4S). K.L. Daughtry and A. Wynne (1987) reported that soil geochemical, magnetometer, and very low frequency, electromagnetic surveys were conducted over the whole grid area. The results of the soil survey were filed for assessment credit by N.B. Vollo (1977B). No reports of the 1977 Craigmont geophysical surveys are known to the author.

A soil-copper anomaly generally co-incident with the 1971 main geophysical anomaly was located in the southern part of the 1977 grid on the eastern parts of the current MARION (604866) and GLORIA (604873) claims (Figure 7). Other anomalies occurred across the two previously mentioned claims as well as in the southern part of the current MARION 2 (605310) claim (Figures 7 and 8). The patterns of both the 1977 soil-copper and lead anomalies were similar to those from the current (2010) Signal soil survey (Figures 19 and 20). Thus results from the two surveys are mutually confirmatory.

Although the trace of the main 1971 geophysical anomaly could be interpreted to have been expressed in soil-zinc anomalies across the southern part of the 1977 soil grid-area (Figures 6 and 9) the anomalies are weak and not very indicative of local zinc mineralization. By comparison, the soil-zinc anomalies from the current (2010) survey are quite intense and much more useful in determining the locations of zinc enrichment

(Figures 18 and 21). Obviously, the amount of zinc in those soil profiles has not changed significantly from 1977 to 2010. The author is of the opinion that the difference in the results of the two soil surveys is due to recent improvements in lab techniques, most notably to the development of the ICP (induced coupled plasma) technique.

From May 16 to June 10, 1977, Craigmont conducted a diamond drill program of 509 m (1,669.9 ft) of BQ core drilled in four holes. Holes SC-1 and SC-2 were drilled north of the road that extends along the slope crest in the eastern part of the current MARION (604866) claim (Figures 4S and 5C). Drill hole SC-3 was drilled down hill from the road at a location about 190 m (623.4 ft) east-northeast of hole SC-1. Drill hole SC-3 penetrated the most intense part of the 1971 geophysical anomaly (Figure 6). Drill hole SC-4 was drilled beneath the 671 road in the eastern part of the current GLORIA (604873) claim. SC-4 tested what was perceived to be the western extension of a single east-west trending anomaly (Daughtry and Wynne, 1987) (Figure 6).

The log of drill hole SC-2 without assays was filed for assessment by N.B. Vollo (1977A). The author found the original drill logs and K.L. Daughtry's notes on this drilling in the Discovery Consultants property file. The author suspects that this drilling was reported upon by K.L. Daughtry in 1978 to Brican Resources. That report is not available to the author. The drill logs from 1977 were as sketchy as those from the 1971 drilling. Rock units were described by metamorphic minerals, structural interpretations were minimal, and they contained no certificates or other records of analyses. The author found sampling summaries from those drill holes among K.L. Daughtry's unpublished notes (Table 4). No core from this drilling is known to exist. The results of the 1977 Craigmont drilling could not be confirmed.

Esso Resources Canada Ltd. optioned the SCOTCH property from Brican in March, 1979 and conducted further ground magnetometer and electromagnetic Max Min (horizontal loop) surveys (Wilson, 1979) (Figure 10). The electromagnetic anomalies from that survey were weak and inconclusive. D.L. Daughtry and A. Wynne (1987) wrote, "This work confirmed the presence of strong magnetic anomalies with significant apparent displacement from the location defined by Craigmont." The author agrees that the magnetic anomalies from the 1979 Esso survey more closely resemble those of the 1977 and 2010 soil surveys

(Figures 6 to 9, and 18 to 23) than they do the 1971 main geophysical anomaly as assumed by the Shuswap Syndicate (Figure 6). The similarities of the results of the 1977, 1979 and 2010 surveys provides some mutual confirmation of those results.

Esso drilled hole 79-3 on the 671 road in the central part of the current MARION (604866) claim. That 125.3-m (411.1-ft) long hole tested one of the 1979 conductors (Stewart, 1979). In his log, Alfred Stewart reported short intervals of disseminated sulphide mineralization. No sampling results were included in his assessment report.

Alfred Stewart was the first core logger working in the property-area who was able to see through the effects of metamorphism to discern the original sedimentary and volcanic stratigraphy in the drill core. Unfortunately, he did not conduct a geological mapping project in the area. The author did not encounter any core from the 1979 Esso drill hole and can not confirm the results from that drilling.

In 1983, Esso sent J.M. Marr (1984) to the Scotch Creek area to conduct some geological mapping, rock and silt sampling (Figures 4N and 4S). The author re-visited some of Marr's outcrops and he estimates that Marr spent three days on the project. Marr's mapping results are about the same as those recorded on the 1971 Derry, Michener and Booth maps and are of little use (Figure 11).

Brican Resources Ltd. conducted a hand and backhoe trenching program. Although no report of that trenching was available to the author, he did find K.L. Daughtry's unpublished notes about that program in the Discovery Consultants property file. A total volume of 146.2 m³ (5,129.5 ft³ or 193.5 yd³) of work seems to have been done (Table 5). Daughtry recorded that there were 10 trenches in all, but he did not record their locations. Several 1980s-era hand and backhoe trenches that occur along the logging road across the northeastern MARION (604866) claim are assumed by the author to be most of the trenches of the 1985 Brican program. That work could not be confirmed.

In 1986, Brican Resources Ltd. cut a grid over the area surrounding the location of drill hole SC-3 in the eastern part of the current MARION (604866) claim (Figure 4S). The grid covered 7.5 ha (18.5 A) of which 6.0 ha (14.8 A) was covered by a magnetic survey (Daughtry, 1986). Later that summer, the grid was expanded to comprise 4.2 km (2.56 mi) (Daughtry and Wynne, 1987). The ground magnetic survey was

re-done (Figure 12). Also a MAX-MIN horizontal-loop, electromagnetic survey was conducted over the whole expanded grid (Figure 13). A gravity survey conducted along line 4 + 00 E, resulted in the production of a single gravity profile (Figure 14).

The pattern resulting from the second 1986 Brican magnetic survey was typical of one derived from a complexly folded mineralized unit. Although less definitive than the 1986 magnetic data, the results of the electromagnetic survey are similar (Figures 12 and 13). The southern end of Line 4+00 E of the 1986 Brican grid is on probably the thickest part of a para-glacial debris flow.

Debris-flow thickness decreases to nil where the line crosses the road at the slope crest at about 1+60 N. A 20 to 30-cm (0.6 to 1-ft) thick layer of disseminated to massive sulphide mineralization is exposed along the northwestern margin of the road (Figures 14 and 5C). These features are deemed to be largely responsible for generally increasing gravity intensity from south to north along the line. Two gravity highs, occurring at about 2+20 S and 0+00 S are close to magnetic anomalies and may be related to local sulphide mineralization (Figures 12 and 14).

The results of the 1986 Brican surveys are consistent with para-glacial geomorphological features on the ground and with the results of the 1979 geophysical as well as 1977 and 2010 soil surveys. Thus, the results of all of these surveys are mutually confirmatory. The results of all of the previously listed surveys were accommodated in the author's estimate of the location of the sulphide-bearing stratigraphic interval (Figure 18).

From January 23 to February 25, 1988, Brican Resources Ltd. conducted a program that resulted in the drilling of a total of 1,220.4 m (4,003.9 ft) of NQ core in 6 holes (Figures 5C and 5W) (Table 4). Drill holes 294-1 to 294-3 were drilled into the 1986 Brican grid-area in the eastern part of the current MARION (604866) claim. Drill hole 294-3 was located on the road along the ridge crest in the northeastern part of the 1986 Brican grid. It tested an northeastward strike extension of the mineralized rock intersected in hole SC-3 that was drilled in 1977. Hole 294-3 had four significantly mineralized intersections (Table 4) and confirmed that there was some extent to the sulphide mineralization that was intersected in drill hole SC-3.

Drill holes 294-5 and 294-6 were located on coincident soil-geochemical and co-incident geophysical anomalies that had been identified by 1971 to 1979 surveys between the main and eastern branches of Corning

Creek. Hole 294-5 was drilled on the current MARION (604866) claim near its western boundary (Figures 4S and 5W). Base-metal intersections in those two drill holes confirmed the soil-lead anomaly into which they were drilled.

The 1988 Brican drilling was filed for assessment credit (Kyba, 1988). Like in most of the other logs, little attempt was made to see through metamorphism to record original stratigraphy. Although certificates of analysis did not accompany the logs, results of the sampling of intersections with comparatively high metal contents were included with the logs. The author has seen no core from the 1988 Brican drill program and can not confirm those results.

Bruce Squinas, Joseph Lawrence and two associates conducted a prospecting program in the property-area from April 17 to 22, 2010 (Squinas with Ostler, 2010). The prospectors found indications of three occurrences of Noranda/Kuroko-type sulphide mineralization and one occurrence of pegmatite fault-related mineralization. Subsequently, those four mineral occurrences were confirmed in person by the author in the presence of Bruce Squinas.

The author personally conducted or supervised all of the current (2010) exploration on the Scotch Creek property and filed the results in a recent assessment report (Ostler, 2011). The author personally designed Figures 1 to 5W, and 17N to 23; all which are related to the results of current (2010) exploration.

During 2009 upon preliminary review of the available historic data regarding the current Scotch Creek property, the author determined that geological input into previous exploration had been minimal. Previous operators had lacked sufficient understanding of the stratigraphy and rock structure that determined the location and orientation of mineralization. Consequently, previous exploration results were sporadic. The author concluded that the property hosted significant untested merit. The current (2010) exploration program was designed to gain an understanding of why mineralization occurred where it did so that its location and orientation in three dimensions could be predicted with some confidence. That program succeeded, and consequently, the current data from the property is adequate to support the author's recommendations in this Technical Report.

8.0 REPORTING REQUIREMENTS FOR ADVANCED PROPERTIES

The Scotch Creek property is an exploration property on which no mineral resources or mineral reserves have been quantified. Reporting requirements for development and production properties contained within National Instrument 43-101 and in Items: 15 to 22 of 43-101F1 are not applicable to this report.

9.0 ADJACENT PROPERTIES

No development on any adjacent property affects the potential of the Scotch Creek property.

10.0 OTHER RELEVANT DATA AND INFORMATION

There are no unusual or unique circumstances or facts affecting the ownership, or potential to develop the Scotch Creek property.

11.0 CONCLUSIONS AND RECOMMENDATIONS

11.1 Interpretation and Conclusions

At the commencement of the current (2010) exploration program, Noranda/Kuroko-type massive sulphide mineralization had been identified on the Scotch Creek property. However, previous explorers had not understood the original volcanic and sedimentary stratigraphy and its subsequent deformation. That lack of understanding precluded them from predicting the location and extent of such syngenetic mineralization. Discerning the relation of mineralization to the stratigraphy and structure of the rocks on the Scotch Creek property was the goal of the current (2010) exploration program. The goal was attained and the program was successful.

Current (2010) geologic mapping has revealed that the metasedimentary and metavolcanic rocks in the Scotch Creek property-area are an upright succession that represent various coeval facies resulting from two concurrent eruptions into a shallow marine basin. The eruption responsible for the greatest deposition of volcanic material in the current property-area emanated from a vent-area north of it. That eruption produced rhyolitic to dacitic pyroclastic rock that is barren of mineralization. A secondary eruption from a vent-area located east-northeast of the current property was more trachytic in composition and was responsible for the Noranda/Kuroko-type mineralization exposed in the property-area.

Noranda/Kuroko-type massive and disseminated mineralization was deposited in a single stratigraphic interval hosted in chloritic ash and fine-grained crystal tuff during a lull in the east-northeasterly eruption. It is located about 30 m (98.4 ft) stratigraphically above the upper contact of a distinctively blue-grey-weathering, trachytic ash tuff. Consequently, the general location of mineralization is easy to predict on the ground in areas of significant rock outcrop.

On the open palaeo-sea-floor, sulphide deposition is about 25 cm (0.82 ft) thick. Where sulphide-bearing brines have pooled in low areas “basins”, massive sulphide thicknesses are in excess of 1 m (3.05 ft). Maximum massive sulphide thickness remains unknown due to sparse outcrop and drill data. Four “basins” have been identified in the southern part of the property-area by current work augmented previous survey results and by old drill data. Stratigraphy has been folded twice which may have resulted in significant flow and thickening of sulphide mineralization in fold-hinge areas.

Current (2010) soil survey results indicate that sulphide mineralization is zoned with regard to copper and zinc contents in the southeastern part of the property-area. Of particular interest, are copper-rich areas within the northeastern and southeastern basins, and with a lesser intensity in the southwestern basin. These areas of high soil-copper contents are interpreted to be reflections of copper-rich zones within more extensive zinc-rich sulphide accumulations. Areas of anomalous soil-silver concentrations within soil-zinc anomalies are deemed to represent zones of high lead and silver concentration in sulphide accumulations assuming that most silver is associated with galena (PbS).

Thrust faulting after the second phase of folding has cut outcrop into extensive panels resulting in the repetition of stratigraphy and the semblance of numerous sulphide-bearing horizons across the property-area.

At present, exploration data from the Scotch Creek property is sufficient for the general location of the near-surface trace of the mineralized horizon to be located throughout most of the property-area. It is not sufficient to calculate maximum true thicknesses or the average tenor of mineralization. Those calculations require more detailed exploration.

The 2010 soil samples were taken at 50-m (164-ft) spacings along lines spaced 100 m (328 ft) apart. The density of that data was sufficient to predict the near-surface trace of mineralization within 50 m (164 ft).

Local soil grids with much closer sample spacings would be appropriate in designing trenching programs in drift-covered areas.

A combination of chip, composite chip, grab, and composite grab samples were taken to establish the existence of sulphide mineralization within a specific stratigraphic interval at rock outcrops throughout the property-area. The author deems that such sampling was sufficient for that purpose.

The author personally conducted all of the current geological mapping on the Scotch Creek property at a scale of 1:5,000. He is confident in the reliability of that mapping at that scale.

Currently, the relationship of sulphide mineralization and the rocks which host it is understood sufficiently to predict its near-surface trace over much of the Scotch Creek property. Uncertainty concerning the thickness and tenor of that mineralization remains. Thus, further exploration is recommended.

11.2 Recommendations

It is recommended that a two-phase work program be conducted in the south-central part of the Scotch Creek property.

The first phase should include geological mapping and prospecting in conjunction with line cutting, electromagnetic, magnetic, and 3-dimensional, induced polarization surveys conducted over the area of the 2010 grid west of the eastern boundaries of the MARION (604866) and MARION 2 (605310) claims.

The new grid would require the cutting out of about 26 km (15.9 mi) of north-south survey lines mostly following the 2010 grid lines. Also, 3.0 km (1.8 mi) of logging road should be brushed out to facilitate generator and cable access. The 2010 grid should be extended and soil-sampled to the west of the northwestern "basin" and in the area of the northeastern "basin".

If reasonable encouragement is generated by the results of the recommended first-phase program, then a second phase of work comprising 2,000 m (6,561 ft) of NQ or NT core should be drilled in the area of the geophysical grid comprising a series of moderately short holes of 100 to 200 m (328 to 656 ft) in length drilled in groups of 2 or 3 at four to five locations.

At present, the most prospective target-areas are on the slope in the eastern part of the MARION (604866) claim near the locations of Craigmont drill hole SC-3 and Brican drill hole 294-3, near the 671 road

near Craigmont drill hole SC-4 on the GLORIA (604873), and east of Esso drill hole 79-3 on the MARION (604866) claim. However, information from the first-phase program may reveal other areas of greater potential.

Only core sections containing significant sulphide mineralization should be split and sampled. This could be contained in a total of 200 m (656 ft) of core. Estimated costs are as follow:

**Table 10
Estimated Cost of the Recommended First-phase Exploration Program**

Item	Cost	Accumulated cost
Wages: 1 geologist/field manager Project management and field time; 33 days @ \$500/day Data processing and reporting for assessment credit; 28 days @ \$500/day 3 Geological technicians; 25 days @ \$300/day each	 \$ 16,500 \$ 14,000 <u>\$ 22,500</u> \$ 53,000	 \$ 53,000
Transport: 2 1-ton 4X4 pick-up trucks; 25 days @ \$100/day each Gasoline and chain-saw fuel	 \$ 5,000 <u>\$ 2,200</u> \$ 7,200	 \$ 7,200
Camp and Crew Costs: Cabin rental; 4 weeks @ \$1,000/week Survey and cutting supplies 2 chain saws; 25 days @ \$25/day each Camp food and meals in transit; 108 man days @ \$25/man day	 \$ 4,000 \$ 400 \$ 1,250 <u>\$ 2,700</u> \$ 8,350	 \$ 8,350
Communication Costs: Long distance telephone FM truck radio; 1 month @ \$80/month	 \$ 40 <u>\$ 80</u> \$ 120	 \$ 120
Sample Analysis Costs: 20 rocks analyzed by ICP and fire assay @ \$50/sample 100 soils analyzed by ICP @ \$25/sample.	 \$ 1,000 <u>\$ 2,500</u> \$ 3,500	 \$ 3,500
Electromagnetic, magnetic and 3-D induced polarization surveys: (Sub-contractor's all-in price) 26 km of surveyed line @ \$5,000/km Data computation and geophysical report production costs	 \$130,000 <u>\$ 12,000</u> \$142,000	 \$ 142,000
Environmental Compliance and Office Costs: Environmental bond for line cutting Office expenses	 \$ 5,000 <u>\$ 2,000</u> \$ 7,000	 <u>\$ 7,000</u>
Itemized Cost of Recommended First-phase Program		\$ 221,170
Harmonized goods and services tax (H.S.T.) (12% of previous items)		<u>\$ 26,540</u>
Itemized Budget		\$ 247,710
Contingency 10% of itemized budget		<u>\$ 24,771</u>
Total estimated Cost of Recommended First-phase Program		\$ 272,481

**Table 11
Estimated Cost of the Recommended Second-phase Exploration Program**

Item	Cost	Accumulated Cost
Direct Drilling Costs: 2,000 m of NQ or NT core drilling @ \$120/m. (This in an all-in sub-contractor's price including such items as bits and hole control fluids) Drill, machinery and rod mobilization 350 wooden N core boxes + lids @ \$20/box + lid	\$ 240,000 \$ 5,000 <u>\$ 7,000</u> \$ 252,000	\$ 252,000
Geological Wages: 1 geologist (agent for the client company for the purpose of shift reports) 28 days field time @ \$500/day 28 days program management, data compilation, and reporting @ \$500/day 1 geological technician 28 days @ \$300/day	\$ 14,000 \$ 14,000 <u>\$ 8,400</u> \$ 36,400	\$ 36,400
Transport and Crew Costs for Geological Support and Management: 1-ton 4X4 pick-up truck; 28 days @ \$100/day Gasoline	\$ 2,800 <u>\$ 1,100</u> \$ 3,900	\$ 3,900
Camp and Crew Costs for Geological Support and Management: Cabin rental; 4 weeks @ \$500/week Core splitter rental, splitting and sampling supplies 1 chain saw; 28 days @ \$25/day each Camp food and meals in transit; 56 man days @ \$25/man day	\$ 2,000 \$ 1,300 \$ 700 <u>\$ 1,400</u> \$ 5,400	\$ 5,400
Communication Costs: Long distance telephone FM truck radio; 1 month @ \$80/month	\$ 60 <u>\$ 80</u> \$ 140	\$ 140
Assay and analysis Costs: 100 2-m core samples ICP + fire assay @ \$50/sample	\$ 5,000	\$ 5,000
Office, Environmental and Compliance Costs: Environmental bond for drilling Office expenses	\$ 10,000 <u>\$ 2,000</u> \$ 12,000	<u>\$ 12,000</u>
Itemized Cost of Recommended Second-phase Program		\$ 314,840
Harmonized goods and services tax (H.S.T.) (12% of previous items)		<u>\$ 37,781</u>
Itemized Budget		\$ 352,621
Contingency 10% of itemized budget		<u>\$ 35,262</u>
Total Estimated cost of Recommended Second-phase Program		\$ 387,883

The estimated total cost of both phases of the recommended program is \$660,364.

12.0 REFERENCES

- Booth, J.; 1971: Line Cutting Report on the East Group of Claims ...; B.C. Min. Energy, Mines and Petr. Res., As. Rept. No. 5,311, 1 map.
- Bradish L.; 1984: Report of Work Geophysical Surveys on th AD Group ...; B.C. Min. Energy, Mines and Petr. Res., As. Rept. No. 13,048; >100 un-numbered p. inc. figs. tables + maps as appendices.
- Daughtry, K.L.; 1986: Assessment Report on a Magnetometer Survey of the Scotch Creek Property SCOTCH Mineral Claim ...; B.C. Min. Energy, Mines and Petr. Res., As. Rept. No. 14,998; 17 p. inc. 2 figs., 4 maps.
- Daughtry, K.L.; 1978: Report on the Scotch Property; report for Brican Resources Ltd.; cited in the bibliography of Daughtry, K.L. and Wynne, A.; 1987 (not available to the author).
- Daughtry, K.L.; 1972: Report of 1972 Field Operations for Shuswap Project; report for Shuswap Syndicate and Derry, Michener and Booth Ltd.; cited in the bibliography of Daughtry, K.L. and Wynne, A.; 1987 (not available to the author).
- Daughtry, K.L.; 1971: Report of 1971 Field Operations for Shuswap Project; report for Shuswap Syndicate and Derry, Michener and Booth Ltd.; cited in the bibliography of Daughtry, K.L. and Wynne, A.; 1987 (not available to the author).
- NOTE: The Derry, Michener and Booth Ltd. 1:9,600-scale maps of Geology, soil-copper, soil-zinc, and ground magnetics, and the drill logs of holes DDH 71-1 to 5 that the author found in the Discovery Consultants property file probably are from this report.
- Daughtry, K.L.; 1970: Report of 1970 Field Operations for Shuswap Project; Report for Shuswap Syndicate and Derry, Michener and Booth Ltd.; cited in the bibliography of Daughtry, K.L. and Wynne, A.; 1987 (not available to the author)
- Daughtry, K.L. and Wynne, A.; 1987: Assessment Report on Magnetic, Electromagnetic, and Gravity Surveys on the SCOTCH Mineral Claim ...; B.C. Min. Energy, Mines and Petr. Res., As. Rept. No. 16,176; 21 p. inc. 2 figs., 5 maps.
- Douglas, J.R.W. ed.; 1970: Geology and Economic Minerals of Canada; Dept. Energy, Mines, Res. Canada, Econ. Geol. Rept. No.1, Ch. VIII, pp. 428-489.
- Fraser, D.C.; 1976: DIGHEM Survey of Shuswap Lake Area, B.C. (not available to the author).
- Hoy, Trygve; 1998: Massive Sulphide Deposits of the Eagle Bay Assemblage, Adams Plateau, South Central British Columbia (082M3,4); B.C. Min. Energy, Mines and Petr. Res., Pap. 1991-1, pp. 223-245.
- Kyba, B.W.; 1988: Diamond Drill Assessment Report on the SCOTCH and SCOTCH 2 Mineral Claims ... B.C. Min. Energy, Mines and Petr. Res., As. Rept. No. 17,643; 15 p. inc. 2 figs., 1 map, 6 drill logs.
- Lepeltier, Claude; 1969: A Simplified Statistical Treatment of Geochemical Data by Graphic Representation; Econ. Geol., Vol. 64, pp 538-550.
- Marr, J.M.; 1984: Scotch Group, Shuswap Lake, B.C.; report for Esso Resources Canada Ltd. (not available to the author).

- Marr, J.M.; 1983: Geology and Silt Geochemistry Report on the SCOTCH Claim ...; B.C. Min. Energy, Mines and Petr. Res., As. Rept. No. 12,216; 9 p. inc. 2 figs., 1 map.
- Ostler, John; 2011: Geological Mapping, Soil Survey, and Prospecting on the Scotch Creek Property; B.C. Min. Energy, Mines and Petr. Res., As. Rept. No. 32,-?-; 68 p. inc. 14 figs., 9 maps, analyses.
- Squinas, B.M., and Ostler, John; 2010: Prospecting on the Scotch Creek Property; B.C. Min. Energy, Mines and Petr. Res., As. Rept. No. 31,910; 21 p. inc. 3 figs., 1 map.
- Stewart Alfred; 1979B: Diamond Drilling Report on the SCOTCH claim 82 L/13, 82 L/14; B.C. Min. Energy, Mines and Petr. Res., As. Rept. No. 7,691 Pt. 1 of 2; 3 p. inc. 1 fig., drill log of DDH 79-3.
- Van de Guchte, M.J.; 1993: Geochemical and Geological Investigation of the Ivor Claims; B.C. Min. Energy, Mines and Petr. Res., Ass. Rept. No. 23,458, 13 p. inc. 6 figs., appendices.
- Vollo, N.B.; 1977A: Diamond Drilling Report on the 82 L/13 SCOTCH Claim ...; B.C. Min. Energy, Mines and Petr. Res., As. Rept. No. 6,419 Pt. 2 of 2; 2 p. inc. 1 fig., 1 map, drill log of DDH SC-2.
- Vollo, N.B.; 1977B: Geochemical Report on the 82 L/13 SC Group ...; B.C. Min. Energy, Mines and Petr. Res., As. Rept. No. 6,419 Pt. 1 of 2; 4 p., 3 maps.
- Vollo, N.B.; 1977C: Line Cutting Report - SCOTCH Claim ...; B.C. Min. Energy, Mines and Petr. Res., As. Rept. No. 6,237; 4 p. inc. 2 figs.
- Wilson, Lloyd; 1979A: Combined EM and Magnetometer Survey SCOTCH Group of Mineral Claims Kamloops Mining Division; B.C. Min. Energy, Mines and Petr. Res., As. Rept. No. 7,691 Pt. 2 of 2; 10 p. inc. 1 fig., 1 section, 5 maps.
- B.C. Minister of Mines, Annual Reports:
1928: p. C 210.
1930: pp. A 188 - A 189.



John Ostler: M.Sc., P.Geo.,
Consulting Geologist
West Vancouver, British Columbia,
Effective March 15, 2011
As amended July 30, 2011



APPENDIX 'A'

CERTIFICATE of the QUALIFIED PERSON

I, John Ostler, of 1015 Clyde Avenue in the City of West Vancouver, Province of British Columbia do hereby certify:

That I am a consulting geologist with business address at 1015 Clyde Avenue, West Vancouver, British Columbia;

That this Certificate of the Qualified Person applies to the Technical Report entitled "Noranda/Kuroko-type Mineralization on the Scotch Creek Property" dated effective March 15, 2011 and amended July 30, 2011;

That I am a graduate of the University of Guelph in Ontario where I obtained my Bachelor of Arts degree in Geography (Geomorphology) and Geology in 1973, and that I am a graduate of Carleton University of Ottawa, Ontario where I obtained my Master of Science degree in Geology in 1977; that I am registered as a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of British Columbia and that I have been engaged in the study and practice of the geological profession for more than 35 years;

That I have participated in exploration for volcanogenic massive sulphide deposits since 1977 for clients, for one of my own public companies, and on my own behalf in Canada, the United States of America, and Chile;

That I have read the definition of Qualified Person set out in Part 1.1 of National Instrument 43-101 and I hereby certify that because of my education, professional affiliation, and relevant experience, I am a Qualified Person with regard to the Scotch Creek property as defined in Part 1.1 of National Instrument 43-101;

That I conducted or supervised all of the current (2010) exploration on the Scotch Creek property during the following times during 2010: May 31 to June 3, June 11 to 15, August 30 to September 17, and September 21 to October 2, that I examined various parts of the 2010 exploration area on the property at several occasions during my work on a near-by property from June 3 to 17 and from June 24 to July 9, 2011, and that my attendance on the property during June and July, 2011 represents a Current Personal Inspection of the Scotch Creek property in compliance with part 6.2 of National Instrument 43-101;

That I am responsible for all of the Technical Report entitled "Noranda/Kuroko-type Mineralization on the Scotch Creek Property" dated effective March 15, 2011 and amended July 30, 2011;

That because the client's agent, Barry Hartley, was out of communication at the time, I map-staked the SOUTHERN CROSS 1 (794642) and SOUTHERN CROSS 2 (794662) claims on June 18, 2010 to cover un-staked ground east of the property and that I transferred those claims to Barry Hartley at cost, on June 24, 2010;

That I am independent of the Scotch Creek property and of Signal Exploration Inc. as is defined in Part 1.5 of National Instrument 43-101;

That my prior involvement with the Scotch Creek property was my review of previous published exploration in the property-area on behalf of Joseph Lawrence and Bruce Squinas in 2008, presentation of the property to clients in 2009 and 2010, and review of exploration data in the Discovery Consultants property files on behalf of Signal Exploration Inc. on April 15, 2010;

That I have read National Instrument 43-101 and that the Technical Report entitled "Noranda/Kuroko-type Mineralization on the Scotch Creek Property" dated effective March 15, 2011 has been amended July 30, 2011 to comply with changes in National Instrument 43-101 and 43-101F1 which became effective on June 30, 2011; and

That as of the date of this certificate, to the best of my knowledge, information, and belief, the Technical Report entitled "Noranda/Kuroko-type Mineralization on the Scotch Creek Property" dated effective March 15, 2011 and amended July 30, 2011 contains all scientific and technical information that is required to be disclosed to make said Technical Report not misleading.



John Ostler; M.Sc., P.Geo.
Consulting Geologist

West Vancouver, British Columbia
Effective March 15, 2011
Amended July 30, 2011

