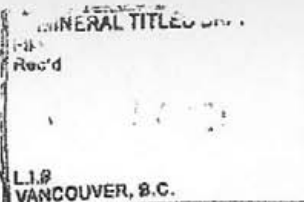




Ministry of Energy & Mines  
Energy & Minerals Division  
Geological Survey Branch

AR 33197



COLBY-STAR (854163)  
COLBY-KING (854164)  
BLACK JACK  
COLBY (864827)  
COLBY TRIO (864847)

ASSESSMENT REPORT  
TITLE PAGE AND SUMMARY

TITLE OF REPORT [type of survey(s)] AIRBORNE MAG. + VELECTROMAG., SAMPLING, PROSPECTING TOTAL COST \$111,726.48

AUTHOR(S) JOHN OSTLER SIGNATURE(S) *John Ostler*

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S) YEAR OF WORK 2012

STATEMENT OF WORK - CASH PAYMENT EVENT NUMBER(S)/DATE(S) EVENT 5359675 JUNE 25, 2012

PROPERTY NAME COLBY MINES

CLAIM NAME(S) (on which work was done) COLBY MINES (544490), F-X ZINC (544492), COLBY (692003), FX-ZONE (69200), FX-N (692023), 12 MILE (692043), COLBY EAST (692083), FX-N1 (692134), FX-N2 (692303), 10 MILE-COLBY (705050), COLBY 10 MILE (705919), COLBY-DON (705902), (no name) (837392)

COMMODITIES SOUGHT ZINC, LEAD, SILVER

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN 082 LINE 004, 007, 009, 010, 019

MINING DIVISION VERNON NTS 82 L/10 + L/15

LATITUDE 50° 44' 30" LONGITUDE 118° 43' 12" (at centre of work)

OWNER(S)  
1) CRAIG A. LYNES 2)

MAILING ADDRESS  
BOX 131  
GRINDROCK, B.C. V0E 1Y0

OPERATOR(S) (who paid for the work)  
1) INEXCO MINING CORP. 2)

MAILING ADDRESS  
200-551 HOWE STREET  
VANCOUVER, B.C. V6C 2C2

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and altitude):  
BAGGER HILL-TYPE MASSIVE SULPHIDE IN EARLY PALAEOZOIC-AGE METASEDIMENTARY ROCKS THAT HAVE BEEN DEFORMED AND METAMORPHOSED DURING DEVELOPMENT OF THE CRETACEOUS-AGE SHUSWF METAMORPHIC COMPLEX

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS AR: 578, 579, 2167, 4933, 4934, 4945, 5369, 6214, 6254, 6551, 17470, 24607, 26730

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
-----------------------------	----------------------------------	-----------------	---

GEOLOGICAL (scale, area)

Ground, mapping \_\_\_\_\_  
 Photo Interpretation \_\_\_\_\_

GEOPHYSICAL (line-kilometres)

Ground		COLBY MINES	544490	
Magnetic		F-X ZINC	544492	
Electromagnetic		COLBY	692003	
Induced Polarization		FX-ZONE	692004	
Radiometric		FX-N	692023	
Seismic		12 MILE	692043	
Other		COLBY EAST	692083	
		FX-N1	692134	
		FX - N2	692303	
		10 MILE - COLBY	705050	
		COLBY 10 MILE	705919	
Airborne	205.3 line km	COLBY - DON	705902	63,321.14
	2259 ha	(no name)	837392	
		COLBY-STAR	854163	
		COLBY-KING	854164	
		BLACK JACK COLBY	864827	
		COLBY TRIO	864847	

GEOCHEMICAL (number of samples analysed for ...)

Soil				
Silt				
Rock	26 48-ELEMENT ICP + AA FOR OVERLIMIT	COLBY MINES	544490	1200.87
Other	PB+Zn	12 MILE	692043	
		(no name)	837392	

DRILLING

(total metres; number of holes, size)

Core \_\_\_\_\_  
 Non-core \_\_\_\_\_

RELATED TECHNICAL

Sampling/assaying	0.6 kg	COLBY MINES	544490	30,020.30
		12 MILE	692043	
Petrographic		(no name)	837392	
Mineralographic				
Metallurgic				

PROSPECTING (scale, area) along roads + 33. ha ← COLBY MINES 544490 17,184.17

PREPARATORY/PHYSICAL trails @ 1.5000 (assuming a 10-m width) 33km ← COLBY 692003

Line/grid (kilometres)		FX-ZONE	692004	
Topographic/Photogrammetric (scale, area)		FX-N	692023	
Legal surveys (scale, area)		12 MILE	692043	
Road, local access (kilometres)/trail		COLBY EAST	692083	
Trench (metres)		FX-N1	692134	
Underground dev. (metres)		10 MILE - COLBY	705050	
Other		COLBY 10 MILE	705919	
		(no name)	837392	
		COLBY-STAR	854163	
		COLBY-KING	854164	
		BLACK JACK COLBY	864827	
		COLBY TRIO	864847	

TOTAL COST 111,726.48

**AIRBORNE GEOPHYSICAL SURVEYS, SAMPLING, AND PROSPECTING  
ON THE COLBY MINES PROPERTY**

Map-staked Claims:

Claim Name	Area	Claim Number	Claim Name	Area	Claim Number
COLBY MINES	81.82 ha (202.10 A)	544490	10 MILE - COLBY	122.70 ha (303.07 A)	705050
F-X ZINC	20.46 ha (50.54 A)	544492	COLBY 10 MILE	61.37 ha (151.58 A)	705919
COLBY	122.71 ha (303.09 A)	692003	COLBY - DON	61.35 ha (151.53 A)	705920
FX- ZONE	61.37 ha (151.58 A)	692004	(no name)	40.91 ha (101.05 A)	837392
FX-N	40.90 ha (101.02 A)	692023	COLBY-STAR	511.31 ha (1,262.94 A)	854163
12 MILE	81.80 ha (202.05 A)	692043	COLBY-KING	511.15 ha (1,262.54 A)	854164
COLBY EAST	163.65 ha (404.22 A)	692083	BLACK JACK COLBY	265.87 ha (656.70 A)	864827
FX-N1	20.45 ha (50.51 A)	692134	COLBY TRIO	61.38 ha (151.61 A)	864847
FX - N2	40.90 ha (101.02 A)	692303	COLBY JACK	347.81 ha (859.09 A)	978013
			Total Property Area	2,617.91 ha (6,466.24 A)	

Location:

Vernon Mining Division  
N.T.S.: 82 L/10 + L/15 B.C.: 082L 077  
50° 44' 30"N., 118° 43' 12" W.  
U.T.M.: 5,622,506 N., 378,647 E.

Owner and Optionor:

**Craig A. Lynes**  
Box 131  
Grinrod, British Columbia, V0E 1Y0

Optionee:

**Inexo Mining Corp.**  
200-551 Howe Street  
Vancouver, British Columbia, V6C 2C2

By:

**John Ostler; M.Sc., P.Geo., Consulting Geologist**  
1015 Clyde Avenue  
West Vancouver, British Columbia, V7T 1E3  
August 14, 2012



GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORT

33,197

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## AIRBORNE GEOPHYSICAL SURVEYS, SAMPLING, AND PROSPECTING ON THE COLBY MINES PROPERTY

### SUMMARY

Geotech Ltd., Rich River Exploration Ltd., and the author through Cassiar East Yukon Expediting Ltd. were commissioned by Inexco Mining Corp. to conduct a program of airborne geophysical surveys (Geotech), prospecting (Rich River), and sampling (the author) in search of Broken Hill-type massive sulphide mineralization. This report is a record of work applied to all of the claims comprising the property with the exception of the COLBY JACK (978013) claim, which had not been staked until after the commencement of the work recorded herein.

A total of 205.3 line-km (125.2 lin-mi) of airborne magnetic and electromagnetic survey covering an area of 22.59 km<sup>2</sup> (8.41 mi<sup>2</sup>) was flown over all of the claims except the COLBY JACK (978013) claim. A complete report of that work by Alexander Prikhodko et al. of Geotech Ltd. forms Appendix 'A' of this report.

A total of 33.0 km (20.1 mi) of road and trail was prospected with varying degrees of intensity throughout the property-area. An estimated 33 hectares (81.5 acres) of area was prospected assuming an average investigation of a 10-m (30.5-ft) width from the centre line of a road or trail. Prospecting was conducted primarily to locate various workings and other features recorded in previous reports and other unpublished documents.

The author examined an estimated 0.6 ha (1.48 A) of workings at the Mile 12 and Cominco zones, and at Chisholm's Zones 1 to 5 of the Central zone.

Helicopter-borne geophysical surveys were flown on March 6 and 7, 2012. Geophysical data manipulation and reporting continued until April, 2012. Prospecting was conducted intermittently from May 29 to June 13, 2012. The author's sampling was conducted on June 11, 15, 21, and 22, 2012. The author's research, data compilation, and reporting was conducted intermittently from January 19, 2012 until the date of this report.

The Colby Mines property occupies mostly southeasterly facing slopes flanking Kingfisher and Danforth creeks near Mabel Lake in the southern part of Shuswap Highland in southern British Columbia. It is on N.T.S. map sheets 82 L/10 and L/15, and on B.C. map sheet 082L 077. The property area comprises 18 map-staked claims covering 2,617.91 ha (6,466.24 A) in the Vernon Mining Division and in the Kamloops Division of the Yale Land District.

No parts of the Colby Mines property cover private land. There are no aboriginal homelands on or adjoining the property. B.C. Hydro has a right of way over a corridor passing through the eastern and southern parts of the claim-area. The province of British Columbia has title to District Lot 5851 which overlaps the eastern boundary areas of the COLBY- KING (854164) and BLACK JACK COLBY (864827) claims. No restrictions to exploration are attached to Lot 5851. There is no plant or equipment, inventory, mine or mill structure of any value on the claims.

Elevations of the Colby Mines property range from 630 m (2,067 ft) at Danforth Creek near the southeastern corner of the COLBY JACK (978013) claim at the southern boundary of the property-area, to 1,240 m (4,068 ft) at the northern boundary of the COLBY-STAR (854163) claim at the northern boundary of the property.

Adequate fresh water for a mining operation could be drawn by gravity from either Kingfisher Creek or Danforth Creek from locations north of the property.

The Colby Mines 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 southern and eastern parts of the property-area.

The property-area experiences cold winters and hot, dry summers. Winter snow falls by late November and stays on the ground until April in open areas. Surface work can be conducted in the property-area from April until November in a normal year.

Remobilized massive and disseminated sulphide mineralization on the property is hosted by calc-silicate gneiss and marble that trend east-northeastward across the property-area. During the 1960s, mineralization was found in several parts of the current property-area including: the Mile 8, Dakota, Central, Cominco, and Mile 12 zones. From 1968 until 1977, exploration was concentrated in the Central zone, located on the COLBY MINES (544490) and COLBY EAST (692083) claims.

The current (2012) exploration program comprised three aspects: helicopter-borne magnetic and electromagnetic surveys, prospecting, and sampling and examination of most of the known workings.

Both the regional and current airborne magnetic survey results indicate the presence of a significant magnetic "low" north of the Central zone and northwest of the Cominco zone in the northwestern part of the property-area. Previous geological mapping indicates that this "low" was the result of the emplacement of a metamorphic plume related to the Cretaceous-age Shuswap metamorphic complex resulting in the conversion of rocks to granulite-grade gneiss and migmatite. Probably, migration of fluids carrying sulphide minerals away from the plume is the direct cause of the magnetic "low".

The area of low total magnetic field intensity in the central part of the property-area is flanked to the northeast and southwest by areas where the rocks are much more magnetic, and presumably more sulphide rich. The two most prospective targets on the property are the area extending from the Mile 8 zone on the TXX-Kingfisher property northwestward through the Dakota zone to north of Kingfisher Creek on the south-central part of the COLBY STAR (854163) claim, and the area extending northwestward from the Mile 12 zone to the northern property boundary on the COLBY KING (854164) claim. The presence of sulphide mineralization near the Dakota zone is indicated by previous soil survey in that area. The presence of sulphide mineralization northwest of the Mile 12 zone is indicated by previous soil survey around that zone and by ground magnetic survey just west of it. A significant ground-magnetic anomaly from the 1964 Cominco survey occurs in the northeastern part of the property coincident with the largest magnetic anomaly in that area generated by the current (2012) survey.

The pattern of electromagnetic responses across the current (2012) survey-area confirms that of the magnetic data in the eastern and western parts of the property. The power line generates a complex pattern of electromagnetic responses that effectively mask those of the current (2012) survey along its right of way. There is an intense electromagnetic response located along the southeastern boundary of the current (2012) survey-area that crosses the power line at a low angle. This rapid change in the local magnetic field may indicate either the presence of magnetic rocks just south of the survey area or the presence of a "wet" fault structure beneath the swamps of Danforth Creek.

Prospecting during the current (2012) exploration program resulted in the location and identification of workings in the major mineralized zones in the property-area, which greatly facilitated examination and sampling of them.

Mineralization occurs in lenses of massive and heavily disseminated pyrrhotite, sphalerite +/- galena in a quartz-orthoclase gangue hosted in sparsely mineralized calc-silicate gneiss and marble. The author presumes that mineralization and its associated gangue evolved from a single-phase fluid that separated into sulphide and silicate phases due to the decline of confining pressure and/or temperature during ascent and emplacement. There seems to be no preferential emplacement of mineralization in any particular stratigraphic unit; thus, any stratigraphic unit may be prospective. Trigve Høy of the B.C. Geological survey (1977) noted that mineralized sections in quartzites are of lower grade but are more continuous along strike with the layering than those in the marbles and that discontinuous high-grade pods are common in the marbles.

The author's 2012 sampling is insufficient to predict an average tenor of mineralization at the Colby Mines property. In 1974, K.L. Daughtry calculated that Zones 'A' and 'B' in the Central zone could contain 1,672,727 tonnes (1,840,000 tons) of mineralization containing an average of 0.58% lead and 2.60% zinc. His historic resource was calculated from the results of extensive sampling, both from surface exposures and from drill cores. In the author's opinion it is a fairly accurate assessment of the average tenor of mineralization that one could expect to find on the Colby Mines property.

A first-phase program of soil, ground magnetic and very low frequency electromagnetic surveys is recommended. Grids with east-west trending lines spaced 100 m (328 ft) apart should be established in the prospective areas of both the northeastern and southwestern parts of the property-area. Soil samples should be taken at 50-m (164-ft) intervals and magnetic and electromagnetic readings should be taken at 25-m (82-ft) intervals along the grid lines.



If the results of the first-phase recommended program generate sufficient encouragement, a second-phase exploration program should be conducted. That program should comprise closely spaced ground magnetic surveys over the most encouraging targets and drilling of those targets.

# AIRBORNE GEOPHYSICAL SURVEYS, SAMPLING, AND PROSPECTING ON THE COLBY MINES 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 documents regarding the Colby Mines property-area.

### 1.2 National Instrument 43-101

This report of exploration work is an assessment report produced in compliance with the regulations of the Mineral Tenure Act of British Columbia. This document is not a "technical report" compliant with National Instrument 43-101.

### 1.3 Management, Extent, and Duration of the Current Work Program

Geotech Ltd., Rich River Exploration Ltd. and the author through Cassiar East Yukon Expediting Ltd. were commissioned by Inexco Mining Corp. to conduct a program of airborne geophysical surveys (Geotech), prospecting (Rich River), and sampling (the author) in search of Broken Hill-type massive sulphide mineralization. This report is a record of work applied to all of the claims comprising the property with the exception of the COLBY JACK (978013) claim, which had not been staked until after the commencement of the work recorded herein.

A total of 205.3 line-km (125.2 lin-mi) of airborne magnetic and electromagnetic survey covering an area of 22.59 km<sup>2</sup> (8.41 mi<sup>2</sup>) was flown over all of the claims except the COLBY JACK (978013) claim. A complete report of that work by Alexander Prikhodko et al. of Geotech Ltd. forms Appendix 'A' of this report.

A total of 33.0 km (20.1 mi) of road and trail was prospected with varying degrees of intensity throughout the property-area (Table 9) (Figure 3). An estimated 33 hectares (81.5 acres) of area was prospected assuming an average investigation of a 10-m width from the centre line of a road or trail. Prospecting was conducted primarily to locate various workings and other features recorded in previous reports and other unpublished documents.

The author examined an estimated 0.6 ha (1.48 A) of workings at the Mile 12 and Cominco zones, and at Chisholm's Zones 1 to 5 of the Central zone (Figures 3, and 45 to 50) (Table 9).

Helicopter-borne geophysical surveys were flown on March 6 and 7, 2012. Geophysical data manipulation and reporting continued until April, 2012. Prospecting was conducted intermittently from May 29 to June 13, 2012. The author's sampling was conducted on June 11, 15, 21, and 22, 2012. The author's research, data compilation, and reporting was conducted intermittently from January 19, 2012 until the date of this report.

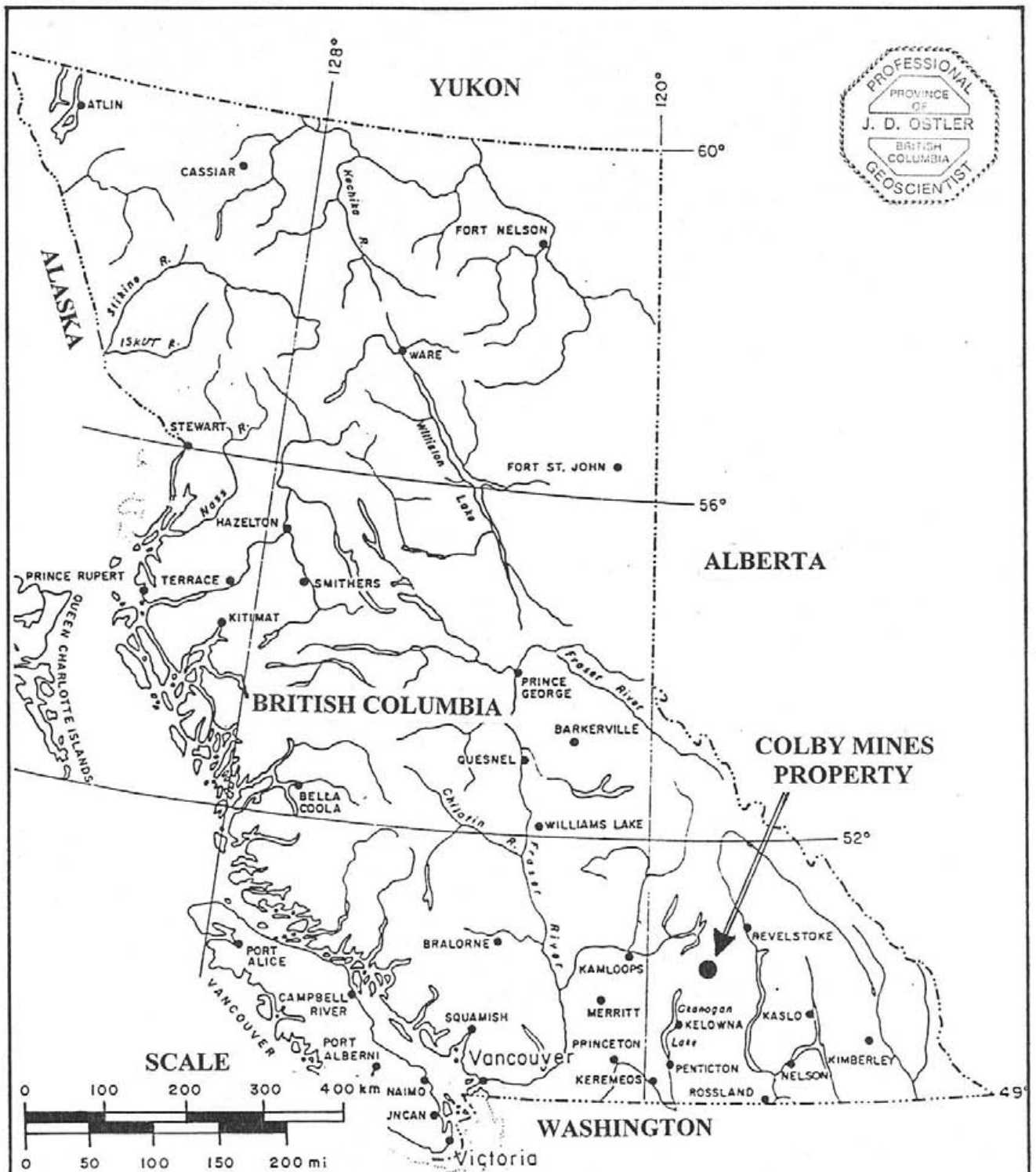
A total of 117.082 man-days (117.082 days X 8 = 936.656 man-hours) of work was conducted during the current (2012) exploration program. For details concerning this work, see Sections 5 and 6 of this report.

#### 1.4 Property Description and Location

The Colby Mines property occupies mostly southeasterly facing slopes flanking Kingfisher and Danforth creeks near Mabel Lake in the southern part of Shuswap Highland in southern British Columbia. It is on N.T.S. map sheets 82 L/10 and L/15, and on B.C. map sheet 082L 077 (Figures 1 and 2). The property area comprises 18 map-staked claims covering 2,617.91 ha (6,466.24 A) in the Vernon Mining Division and in the Kamloops Division of the Yale Land District. Remobilized massive and disseminated sulphide mineralization on the property is hosted by calc-silicate gneiss and marble that trend east-northeastward across the property-area. The locations of significant areas within the property are as follow (Figure 2):

**Table 1**  
**Locations of Significant Areas on the Colby Mines Property**

Center of Entity	U.T.M. Co-ordinates	Longitude and Latitude
property centre	5,622,506 N., 378,647 E.	50° 44' 30" N., 118° 43' 12" W.
Dakota zone on the FX-ZONE (692004) claim	5,620,341 N., 376,235 E.	50° 43' 18" N., 118° 45' 12" W.
Central zone on the COLBY MINES (544490) and COLBY EAST (692083) claims	5,621,161 N., 377,415 E.	50° 43' 45" N., 118° 44' 13" W.
Cominco zone on the (no name) (837392) claim	5,621,961 N., 379,127 E.	50° 44' 13" N., 118° 42' 47" W.
Mile 12 zone on the 12 MILE (692043) claim	5,622,523 N., 381,376 E.	50° 44' 33" N., 118° 40' 52" W.



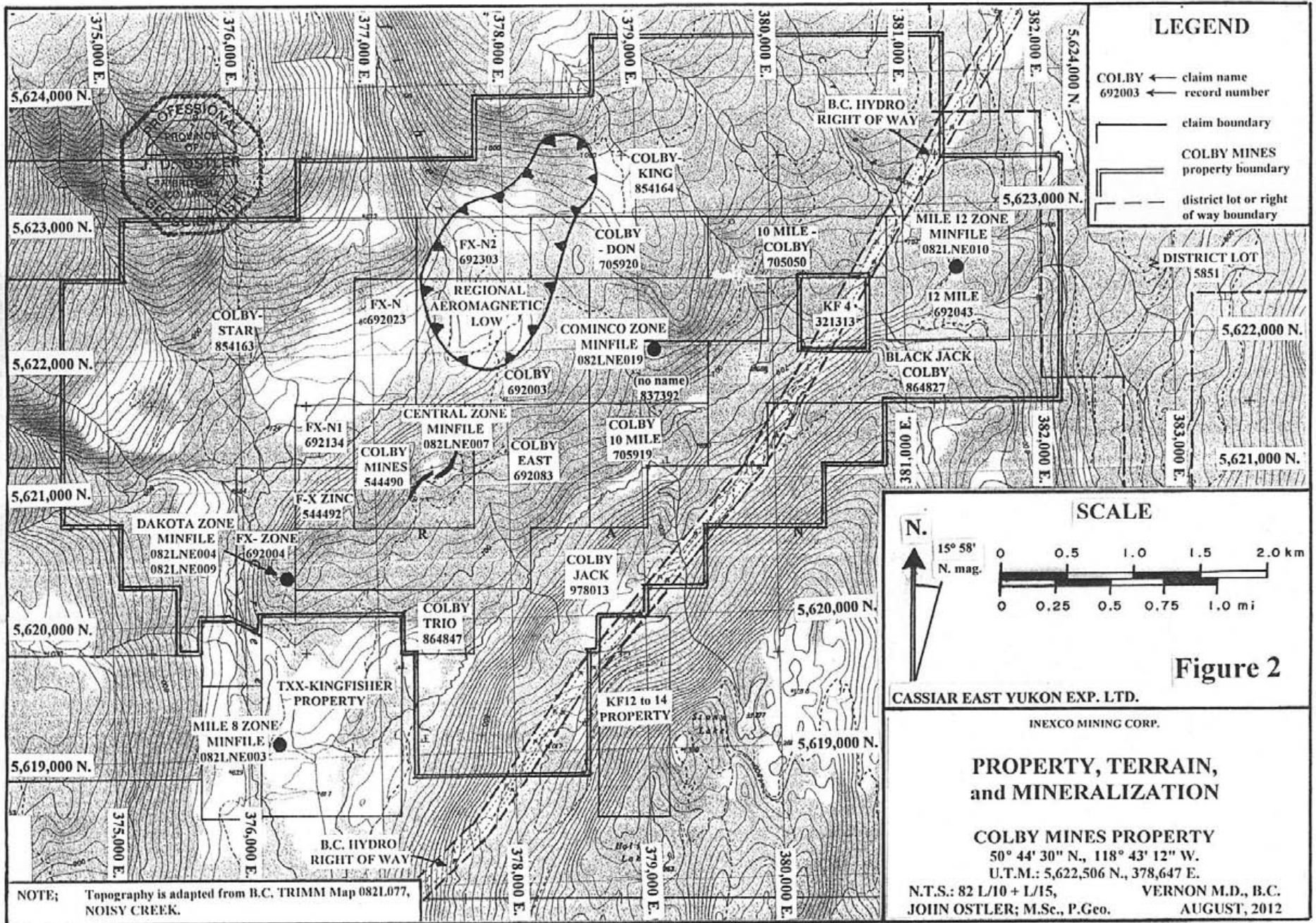
**Figure 1**

CASSIAR EAST YUKON EXP. LTD.

INEXCO MINING CORP.

**GENERAL LOCATION**

**COLBY MINES PROPERTY**  
 50° 44' 30" N., 118° 43' 12" W.  
 U.T.M.: 5,622,506 N., 378,674 E.  
 N.T.S.: 82 L/10 + L/15, VERNON M.D., B.C.  
 JOHN OSTLER; M.Sc., P.Geo. AUGUST, 2012





No parts of the Colby Mines property cover private land. There are no aboriginal homelands on or adjoining the property. B.C. Hydro has a right of way over a corridor passing through the eastern and southern parts of the claim-area (Figure 2). The province of British Columbia has title to District Lot 5851 which overlaps the eastern boundary areas of the COLBY- KING (854164) and BLACK JACK COLBY (864827) claims. No restrictions to exploration are attached to Lot 5851. There is no plant or equipment, inventory, mine or mill structure of any value on the claims. Tenures comprising the property (Figure 2) are as follow:

**Table 2**  
**Map-staked Claims**

Claim Name	Record No.	Area: hectares (Acres)	Record Date	Expiry Date prior to current work	Expiry Date upon filing current work	Owner
COLBY MINES	544490	81.82 (202.10)	Oct. 27, 2006	Jan. 1, 2013	May 31, 2018	Craig A. Lynes
F-X ZINC	544492	20.46 (50.54)	Oct. 27, 2006	Jan. 1, 2013	May 31, 2018	Craig A. Lynes
COLBY	692003	122.71 (303.09)	Dec. 31, 2009	Jan. 1, 2013	May 31, 2018	Craig A. Lynes
FX- ZONE	692004	61.37 (151.18)	Dec. 31, 2009	Jan. 1, 2013	May 31, 2018	Craig A. Lynes
FX-N	692023	40.90 (101.02)	Jan. 1, 2010	Jan. 1, 2013	May 31, 2018	Craig A. Lynes
12 MILE	692043	81.80 (202.05)	Jan. 1, 2010	Jan. 1, 2013	May 31, 2018	Craig A. Lynes
COLBY EAST	692083	163.65 (404.22)	Jan. 1, 2010	Jan. 1, 2013	May 31, 2018	Craig A. Lynes
FX-N1	692134	20.45 (50.51)	Jan. 1, 2010	Jan. 1, 2013	May 31, 2018	Craig A. Lynes
FX-N2	692303	40.90 (101.02)	Jan. 1, 2010	Jan. 1, 2013	May 31, 2018	Craig A. Lynes
10 MILE - COLBY	705050	122.70 (303.07)	Jan. 30, 2010	Jan. 1, 2013	May 31, 2018	Craig A. Lynes
COLBY 10 MILE	705919	61.37 (151.18)	Feb. 10, 2010	Jan. 1, 2013	May 31, 2018	Craig A. Lynes
COLBY - DON	705920	61.35 (151.53)	Feb. 10, 2010	Jan. 1, 2013	May 31, 2018	Craig A. Lynes
(no name)	837392	40.91 (101.05)	Nov. 3, 2010	Sept. 30, 2012	May 31, 2018	Craig A. Lynes
COLBY-STAR	854163	511.31 (1,262.54)	May 9, 2011	Jan. 1, 2013	May 31, 2018	Craig A. Lynes
COLBY-KING	854164	511.15 (1,262.54)	May 9, 2011	Jan. 1, 2013	May 31, 2018	Craig A. Lynes
BLACK JACK COLBY	864827	265.87 (656.70)	July 5, 2011	Oct. 5, 2012	May 31, 2018	Craig A. Lynes
COLBY TRIO	864847	61.38 (151.61)	July 6, 2011	Oct. 5, 2012	May 31, 2018	Craig A. Lynes
COLBY JACK	978013	347.81 (859.09)	April 4, 2012	May 31, 2018	May 31, 2018	Craig A. Lynes
Total Property area		2,617.91 (6,466.24)				

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

Elevations of the Colby Mines property range from 630 m (2,067 ft) at Danforth Creek near the southeastern corner of the COLBY JACK (978013) claim at the southern boundary of the property-area, to 1,240 m (4,068 ft) at the northern boundary of the COLBY-STAR (854163) claim at the northern boundary of the property.

Adequate fresh water for a mining operation could be drawn by gravity from either Kingfisher Creek or Danforth Creek from locations north of the property.

The Colby Mines 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 southern and eastern parts of the property-area.

Although the till cover generally seems to be thin, most of the rock outcrops are in road cuts and along ridge crests like the one north of the Central zone. Soil profiles observed in road cuts were deemed to be sufficiently mature for soil-survey results to be meaningful. Soil geochemical surveys have been used successfully during previous exploration programs.

The property-area experiences cold winters and hot, dry summers. Winter snow falls by late November and stays on the ground until April in open areas. Surface work can be conducted in the property-area from April until November in a normal year.

Directions for road access to the property from the B.C. highway system are as follow:

Proceed along B.C. Highway 97A to Enderby. Near the town centre, turn eastward onto Cliff Street. Proceed along Cliff Street across Shuswap River to Ashton Creek which is 9.2 km (5.6 mi) east of Enderby. Just beyond the bridge over Ashton Creek, the road divides. Turn to the left onto the Mabel Lake Road. Proceed eastward for 20.3 km (12.4 mi) on the Mabel Lake Road to the Three Valley (Kingfisher) forest service road which is controlled by FM radio frequency 153.230.

The road to the Mile 8 calcite quarry and the Dakota zone diverges to the left up the hill from the Three Valley road at km 12.9 (mile 7.4). The road to the Central zone diverges to the left up the hill from that road at km 13.8 (mi 8.4). A very overgrown road to the Cominco zone diverges up hill from the road just east of a small creek at km 16.8 (mi 10.2). The old road to the Mile 12 trench diverges to the right and down hill from the main road at km 19.4 (mi 11.8). The western part of the Central zone can be accessed by 4-wheel drive vehicles in dry weather. The eastern part of that zone can be reached only on foot.

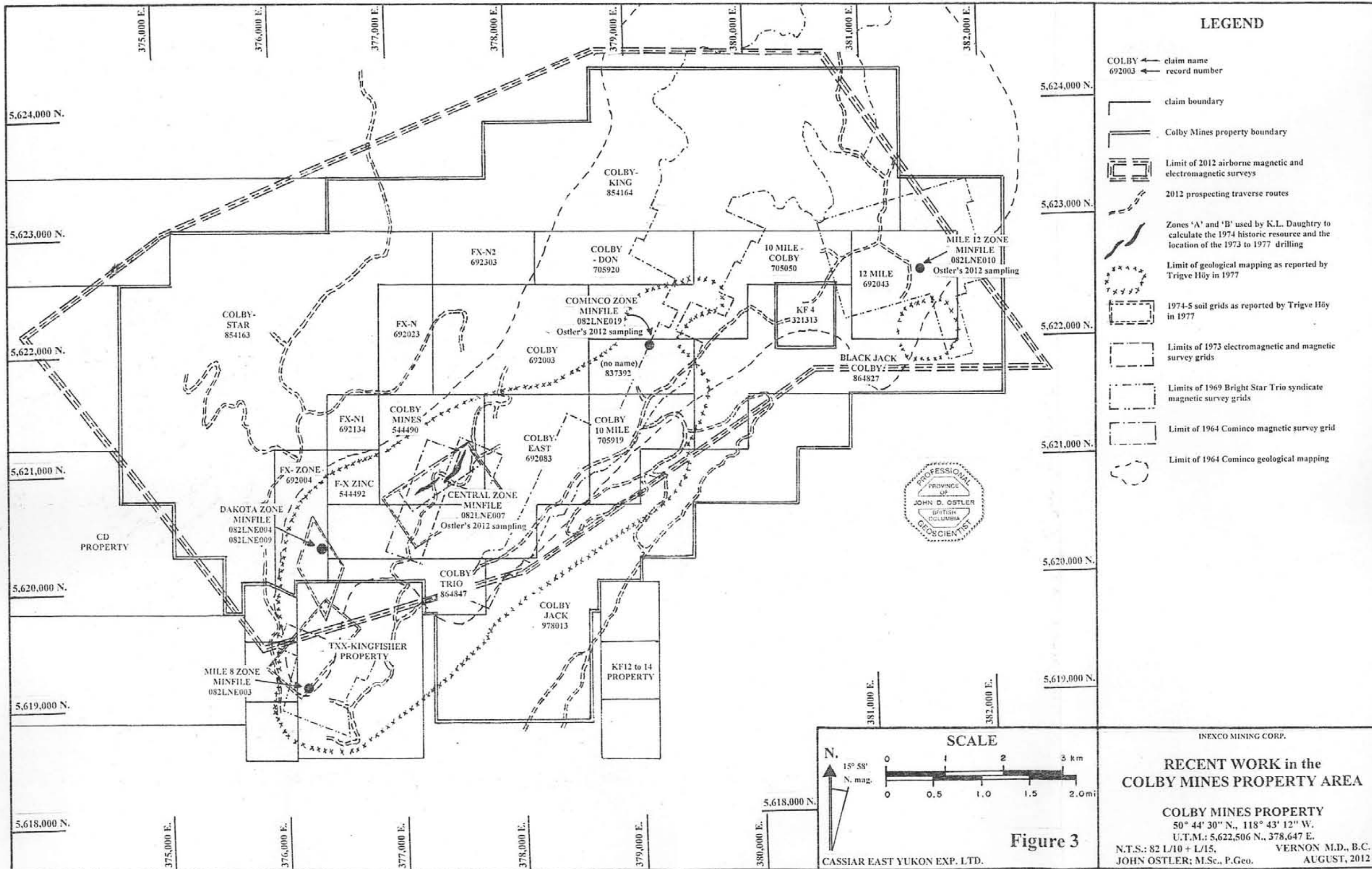
The town of Enderby, located about 44 km (26.8 mi) west of the claims by road, is the nearest supply and service center to the property. Services at Enderby are sufficient to support surface exploration programs such as prospecting, mapping, or soil sampling. The Salmon Arm, located at the junction of B.C. Highways 1 and 97C, about 68 km (41.5 mi) north of the property, hosts the nearest helicopter base and a rail yard where mineral products can be loaded for transport to a smelter. The city of Kamloops, located on B.C. Highway 1 about 175 km (106.8 mi) west of the property has services necessary to support a mining operation.

## 2.0 HISTORY

**1963** The showings of the area that became the Central zone were discovered by W.C. Rotar of the Bright Star Trio syndicate of Vernon, B.C. The Bright Star property was staked to cover the showings. By 1964, the Bright Star property comprised 28 2-post claims (McKechnie and Smith, 1964) with a maximum area of 585.2 ha (1,445.4 A). The configuration of those claims is unknown to the author.

The Consolidated Mining and Smelting Company of Canada Limited (Cominco) discovered the showings of the Cominco and Mile 12 zones and staked the core of the Kingfisher property located east of the Bright Star property. Cominco recorded a total of 65 2-post claims from November 19, 1963 to September 28, 1964. In its final form, that property covered about 1,337.6 ha (3,303.9 A) after deduction for overlap (Figures 4 and 5).

**1964** Sheep Creek Mines Ltd. optioned the Bright Star property from the Bright Star Trio syndicate. Sheep Creek drilled six diamond-drill holes totalling 195.7 m (642 ft) and excavated several hand-blasted and bulldozer trenches over a distance of 731.5 m (2,400 ft) along the trend of the Central zone between elevations of 762 and 838 m (2,500 and 2,750 ft) (Chisholm, 1973). Five zinc-lead showings were explored in the Central zone at that time (McKechnie and Smith, 1964). Sheep Creek terminated its option on the property. No assessment reports of that work were filed; the results of it are unknown to the author.



**1964 Continued**

Probably, Cominco optioned the Bright Star property from the syndicate after the withdrawal of Sheep Creek. From September 1 to November 15, 1964, Cominco conducted 1:1,000-scale geological mapping over a 15.2 km<sup>2</sup> (5.7 mi<sup>2</sup>) area that covered both the Kingfisher and Bright Star properties as well as the area that would become known as the Dakota showings (Gifford and Richardson, 1964A) (Figures 3 and 4). Also, a total of 65 ha (160.6 A) and 97.5 ha (234.7 A) were mapped at a scale of 1:100 in the Cominco and Mile 12 zones respectively (Gifford and Richardson, 1964A). Zinc-lead mineralization was found to be hosted by a marble and calc-silicate rock unit that transected both the Bright Star and Kingfisher properties.

From October 1 to 31, 1964, a magnetic survey was conducted over a 5 km<sup>2</sup> (1.9 mi<sup>2</sup>) area on the Kingfisher property (Gifford and Richardson, 1964B) (Figures 3 and 5). Grid lines in the southeastern part of the survey-area were 121.9 m (400 ft) apart. Traverses were conducted along logging roads in the northwestern part of the survey-area. Readings were taken at 15.2-m (50-ft) intervals along the lines. Readings at loop-back stations were used to correct data for diurnal variation in vertical magnetic field. Magnetic "highs" where total vertical magnetic field exceeded the average for the survey by at least 400 nanoteslas (gammas) were located in several parts of the survey-area. The distribution of those magnetic "highs" did not relate to the trends of stratigraphy and mineralization.

Cominco drilled four diamond drill holes that cut a total of 112.8 m (370 ft) into the Cominco zone (Smith, 1964). No record of that drilling is known to the author.

- 1965** Dakota Silver Mines Ltd. staked the Elk and Dakota claims to the west of Bright Star property over the showings that would become known as the Dakota zone (Figure 3). The property comprised 28 2-post claims (McKechnie, 1965) that covered a maximum of 585.2 ha (1,445.4 A). The configuration of those claims are unknown to the author. E.O. Chisholm (1973) described Dakota's work on its claims that year as follows:

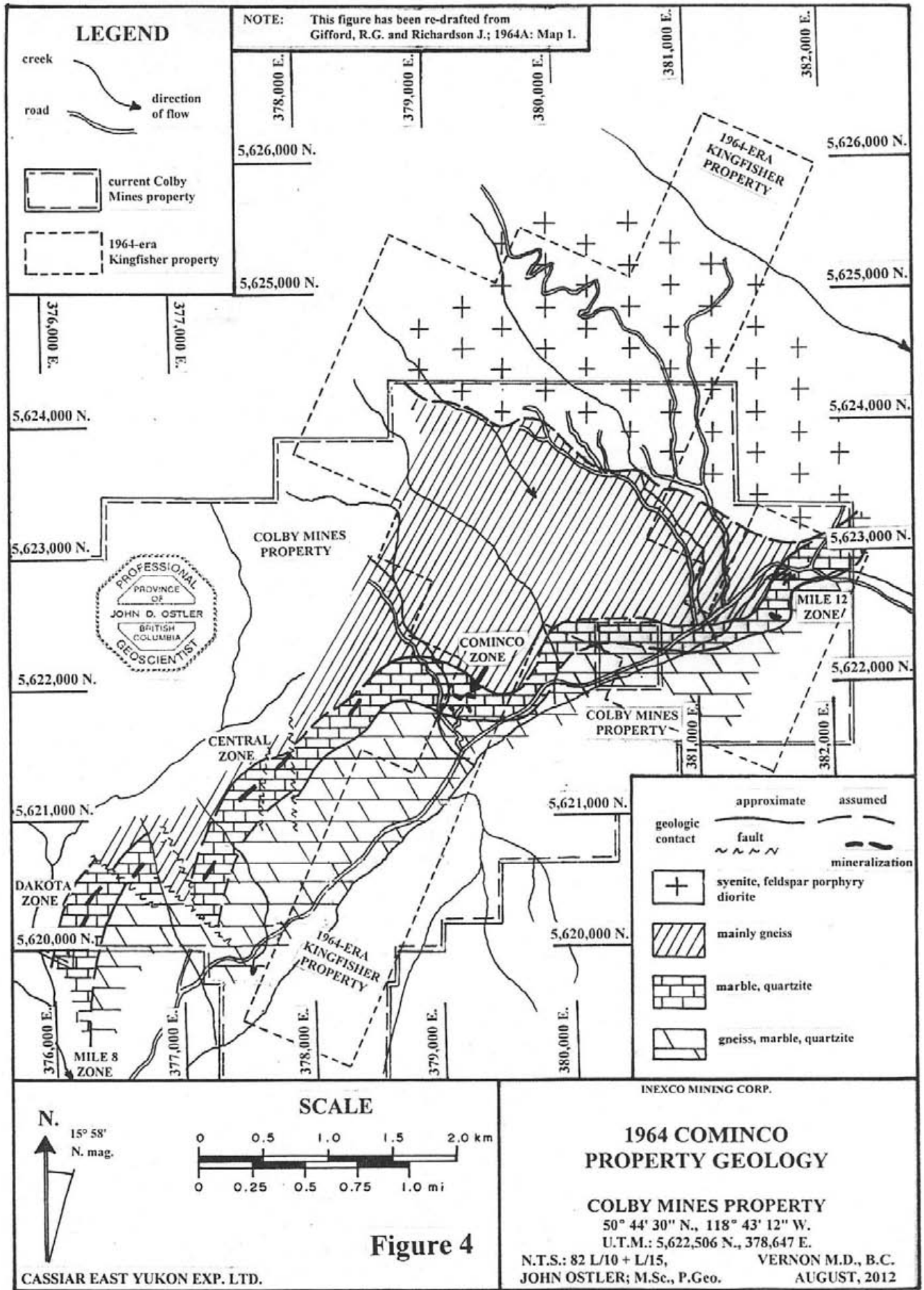
In 1965, Dakota Silver Mines Ltd. of Vernon, B.C. staked claims ... on the middle fork of Kingfisher Creek 8 miles (12.9 km) upstream from the confluence with Shuswap River. On the Elk 3 claim ... approximately at elevation of 2,820 to 2,980 feet (859.5 to 908.3 m), several trenches were blasted and at the lower elevation a diamond drill site was noted at which two holes were drilled at an inclination of 45° and 68° towards the trenched area, at a bearing of N. 20° West (340°). No core was found. The showing area was examined and sampled by the writer.

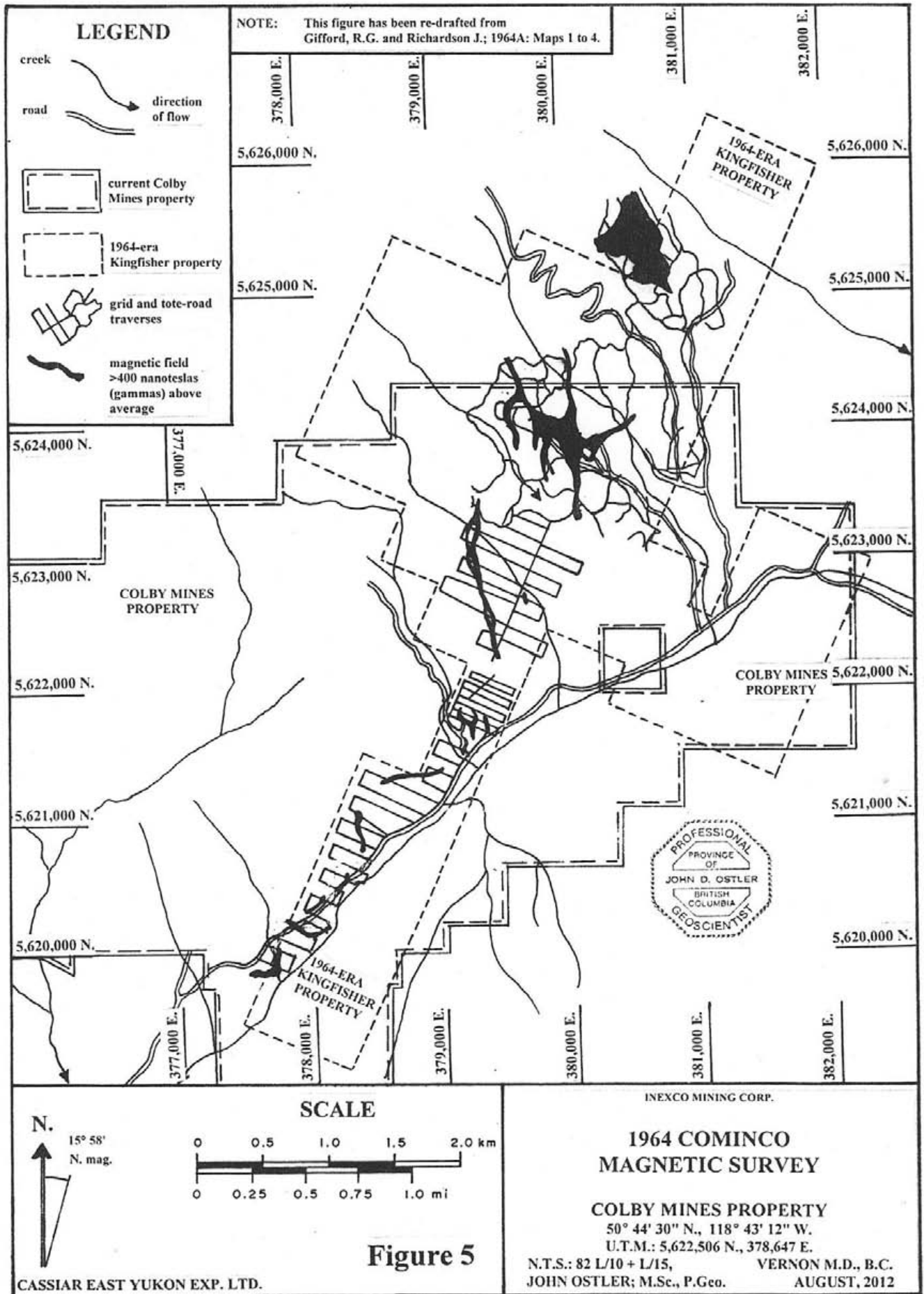
Chisholm, E.O.; 1973: p. 6.

Cominco lost interest in the area and let its Kingfisher property lapse.

- 1966** The production file associated with MINFILE occurrence 082LNE007 records that 4 tonnes of mineralization was shipped from what would become known as the Central zone. That shipment contained 5,008 gm silver, 450 kg lead, and 166 kg zinc indicating a recoverable grade of 1,252 gm/mt (36.52 oz/ton) silver, 11.25% lead, and 4.15% zinc.







- 1968** The Bright Star property had grown to include a total of 127 2-post claims (Smith and Wardman, 1968) which could have had a maximum area of 2,654.3 ha (6,556.1 A). Fourteen trenches were dug and a 7.3-m (24-ft) long drill hole was drilled by a 2-man crew during a four-month long program that year. The author knows of no details of that work.
- 1969** The Bright Star property comprised a total a total of 123 full and fractional 2-post claims that covered an area of about 2,402.7 ha (5,934.7 A). It extended from the Mile 8 zone to the Mile 12 zone and covered most of the area covered by the current Colby Mines property.

Alrae Engineering Ltd. of Vancouver, B.C. was commissioned to conduct magnetic surveys in three areas: north of the Mile 8 zone and south of the current FX- ZONE (692004) claim (named the Golden West grid-area), along the southeastern margin of the Central zone on the current COLBY MINES (544490) and COLBY EAST (692083) claims (named the Star grid-area), and around the Mile 12 zone on a grid centred on the current 12 MILE (692043) claim (named the Bright Star Trio grid-area) (Jury, 1970). A total of 2,564.1 m (8,412.5 ft) of base line and 28,541.5 m (93,640 ft) of grid line was surveyed in the three grids (Figures 3, 6 and 7). Grid lines were spaced 61 m (200 ft) apart; readings were take at 30.5-m (100-ft) intervals along the lines. A total of 3,273.5 m (10,740 ft) of fill-in line at 30.5-m (100-ft) spacings were surveyed at 16.2-m (50-ft) spacings in a magnetically interesting part of the Bright Star Trio grid. Adjacent lines were also surveyed at 15.2-m (50-ft) intervals.

Rae Jury (1970) related the pattern of magnetic anomalies from the 1969 Bright Star survey to the east-west trending marble and quartzite unit as mapped by R.G. Gifford in 1964 (Figure 4). In the author's opinion, the magnetic anomalies on the Golden West and Star grids (Figure 6) were too small and localized to justify such an assumption. The trend of magnetic highs on the Bright Star Trio grid are like those from the near-by 1964 Cominco survey. In both grid-areas, it is north-south and intersects the marble quartzite unit at a high angle (Figures 5 and 7).

David Smith (1970) commented on the 1969 Bright Star exploration program as follows:

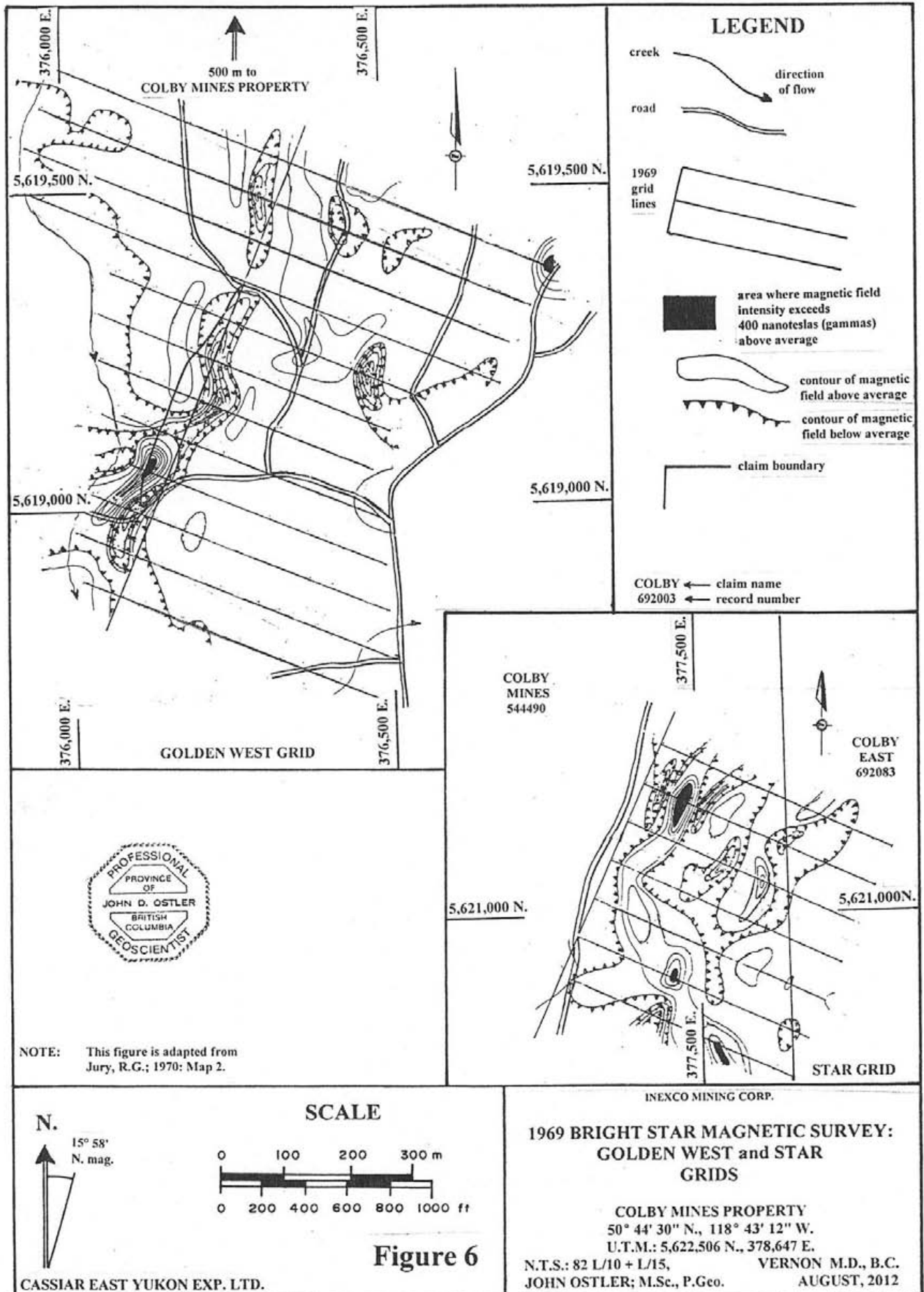
A magnetometer survey covering 28 line-miles (45.1 line-km) was run over the BRIGHT STAR TRIO, GOLDEN WEST, and STAR groups; 1,000 soil samples were collected from the same claims for chemical analysis; and 10 holes totalling 597 feet (182 m) were diamond drilled from surface.

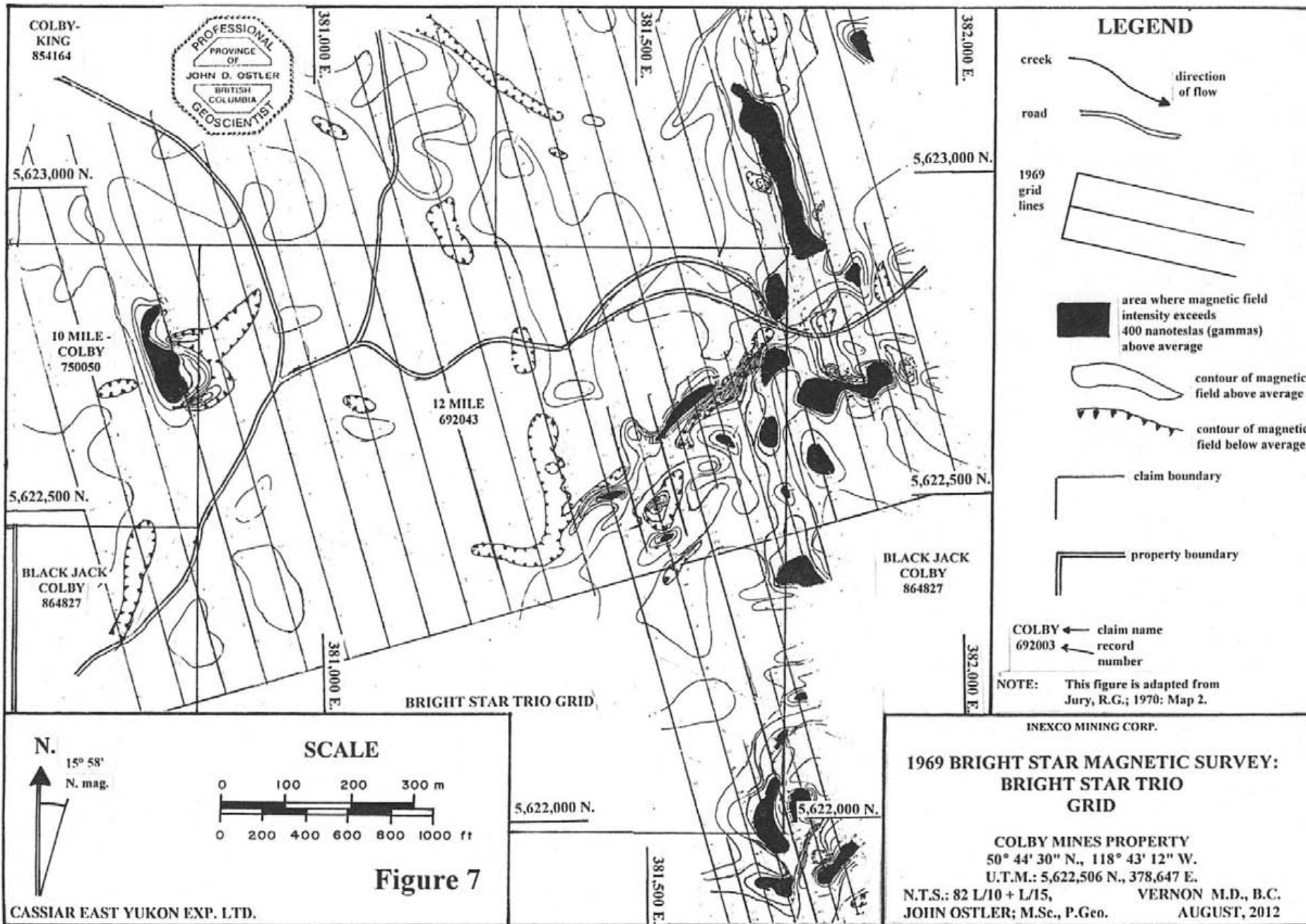
Smith, David: 1970: p. 298.

The author knows of no records of that soil survey or drilling.

#### **1965 to 1973**

Bright Star Trio Mining Ltd. conducted extensive bulldozer trenching and stripping, and some diamond drilling in the Central zone (Chisholm 1973; Höy, 1977). No results of that work are known to the author. W.C. Rotar and associates owned a pack-sack drill with which they drilled AQ core at the bright Star property (W.R. Gilmour, pers. comm.).







**1973 and 1974: Summary**

Colby Mines Ltd. located 34 (2-post) claims over the original Bright Star property (the Central zone) in 1973 ... and subsequently expanded the property to over 250 claims to include the original Kingfisher property (covering the Cominco and Mile 12 zones), the original Elk and Dakota claims (Dakota zone), and the Mile 8 zone. From a map published by Trigve Høy (1975), the author calculated that the 1974-era Black Jack property covered about 5,565 ha (13,476 A).

Trigve Høy (1975) described the staking of the Black Jack property by Colby Mines Ltd. in the current property-area and its exploration as follows:

**WORK DONE**

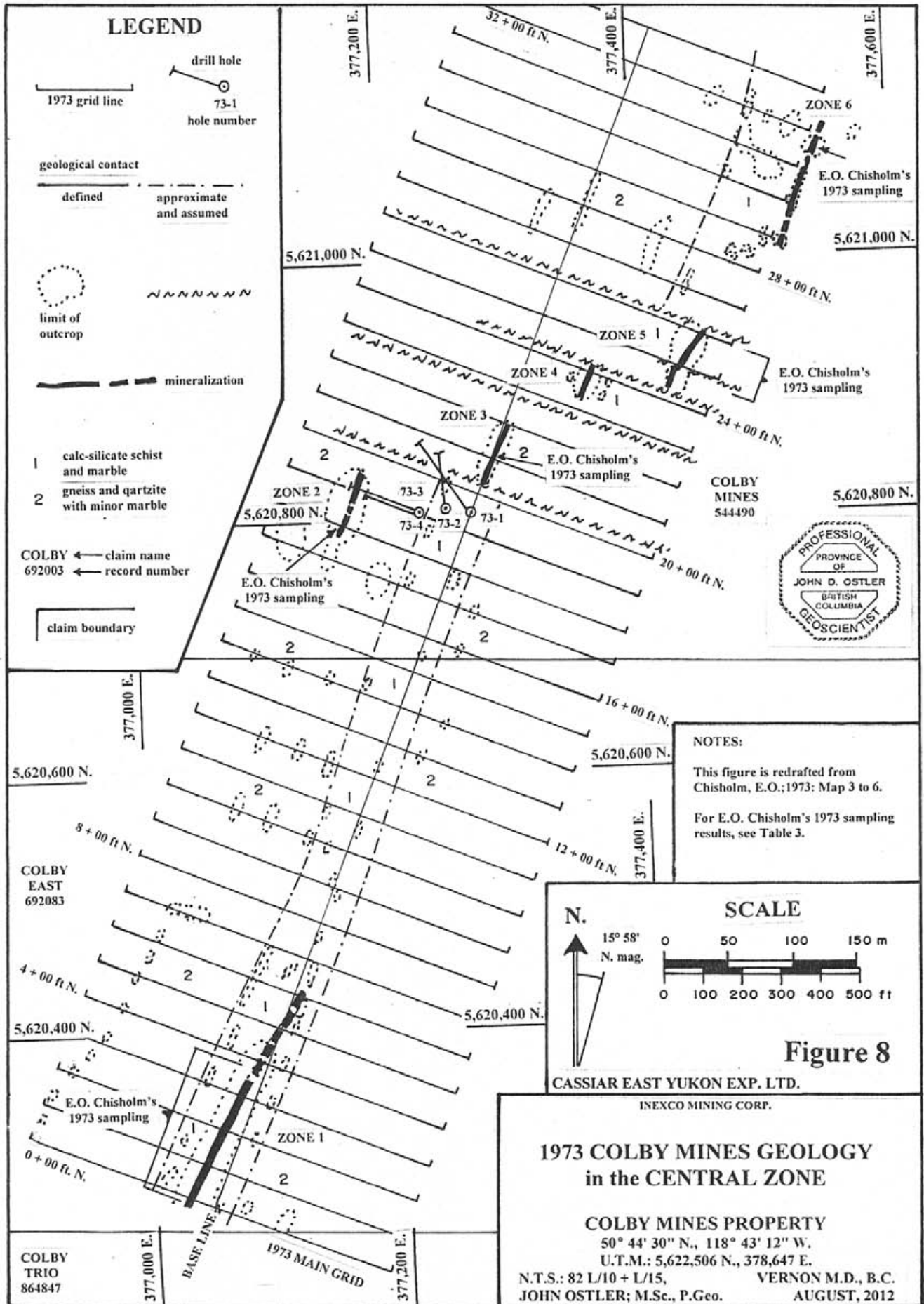
1973 and early 1974 - linecutting, magnetometer survey, and altimeter survey (Figures 9N and 9S), 7 line-miles (11.3 line-km); linecutting and electromagnetic survey (Figure 10), 2.9 line-miles (4.7 line-km); surface geological mapping, 1 inch equals 100 feet and 50 feet (Figure 8); surface diamond drilling, 25 holes totalling 5,604 feet (1,708.1 m) on FX 2, 3, 21, and 22 (the Central zone);

1974 - surface geological mapping, 1 inch equals 100 feet, ground magnetometer survey, 100-foot (30.5-m) grid spacing, more than 6.8 line-miles (10.9 line-km); and geochemical soil survey, 100-foot (30.5-m) grid spacing, more than 6.8 line-miles (10.9 line-km) covering the FX 2, 3, 21, and 22 (the Central zone) and three other groups in the north and south parts of the property; packsack drilling, five holes; road construction 2 miles (3.2 km); trenching, 250 feet (76.2 m); stripping 1,500 by 300 feet (457.2 X 91.4 m).

Høy, Trigve; 1975: p. 94.

Trigve Høy (1977) commented that trenching in August and September of 1974 led to the discovery of lead-zinc mineralization 150 to 200 metres (492.1 to 656.2 ft) east and downslope of the original Bright Star showings. These new showings are in a nearly pure marble layer striking north-northeast and dipping to the east. The author encountered no record of the details of the 1974 trenching.

**1973** The 1973 main grid in the Central zone comprised a 1,005.8-m (3,300-ft) long base line oriented at 020°-200° along a previously established claim line. Thirty-three lines were turned at right angles off the base line at 30.5-m (100-ft) intervals and extended for 152.4 m (500 ft) on both sides of the base line. The grid covered a total of 30.66 ha (75.73 A). At that time, the Central zone was referred to as either the East or Main zone.



1973 Continued

E.O. Chisholm (1973) mapped the geology on the 1973 grid and sampled zinc-lead mineralization in six zones within it (Figure 8) (Table 3) and reported the results as follow:

Zone 1

Located at ... 00 on base line ... Elevation 2475 feet (754.4 m) (Figure 8).

The showing consists of a 450 foot (137.2-m) long zone of massive to disseminated sulphides varying from a few feet to 25 feet (7.6 m) in width in a crystalline limestone host rock (Figures 47N, 47C, and 47S). It dips vertically and strikes N. 20° to 30° E. The limestone strikes the same direction but dips at 50° to the east. Sulphides consist of pyrrhotite, sphalerite, galena, pyrite and minor chalcopyrite in massive form, and disseminated throughout the limestone walls ... Seven representative grab samples (of massive sulphide mineralization), taken at intervals of 50 to 100 feet (15.2 to 30.5 m) along the veins (Table 3).

Zone 2

Location 0 + 1800 North, 300 West. Elevation 2750 feet (838.2 m) (Figures 8 and 48).

Zone 2 is comprised of massive sulphides containing considerable galena and sphalerite. Length is 150 feet (45.7 m) and width 10 to 15 feet (3.5 to 4.6 m). Strike N 20° E, dip 75° east. The host rock is quartzite. The zone appears to pinch out or is faulted off at both ends. A grab sample of representative sulphide from the pit on the showing assayed (as in Table 3).

Zone 3

Location 0+ 2100N. Elevation 2700 feet (823 m) on base line (Figures 8 and 49). Comprised of 20 feet (6.1 m) high rock face exposing massive and disseminated pyrrhotite, sphalerite and galena over a width of 25 feet (7.6 m). A rusty zone of mineralized rubble extends 50 feet (15.2 m) on either side of the showing. Strike at both ends is covered with overburden. The zone strikes N 20° E and dips vertically. The rock face shows considerable north south fracturing and shearing. The host rock sulphides is quartzite.

A representative chip sample across the sulphide zone face assayed (as in Table 3).

Zone 4

Location 0+ 2400N; 130 East. Elevation 2750 feet (838.2 m) (Figures 8 and 50). Comprised of 12 feet (3.7 m) wide sulphide zone extending for 100 feet (30.5 m) in a N 20° E direction. Dip vertical. Sulphides consist of massive and disseminated pyrrhotite, sphalerite and galena. The host rock is crystalline limestone that dips flatly at 15° to the east. No samples were taken due to the rusty oxidized nature of the rock. The zone appears to be an extension of zone No.1 faulted 100 ft. (30.5 m) to the east.

### Zone 5

Location 0+ 2400 feet North, 400 feet East. Elevation 2800 feet (853.4 m) (Figures 8 and 50). Comprised of 20 feet (6.1-m) wide 200 feet (61-m) of massive and disseminated sulphides striking N 20° E and dipping vertically. The sulphides consist of pyrrhotite, sphalerite and minor galena in a quartzite host rock. The north and south ends of the showing are covered with overburden and open to extensions.

Three representative samples from the zone assayed (as in Table 3).

### Zone 6

Location 0+ 32 (32 + 00) N 500 E. Elevation 2850 feet (868.7 m) (Figure 8). Comprised of a 15 foot (4.6-m) wide zone of massive to disseminated sulphide exposed for a length of 50 feet (15.2 m). Sulphides consist of pyrrhotite, sphalerite and galena in a crystalline limestone host rock similar to No.1 showing. The north and south ends of the showing are covered with overburden and open to extensions. The strike is N 20 to 30° East; dip vertical. The enclosing limestone strikes N 20° E and dips 30° East. Two hundred feet (61 m) to the south along strike the zone appears again and the total zone length is possibly 250 feet (76.2 m). The zone appears to be a faulted extension to the east of the No.4 zone.

A representative grab sample of sulphide assayed (as in Table 3).

Chisholm, E.O.; 1973; pp. 10-15.

E.O. Chisholm (1973) examined and sampled the Dakota zone (Figures 2 and 3) which at that time was named the West or FX 5 zone. He described that zone as follows:

A series of bulldozer trenches and rock trenches at widely spaced intervals expose a 15 to 25-foot (4.6 to 7.6-m) - wide zone of sulphide in crystalline limestone and quartzite. Mineralization consists pyrrhotite, sphalerite and minor galena in silicified shears and disseminated zones.

Two drill holes were drilled at angles of 45° and 65° beneath one of the rock trenches (see 1965, this section). ... Above the drill holes some 75 feet (22.9 m) vertically a rock trench exposed 30 feet (9.1 m) wide lead-zinc zone. A chip sample across 30 feet (9.1 m) taken by the writer assayed lead 0.54% zinc 2.15% silver 0.06 oz/ton (11.2 gm/mt) gold 0.001 (0.034 gm/mt).

The FX 5 zone (Dakota zone) is similar geologically and mineralogically to the main zone on FX 21 (his zones 3 to 5 on the 1973 grid in Figure 8) ...

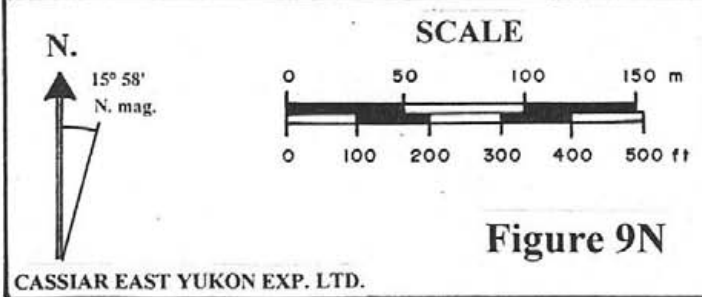
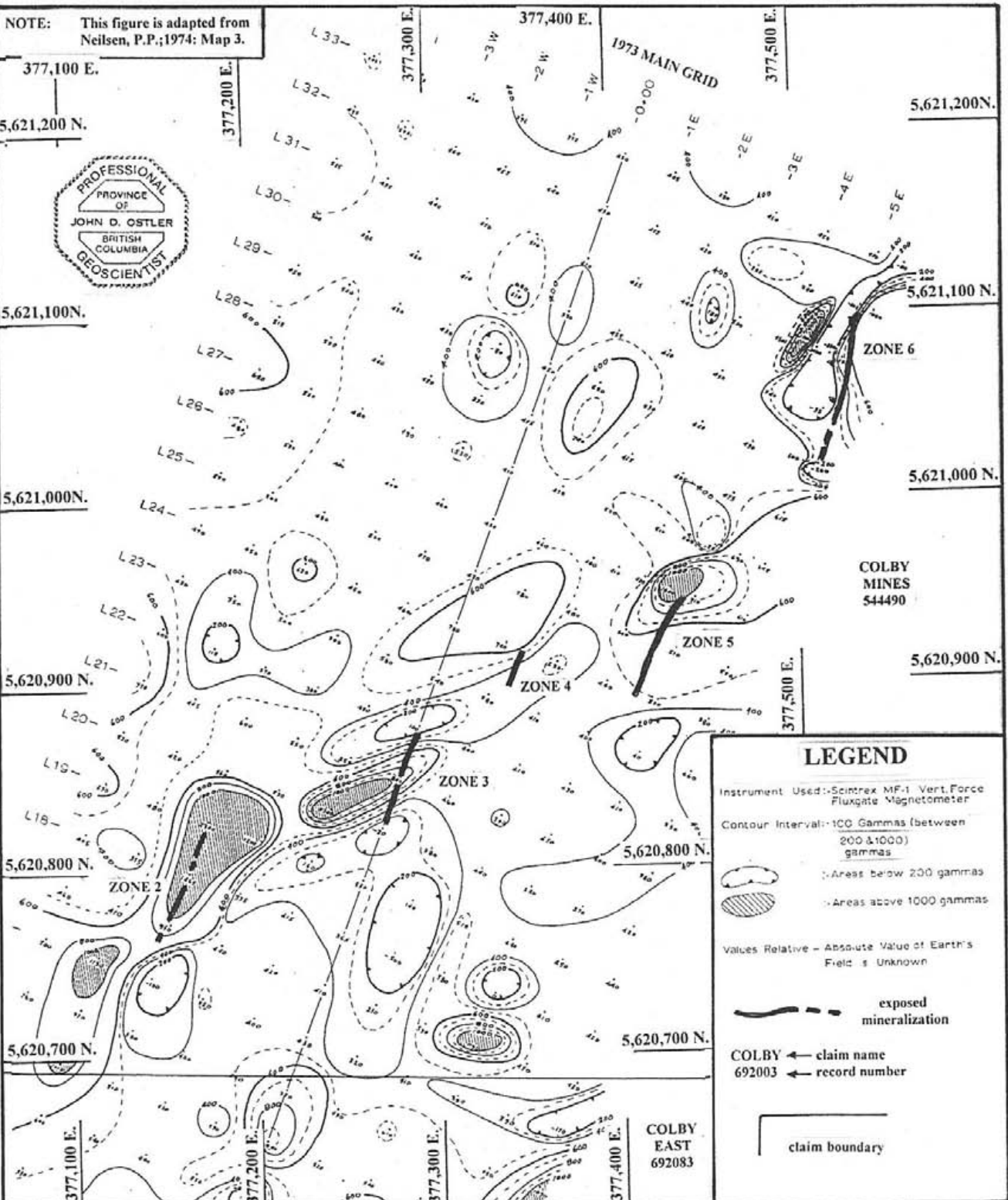
Chisholm, E.O.; 1973; p. 16.

From September 8 to 21, 1973, P.P. Nielsen (1974) conducted topographic and magnetic surveys in the 1973 main grid area. Chisholm's zones 1 and 6 corresponded with "lows" in the vertical magnetic field. Zones 2, 3, and 5 corresponded with magnetic "highs", and zone 4 was accompanied by a very subtle magnetic response (Figures 9N and 9S).

Table 3  
E.O. Chisholm's 1973 Sampling in the Central Zone

"Representative grab" Sample No.	Location on 1973 Grid	Length m ft	Pb %	Zn %	Au gm/ml oz/ton
Zone 1					
Grab No. 1	0 + 50 N.	0.6 2	0.19	15.60	
Grab No. 2	1 + 00 N.	1.5 5	3.68	11.30	
Grab No. 3	1 + 50 N.	6.1 20	0.12	2.48	
Grab No. 4	1 + 75 N.	6.1 20	0.17	2.52	
Grab No. 5	2 + 50 N.	1.5 5	0.09	1.43	
Grab No. 6	3 + 50 N.	1.5 5	0.02	0.06	
Grab No. 7	3 + 75 N.	3.5 10	0.21	1.50	
Zone 2					
Grab sample	18 + 00 N. 3 + 00 W.	Grab from pit	0.01	3.90	
Zone 3					
Composite chip	21 - 00 N. 0 + 00 W.	15.2 50 (assumed)	0.31	1.59	0.034 0.001
Zone 4					
Not sampled					
Zone 5					
Grab 1	26 - 00 N. 4 + 00 E.	6.1 20	1.02	4.66	
Grab 2	25 - 00 N. 4 + 00 E.	6.1 20	0.24	2.41	
Grab 3	24 - 75 N. 4 + 00 E.	6.1 20	0.01	0.13	
Grab 4	24 - 75 N. 4 + 00 E.	Best mineral	1.05	6.12	
Zone 6					
Grab sample	32 - 00 N. 5 + 00 E.	?	0.02	1.94	

NOTE: This figure is adapted from Neilsen, P.P.; 1974: Map 3.



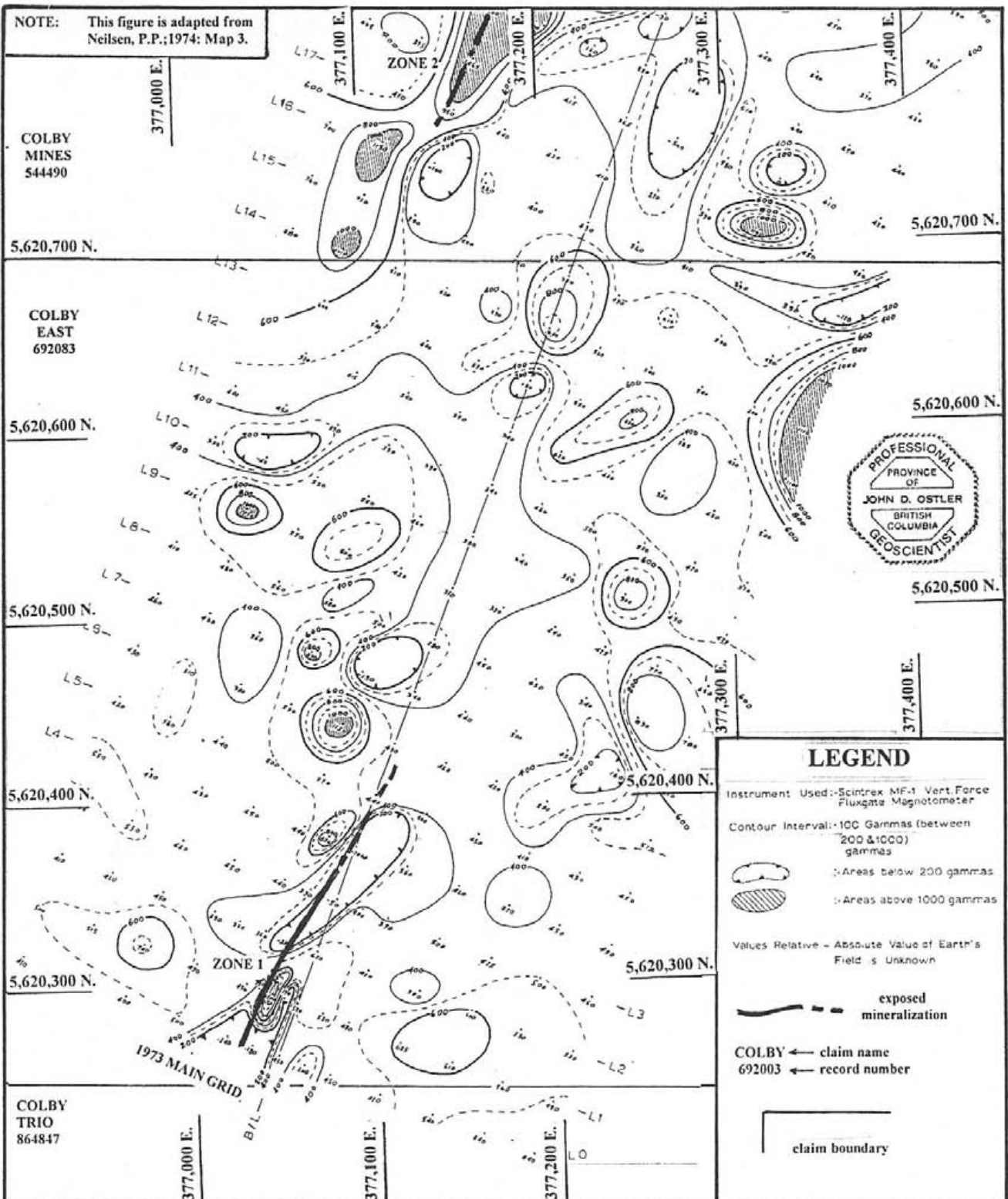
INEXO MINING CORP.

**1973 COLBY MINES MAGNETIC SURVEY: NORTHERN PART**

**COLBY MINES PROPERTY**  
 50° 44' 30" N., 118° 43' 12" W.  
 U.T.M.: 5,622,506 N., 378,647 E.

N.T.S.: 82 L/10 + L/15, VERNON M.D., B.C.  
 JOHN OSTLER; M.Sc., P.Geo. AUGUST, 2012

NOTE: This figure is adapted from Neilsen, P.P.:1974: Map 3.



PROFESSIONAL  
 PROVINCE OF  
 JOHN D. OSTLER  
 BRITISH COLUMBIA  
 GEOSCIENTIST

**LEGEND**

- Instrument Used - Scintrex MF-1 Vert. Force Fluxgate Magnetometer
- Contour Interval - 100 Gammas (between 200 & 1000) gammas
- Areas below 200 gammas
- Areas above 1000 gammas
- Values Relative - Absolute Value of Earth's Field is Unknown
- exposed mineralization
- COLBY ← claim name
- 692003 ← record number
- claim boundary

**N.**  
 15° 58'  
 N. mag.

**SCALE**

0 50 100 150 m

0 100 200 300 400 500 ft

**Figure 9S**

CASSIAR EAST YUKON EXP. LTD.

INEXCO MINING CORP.

**1973 COLBY MINES MAGNETIC SURVEY: SOUTHERN PART**

**COLBY MINES PROPERTY**  
 50° 44' 30" N., 118° 43' 12" W.  
 U.T.M.: 5,622,506 N., 378,647 E.

N.T.S.: 82 L/10 + L/15, VERNON M.D., B.C.  
 JOHN OSTLER; M.Sc., P.Geo. AUGUST, 2012

### 1973 Continued

The northern part of the 1973 main grid containing Chisholm's zones 2 to 6 was considered to be the most prospective area by Colby Mines. From November 2 to 7, 1973, P.P. Nielsen (1974) conducted a horizontal loop "shootback" electromagnetic survey over a grid that straddled the northern part of the 1973 main grid (Figure 10). The 1973 EM grid was centred on a 701-m (2,300-ft) long base line that was oriented at 055° lines were extended for 91.4 m (300 ft) at 90° from each side of the base line. Lines 1W and 0 were extended another 91.4 m (300 ft) to the southeast. The 1973 EM grid covered an area of 13.1 ha (32.36 A).

Four conductive zones were found in the 1973 EM grid area. P.P. Nielsen discussed the results of the 1973 magnetic and electromagnetic surveys as follows:

... The most pronounced magnetic feature observed ... is the northeast striking linear across the north-central grid-area which consists of a series of dipolar anomalies of magnetic highs with adjacent lows. These dipoles are the responses due to steeply dipping, near-surface dike-like bodies of moderate to high magnetic susceptibility.

The linear is interpreted as a shear-zone in which numerous bands, veins and, possibly lenses or pods of pyrrhotite occur. Three showings along this linear co-incident with these dipoles exhibit a close association of pyrrhotite, sphalerite and galena. The linear is open at both ends of the grid and it is reasonable to assume that further magnetic coverage in these directions will delineate other mineralized zones.

Due to the lack of susceptibility contrast between the gneisses, quartzites and limestones observed within the survey area, magnetic mapping on rock-types and cross-faults has been relatively unsuccessful. However, the series of spot magnetic highs and/or lows as well as flexures corroborated by the electro-magnetic survey and the geological and topographical evidence strongly indicate the existence of cross-faulting which appears to have dissected a continuous zone on mineralization into pods and lenses as observed in the showings.

... The present survey coverage has partially delineated another interesting magnetic feature on the eastern ends of Lines 12 to 17 inclusive (Figure 9S) ... (which) could represent sulphides of economic significance.

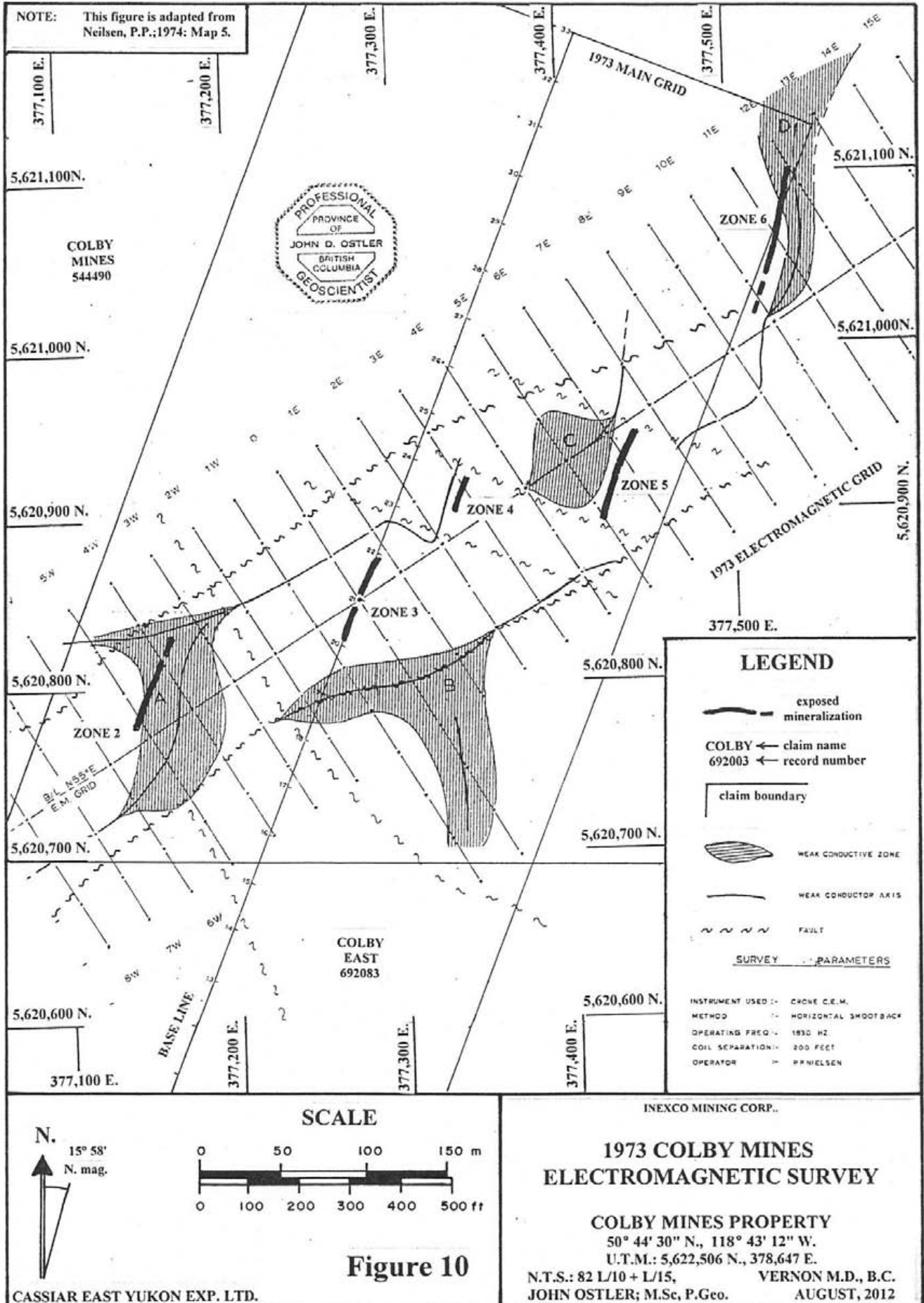
Numerous other local dipolar anomalies occur throughout the grid and all are thought to be caused by pyrrhotite likely associated with sphalerite and galena.

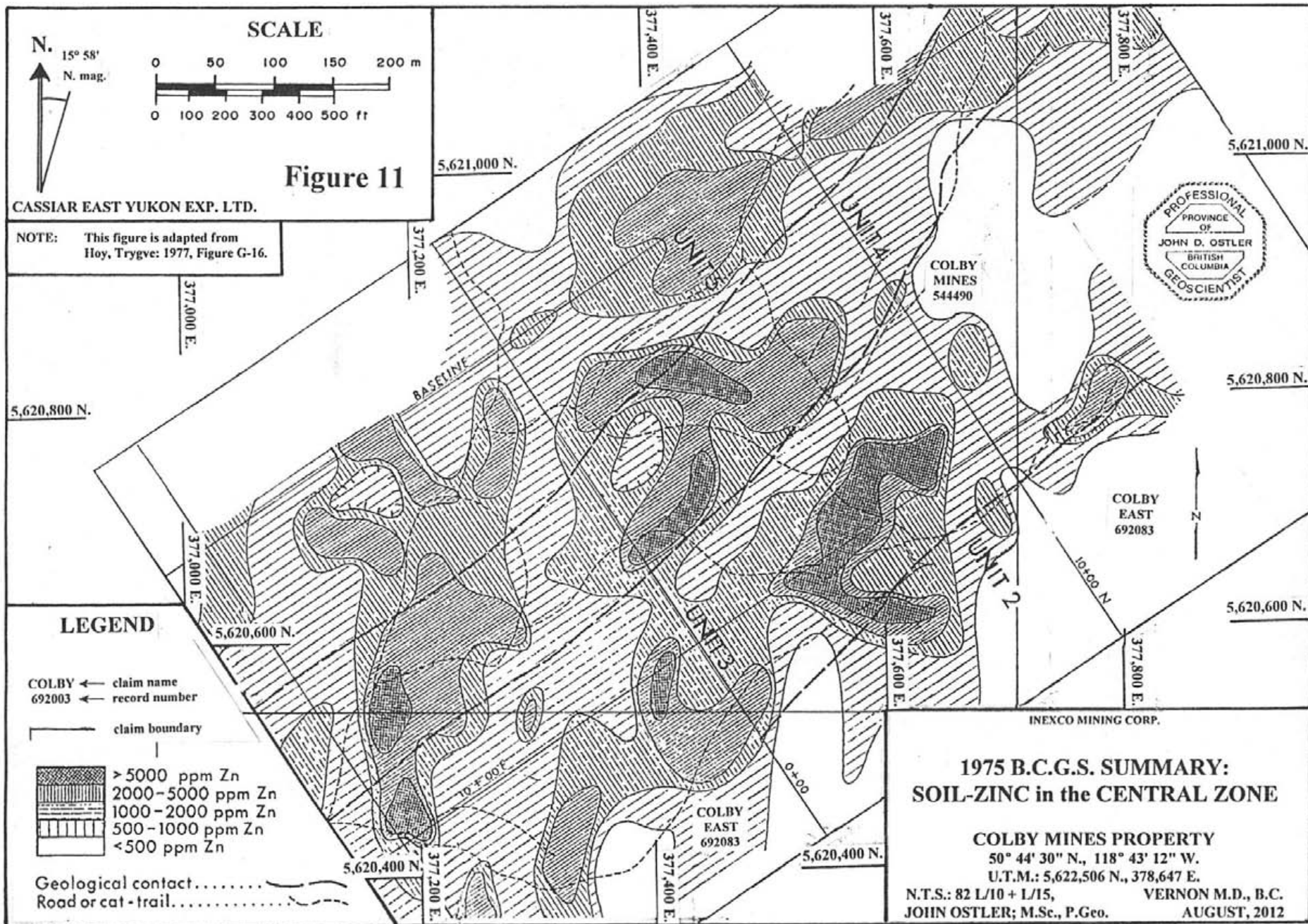
Recent drilling has shown that the geology is quite complex. Mineralization has been encountered in all rock-types present but the best mineralized intersections to date appear to be along the interpreted "shear" coincident with dipolar magnetic anomalies. The limestone is interfingered with the quartzites and the gneisses are highly folded, faulted and irregular.

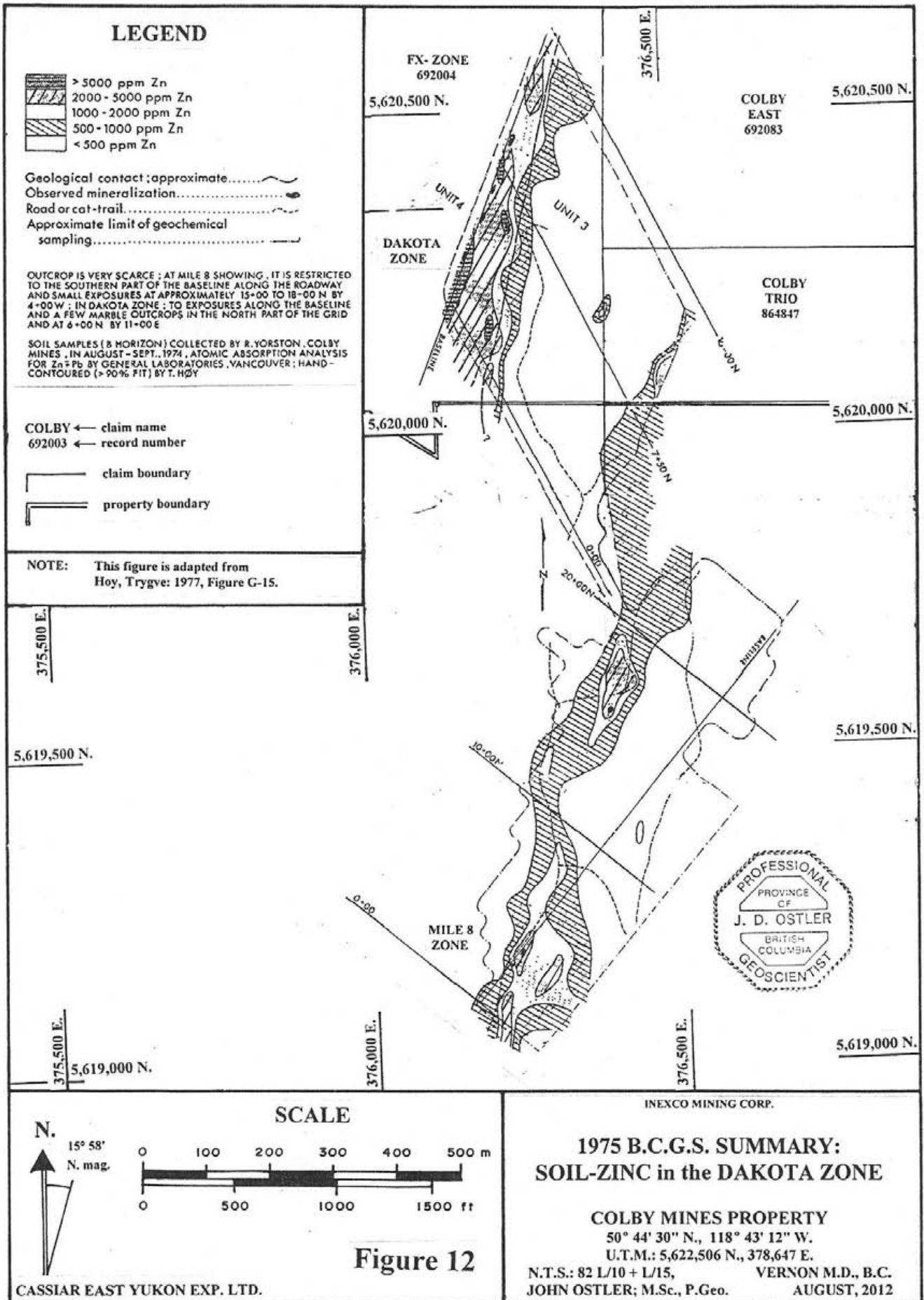
Nielsen, P.P.; 1974: pp. 7-9.

- 1974 The 1973 electromagnetic grid was expanded to form the 1974 Colby Mines grid. The 1974 grid extended for 975.4 m (3,200 ft) northeastward along the base line and for 609.6 m (2,000 ft) southeastward across it to include an area of 59.46 ha (146.87 A). It covered parts of the current COLBY MINES (544490) and COLBY EAST (692083) claims (Figure 3).









#### 1974 Continued

Although no original reports of the 1974 Colby Mines geochemical surveys and mapping are known to the writer, subsequent reports presumably of that work were published by Trigve Høy (1977). Soil-zinc results, presumably from the 1974 survey in the Central zone contained a distinct anomaly in the northwestern part of the grid-area in the area that hosted Chisholm's zones 2 to 6 (Figures 10 and 11). A group of much more intense soil-zinc anomalies occurred in the central part of the grid, southeast of zones 2 to 6. Geological mapping in the central zone recorded more detail consistent with the previous 1964 Cominco mapping in that area (Figures 4, 40, and 41) (Section 3.3.1, this report).

Two grids that extended from the Mile 8 zone to the Dakota zone are presumed to have been constructed by Colby Mines in 1974 (Figure 12). Those grids covered a combined area of 48 ha (118.56 A). Soil-zinc results indicate that a north-south trending zone of zinc-enriched soils extends northward from the Mile 8 zone onto the current property-area and is located about 330 m (1,082 ft) east of the Dakota zone.

The author knows of no records of the 1974 trenching conducted by Colby Mines Ltd.

#### 1973 and 1974 Drilling

From November 12, 1973 to March 2, 1974, Colby Mines Ltd. drilled 25 holes, using a PBS-1 drill. A total of 1,708.1 m (5,604 feet) of AQ core was recovered. Drilling commenced in the northeastern part of the 1973 grid on Chisholm's zones 2 to 6 in the Central zone and spread both east-northeast across the 1974 grid-area and south-southwest to Chisholm's zone 1 (Figures 3 and 13).

Significantly mineralized intersections were intersected in 16 of the 25 drill holes (Table 4). Previously, a series of nearly vertically dipping zones of lead-zinc mineralization was observed to cut across meta-sedimentary stratigraphy that dipped steeply southeastward. That pattern was confirmed to a depth of about 60 m (197 ft) beneath surface.

Although the drill logs from the 1973-1974 drill program were filed for assessment credit (Gilmour, 1974), no sections were filed. The author found those sections in the property file of Discovery Consultants Ltd. of Vernon, B.C. They have been included in this report in order to put them into the public record (Figures 15 to 31).

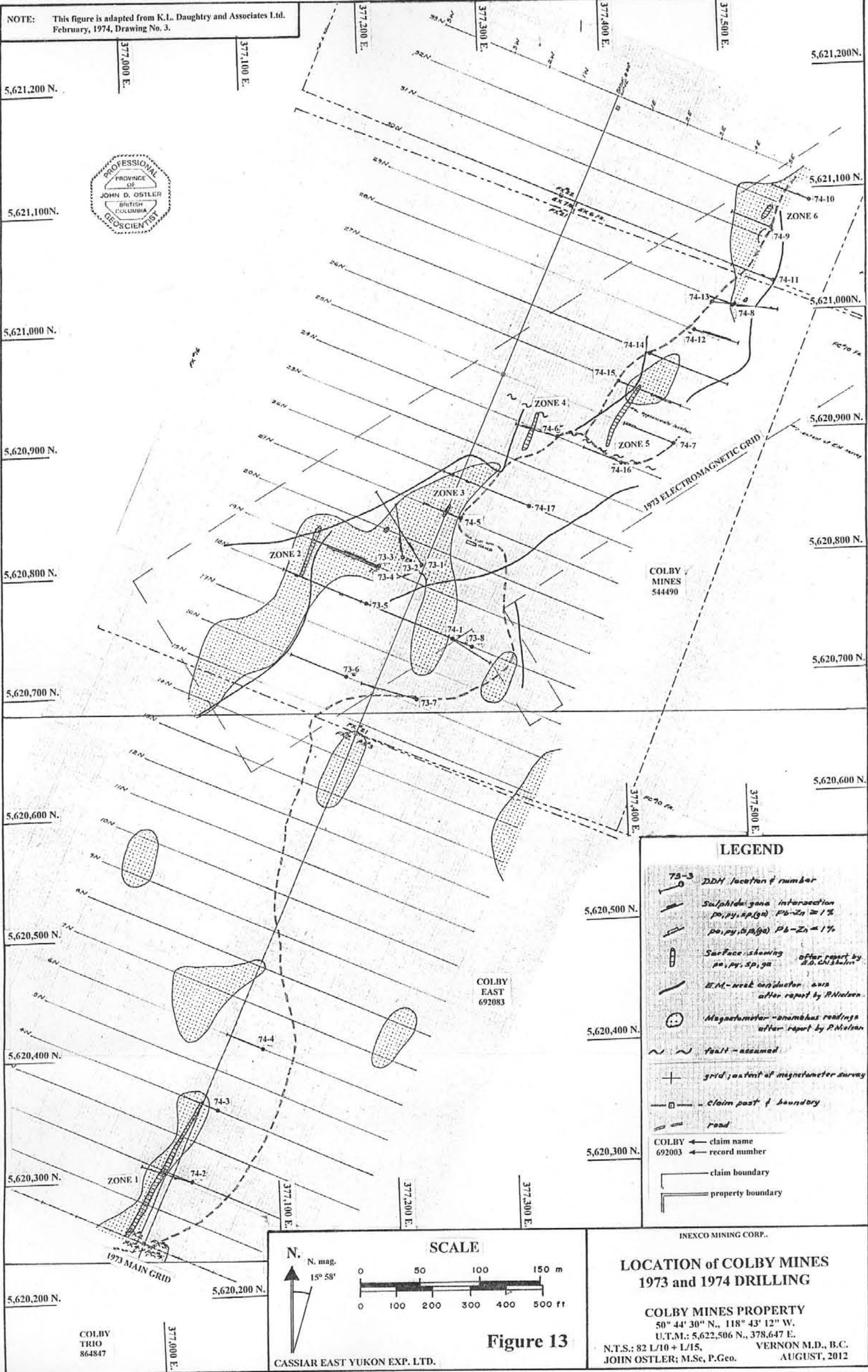
Two zones, named 'A' and 'B' were identified by drilling in the north-central part of the Central zone. Zone 'A' covered Chisholm's zones 2 to 4. Zone 'B' coincided with Chisholm's zones 4 to 6 (Figures 10, 11, 14, and 32).

#### 1974 Historic Resource

During the spring of 1974, the management of Colby Mines Ltd. was interested in shipping some lead-zinc mineralization from the Central zone. K.L. Daughtry, P.Eng. was asked to produce a resource calculation of near-surface material in zones 'A' and 'B' for internal use by the company. Daughtry calculated a resource of 1,672,727 tonnes (1,840,000 tons) of mineralization containing an average of 0.58% lead and 2.60% zinc (Table 5). Subsequently, during the writing of the Colby Mines statement of material facts, Daughtry's internal resource was converted into a reserve by its author without K.L. Daughtry's consent (W. R. Gilmour, pers. comm.). That is the "reserve" quoted in the description of the Kingfisher property in MINFILE occurrence No. 082LNE007.



NOTE: This figure is adapted from K.L. Daughtry and Associates Ltd. February, 1974, Drawing No. 3.



### LEGEND

- DDH location & number
- Sulphide-ganga intersection  
po, py, sp, ga Pb-Zn = 1%
- Sulphide-ganga intersection  
po, py, sp, ga Pb-Zn = 1%
- Surface showing  
po, py, sp, ga after report by A.O. Christensen
- E.M.-weak conductor axis  
after report by P. Nielsen
- Magnetometer-anomalies readings  
after report by P. Nielsen
- fault - assumed
- grid; extent of magnetometer survey
- claim past boundary
- road
- COLBY ← claim name
- 692003 ← record number
- claim boundary
- property boundary

**SCALE**

0 50 100 150 m

0 100 200 300 400 500 ft

**Figure 13**

CASSIAR EAST YUKON EXP. LTD.

INEXCO MINING CORP.

**LOCATION of COLBY MINES  
1973 and 1974 DRILLING**

**COLBY MINES PROPERTY**  
50° 44' 30" N., 118° 43' 12" W.  
U.T.M.: 5,622,506 N., 378,647 E.

N.T.S.: 82 L/10 + L/15, VERNON M.D., B.C.  
JOHN OSTLER; M.Sc, P.Geo. AUGUST, 2012

Table 4  
1973 and 1974 Drilling: Significant Intersections

SUMMARY DATA												
DIAMOND DRILL PROGRAM						BLACK JACK PROPERTY						
HOLE NUMBER	LOCATION	BEARING	DIP AT COLLAR	DATE STARTED	DATE COMPLETED	FINAL DEPTH	SIGNIFICANT Zn-Pb ZONE					
							POSTAGE INTERVAL	INTERSECTION WIDTH	TRUE WIDTH	% Pb	% Zn	HOST ROCK
73-1	19+49N-0+07W	325°	40°	NOV 2/73	NOV 11/73	302'	60'-90'	30'	21'	0.66	1.86	QUARTZITE
73-2	19+47N-0+61N	350°	40°	NOV 10/73	NOV 21/73	201	28-73	45	39	0.03	1.35	MARBLE
73-3A		ABANDONED				30						
73-3	19+00N-1+13W	290°	40°	NOV 23/73	NOV 26/73	249	52-133	81	35	1.36	3.47	Q & M
73-4	19+00N-1+13N	290°	65°	NOV 26/73	NOV 30/73	349	150.5-160 165-182.5 202.5-217 276-281	3.5 17.5 14.5 3	2 9 7 3	0.20 0.33 0.26 0.17	2.74 2.73 2.32 1.56	Q Q Q & M Q
73-5	18+36N-1+08N	290°	40°	DEC 2/73	DEC 5/73	318	86-91 261-272	5 11	3.5 7	0.27 0.10	1.75 1.19	M M & Q
73-6	16+00N-0+01N	290°	40°	DEC 5/73	DEC 7/73	217						
73-7	16+17N-1+17E	284°	30°	DEC 8/73	DEC 11/73	180						
73-8	18+00N-2+00E	290°	45°	DEC 13/73	DEC 18/73	426	30-28	8	5	0.02	1.39	Q
74-1	18+00N-1+44E	120°	30°	JAN 7/74	JAN 9/74	192.5						
74-2	2+00N-0+55E	285°	45°	JAN 11/74	JAN 13/74	204	67-68.5	5.5	5	0.35	1.62	M
74-3	4+00N-0+58E	290°	45°	JAN 13/74	JAN 14/74	140						
74-4	6+00N-0+93E	290°	45°	JAN 15/74	JAN 16/74	150						
74-5	21+00N-0+71E	290°	45°	JAN 17/74	JAN 18/74	152	45-64.5 130-142.5	19.5 12.5	14 9	0.34 0.14	2.25 2.52	Q & M M & Q
74-6	24+00N-2+00E	285°	45°	JAN 18/74	JAN 19/74	167	108-115	7	4	0.34	4.82	Q
74-7	25+00N-4+34E	290°	46.5°	JAN 20/74	JAN 21/74	206	181.5-184	2.5	2	0.01	2.28	Q
74-8	29+07N-5+37E	285°	45°	JAN 24/74	JAN 25/74	151	16-36	20	15	1.95	3.70	Q
74-9	31+32N-5+13E	290°	45°	JAN 28/74	JAN 29/74	163.5						
74-10	32+39N-5+78E	290°	45°	JAN 31/74	FEB 1/74	151	38-42.5	4.5	3	0.05	2.37	Q
74-11	30+00N-5+73E	290°	45°	FEB 3/74	FEB 4/74	170	38.5-44.5	6	5	0.12	3.00	Q
74-12	28+02N-4+28E	105°	45°	FEB 6/74	FEB 7/74	179	38.5-130 145.5-147	99.5 1.5	52 1.5	0.36 0.05	2.84 3.25	Q & M Q
74-13	28+00N-4+48E	95°	45°	FEB 7/74	FEB 11/74	253						
74-14	27+00N-3+42E	110°	45°	FEB 13/74	FEB 19/74	317						
74-15	26+00N-2+34E	110°	40°	FEB 20/74	FEB 21/74	235	152-162	10	3	0.04	2.48	Q
74-16	24+00N-3+85E	290°	45°	FEB 22/74	FEB 24/74	182						
74-17	22+00N-2+00E	290°	45°	FEB 28/74	MAR 2/74	379	244.5-255	14.5	12	0.77	1.40	Q
N.R. 5	APRIL 1974	DRAWING NO. 6				TOTAL	5604		423.5	258		DWG. 024-013



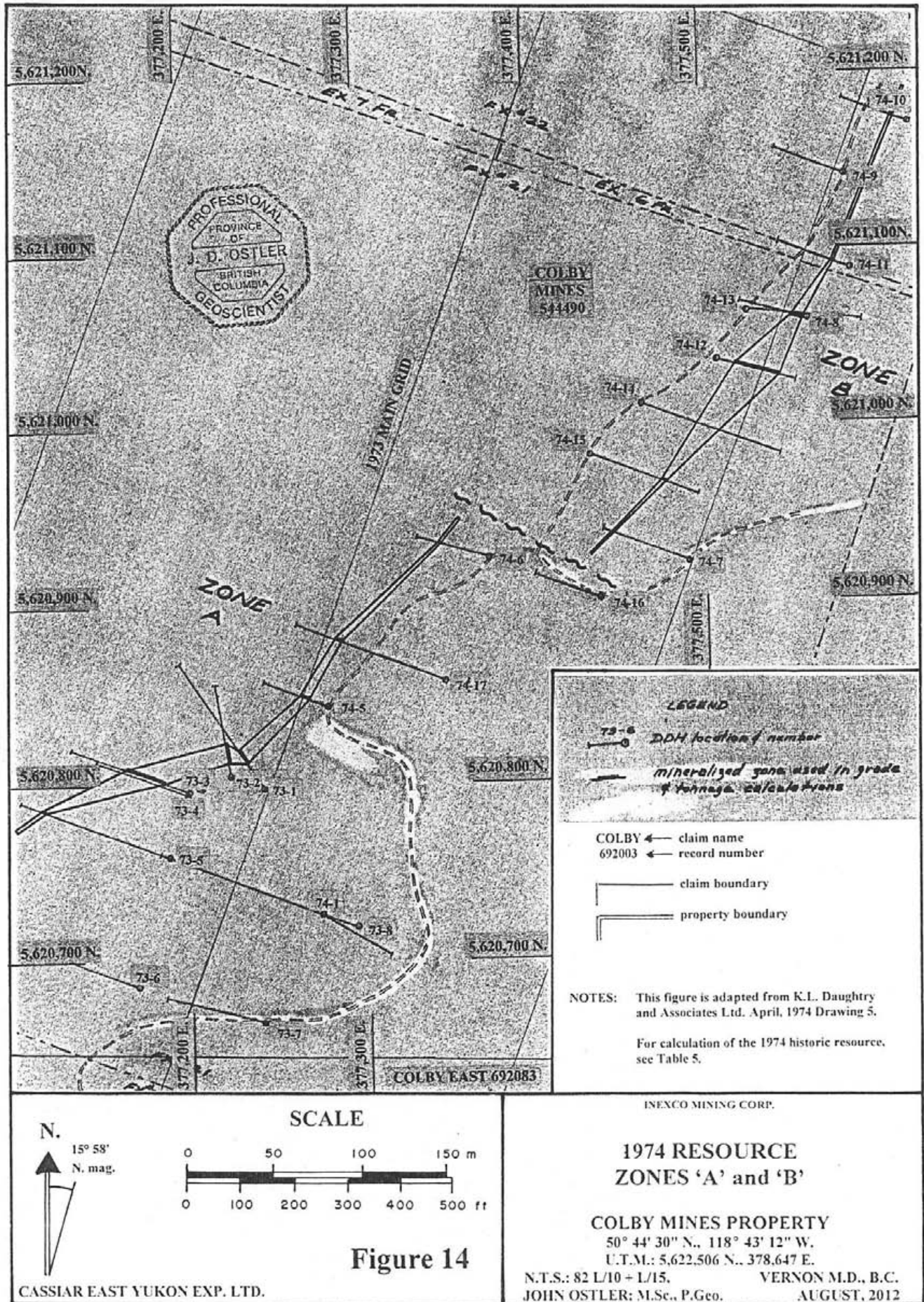


Table 5  
1974 Historic Resource

SUMMARY OF GRADE & TONNAGE OF MINERALIZED ZONES  
BLACK JACK PROPERTY

ZONE	TONNAGE	TONS/ VERTICAL FT.	%Pb	%Zn	WIDTH	LENGTH	VALUE (Pb) per TON	VALUE (Zn) per TON	TOTAL VALUE per TON
A		1180	0.62	2.35	17.1'	862'	\$2.48	\$16.00	\$18.50
including	102,000	280	0.86	3.75	4.8	730	3.44	25.50	28.90
B		954	0.53	2.91	13.8	864	2.12	19.80	21.90
including	51,500	242	1.13	4.34	7.1	426	4.52	29.50	34.00
A+B	1,840,000	2130	0.58	2.60	15.4	1730	2.32	17.70	20.00
including	154,000		0.98	4.02	5.6	1160	3.92	27.30	31.20

N.B.

- depth assumed 1/2 strike length
- width corrected for dip & strike  $\pm 20\%$
- cut off grade at 1% Pb+Zn
- assumed general vertical dip of mineralized zones
- assumed Pb at 20<sup>th</sup> lb.
- assumed Zn at 34<sup>th</sup> lb.

DWG. 024-014  
W.R.G. APRIL 1974 DRAWING NO. 7



325°  
N. 35° W.

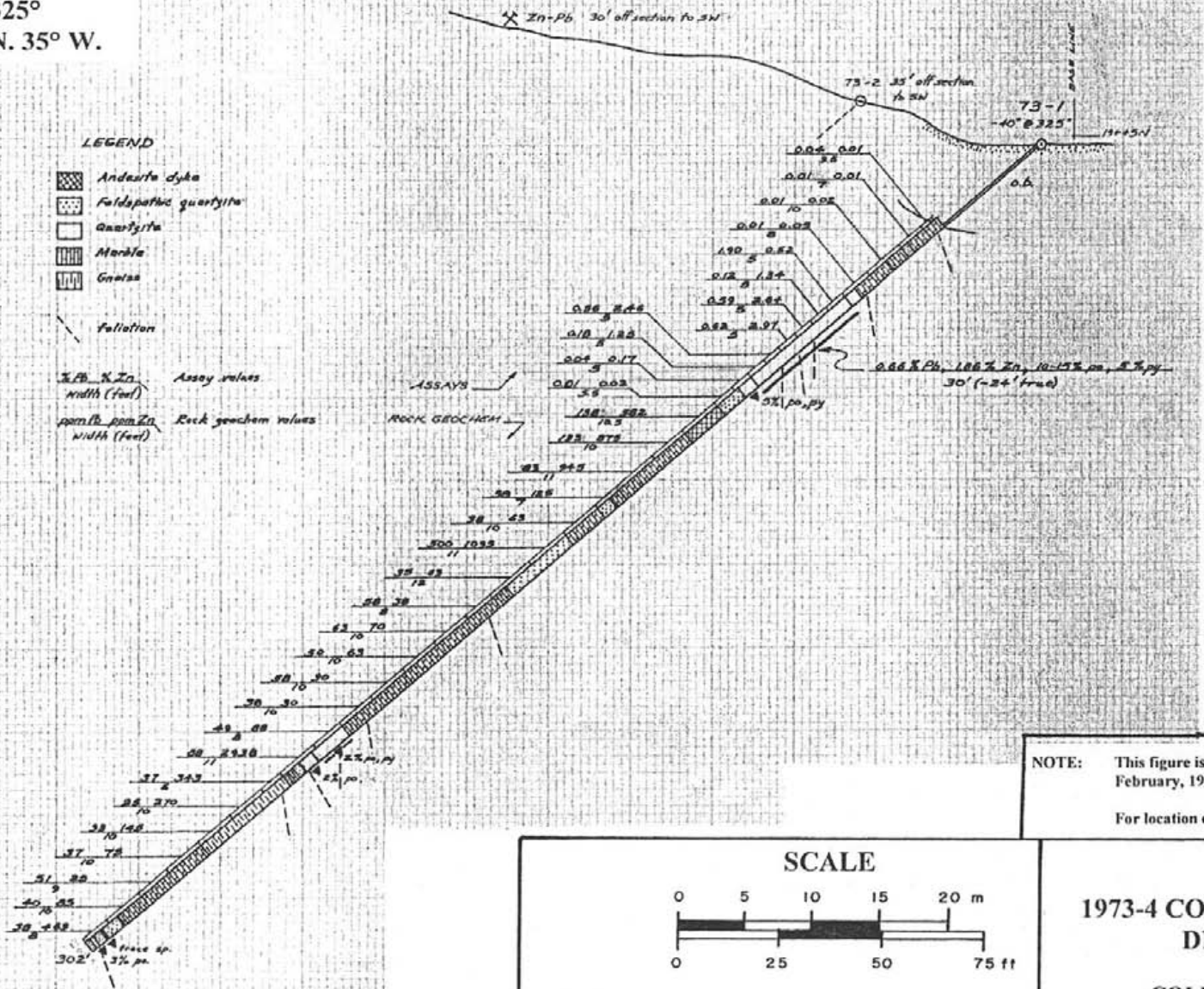
145°  
S. 35° E.

LEGEND

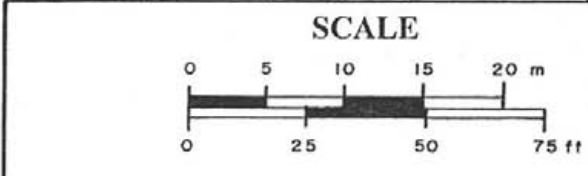
- Andesite dyke
- Feldspathic quartzite
- Quartzite
- Marble
- Gneiss
- Foliation

$\frac{\% Pb}{width (feet)}$   $\frac{\% Zn}{width (feet)}$  Assay values

$\frac{ppm Pb}{width (feet)}$   $\frac{ppm Zn}{width (feet)}$  Rock geochem values



NOTE: This figure is adapted from K.L. Daughtry and Associates Ltd. February, 1974, Drawing No. 8 (DWG -024-015).  
For location on the property, see Figure 13.

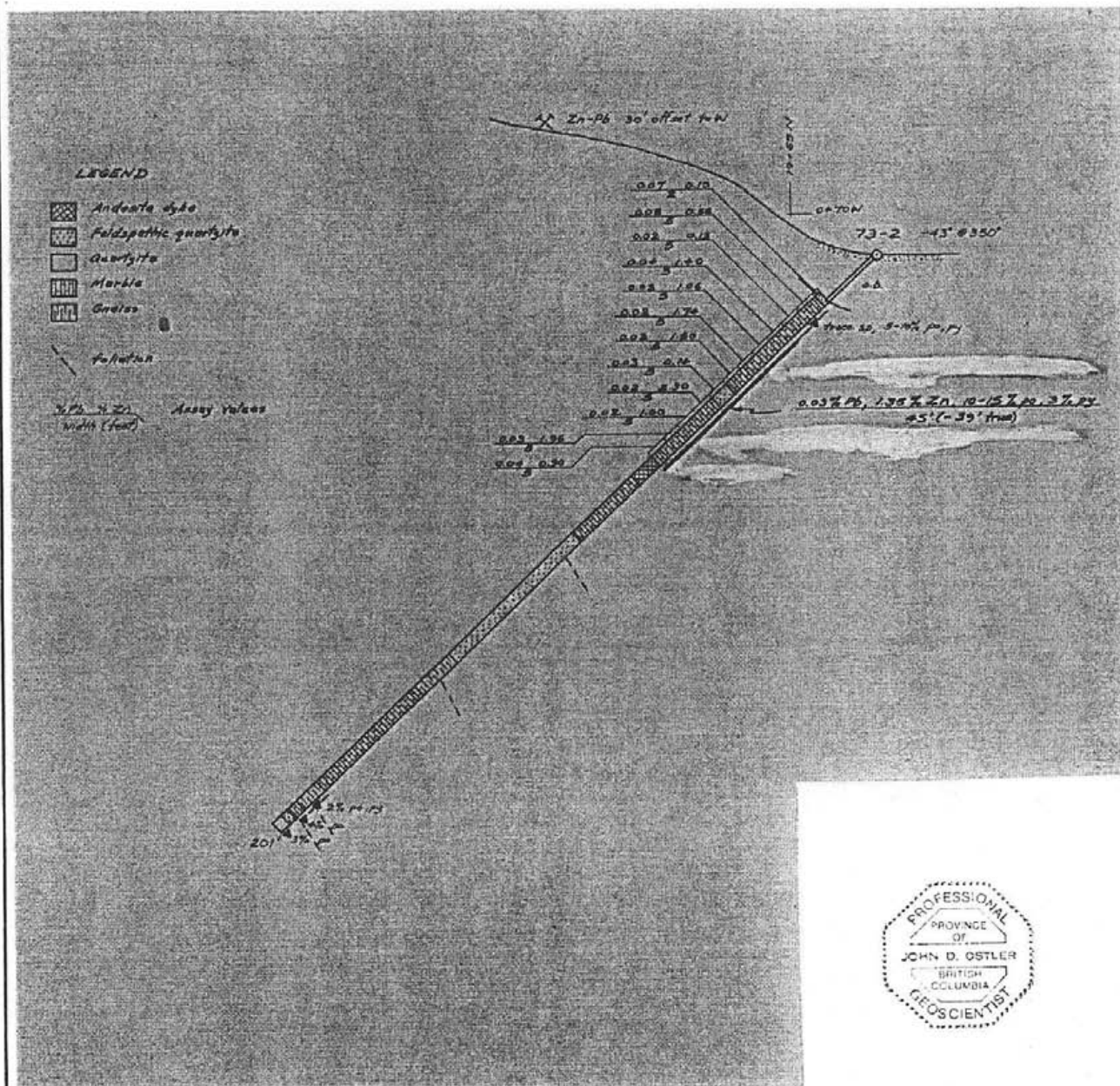


INEXCO MINING CORP.  
**1973-4 COLBY MINES DRILLING:  
DRILL HOLE 73-1**  
**COLBY MINES PROPERTY**  
50° 44' 30" N., 118° 43' 12" W.  
U.T.M.: 5,622,506 N., 378,647 E.  
N.T.S.: 82 L/10 + L/15, VERNON M.D., B.C.  
JOHN OSTLER; M.Sc, P.Geo. AUGUST, 2012

**Figure 15**  
CASSIAR EAST YUKON EXP. LTD.

350°  
N. 10° W.

170°  
S. 10° E.



NOTE: This figure is adapted from K.L. Daughtry and Associates Ltd. February, 1974, Drawing No. 9 (DWG -024-016).  
For location on the property, see Figure 13.

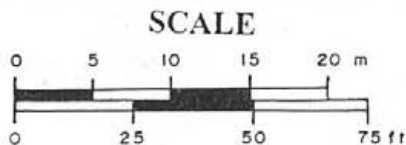


Figure 16

CASSIAR EAST YUKON EXP. LTD.

INEXCO MINING CORP.

1973-4 COLBY MINES DRILLING:  
DRILL HOLE 73-2

COLBY MINES PROPERTY

50° 44' 30" N., 118° 43' 12" W.

U.T.M.: 5,622,506 N., 378,647 E.

N.T.S.: 82 L/10 + L/15.

VERNON M.D., B.C.

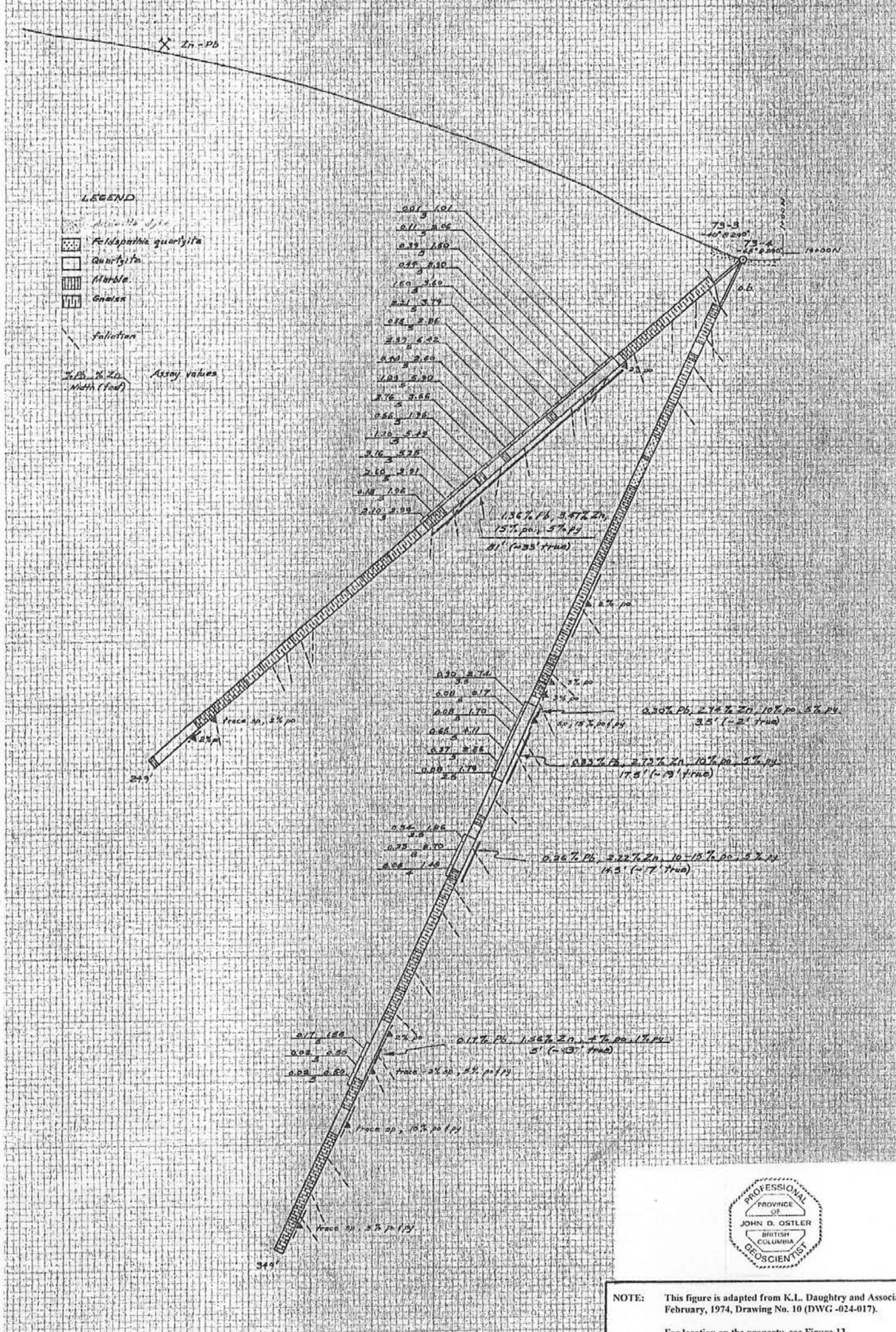
JOHN OSTLER: M.Sc., P.Geo.

AUGUST, 2012



290°  
N 70° W.

110°  
S. 70° E.

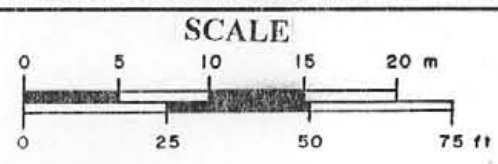


-35-

-36-



NOTE: This figure is adapted from K.L. Daughtry and Associates Ltd. February, 1974, Drawing No. 10 (DWG-024-017).  
For location on the property, see Figure 13.



**1973-4 COLBY MINES DRILLING:  
DRILL HOLES 73-3 and 73-4**

COLBY MINES PROPERTY  
50° 44' 30" N., 118° 43' 12" W.  
U.T.M.: 5,622,506 N., 378,647 E.  
N.T.S.: 82 L/10 + L/15, VERNON M.D., B.C.  
JOHN OSTLER; M.Sc., P.Geo. AUGUST, 2012

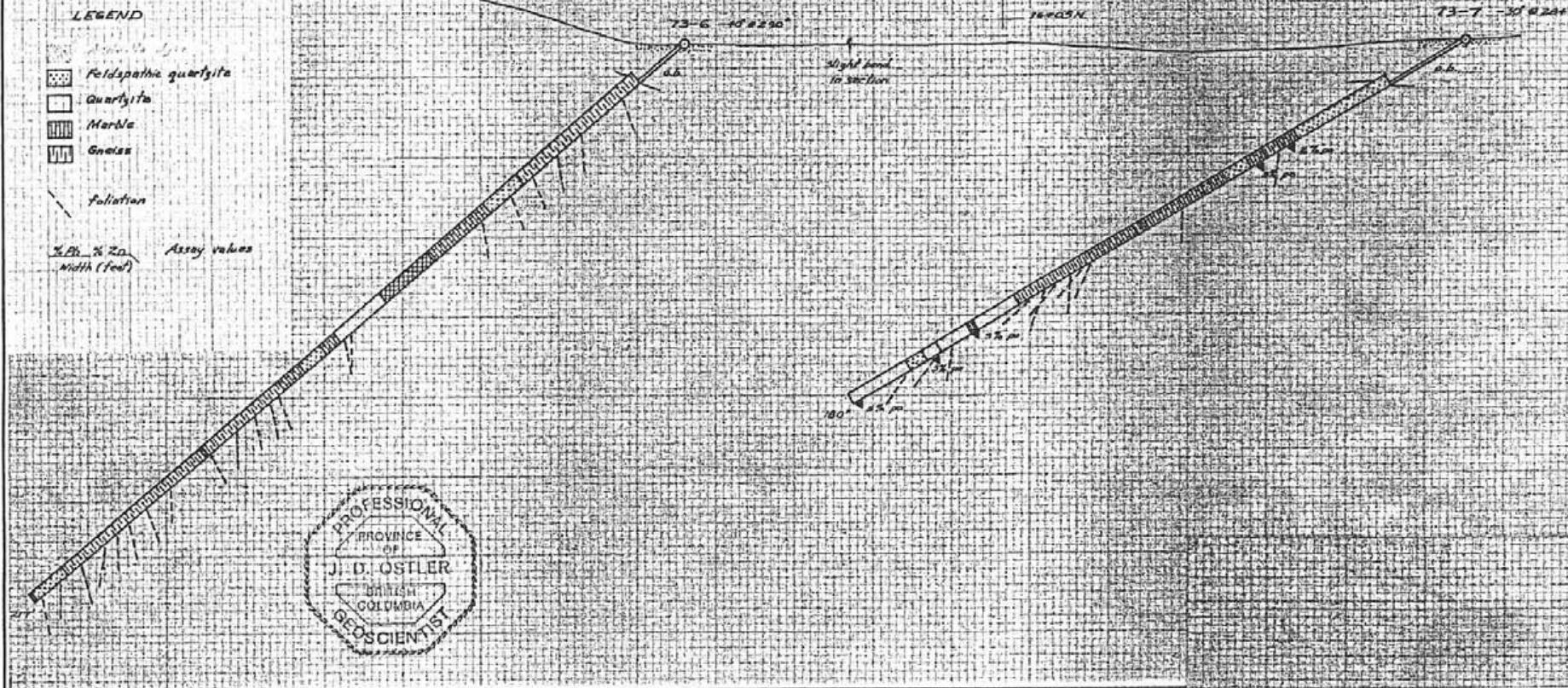
Figure 17



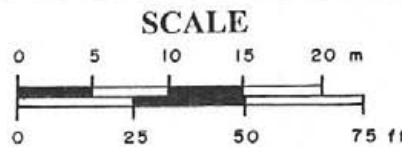


290°  
N 70° W.

110°  
S. 70° E.



NOTE: This figure is adapted from K.L. Daughtry and Associates Ltd.  
February, 1974, Drawing No. 12 (DWG-024-019).  
For location on the property, see Figure 13.

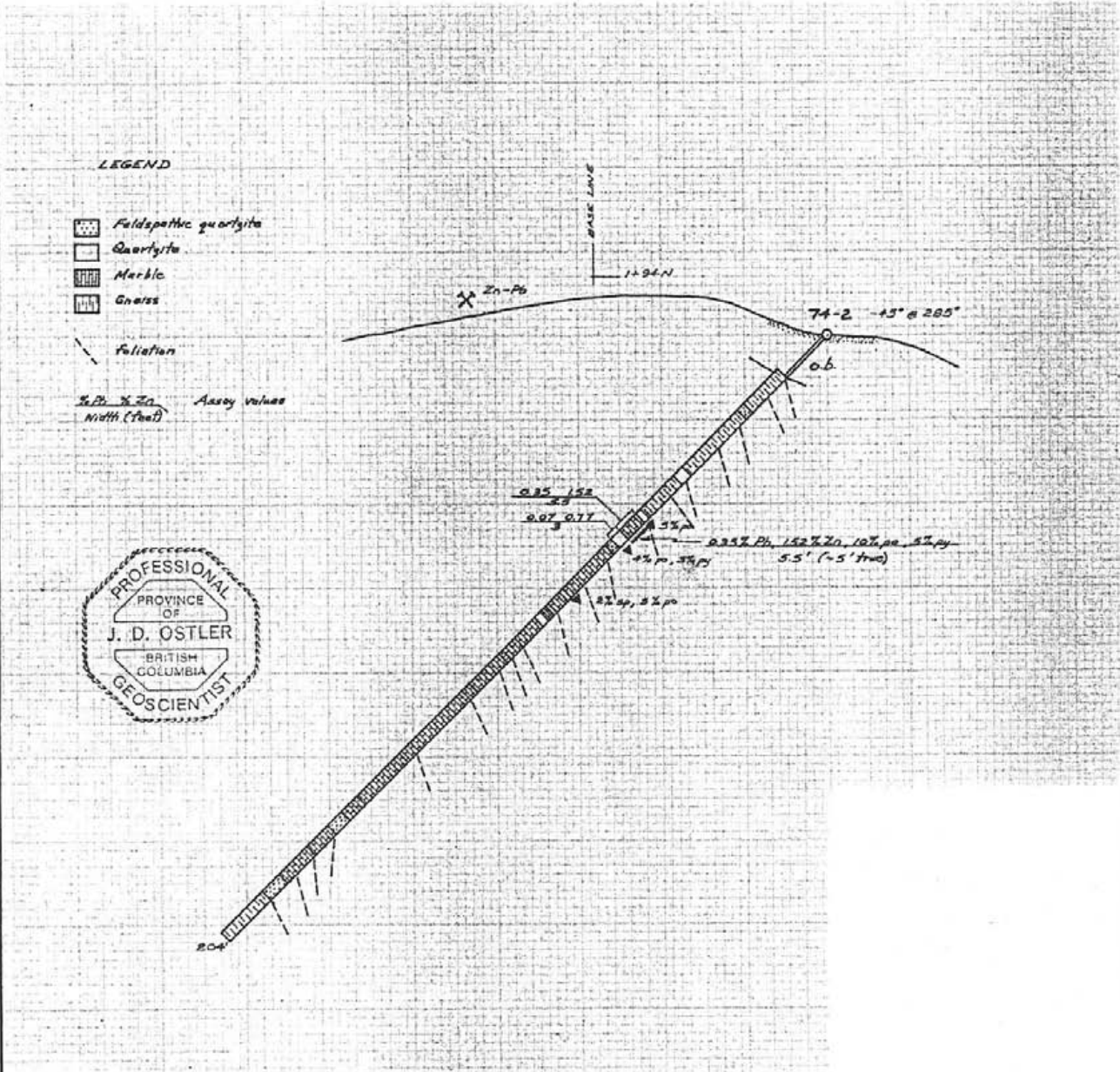


INEXO MINING CORP.  
**1973-4 COLBY MINES DRILLING:  
DRILL HOLES 73-6 and 73-7**  
  
COLBY MINES PROPERTY  
50° 44' 30" N., 118° 43' 12" W.  
U.T.M.: 5,622,506 N., 378,647 E.  
N.T.S.: 82 L/10 + L/15, VERNON M.D., B.C.  
JOHN OSTLER; M.Sc., P.Geo. AUGUST, 2012

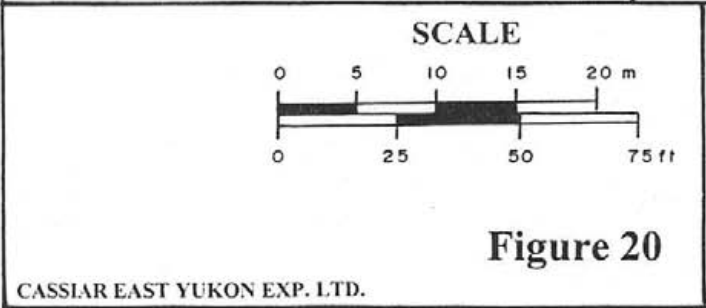
Figure 19

285°  
N 75° W.

105°  
S. 75° E.



NOTE: This figure is adapted from K.L. Daughtry and Associates Ltd. February, 1974, Drawing No. 13 (DWG-024-020).  
 For location on the property, see Figure 13.



INEXCO MINING CORP.

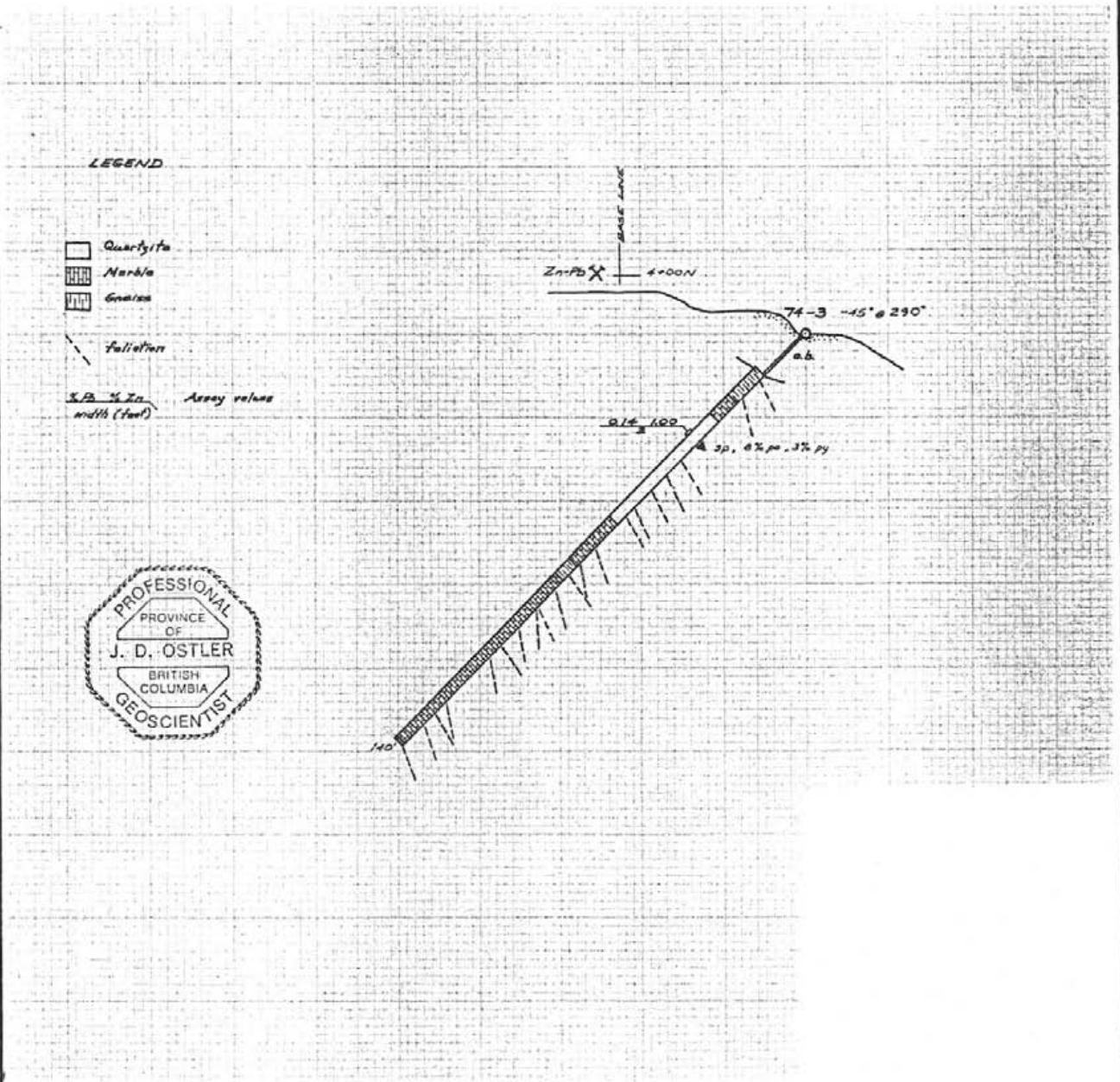
**1973-4 COLBY MINES DRILLING:  
 DRILL HOLE 74-2**

COLBY MINES PROPERTY  
 50° 44' 30" N., 118° 43' 12" W.  
 U.T.M.: 5,622,506 N., 378,647 E.  
 N.T.S.: 82 L/10 + L/15, VERNON M.D., B.C.  
 JOHN OSTLER; M.Sc., P.Geo. AUGUST, 2012



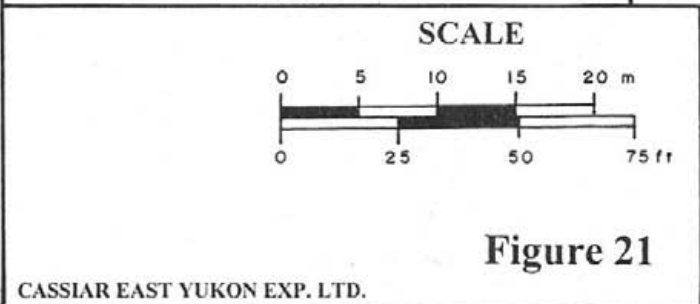
290°  
N 70° W.

110°  
S. 70° E.



NOTE: This figure is adapted from K.L. Daughtry and Associates Ltd. February, 1974, Drawing No. 14 (DWG -024-021).

For location on the property, see Figure 13.



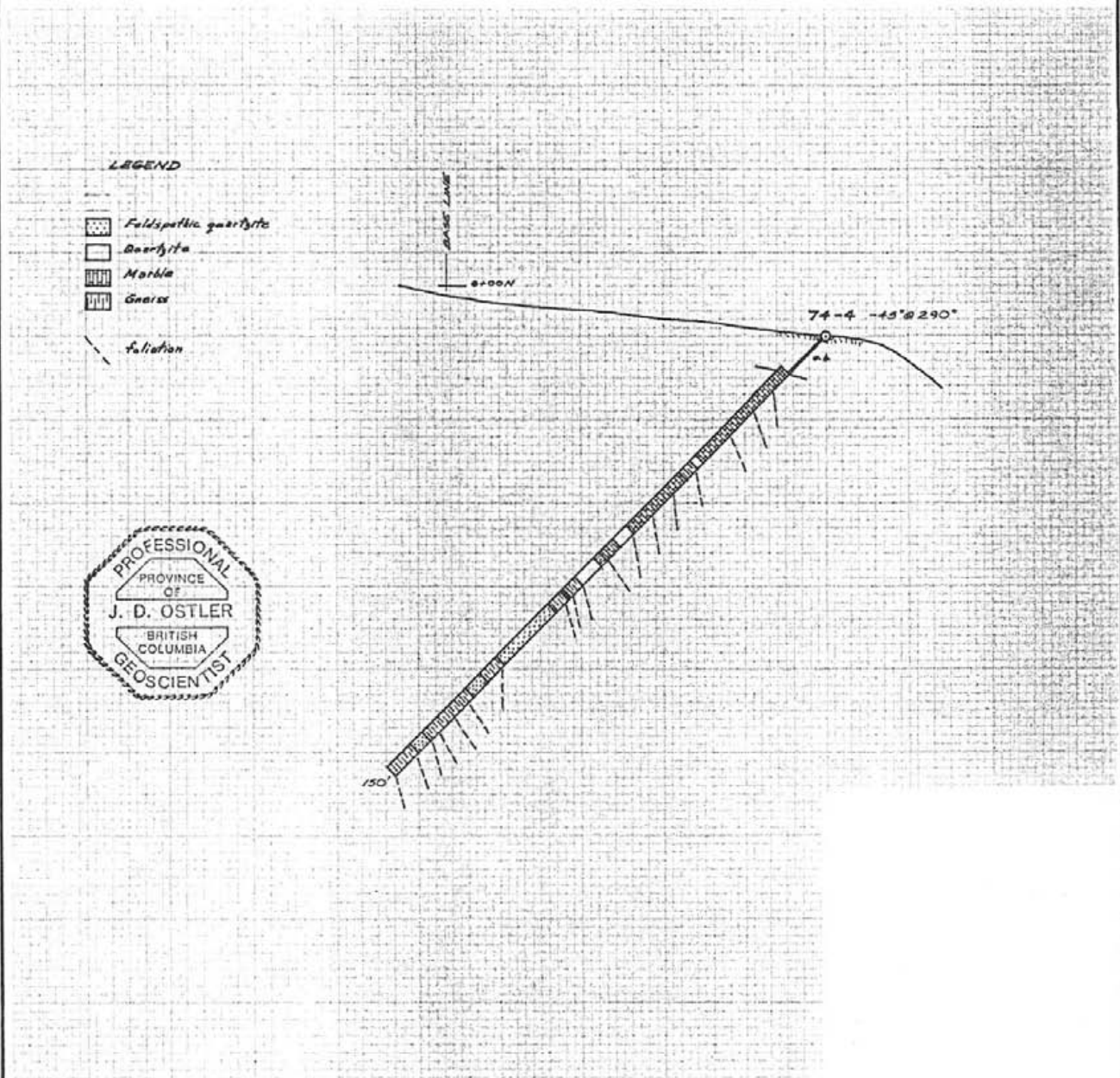
INEXCO MINING CORP.

**1973-4 COLBY MINES DRILLING:  
DRILL HOLE 74-3**

**COLBY MINES PROPERTY**  
50° 44' 30" N., 118° 43' 12" W.  
U.T.M.: 5,622,506 N., 378,647 E.  
N.T.S.: 82 L/10 + L/15, VERNON M.D., B.C.  
JOHN OSTLER; M.Sc. P.Geo. AUGUST, 2012

290°  
N 70° W.

110°  
S. 70° E.



NOTE: This figure is adapted from K.L. Daughtry and Associates Ltd. February, 1974, Drawing No. 15 (DWG -024-022).

For location on the property, see Figure 13.

SCALE

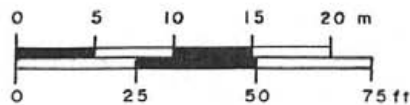


Figure 22

INEXCO MINING CORP.

1973-4 COLBY MINES DRILLING:  
DRILL HOLE 74-4

COLBY MINES PROPERTY

50° 44' 30" N., 118° 43' 12" W.

U.T.M.: 5,622,506 N., 378,647 E.

N.T.S.: 82 L/10 + 1/15,  
JOHN OSTLER; M.Sc., P.Geo.

VERNON M.D., B.C.  
AUGUST, 2012



290°  
N 70° W.

110°  
S. 70° E.

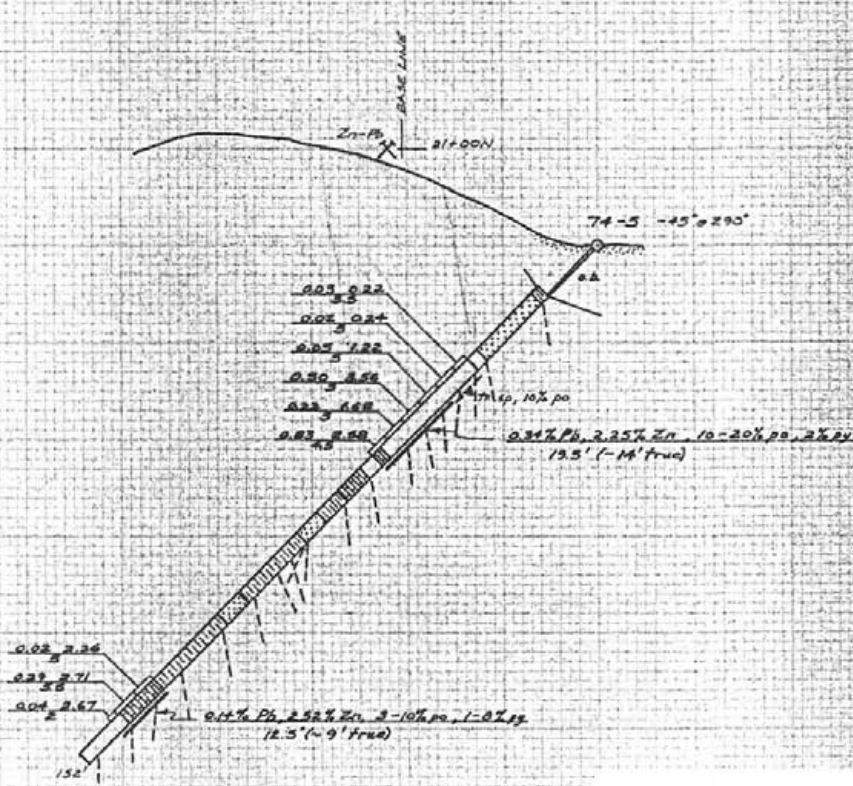


LEGEND

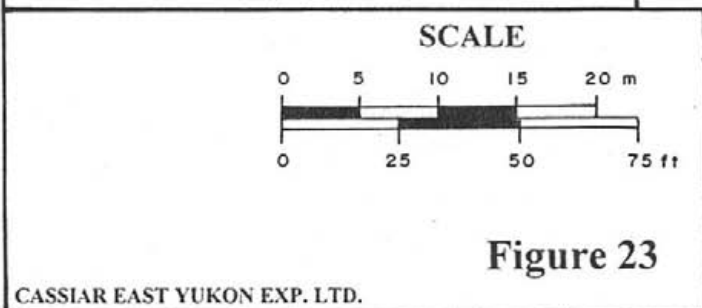
- Feldspathic quartzite
- Quartzite
- Marble
- Gneiss

foliation

5 Pb % Zn Assay values  
width (feet)



NOTE: This figure is adapted from K.L. Daughtry and Associates Ltd. February, 1974, Drawing No. 16 (DWG -024-023).  
For location on the property, see Figure 13.



INEXCO MINING CORP.

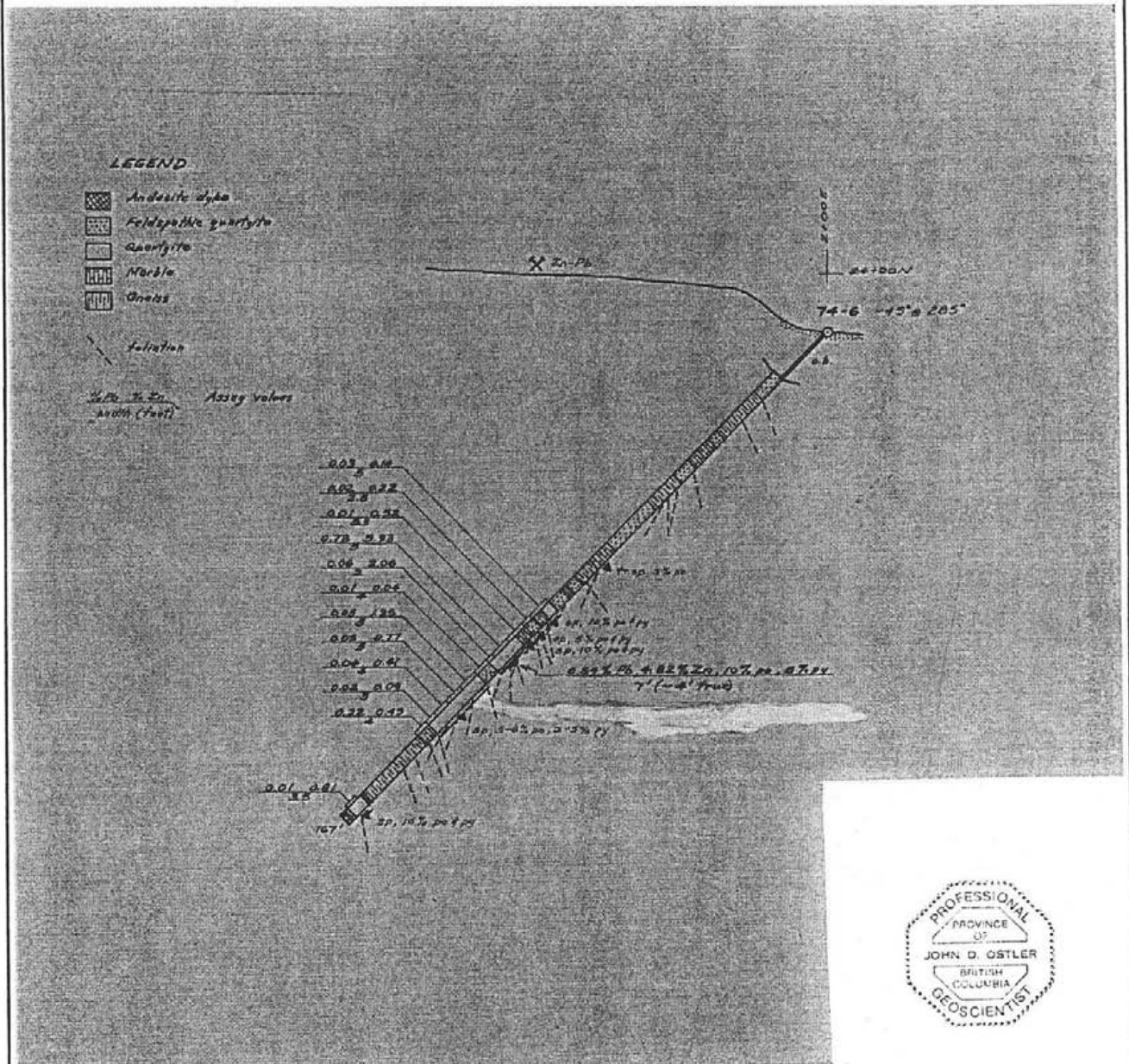
**1973-4 COLBY MINES DRILLING:  
DRILL HOLE 74-5**

**COLBY MINES PROPERTY**  
50° 44' 30" N., 118° 43' 12" W.  
U.T.M.: 5,622,506 N., 378,647 E.

N.T.S.: 82 L/10 + L/15,      VERNON M.D., B.C.  
JOHN OSTLER: M.Sc, P.Geo.      AUGUST, 2012

285°  
N 75° W.

105°  
S. 75° E.

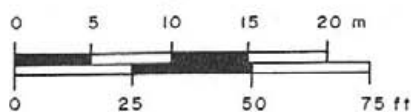


**NOTE:** This figure is adapted from K.L. Daughtry and Associates Ltd. February, 1974, Drawing No. 17 (DWG -024-024).

For location on the property, see Figure 13.



**SCALE**



**Figure 24**

INEXO MINING CORP.

**1973-4 COLBY MINES DRILLING: DRILL HOLE 74-6**

**COLBY MINES PROPERTY**

50° 44' 30" N., 118° 43' 12" W.

U.T.M.: 5,622,506 N., 378,647 E.

N.T.S.: 82 L/10 + L/15,

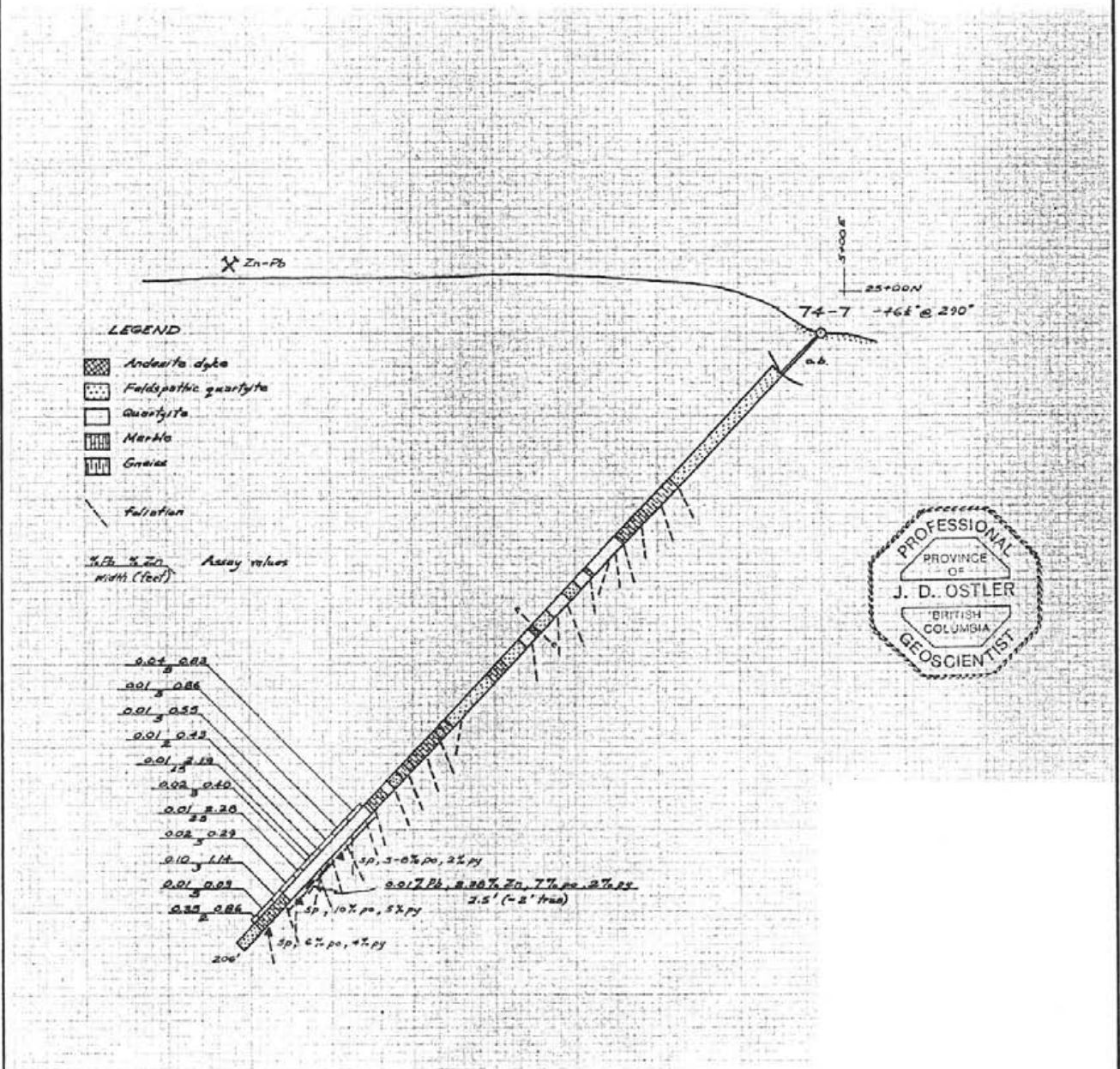
VERNON M.D., B.C.

JOHN OSTLER: M.Sc., P.Geo.

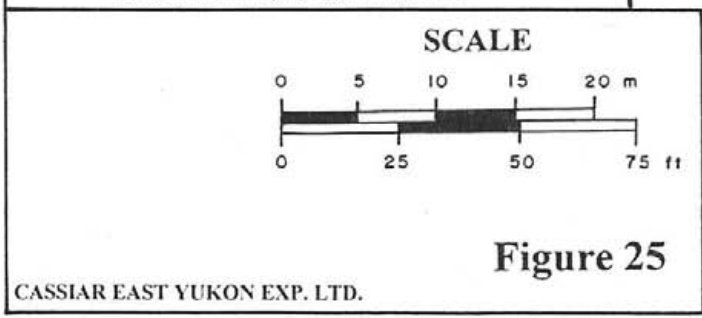
AUGUST, 2012

290°  
N 70° W.

110°  
S. 70° E.



NOTE: This figure is adapted from K.L. Daughtry and Associates Ltd. February, 1974, Drawing No. 18 (DWG -024-025).  
 For location on the property, see Figure 13.



INEXCO MINING CORP.

**1973-4 COLBY MINES DRILLING:  
 DRILL HOLE 74-7**

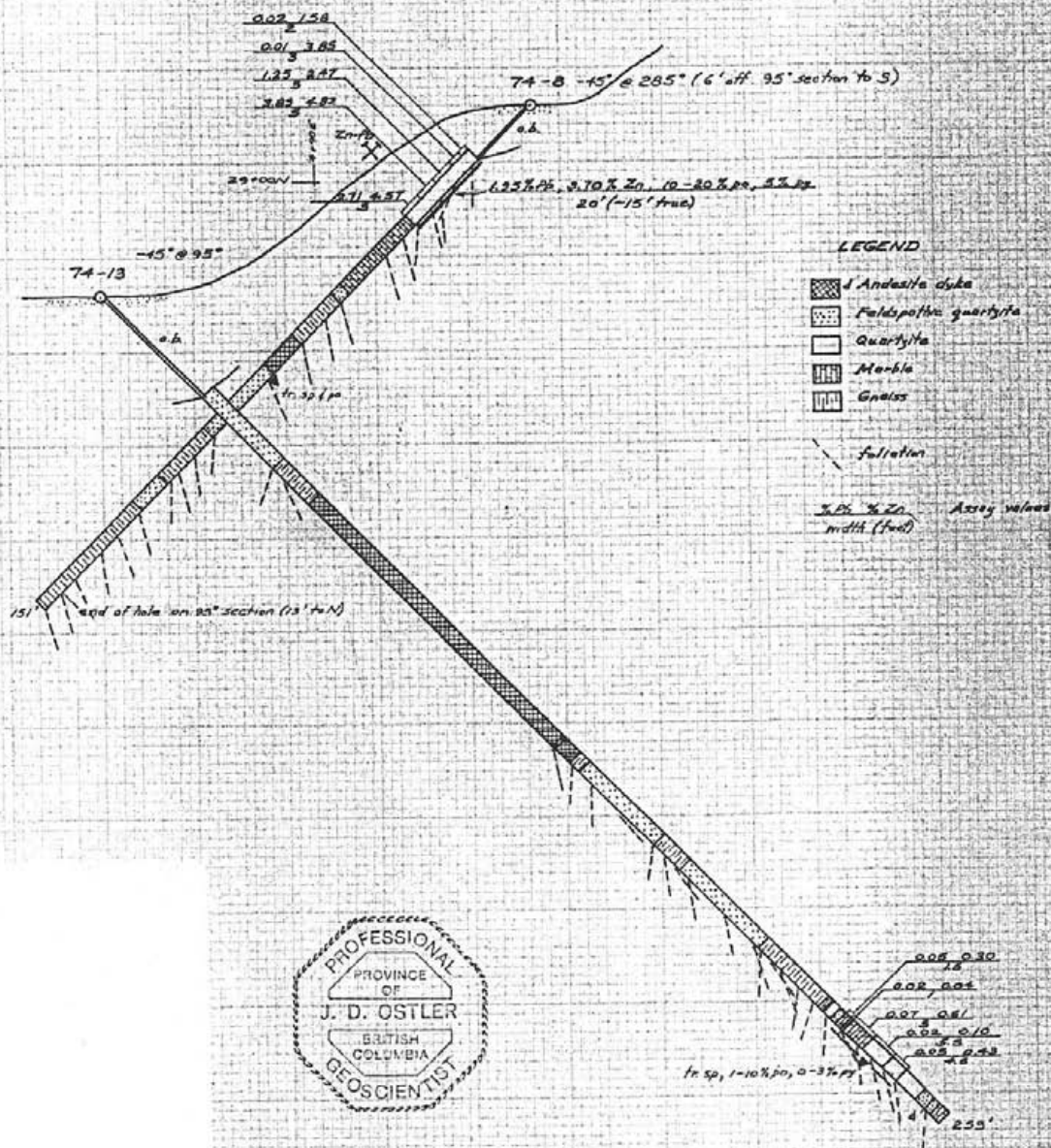
COLBY MINES PROPERTY  
 50° 44' 30" N., 118° 43' 12" W.  
 U.T.M.: 5,622,506 N., 378,647 E.

N.T.S.: 82 L/10 + L/15, VERNON M.D., B.C.  
 JOHN OSTLER; M.Sc., P.Geo. AUGUST, 2012



285°  
N 75° W.

105°  
S. 75° E.



NOTE: This figure is adapted from K.L. Daughtry and Associates Ltd. February, 1974, Drawing No. 19 (DWG -024-026).

For location on the property, see Figure 13.

SCALE

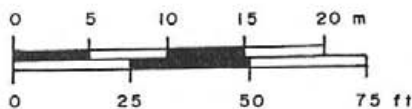


Figure 26

INEXCO MINING CORP.

1973-4 COLBY MINES DRILLING:  
DRILL HOLES 74-8 and 74-13

COLBY MINES PROPERTY

50° 44' 30" N., 118° 43' 12" W.

U.T.M.: 5,622,506 N., 378,647 E.

N.T.S.: 82 L/10 + L/15,

VERNON M.D., B.C.

JOHN OSTLER; M.Sc., P.Geo.

AUGUST, 2012

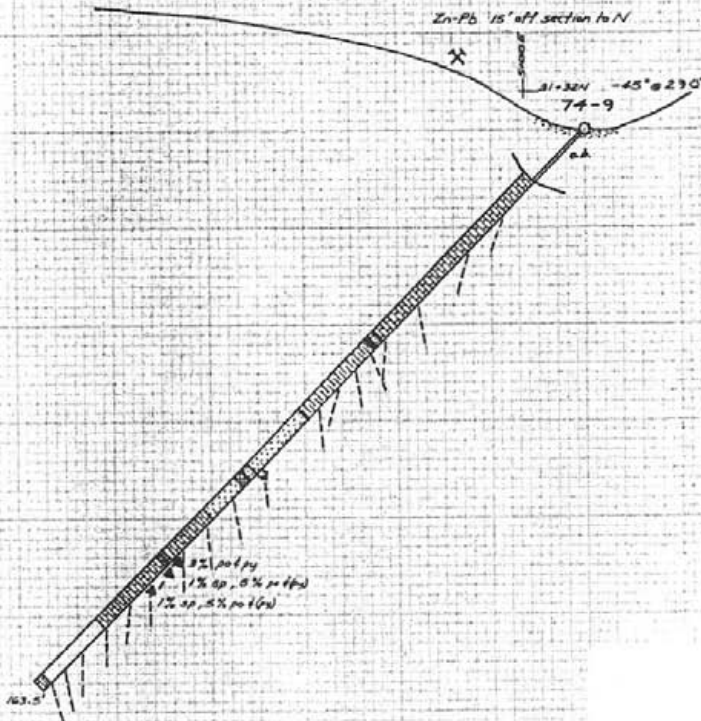
CASSIAR EAST YUKON EXP. LTD.

290°  
N 70° W.

110°  
S. 70° E.

LEGEND

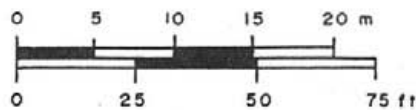
-  *d. Andesite dyke*
-  *Feldspathic quartzite*
-  *Quartzite*
-  *Marble*
-  *Gneiss*
-  *foliation*



NOTE: This figure is adapted from K.L. Daughtry and Associates Ltd. February, 1974, Drawing No. 20 (DWG -024-027).

For location on the property, see Figure 13.

SCALE



INEXO MINING CORP.

1973-4 COLBY MINES DRILLING:  
DRILL HOLE 74-9

COLBY MINES PROPERTY

50° 44' 30" N., 118° 43' 12" W.

U.T.M.: 5,622,506 N., 378,647 E.

N.T.S.: 82 L/10 + L/15,

VERNON M.D., B.C.

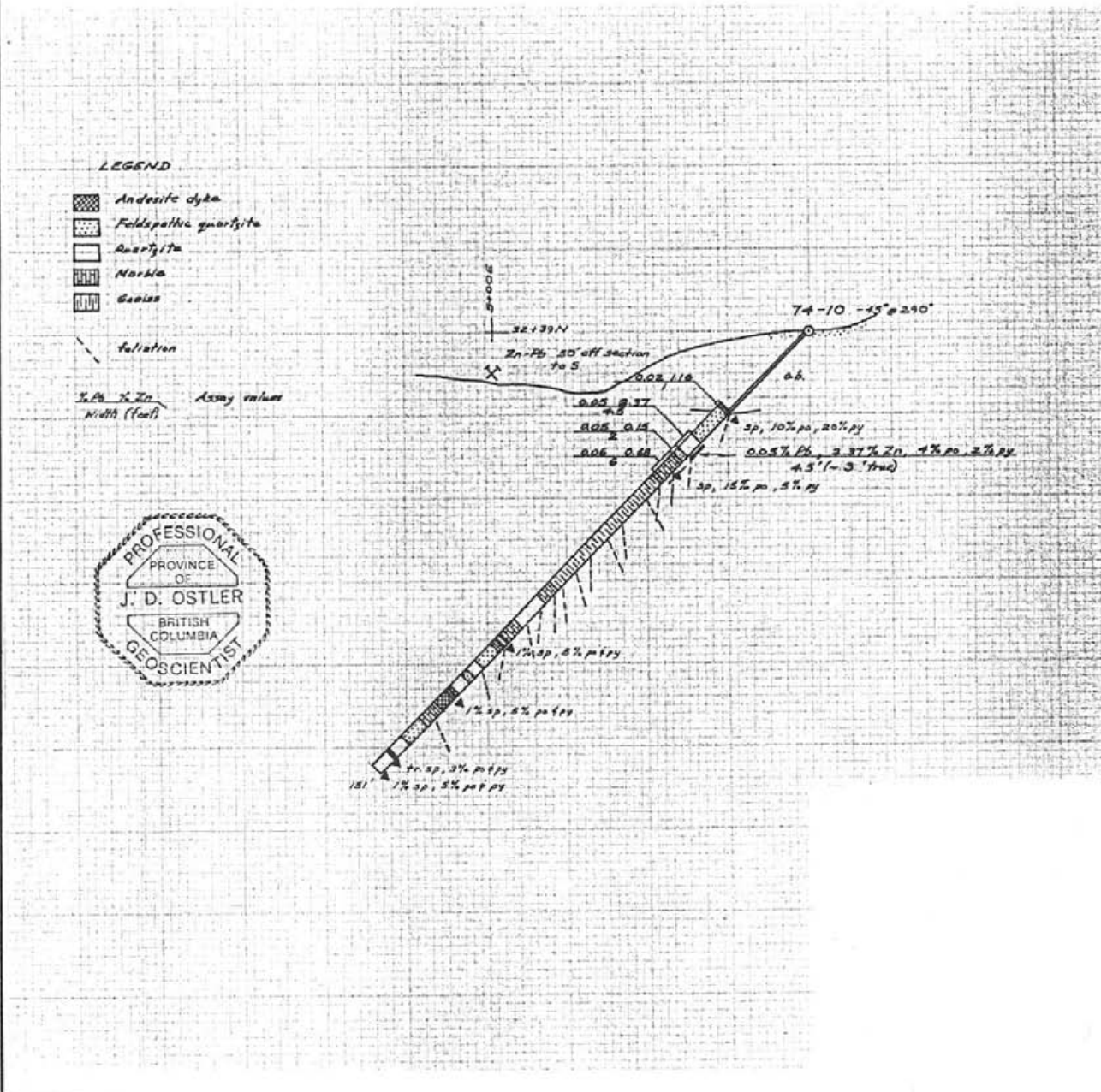
JOHN OSTLER; M.Sc, P.Geo.

AUGUST, 2012

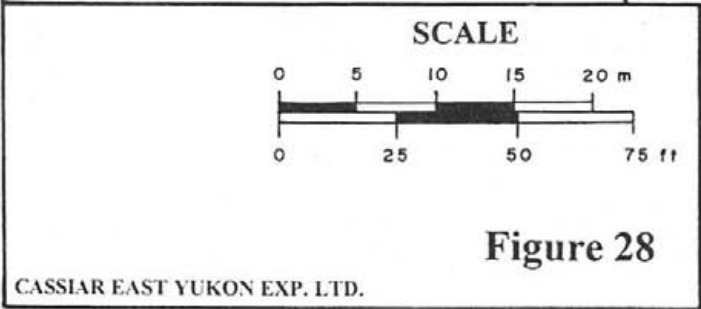
Figure 27

290°  
N 70° W.

110°  
S. 70° E.



NOTE: This figure is adapted from K.L. Daughtry and Associates Ltd. February, 1974, Drawing No. 21 (DWG -024-028).  
For location on the property, see Figure 13.



INEXCO MINING CORP.

**1973-4 COLBY MINES DRILLING:  
DRILL HOLE 74-10**

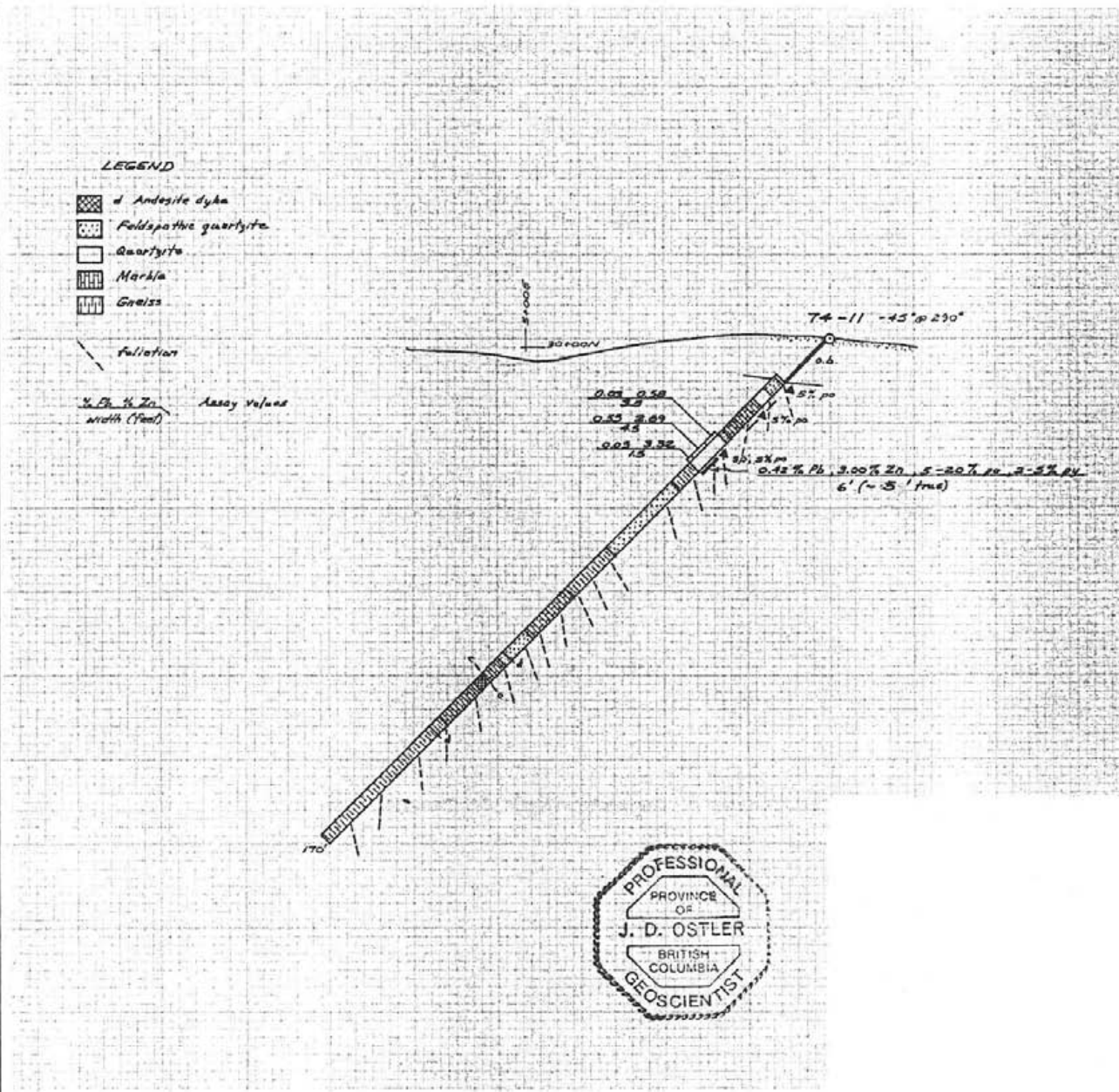
COLBY MINES PROPERTY  
50° 44' 30" N., 118° 43' 12" W.  
U.T.M.: 5,622,506 N., 378,647 E.

N.T.S.: 82 L/10 + L/15, VERNON M.D., B.C.  
JOHN OSTLER; M.Sc., P.Geo. AUGUST, 2012



290°  
N 70° W.

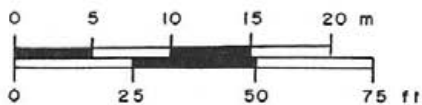
110°  
S. 70° E.



NOTE: This figure is adapted from K.L. Daughtry and Associates Ltd. February, 1974, Drawing No. 22 (DWG -024-029).

For location on the property, see Figure 13.

**SCALE**



INEXCO MINING CORP.

**1973-4 COLBY MINES DRILLING:  
DRILL HOLE 74-11**

**COLBY MINES PROPERTY**

50° 44' 30" N., 118° 43' 12" W.

U.T.M.: 5,622,506 N., 378,647 E.

N.T.S.: 82 L/10 + L/15,

VERNON M.D., B.C.

JOHN OSTLER: M.Sc., P.Geo.

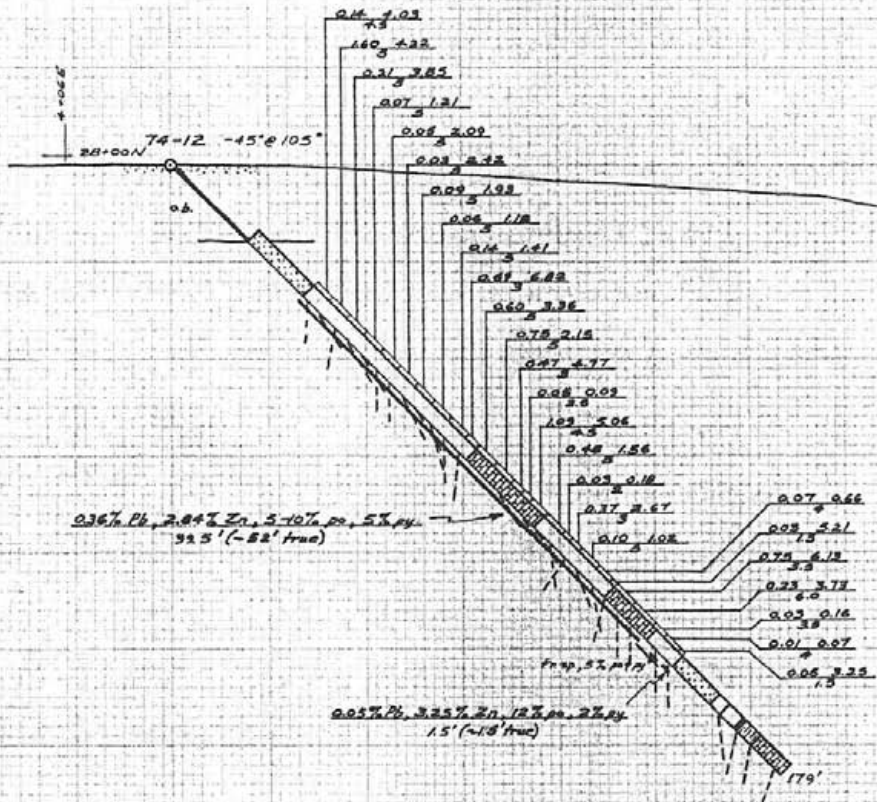
AUGUST, 2012

**Figure 29**



285°  
N 75° W.

105°  
S. 75° E.



LEGEND

- Feldspathic quartzite
- Quartzite
- Marble
- Gneiss

fault



NOTE: This figure is adapted from K.L. Daughtry and Associates Ltd. February, 1974, Drawing No. 23 (DWG-024-030).  
For location on the property, see Figure 13.

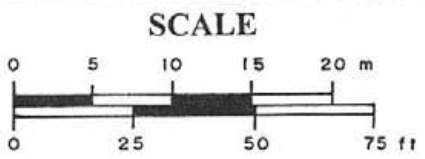


Figure 30

CASSIAR EAST YUKON EXP. LTD.

INEXCO MINING CORP.

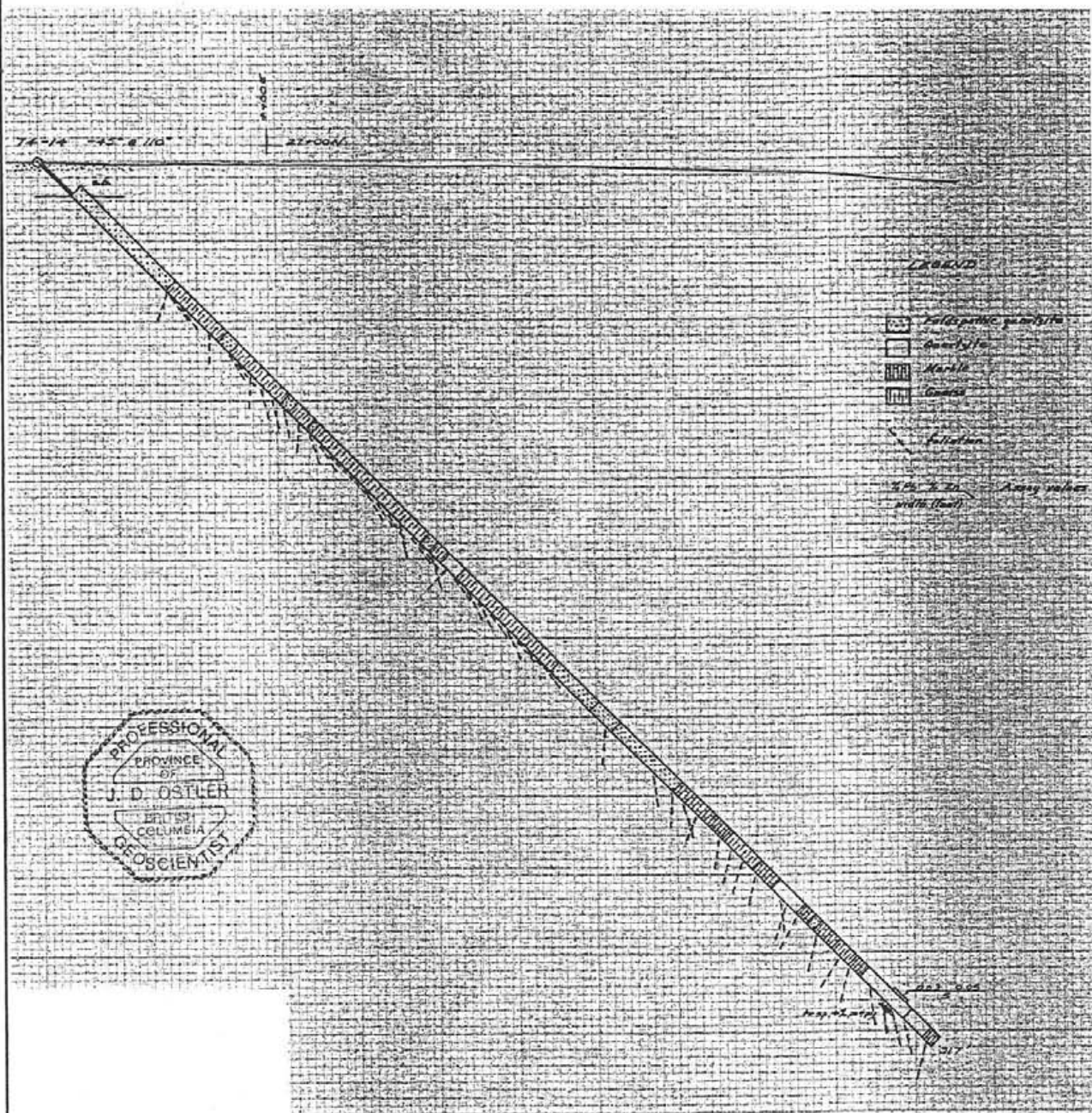
1973-4 COLBY MINES DRILLING:  
DRILL HOLE 74-12

COLBY MINES PROPERTY  
50° 44' 30" N., 118° 43' 12" W.  
U.T.M.: 5,622,506 N., 378,647 E.

N.T.S.: 82 L/10 + L/15, VERNON M.D., B.C.  
JOHN OSTLER; M.Sc., P.Geo. AUGUST, 2012

290°  
N 70° W.

110°  
S. 70° E.



NOTE: This figure is adapted from K.L. Daughtry and Associates Ltd. February, 1974, Drawing No. 24 (DWG -024-031).

For location on the property, see Figure 13.

SCALE

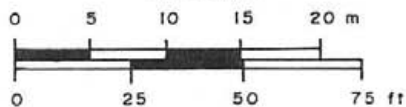


Figure 31

INEXCO MINING CORP.

1973-4 COLBY MINES DRILLING:  
DRILL HOLE 74-14

COLBY MINES PROPERTY

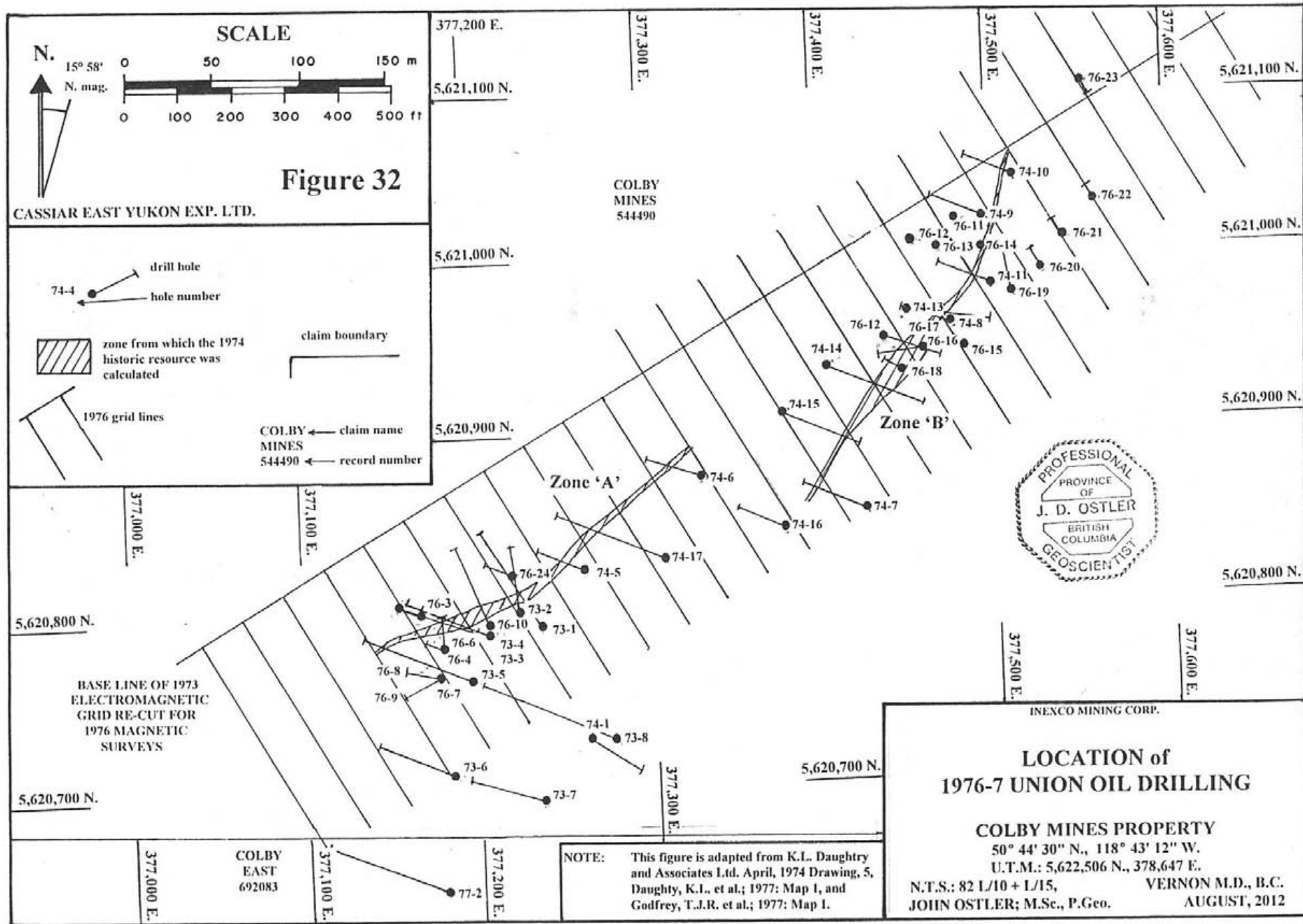
50° 44' 30" N., 118° 43' 12" W.

U.T.M.: 5,622,506 N., 378,647 E.

N.T.S.: 82 L/10 + L/15,  
JOHN OSTLER; M.Sc., P.Geo.

VERNON M.D., B.C.  
AUGUST, 2012

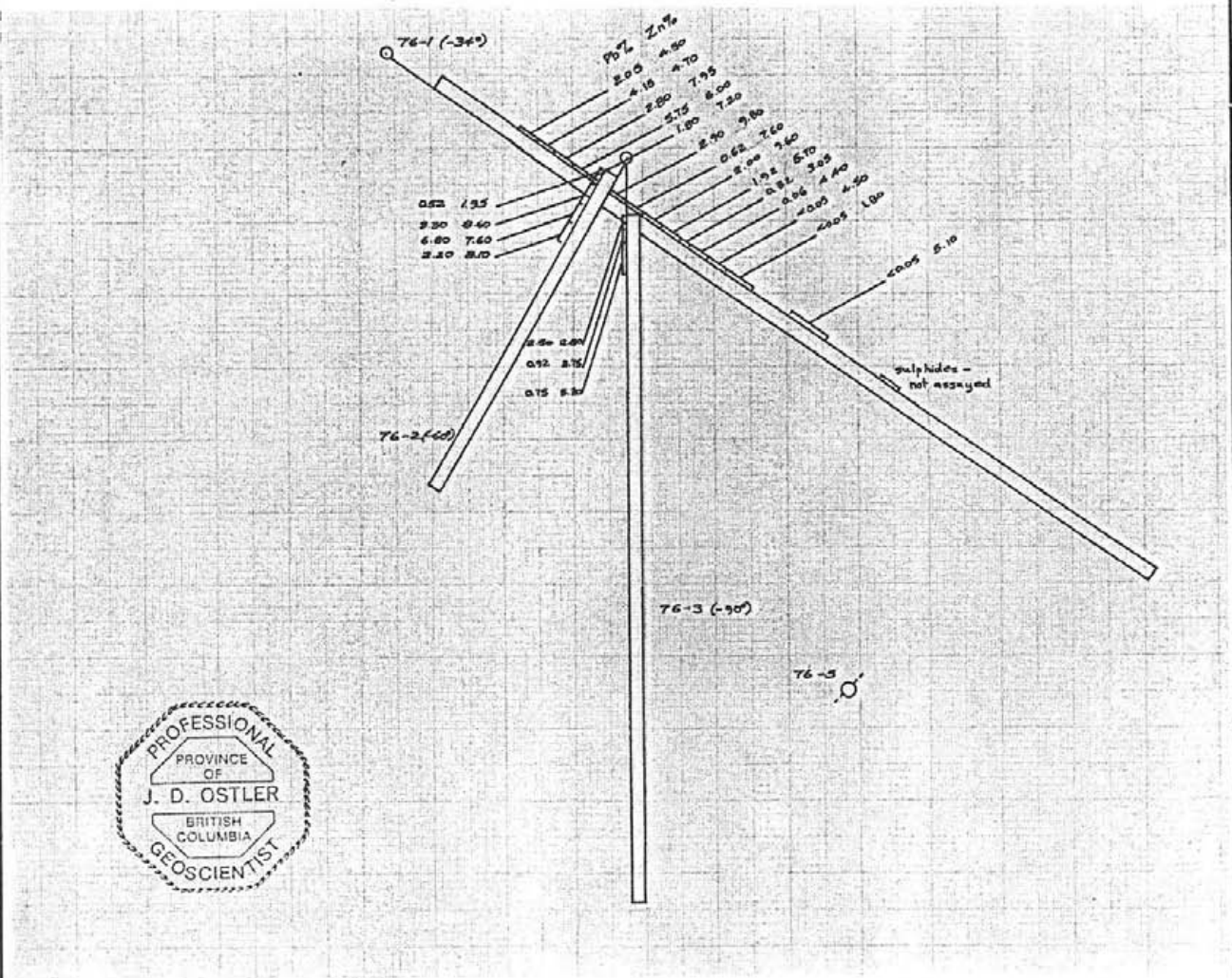
CASSIAR EAST YUKON EXP. LTD.





287°  
N. 73° W.

107°  
S. 73° E.



NOTE: This figure is adapted from K.L. Daughtry and Associates Ltd. Drawing No. 024-048.

For location on the property, see Figure 32.

SCALE

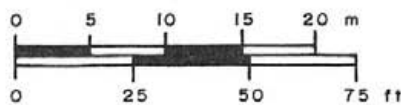


Figure 33

INEXO MINING CORP.

1976 UNION OIL DRILLING:  
DRILL HOLES 76-1, 76-2, and 76-3

COLBY MINES PROPERTY

50° 44' 30" N., 118° 43' 12" W.

U.T.M.: 5,622,506 N., 378,647 E.

N.T.S.: 82 L/10 + L/15,

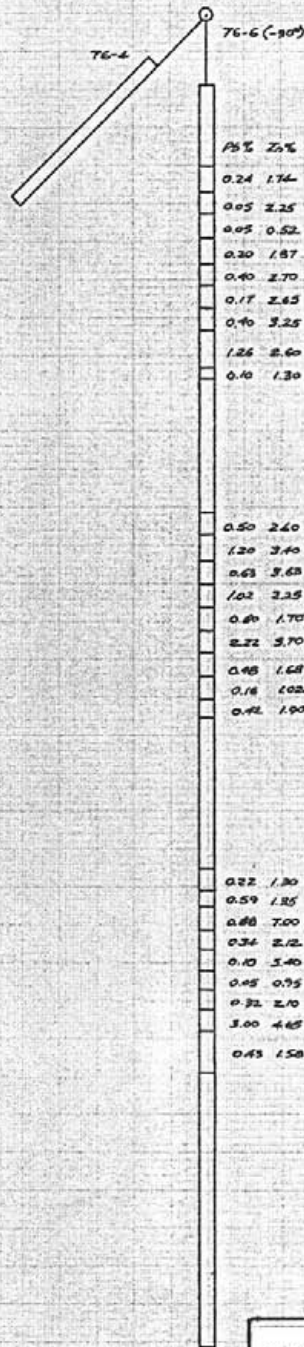
VERNON M.D., B.C.

JOHN OSTLER; M.Sc, P.Geo.

AUGUST, 2012

290°  
N 70° W.

110°  
S. 70° E.



NOTE: This figure is adapted from K.L. Daughtry and Associates Ltd. Drawing No. 024-049.

For location on the property, see Figure 32.

SCALE

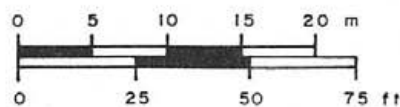


Figure 34

INEXCO MINING CORP.

1976 UNION OIL DRILLING:  
DRILL HOLES 76-4 and 76-6

COLBY MINES PROPERTY

50° 44' 30" N., 118° 43' 12" W.

U.T.M.: 5,622,506 N., 378,647 E.

N.T.S.: 82 L/10 + L/15,

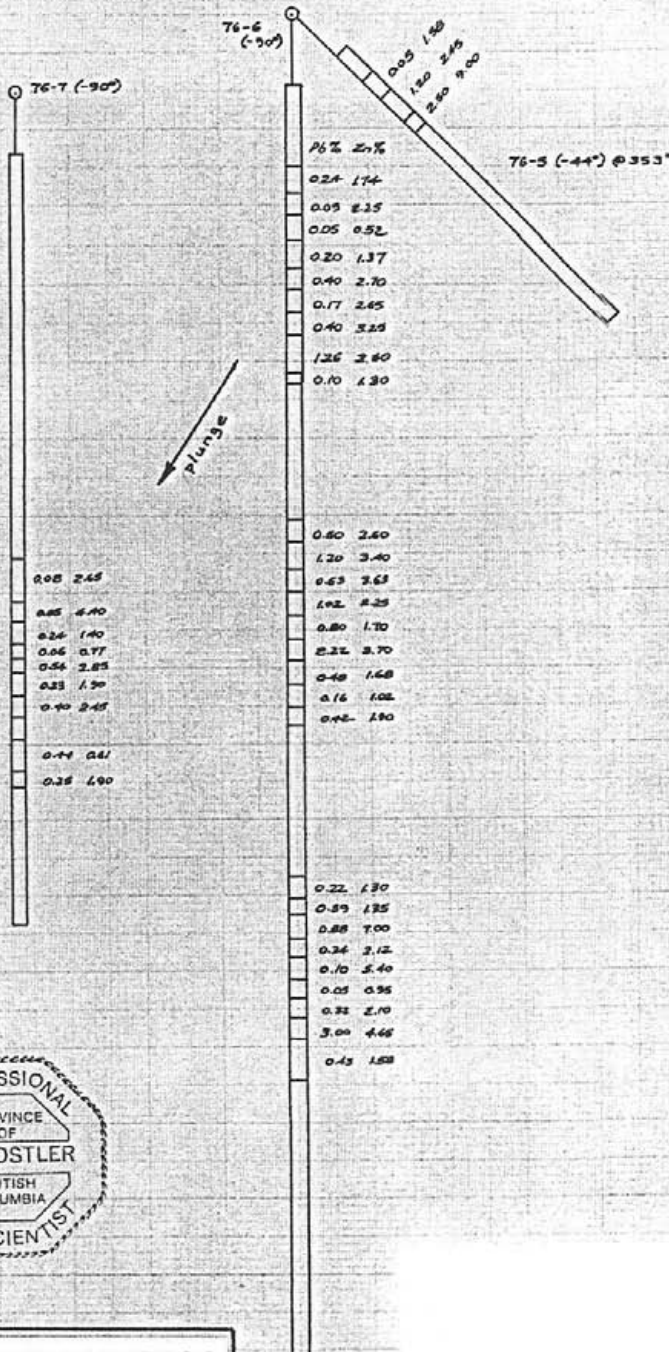
VERNON M.D., B.C.

JOHN OSTLER; M.Sc., P.Geo.

AUGUST, 2012

186°  
S. 06° W.

006°  
N. 06° E.



NOTE: This figure is adapted from K.L. Daughtry and Associates Ltd. Drawing No. 024-050.  
For location on the property, see Figure 32.

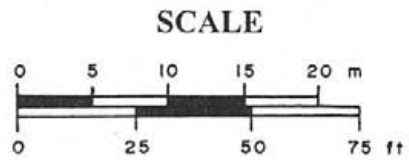


Figure 35

CASSIAR EAST YUKON EXP. LTD.

INEXCO MINING CORP.

1976 UNION OIL DRILLING:  
DRILL HOLES 76-5, 76-6, and 76-7

COLBY MINES PROPERTY  
50° 44' 30" N., 118° 43' 12" W.  
U.T.M.: 5,622,506 N., 378,647 E.

N.T.S.: 82 L/10 + L/15, VERNON M.D., B.C.  
JOHN OSTLER; M.Sc., P.Geo. AUGUST, 2012



150°  
S. 30° E.

330°  
N. 30° W.

76-10 (40)

29% Zn  
2.00% Cu  
0.10 Fe  
0.02 Mn  
0.10 Pb  
1.50 Ag  
1.50 Au  
0.05 Ni  
0.02 Co  
0.02 Ni  
0.02 Ni  
0.02 Ni

NOTE: This figure is adapted from K.L. Daughtry and Associates Ltd.  
Drawing No. 024-052.

For location on the property, see Figure 32.

SCALE

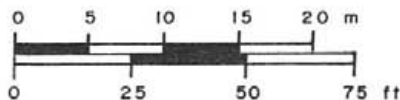


Figure 36

CASSIAR EAST YUKON EXP. LTD.

INEXCO MINING CORP.

1976 UNION OIL DRILLING:  
DRILL HOLE 76-10

COLBY MINES PROPERTY

50° 44' 30" N., 118° 43' 12" W.

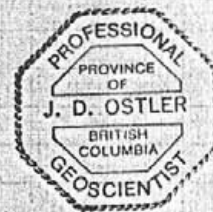
U.T.M.: 5,622,506 N., 378,647 E.

N.T.S.: 82 1/10 + 1/15,

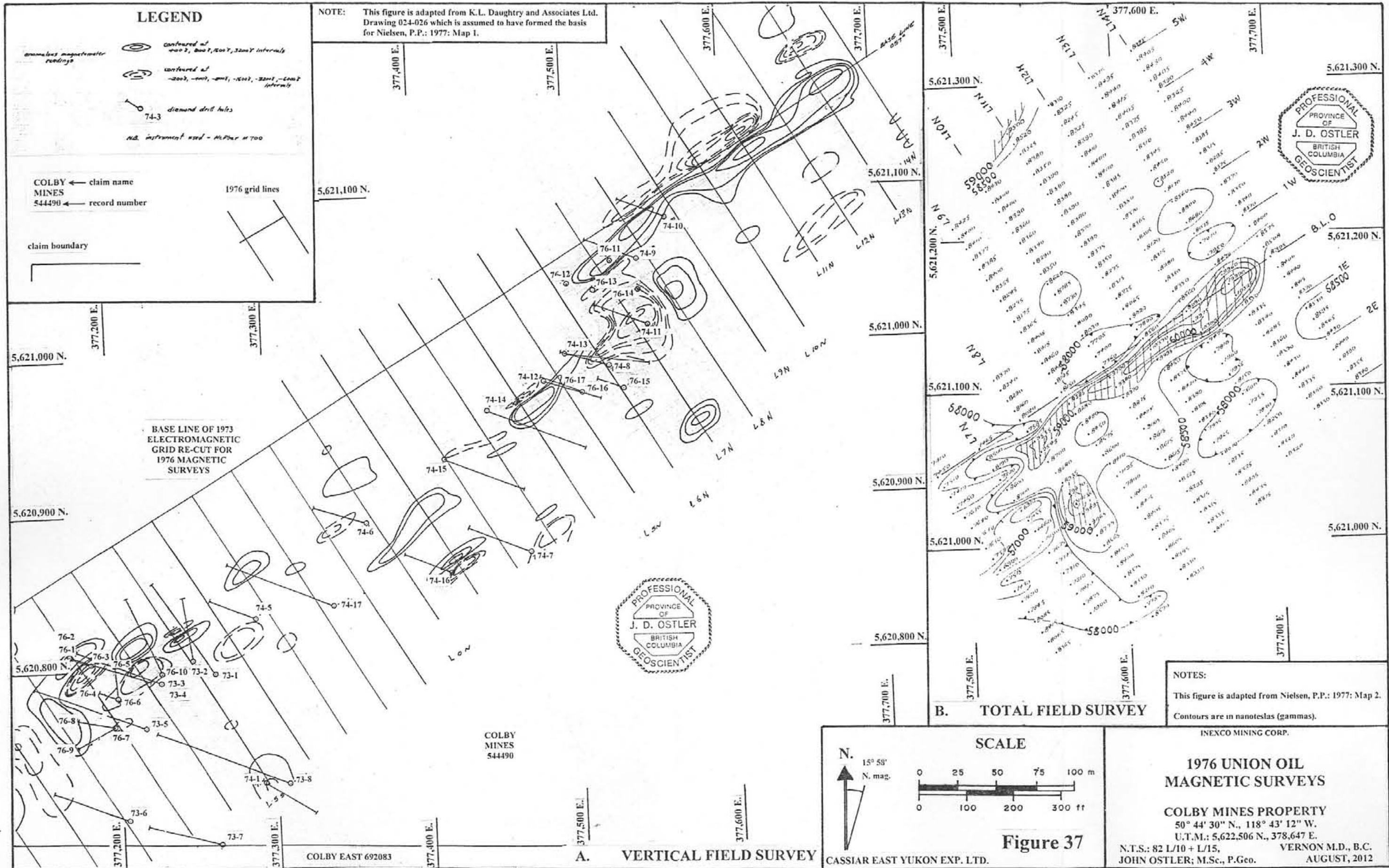
VERNON M.D., B.C.

JOHN OSTLER; M.Sc., P.Geo.

AUGUST, 2012







NOTE: This figure is adapted from K.L. Daughtry and Associates Ltd. Drawing 024-026 which is assumed to have formed the basis for Nielsen, P.P.: 1977: Map 1.

**LEGEND**

- Contoured at 2, 5, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 120, 140, 160, 180, 200, 220, 240, 260, 280, 300, 320, 340, 360, 380, 400, 420, 440, 460, 480, 500, 520, 540, 560, 580, 600, 620, 640, 660, 680, 700, 720, 740, 760, 780, 800, 820, 840, 860, 880, 900, 920, 940, 960, 980, 1000
- Contoured at 2000, 2500, 3000, 3500, 4000, 4500, 5000
- diamond drill holes
- N.B. instrument used - McPhar #700

COLBY ← claim name  
MINES 544490 ← record number

claim boundary

1976 grid lines

BASE LINE OF 1973 ELECTROMAGNETIC GRID RE-CUT FOR 1976 MAGNETIC SURVEYS

COLBY MINES 544490

COLBY EAST 692083



NOTES:  
This figure is adapted from Nielsen, P.P.: 1977: Map 2.  
Contours are in nanoteslas (gammas).

**SCALE**

0 25 50 75 100 m  
0 100 200 300 ft

**Figure 37**

CASSIAR EAST YUKON EXP. LTD.

INEXCO MINING CORP.

**1976 UNION OIL MAGNETIC SURVEYS**

COLBY MINES PROPERTY  
50° 44' 30" N., 118° 43' 12" W.  
U.T.M.: 5,622,506 N., 378,647 E.

N.T.S.: 82 L/10 + L/15, VERNON M.D., B.C.  
JOHN OSTLER; M.Sc., P.Geo. AUGUST, 2012

- 1976 The production file associated with MINFILE occurrence 082LNE007 records that 12 tonnes of mineralization was shipped from the Central zone. That shipment contained 187 gm silver, 1,157 kg lead, and 830 kg zinc indicating a recoverable grade of 15.58 gm/mt (0.45 oz/ton) silver, 9.64% lead, and 6.92% zinc.

During the spring of 1976, Union Oil Company of Canada Limited of Calgary, Alberta optioned the Kingfisher property (the Black Jack property re-named) from Colby Mines Ltd. Apex Drilling of Salmon Arm, B.C. was commissioned to conduct a total of 1135.4 m (3,725 ft) of AQ core drilling. Holes 76-01 to 76-24 were drilled into the northeastern part of the Central zone (Figure 32). Drilling was conducted from October 4 to December 21, 1976. The 1976 drilling results generally confirmed those of the 1973-4 drill program.

The drill logs for the following drill holes were filed for assessment credit (Daughtry, K.L. et al., 1977): 76-1, 76-2, 76-3, 76-4, 76-14, 76-19, part of 76-21, 76-22, 76-23, and 76-24. The author found drill sections for holes 76-1 to 76-7 and 76-10 in the property file of Discovery Consultants Ltd. (Figures 33 to 36). No assay certificates from that drilling are known to the author.

P.P. Nielsen (1977) conducted a ground-magnetic survey in the area of the 1976 drilling from October 20 to 30, 1976 in order to assist in spotting drill holes. A total of 5,670 m (18,602.4 ft) of line in the 1973 electromagnetic grid was re-cut and surveyed for vertical magnetic field (Figure 37). Readings were taken at 7.6-m (25-ft) intervals along lines spaced 30.5 m (100 ft) apart. Intermediate stations were spaced at 3.8-m (12.5-ft) and 1.9-m (6.25-ft) intervals in areas with steep magnetic gradients. Data was corrected for diurnal field variations. Nielsen returned to the property from December 4 to 6, 1976 to survey 1,418 m (4,652.2 ft) of the grid for total magnetic field. He concluded as follows:

The magnetometer survey has resulted in a clearer, but by no means complete, understanding of the Kingfisher property. Magnetics have proven to be a fast, relatively inexpensive geophysical tool for locating drill-holes for the proving of Zn - Pb tonnage and grade.

A comparison of the present vertical force results with the contour map of the magnetometer survey carried out in 1973 over a larger area using a different grid-line orientation and wider sampling interval clearly shows that it is necessary to carry out a very detailed survey using accurately located grid-lines and stations.

The total field test survey did not add significantly to the interpretation of the magnetics but did partially delineate a new magnetic feature to the west of the present area under investigation.

All dipolar anomalies drilled thus far have been due to pyrrhotite which has been accompanied by significant thicknesses and grades of sphalerite-galena mineralization.

It is therefore recommended that all dipoles should be drilled and that the entire property should be magnetically surveyed using a coarse-cut grid initially with detailed coverage to follow in areas of interesting magnetic response.

Nielsen, P.P.; 1977: p. 8.

- 1977 Correspondence between K.L. Daughtry and representatives of Union Oil, and an account in *Geology in British Columbia 1977* (Höy, 1977) indicate that a total of 7 holes were drilled which resulted in the production of 818 m (2,683.7 ft) of BQ core was produced. Drill hole 77-2 was located south of historic resource zone 'A' (Figure 32). Minor lead-zinc mineralization was intersected in several parts

of the hole (Godfrey, T.J.R. et al., 1977). Only a drill log and a location map were filed by Godfrey for assessment credit. Neither the results of the other holes from the 1977 drilling, nor any results of analyses are not known to the author. Trygve Höy (1977) reported that during 1976: a geological map at a scale of 1:5,000 was made of the whole property, the Central zone was mapped at 1:500, and that a soil and silt sampling program was conducted over the whole property. Correspondence in the Discovery Consultants property file indicates that at least some of that work was conducted in 1977. No results from any of that work are known to the author.

By May 2, 1978, Union Oil had terminated its option on the Kingfisher property. At that time, the property had sufficient assessment work filed to its credit to keep it in good standing until 1981.

#### **1978 to 1986**

The history of exploration in the current Colby Mines property area is unknown to the author.

#### **1986 to 2005**

Fragmentary evidence from several claim maps indicates that K.L. Daughtry and Associates Ltd. and later, Discovery Consultants Ltd. maintained two 2-post claims over resource zones 'A' and 'B' in the Central zone. Those claims were allowed to lapse and subsequently re-staked on several occasions. The area northwest of the Central zone was held by various parties unknown to the author. They recorded no work on those claims.

**1987** Barry Buchanan staked the OM 1 to 6 (2283 to 2288) 2-post claims in the Mile 8 showings-area on June 8, 1987. The property covered 250.8 ha (619.6 A) located in the current TXX-Kingfisher property-area (Figures 2 and 3). Control of the claims passed to McCrory Holdings (Yukon) Ltd. of Vancouver, B.C.

**1988** G.E. Nicholson (1988) examined the OM claims on March 19, 1988 for its limestone potential. Nicholson took 11 samples of white limestone which contained from 42.72 to 52.79% calcium oxide with acceptably low concentrations of silicon, iron, magnesium, aluminum, and sulphur.

**1992** The Kingfisher Marble property was staked by Alfred Green. The property comprised 37 2-post and 2 modified grid claims that covered 1,309 ha (3,223.2 A) and covered the southeastern part of the current Colby Mines property-area. It extended from the Mile 8 zone to north of the Mile 12 zone. That property was explored for white calcite-rich marble. The operators seem to have had no interest in the base and precious-metal potential of the area.

#### **1992 and 1993**

Ralph Englund (1995) recorded that Franz Capital Corporation gained control of the property and conducted a program including geological mapping, and 804 m (2,637.8 ft) of diamond drilling over an 800-m (2,624.7-ft) strike length. An historic resource of 10.2 million tonnes (11.22 million tons) of calcite marble was calculated for a 30 to 50-m (98.4 to 164-ft) wide zone that had a strike length of 1,300 m (4,265.1 ft). No details of that work nor parameters of that historic resource are known to the author. The author assumes that the marble resource extended from near the Mile 8 zone to south of the Central zone extending across the current TXX-Kingfisher property (Figure 2).

**1994** Control of the Kingfisher Marble property passed to Kingfisher Marble Ltd. which commissioned Ralph Englund (1995) to report on exploration and production from the property. Englund summarized that development as follows:

... Field work to date has included the excavation of 24,000 tonnes (26,400 tons) of white marble of which some 4,000 tonnes (4,400 tons) has been processed as a minus 2-inch landscape rock

...

... the marble meets or exceeds A.S.T.M. requirements as a dimension stone. Based on exploration work to date, a reserve (historic resource) estimate has been made for 2.5 million tonnes (2.75 million tons) of white and decorative marble over a strike length of 900 metres (2,952.8 ft) (probably located on the current TXX-Kingfisher property located south of the current Colby Mines property) ...

Englund, R.J.; 1995: Summary.

#### 1995 to 1999

Records of mineral titles online ( [mtonline.gov.bc.ca](http://mtonline.gov.bc.ca) ) show that ownership of the Kingfisher Marble property changed hands several times ending up in those of the Sheriff by June 24, 1999.

No work was recorded for the credit of the claims held by K.L. Daughtry and Associates over the Central zone.

#### 2000 to 2006

Andrew Hockhold of Armstrong, B.C. gained control of the Kingfisher Marble property on January 18, 2000. He filed physical work to keep the property in good standing.

**2000** T.H. Carpenter of Discovery Consultants Ltd. staked the Kingfish 1 and 2 (376052 and 376053) 2-post claims on April 26 and May 1, 2000 respectively to cover historic resource zones 'A' and 'B' in the Central zone. The 2000-era Kingfish property covered 50 ha (123.5 A). The property was staked on behalf of the Peregrine Syndicate, a private group.

**2001** Field work by Discovery on the Kingfish property comprised sampling in the area of the 1976 production from the Central zone. T.C. Carpenter described the program as follows:

It is evident at the Central zone that a limited mining program was carried out at the site at some time in the past as evidenced by waste piles and the presence of crushed material stored on site ... The 2001 program comprised the sampling of crushed mineralized material contained within 12 45-gallon (205-litre) drums at the main showing area as well as the sampling of mineralized material from the waste piles ...

Carpenter T.H.; 2001: p. 5.

Carpenter reported that the 12 drums contained about 3.5 tonnes (3.85 tons) of crushed mineralization. Carpenter mentioned that all six samples from the drums contained >10,000 ppm lead. From that, the author deduced that samples KF 01 to 06 were from the drums and that samples KF 07 to 10 were from the dumps. The six samples taken from the crushed mineralization in the drums (KF 01 to 06) contained an average of: 99 ppm copper, 5.44% lead, 9.16 % zinc, and 3.6 gm/mt (0.105 oz/ton) silver. The four samples taken from the dumps (KF 07 to 10) contained an average of: 144 ppm copper, 0.277% lead, 7.61 % zinc, and <1.1 gm/mt (<0.032 oz/ton) silver. (The results of the author's sample CM6-CON of seven of the drums is contained in Table 7.)

Carpenter's 2001 work put the 2000-era Kingfish property in good standing until October 26, 2005.

**2005 and 2006**

Discovery Consultants Ltd. sold the 2000-era Kingfish property to Bearclaw Capital Corp. of Vernon, B.C. The Kingfish 1 and 2 claims were included in the map-staked (no name) (512880) claim which expired on October 27, 2006.

**2006 to 2009**

Andrew Hockhold let most of the 2000-era Kingfisher Marble property lapse. He retained the current TXX-Kingfisher property (located around the Mile 8 zone), the KF 12 to 14 property (located south of the current Colby Mines property), and the KF 4 (321313) claim which is surrounded by the eastern part of the current Colby Mines property (Figure 2).

**2006** On October 26, 2006, the day that Bearclaw's (no name) (512880) claim expired, Craig Lynes staked the COLBY MINES (544490) and F-X ZINC (544492) claims to cover that ground.

**2009 to 2011**

As claims owned by Andrew Hockhold and others expired, Craig Lynes staked more claims to increase the Colby Mines property to near its current size. Lynes filed physical work on the property to keep it in good standing.

**2010** On November 3, 2010, Kelly Funk of Nanaimo, B.C. map-staked the (no name) (837392) claim covering 2 cells or 40.91 ha (101.05 A) over the Cominco zone (Figure 2).

**2011** On May 9, 2011, Inexco Mining Corp. obtained an option to purchase 100% interest in the Colby Mines property subject to a 3% net smelter return from Rich River Exploration Ltd., a service company controlled by Craig Lynes.

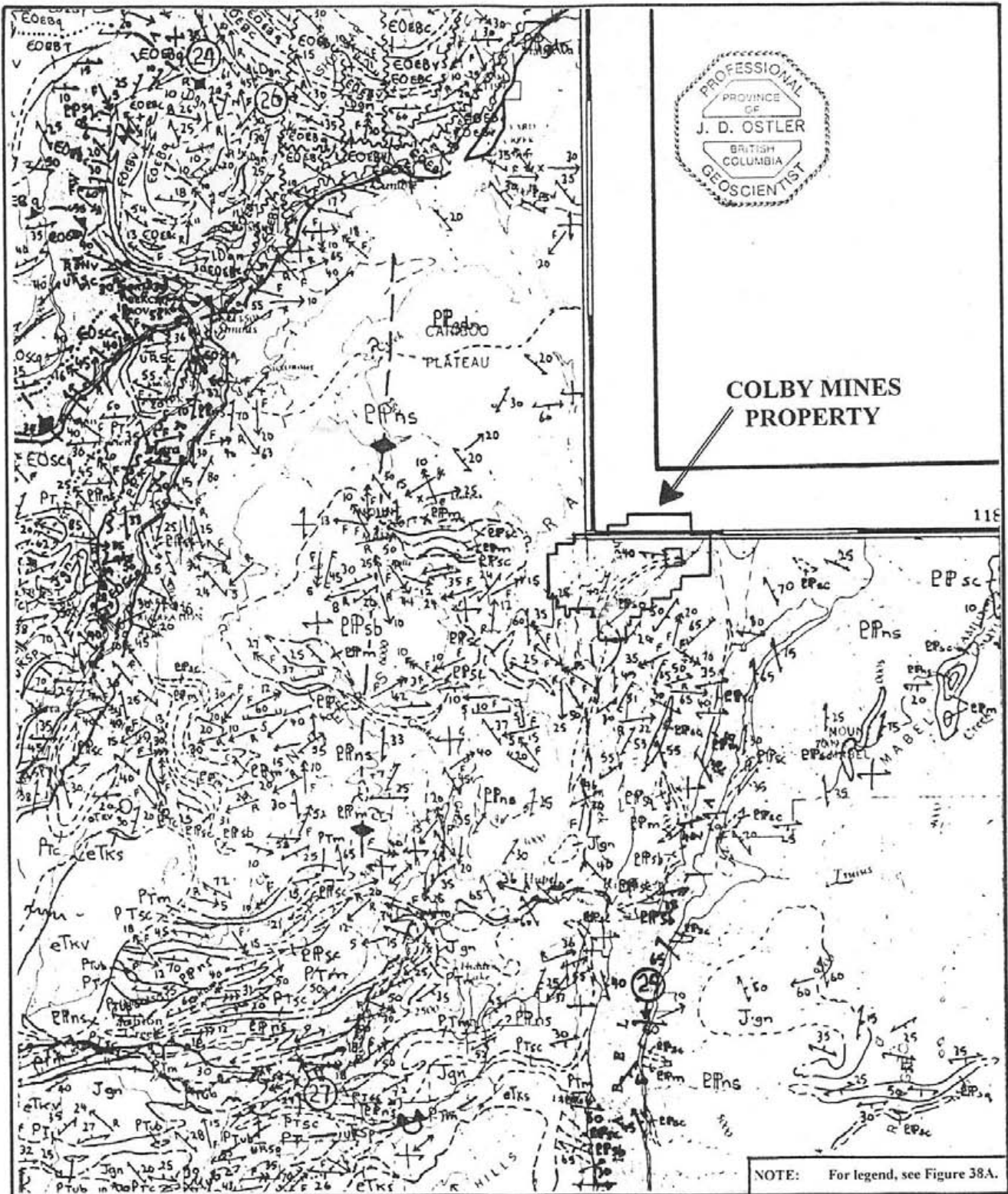
**2012** On February 7, 2012, Craig Lynes obtained the (no name) (837392) claim from Kelly Funk. The claim was immediately added to the Colby Mines property and an amending agreement was signed by Rich River and Inexco on February 8, 2012.

On April 4, 2012, Craig Lynes map-staked the COLBY JACK (978013) claim along the southeastern margin of the Colby Mines property. The claim was automatically included in the property. Lynes filed physical work on that claim to extend its expiry date to May 31, 2018. That physical work is not reported upon herein and no credit for that work is requested.

On April 25, 2012, Colin Dunn and RIT Minerals Corp. map-staked the CDI to 4 (982242, 982262, 982282, and 982283) claims to tie onto the western side of the Colby Mines property (Figure 3). No work known to the author has been conducted on those claims.

On January 19, 2012, the author was commissioned to find as much of the lost exploration records from the property as possible and to produce a comprehensive history of work in the property area so that it could be entered into the public record. Geotech Ltd. of Mississauga, Ontario was commissioned to conduct airborne magnetic and electromagnetic surveys over the property. The surveys were flown from March 6 and 7, 2012 (Figures 3, 43, and 44) (Appendix 'A'). Craig Lynes conducted a prospecting program from May 29 to June 13, 2012 in order to locate historic workings on the ground and to investigate areas of mineral potential indicated by recently uncovered exploration records and by the 2012 airborne geophysical surveys (Figure 3). The author conducted a sampling program of mineralized rock exposures on June 11, 15, 21, and 22, 2012 (Figures 3, and 45 to 50). This 2012 exploration program constitutes the current work reported upon herein.



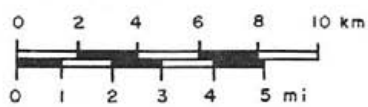


**COLBY MINES  
PROPERTY**

NOTE: For legend, see Figure 38A.



**SCALE**



**Figure 38**

INEXCO MINING CORP.

**REGIONAL GEOLOGY**  
from G.S.C. OPEN FILE 637

**COLBY MINES PROPERTY**

50° 44' 30" N., 118° 43' 12" W.

U.T.M.: 5,622,506 N., 378,647 E.

N.T.S.: 82 L/10 + L/15,

VERNON M.D., B.C.

JOHN OSTLER; M.Sc., P.Geo.

AUGUST, 2012

CASSIAR EAST YUKON EXP. LTD.

### Figure 38A Legend to Figure 38

PHANEROZOIC

CENOZOIC

TERTIARY OR QUATERNARY  
PLIOCENE OR PLEISTOCENE

**TQ** CONGLOMERATE (NEAR YEANONI); BASALTIC APEXITE, BRECCIA, RUBBLE, CONGLOMERATE (ALONG NORTH THOMPSON AND CLEARWATER RIVERS).

TERTIARY

MIOCENE AND/OR PLIOCENE (MAY INCLUDE PLEISTOCENE)

**mTv** PLATEAU LAVAS; OLIVINE BASALT, ANDESITE; RELATED ASH AND BRECCIA, BASALTIC APEXITE; MINOR BASAL SEDIMENTS; (MAY INCLUDE YOUNGER VALLEY BASALTS).

Eocene and (?) Oligocene

**eTkv** KAMLOOPS GROUP (PRINCETON GROUP IN SOUTHWEST CORNER; SKULL HILL FORMATION ALONG NORTH THOMPSON RIVER; ANDESITE, BASALT, DACITE, TRACHYTE FLOWS AND DYKES, BRECCIA, TUFF, AGGLOMERATE.

**eTks** KAMLOOPS GROUP (CHU CHUA FORMATION ALONG NORTH THOMPSON RIVER; TRANQUILLE BEDS NEAR WESTERMOST SOUTH THOMPSON RIVER; INCLUDES UNIT Tcg ON MAP A).

**eTks** SANDSTONE, CONGLOMERATE, SHALE; MINOR COAL, TUFF, ARGOSE, UNCONFORMITY

PALEOCENE OR EOCENE

**pTy** SYENITE, GRANITE; MINOR MONZONITE, SHONKINITE.

MESOZOIC

CRETACEOUS

**Kg** GRANITE, GRANODIORITE; LESSER QUARTZ MONZONITE AND QUARTZ DIORITE.

BALDY BATHOLITH AND SATELLITIC STOCKS.

**Kqm** QUARTZ MONZONITE, GRANODIORITE; MINOR PEGMATITE.

EARLY CRETACEOUS

SALMON ARM, DEEP CREEK, HISSQUILM and SCOTCH CREEK PLUTONS.

**eKgd** GRANODIORITE, GRANITE, QUARTZ MONZONITE; MINOR DIORITE, GABBRO, QUARTZ, DIORITE.

RAFT BATHOLITH

**eKqm** QUARTZ MONZONITE, GRANODIORITE; MINOR PEGMATITE AND DIORITE.

JURASSIC OR CRETACEOUS

**J** SYENITE AND FELSITE DYKES.

JURASSIC

**Jgn** MASSIVE AND FOLIATED, SYNTECTONIC PEGMATITE, APLITE, LEUCOPATIC GRANITE AND QUARTZ MONZONITE BORDERING AND WITHIN SHUSHAP METAMORPHIC COMPLEX AND DEANAGAN PLUTONIC AND METAMORPHIC COMPLEX; SILVER STAR INTRUSIONS. (MAY INCLUDE ORTHOGNEISS OF PALAEOZOIC AND PROTHEROZOIC AGES).

LATE JURASSIC

VALHALLA PLUTONIC ROCKS

**lJgd** GRANODIORITE, GRANITE; MINOR GABBRO, DIORITE, QUARTZ DIORITE.

EARLY JURASSIC

LONG RIDGE PLUTON

**eJg** FOLIATED, LIMEATED GRANITE (MAY INCLUDE PALAEOZOIC PLUTONIC ROCKS).

NELSON PLUTONIC ROCKS; SMYTH BATHOLITH AND SATELLITIC STOCKS.

**eJgd** QUARTZ DIOIRITE, GRANODIORITE; MINOR DIORITE, GRANITE, AMPHIBOLITE, GABBRO AND ULTRAFELIC ROCKS.

**eJdi** DIORITE; MINOR QUARTZ DIORITE AND GABBRO.

**eJy** SYENITE AND MONZONITE.

INTRUSIVE CONTACT

TRASSIC AND JURASSIC

UPPER TRASSIC AND LOWER JURASSIC

NICOLA GROUP (POSSIBLY INCLUDES SLOCAN GROUP NEAR SOUTHEAST EDGE OF AREA).

**JNv** ANDESITE AND BASALT FLOW ROCKS, PORPHYRIC ANDIGITE ANDESITE, BRECCIA, TUFF, AGGLOMERATE, GREENSTONE, CHLORITIC PHYLLITE; MINOR ARGILLITE, LIMESTONE, SERICITIC SLIST.

UPPER JURASSIC

KARNIAN AND NORIAN

NICOLA GROUP

**URNS** BLACK SHALE, ARGILLITE, CONGLOMERATE, LIMESTONE, SILESTONE, MINOR TUFF AND PHYLLITE

**URNC** LIMESTONE

SLOCAN GROUP

SLOCANIS FORMATION

**URSC** SERICITIC, GRAPHITIC AND ARGILLACEOUS LIMESTONE; CALCAREOUS PHYLLITE, ARGILLITE.

**URSP** SHALE, ARGILLITE, MASSIVE SILESTONE, PHYLLITE, TUFF AND CALCAREOUS PELITE; MINOR CONGLOMERATE, LIMESTONE, GREENSTONE, CHLORITIC PHYLLITE AND ANDALUSITE - STAUROLITE - AND KYNOLITE - BEARING SCHIST.

**URSCB** CONGLOMERATE.

## Figure 38A Legend to Figure 38 Continued

**PALAEZOIC AND MESOZOIC**

ORANJIAN FLUORIC AND METAMORPHIC COMPLEX (MAY INCLUDE METAMORPHIC EQUIVALENTS OF UNIT CP1a AND/OR OLDER ROCKS, AND TRIASSIC GNEISSIC GARNETITE).

- PMgn** HORNBLENDE AND Biotite GNEISS; PARAGNEISS; MINOR SCHIST, MARBLE, QUARTZITE AND AMPHIBOLITE
- PMun** DIORITIC GNEISS, AMPHIBOLITE.
- Pxc** MARBLE.
- PSb** QUARTZ MICA SCHIST.

**POLARZOIC**

PERMIAN AND (?) PENNSYLVANIAN  
KASLO GROUP

- PKyb** MASSIVE AND FOLIATED GREENSTONE, CHLORITIC PHYLLITE, AMPHIBOLITE; MINOR ULTRAMAFIC ROCKS.
- PKub** SERPENTINIZED ULTRAMAFIC ROCKS.

SLIDE MOUNTAIN GROUP  
FERNELL FORMATION

- PF** PILLTH LAVA FLOWS, MASSIVE AND FOLIATED GREENSTONE, GREENSCHIST, ARGILLACEOUS CHERT; MINOR AMPHIBOLITE, LIMESTONE, BRECCIA.
- PFt** CHERT
- PFp** ARGILLITE, SILTSTONE
- PFcg** CONGLOMERATE
- PFub** SERPENTINIZED ULTRAMAFIC ROCKS.

ISALON FORMATION

- PI** GREENSTONE, CHLORITE PHYLLITE, AMPHIBOLITE; MINOR BLACK SHALE, LIMESTONE, MARBLE.
- PIub** SERPENTINIZED ULTRAMAFIC ROCKS.
- PIc** MASSIVE, WHITE LIMESTONE.
- PIcg** FOLIATED AND STRETCHED QUARTZ PEBBLE CONGLOMERATE.
- PItm** AMPHIBOLITIC GNEISS.
- PItc** GRN. DIORITIC MARBLE.

CARBONIFEROUS AND PERMIAN (MAY INCLUDE TRIASSIC)  
(WESTERIAN - MURROMAN AND VOLCANICIAN-GUADALUPIAN (MAY INCLUDE KARKIAN + NORTIAN),  
JONPSON ASSEMBLAGE (MAY INCLUDE UNIT UJMS)).

- CP1a** UNDIVIDED.
- CP1as** SILICEOUS ARGILLITE, VOLCANICLASTIC SANDSTONE, QUARTZITE, SILTSTONE; MINOR LIMESTONE, SHEARED CONGLOMERATE, BRECCIA AND GREENSTONE.
- CP1ay** GREENSTONE, TUFF.
- CP1ac** MASSIVE, CRYSTALLINE WHITE AND GREY LIMESTONE; MINOR CHERT PEBBLE CONGLOMERATE, ARGILLACEOUS LIMESTONE AND CHERT.
- CP1acs** CONGLOMERATE WITH LIMESTONE MATRIX.

**CARBONIFEROUS**

MILFORD GROUP

- CMss** SILTSTONE, SANDSTONE, SHALE; MINOR QUARTZ GRANULE CONGLOMERATE.
- CMsp** BLACK SHALE, ARGILLITE, MINOR SANDSTONE
- CMvd** GREENSTONE, CHLORITIC ARGILLITE.

MISSISSIPPIAN

DEADEAN - PERANGLIAN  
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 CO1b AND T1Mv1).

- Pub** SERPENTINITE AND SERPENTINIZED ULTRAMAFIC ROCKS; MINOR PYROXENITE AND PERIDOTITE.

CHAPPERON GROUP

- PCv** CHLORITIC PHYLLITE, GREENSTONE, MICACEOUS SCHIST; MINOR LIMESTONE AND ULTRAMAFIC ROCKS.

DEVONIAN

LATE DEVONIAN

MOUNT POWELL BATHOLITH - SOUTH FRESHWATER PLUTON.

- LDgn** FOLIATED AND LINEATED LEUCOCRATIC GRANITE, GRANITIC FELDSPAR PORPHYRY, QUARTZ MONZONITE, GRANULITE; MINOR PEGMATITE AND QUARTZ DIORITE.

ORDOVICIAN

LATE ORDOVICIAN

LITTLE SHUSHAN GNEISS

- LDgn** LEUCOCRATIC GRANITE GNEISS, QUARTZ MONZONITE GNEISS, AMPHIBOLITE GNEISS, MINOR DIORITE GNEISS.

Figure 38A  
Legend to Figure 38 Continued

- CANADIAN AND PROTEROZOIC  
EAGLE BAY FORMATION
- EObns** FOLIATED ACID VOLCANIC ROCKS: CHERT, SILICEOUS PHYLLITE; SHEARED AND ALTERED QUARTZ ALLOSPAR PORPHYRY AND/OR QUARTZ GRANULE CONGLOMERATE; GNEISSIC ACID IGNEOUS ROCKS NEAR SHUSWAP LAKE.
  - EObsv** GREENSTONE, CHLORITIC PHYLLITE, MINOR AGGLOMERATE, SERICITIC PHYLLITE, QUARTZITE, LIMESTONE AND TUFF.
  - EObsq** SERICITIC, SILICEOUS PHYLLITE, SERICITIC QUARTZITE, QUARTZ BIOTITE SCHIST, QUARTZ BIOTITE GARNET SCHIST; MINOR TUFF AND LAYERS OF UNITS **EObsv**, **EObsc**.
  - EOlnp** BLACK ANGELETTE, ARGILLACEOUS PHYLLITE, SHALET MINOR LIMESTONE.
  - EOlnc** MASSIVE WHITE CRYSTALLINE LIMESTONE, DARK GREY FOLIATED LIMESTONE; MINOR LIMESTONE WITH CHERT NODULES.
  - EOlnc** CONGLOMERATE, SOME WITH BLACK QUARTZ CLASTS; MINOR BRECCIA AND AGGLOMERATE.
- TSHEKAKIN LIMESTONE MEMBER
- EOlns** MASSIVE WHITE CRYSTALLINE LIMESTONE, MINOR GREENSTONE AND GREENSCHIST.
- SILVER CREEK FORMATION
- EOscd** QUARTZ BIOTITE, SERICITIC AND GARNET SCHIST; MINOR QUARTZ-FELDSPATHIC BIOTITE GNEISS, PEGMATITE, AMPHIBOLITE, MARBLE.
- CHASE QUARTZITE MEMBER
- EOscq** QUARTZITE, SILICEOUS MARBLE, CRYSTALLINE LIMESTONE; MINOR PELTIC SCHIST.
- PROTEROZOIC AND PALAEOZOIC (MAY INCLUDE ARCHAEAN)
- SHUSWAP METAMORPHIC COMPLEX
- EPns** UNDIFFERED: GRANITOID GNEISS, PARAGNEISS, SCHIST; MINOR QUARTZITE, MARBLE, AMPHIBOLITE.
  - EPnb** QUARTZ MICA SCHIST, COMMONLY GARNET- AND SILLIMANITE-BEARING.
  - EPnq** QUARTZITE; MINOR PELTIC SCHIST.
  - EPnc** MARBLE, DIOPSIDIC MARBLE-MINOR CALCIUM SILICATE GNEISS AND AMPHIBOLITE.
  - EPnm** AMPHIBOLITE, AMPHIBOLITIC GNEISS, MINOR HORNBLENDE BIOTITE SCHIST.
  - EPncc** SILICEOUS MARBLE, CALCAREOUS QUARTZITE, CALCIUM SILICATE GNEISS; MINOR PELTIC SCHIST.
  - EPngn** GRANODIORITE, DIORITE AND TONALITE GNEISS, AUGEN GNEISS.

----- GEOLOGICAL BOUNDARIES (APPROXIMATE, ASSUMED).

FAULTS

- ▲▲▲▲ MYLONITE 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, SEMI-FOLIATION, 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 (I); MINERAL ALIGNMENT OR HOLOGRAPHIC (R) AND BOUNDING AXES (B); UNDETERMINED LINEATIONS NOT LABELED; 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 (ANTIFORMAL, UPRIGHT, OVERTURNED OR RECUMBENT).
- EARLY AXIAL TRACE (SYNFORM, UPRIGHT, OVERTURNED OR RECUMBENT).
- LATE AXIAL TRACE (ANTIFORMAL, SYNFORM).

GEOCHRONOLOGIC SAMPLE SITE

- PALAEOLOGIC SAMPLE
- RADIOMETRIC SAMPLE

### 3.0 GEOLOGICAL SETTING

#### 3.1 Regional Geology

The area northwest of Mabel Lake was mapped and interpreted by A.V. Okulitch (1979) of the Geological Survey of Canada, from 1972 to 1974 (Figure 38). He mapped the rocks in the property-area as Palaeozoic and Proterozoic strata metamorphosed during the development of the Shuswap Metamorphic Complex. The rocks northwest of the property were mapped as undifferentiated granitoid gneiss and schist. The central calc-silicate band that contains much of the known mineralization was mapped as marble, calcium-silicate gneiss and amphibolite. Rocks southeast of the band were mapped as quartzite and pelitic schist. 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:

Stratigraphic and radiometric studies indicate that a succession of orogenic events have affected rocks in the project-area beginning in the Archean and Early Proterozoic times ... The extent of such early events in the Shuswap Complex is unknown ...

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 (occurred) at  $479 \pm 17$  Ma ... a widespread mid-Ordovician unconformity in the Rocky Mountain Thrust Belt ... and effusion of activity along the continental margin (also occurred) at this time.

In the project-area, mesoscopic structural data are not definitively supportive of such an event as two phases of early isoclinal folding are not really distinguishable and at least one such phase is present in post-Ordovician units ... Tightly folded, pervasive foliation in the Lardeau Assemblage is not as clearly developed in the Milford and Kaslo groups and the Tsalkom and Sicamous Formations but regional differences in intensity of deformation and possible preferential development of early structures at depth ... obscure relationships. Earliest structures in the Mount Fowler Batholith ... appear to post-date earliest features in adjacent country rocks ... Despite such ambiguities, 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 affected 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 ... Evidence for these events is restricted to rocks of the Thompson Assemblage (*sensu stricto*) and the Chapperton Group in the Intermontane Belt and the southernmost part of the Omineca Crystalline Belt. Farther east, a disconformity separates Triassic from older rocks ... These events are the earliest known in the Okanagan Plutonic and Metamorphic Complex.

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 closure of the K-Ar isotopic system during 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. Final cooling of the high grade metamorphic rocks may not have taken place until about 50 Ma ..., or a discrete thermal event, perhaps associated with Eocene plutonic and volcanic rocks, affected the Rb-Sr and K-Ar isotopic systems and annealed fission tracks in zircon, sphene and apatite. 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.

Table 6  
Table of Geologic Events and Lithologic Units around Mabel Lake

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.
Miocene to Pliocene 23.8-1.5 m.y.	Intrusion of olivine basalt dykes.
Eocene to Pliocene 57.1-1.6 m.y.	Erosion, and unroofing of the rocks, incision of the land surface:
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
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 near Shuswap Lake
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 probably also in the Colby Mines property-area. Metamorphic closure related to the Shuswap Metamorphic Complex: <b>MINERALIZATION:</b> Final re-mobilization of silver-lead-zinc mineralization in the Colby Mines property-area
including Middle Jurassic to Early Cretaceous 155-130 m.y.	
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 elastic 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.
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 metasedimentary rocks in the Colby Mines property-area, 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. <b>MINERALIZATION:</b> Deposition of Broken Hill-type massive sulphide mineralization in the Colby Mines property-area
	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 et al. (1970).

### 3.2 Regional Geophysics and Biochemistry

#### 3.2.1 Regional Aeromagnetic Surveys

In 1965 and 1972, the federal Department of Mines and Technical Surveys conducted fixed-wing airborne aeromagnetic surveys over the area northwest of Mabel Lake. Energy, Mines, and Resources Maps, 4781G and 8503G covering N.T.S. map-areas 82 L/10 and 82 L/15 were two of the aeromagnetic maps produced. The current Colby Mines property-area straddles the boundary of those two maps. Both maps were re-scaled to 1:50,000 to produce parts of Figure 39.

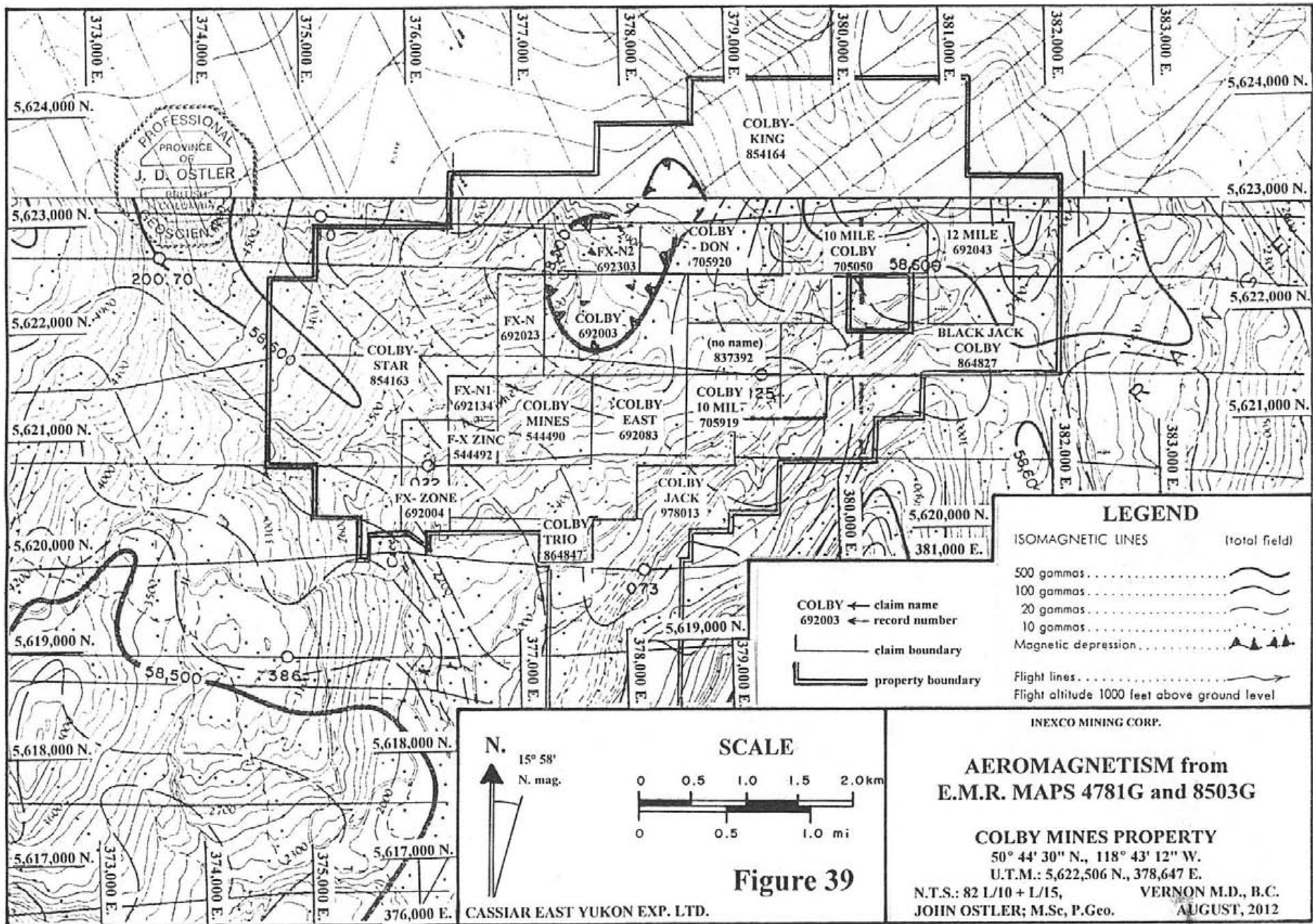
The generally north-northeasterly regional magnetic field pattern is re-oriented into a sub-circular pattern about 5 km (3.1 mi) in diameter. That pattern is centred on a mild "low" that is centred at the southern boundary of the FX-N2 (692303) claim in the central part of the Colby Mines property.

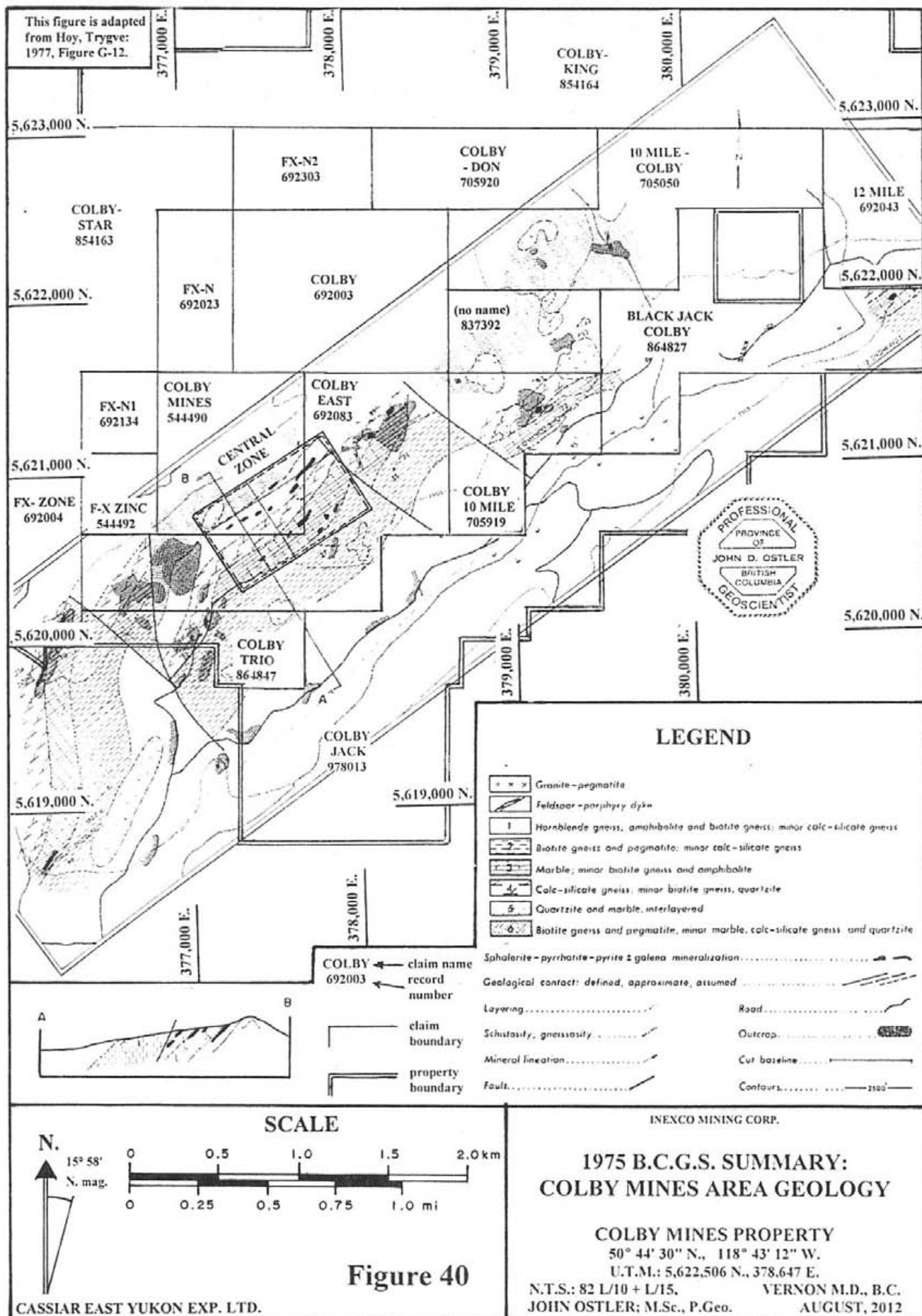
This "low" corresponds with an area of granulite-facies metamorphic rocks. It may have been produced by a loss of iron from those rocks by the expulsion of metal-rich fluids during local metamorphic re-crystallization.

#### 3.2.2 Regional Biochemical Surveys

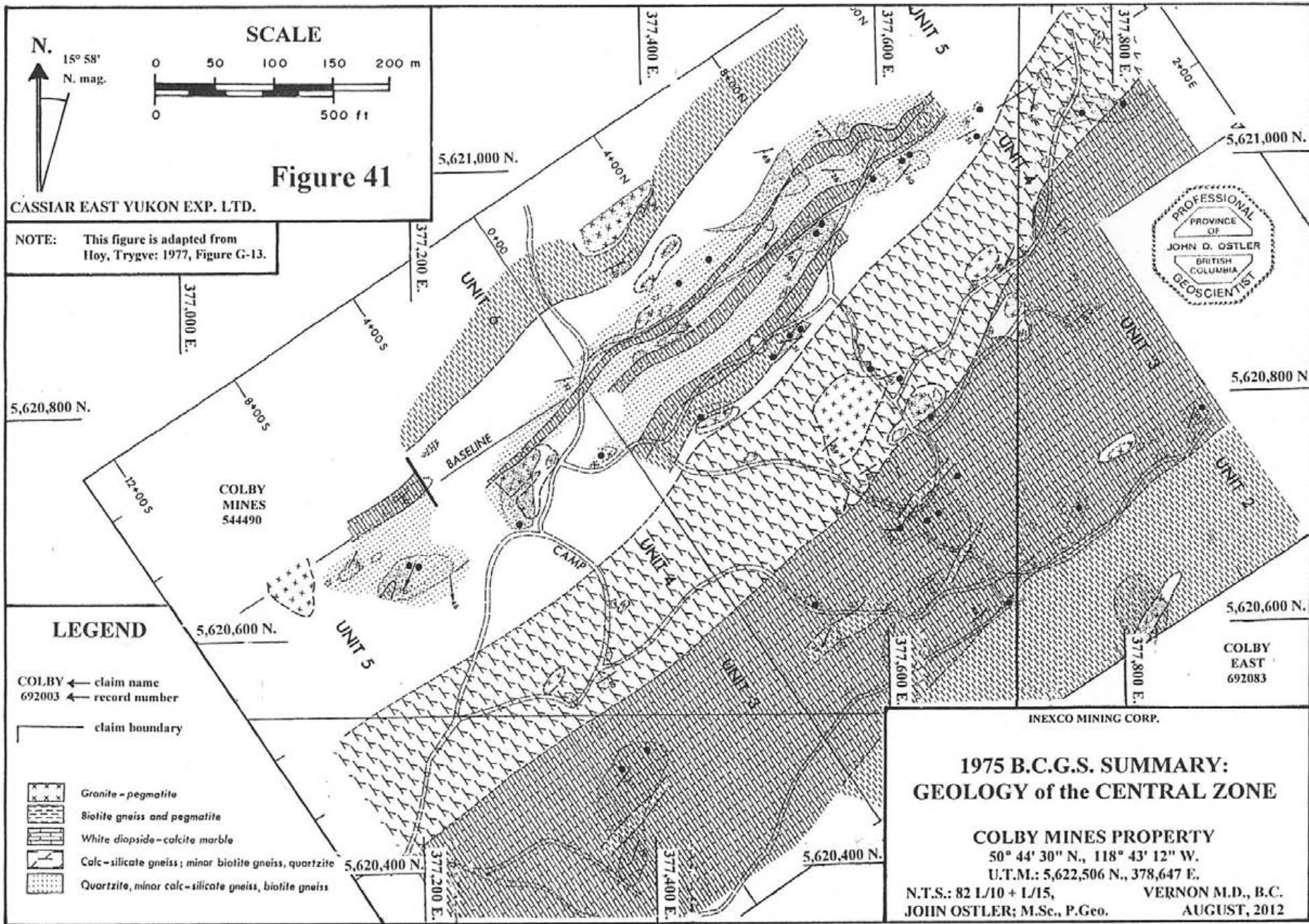
During April 2006, the Geological Survey of Canada conducted a program of helicopter-assisted tree-top sampling in an area flanking both sides of the northern part of Mabel Lake. The current Colby Mines property-area was in the northwestern part of that survey-area. Twigs from near the tops of douglas fir trees were analyzed for 53 elements (Dunn and Thompson, 2007). Subsequently, those twig and needle samples were analyzed in order to discern which of the two media was most closely associated with mineralization (Dunn and Thompson, 2009). A total of 90 hemlock tree-bark samples were taken in an area of previously defined douglas fir twig and needle anomalies southeast of Mabel Lake.

Upon examining the results of those biochemical surveys in the Colby Mines property-area, the author could not discern any patterns that were unquestionably associated with mineralization.









### 3.3 Property Geology

#### 3.3.1 Stratigraphy

Trygve Höy of the British Columbia Geological Survey examined the area of the current Colby Mines property and summarized the local geology as follows:

The property lies within the Shuswap Metamorphic Complex ... Jones (1959) (and) Okulitch (1974) (Figure 38) assign rocks in the Colby area to the Monashee Group, a heterogeneous package of probable Proterozoic and Early Palaeozoic age comprising granitoid gneiss, augen gneiss, sillimanite-bearing schist, and prominent marble and quartzite layers (Figure 40).

Rocks within the map-area have been divided into six metamorphic units and two intrusive units. The sequence of metamorphic units probably represents an originally conformable package of sedimentary rocks ...

Unit 6 which includes all rock units beneath unit 5 is exposed only in the western part of the Central zone and north of the Cominco showings (Figures 40 and 41). This unit consists dominantly of medium to coarse-grained garnet-biotite gneiss that is intruded by many granite-pegmatite sills and dykes. Some white quartzite, marbles, and rare calc-silicate gneiss layers occur in unit 6.

Unit 5 is well-exposed in the Central zone and northwest of the Cominco showings. It consists of fairly pure white marble interlayered with quartzite ... The more impure quartzite (layers included in) unit 5 (those containing diopside and/or feldspar) may be mineralized with sulphides; one of the most continuously mineralized sections in the Colby area is a zone in a quartzite which follows the baseline from approximately 7 +00 N to 11 + 00 N (Figure 41).

Unit 4 is a heterogeneous unit comprised predominantly of calc-silicate gneiss, but including rusty-weathering to clean white marble, garnet-biotite gneiss, minor quartzite and minor amphibolite ... The rocks of unit 4 host sulphide mineralization in the Central zone, Dakota zone, and Cominco showings ...

Unit 3 is a massive white marble up to several hundred metres thick ... Included in the marble are a number of discontinuous layers of garnet-biotite gneiss and hornblende gneiss. The most significant mineralization in the Central zone and all the mineralization in the Mile 12 and Mile 8 showings are contained within unit 3.

Unit 2 consists of rusty-weathering garnet-biotite-sillimanite gneiss with minor amounts of associated calc-silicate gneiss. Granite-pegmatite bodies, up to several hundred metres in diameter commonly intrude unit 2.

Unit 1 .. Consists of hornblende gneiss, garnet-biotite gneiss, and some calc-silicate gneiss. The hornblende gneiss grades to amphibolite ...

Units 1 to 6 are intruded by numerous stock-like bodies. These range in size from small discontinuous sills a few metres in length to almost equidimensional stock-like intrusions several hundred metres in diameter ... The pegmatites are generally massive; only rarely do they have a conspicuous planar fabric ... They are composed of feldspar and quartz with lesser amounts of biotite, muscovite, and garnet ...

COLBY AREA	BIG LEDGE AREA <sup>1</sup>	RIONDEL (BLUEBELL MINE) AREA <sup>2,3</sup>	
		L4 biotite-quartz-feldspar gneiss	Index Formation
		L3 calc-silicate gneiss, impure rusted marble layers, one quartzite layer	
UNIT 1: hornblende gneiss, amphibolite, biotite gneiss, minor calc-silicate gneiss		L2 biotite-hornblende gneiss and amphibolite, minor calc-silicate and marble layers, rare schistose layers	Tardeau Group
UNIT 2: biotite gneiss, pegmatite, minor calc-silicate gneiss	UNITS 7-13: schist, gneiss, calc-silicate gneiss, thin marbles, amphibolite	L1 micaceous schists	
UNIT 3: marble	Empress marble	B marble	Badshot
UNIT 4: calc-silicate gneiss, minor biotite gneiss, quartzite	UNITS 1-5: dark schists, quartzite, calc-silicate gneiss, marble	M schist, quartzite, impure marble	Mohican Formation
UNIT 5: Interlayered marble and quartzite			
UNIT 6: biotite gneiss and quartzite		H4 dark quartzite, quartz-rich schists	Hamill Group
		H3 white quartzite	
		H2 schist, quartzite, siltstone, minor amphibolites	

<sup>1</sup> HOY, T., (1976): Geology of the Big Ledge Area, *British Columbia Department of Mines and Petroleum Resources*, GEM, 1975.  
<sup>2</sup> HOY, T., (1974): Structure and Metamorphism of Kootenay Arc Rocks around Riondel, *British Columbia*, unpublished Ph.D. thesis, *Queen's University*, Kingston, Ontario.  
<sup>3</sup> HOY, T., (1974): Geology of the Riondel Area, *British Columbia Department of Mines and Petroleum Resources*, Preliminary Map No. 16.

Figure G-14. Correlation of units in the Colby area with the Big Ledge and Riondel area.

NOTE: This figure is adapted from Hoy, Trygve: 1977, Figure G-14.

Figure 42

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INEXCO MINING CORP.

**1975 B.C.G.S. SUMMARY:  
STRATIGRAPHIC CORRELATION**

**COLBY MINES PROPERTY**  
 50° 44' 30" N., 118° 43' 12" W.  
 U.T.M.: 5,622,506 N., 378,647 E.  
 N.T.S.: 82 L/10 + L/15.      VERNON M.D., B.C.  
 JOHN OSTLER: M.Sc., P. Geo.      AUGUST, 2012

Trigve Høy (1977) tentatively correlated the rocks of the Colby Mines property-area with those around Riondel on the eastern side of Kootenay Lake (Figure 42). Because of the loss of primary rock structures and textures in both areas, his correlation was based on the similarity of rock types and sequences.

He correlated the prominent marble unit in the Colby Mines property-area (unit 3) with the lower Cambrian Badshot marble in the Riondel area. Mochican Formation schists, quartzites, and marbles underlying the Badshot Formation near Riondel were correlated with units 4 and 5 in the Colby area. Høy thought that unit 6 could be a more 'argillaceous' equivalent of the upper part of the Hamill Group.

Micaceous schists overlying the Badshot marble were correlated with the gneisses of unit 2 on the Colby Mines property.

### 3.3.2 Deformation and Metamorphism

Trigve Høy (1977) described the deformation and metamorphism of the rocks exposed in the current Colby Mines property-area as follows:

The structure ... is dominated by four northwest-trending faults (Figure 40) ... (with) right-lateral ... displacement ranging from ... 100 metres to 700 meters (328-2,297 ft).

A fifth fault which trends northeast is inferred to cutout unit 3 southwest of the Central zone ... (There) biotite-garnet gneiss of unit 2 is in contact with calc-silicate gneiss of unit 4.

These faults cut across an earlier mineral foliation which strikes north-northwest and dips at varying angles to the southeast. This foliation is ... almost parallel with layering. Mineral lineations contained within the foliation plunge to the southwest. Macroscopic folds were not recognized ... although two types of mesoscopic folds are common. The first type is typically tight to isoclinal and plunges to the southwest, parallel to the mineral lineations. The second type is more open and has a more variable attitude, although generally it plunges to the southwest ...

The rocks of the Colby area have been subjected to high-grade regional metamorphism; aluminous gneisses contain sillimanite and occasionally kyanite. Diopside is common ... throughout the Colby area. The assemblage, diopside-forsterite (stable at 560° C temperature and 5 k bar pressure) was observed in one marble sample from the Mile 8 showing (south of the current property-area) ... The assemblage calcite-phlogopite-diopside-chondrodite (indicative of upper amphibolite and/or granulite facies metamorphism) has been identified in marbles at three localities ... Scapolite is common in calc-silicate gneisses, frequently being associated with diopside and plagioclase.

Høy, Trygve; 1977: pp. G20 - G 23.

### 3.4 Property Mineralization

E.O. Chisholm (1973) examined the western part of the current property-area and summarized his observations of mineralization in the Central and Dakota zones as follows:

Mineralization includes pyrrhotite, sphalerite, galena and minor chalcopyrite and pyrite. It favours a replacement mode in vertically oriented lenses in the crystalline limestone and calcareous quartzite, but occurs also near the limestone in the enclosing quartzite.

Structural control for the mineralization appears to be a northerly trending regional fault along the Kingfisher Creek valley ... The strike of the fault is sub-parallel to the mineralized zones which are possibly in subsidiary faults off the main structure.

The strike trends in the host rock are also in this direction and are parallel to geological contacts. Compressional forces shown on the GSC Tectonic map of the area acted from the north and south causing northerly trending shears.

A series of post mineral cross faults are evident displacing the favourable limestone belt and with it, the mineralized zones (in the Central zone) ...

The evidence points to a vertical shear structure as a locus of mineralization that strikes in a N 20 to 30° E direction. The host limestone and gneissic quartzite strike in the same direction ... but dip at 40 to 50° easterly. The most favourable host for lead-zinc mineralization is the crystalline limestone. The sulphides are found in silicified shear zones within the limestone and locally in the enclosing quartzites. A second mode of occurrence ... is disseminated replacement of the limestone in proximity to the silicified shears.

Chisholm, E.O.; 1973: pp. 8-10.

E.O. Chisholm's assumption that sub-vertical shears trending at about 025°-205° were responsible for mineralization is supported by results of the current airborne magnetic survey (Figure 43). In both the eastern and western parts of the property-area broad, north-northeasterly trending bands comparatively high magnetism occur. These could be expressions of conduits carrying pyrrhotite-sphalerite mineralization into the local stratigraphy.

Mineralization could have been deposited in sub-vertical dilatations that trended at 055°-235°, parallel with orientation of the greatest compressional stress. The least compressional stress could have been oriented at 145°-325°. The dominant, right-lateral shear plane would trend at 025°-205° as E.O. Chisholm reported, and a recessive, left lateral shear plane would trend at 085°-265°.

The close association of galena and sphalerite with magnetic pyrrhotite has been of great benefit to exploration on the Colby Mines property. Most of the 1974 to 1977 drill holes in the central zone were spotted



on anomalies generated by P.P. Neilsen's (1974 and 1977) magnetic surveys (Figures 9N, 9S, 13, 14, and 37).

Trigve Høy (1977) examined mineralization closely; his findings were as follow:

Mineralization in marbles consists of dark, medium-grained sphalerite, with varying amounts of pyrrhotite and minor pyrite disseminated through a medium to coarse-grained white calcite matrix ... Galena is also common, though much finer grained and more widely scattered. In polished section, the sulphides appear as angular equidimensional to elongate intergrowths of dominantly sphalerite and pyrrhotite entirely enclosed in the calcite matrix. The sulphide concentration varies considerably across a mineralized zone, commonly producing a crude layering ... Poorly defined folds with tight hinge zones may be defined by this sulphide layering.

Mineralized quartzites almost invariably contain calcareous minerals in accessory amounts ... Dark sphalerite with pyrrhotite is concentrated generally in thin layers, or is seen to define the foliation in the quartzite. Galena is more common in quartzites than in the marbles, although it is always subsidiary to sphalerite. The sulphide concentration varies from widely scattered individual sphalerite and pyrrhotite grains entirely enclosed in quartz to almost massive, sphalerite-pyrrhotite (+/- galena, pyrite) intergrowths with only interstitial subrounded to subangular quartz and diopside grains.

Mineralization in calc-silicate gneisses shows gradational features between that in the marble and that in quartzite. Sphalerite, pyrrhotite, pyrite +/- galena may be evenly distributed through a coarse-grained calcite-diopside rock or may tend to concentrate in layers in a more quartz-rich rock.

In general, mineralized sections in quartzites are of lower grade but are more continuous along strike with the layering than those in the marbles. Discontinuous high-grade pods are common in the marbles.

Høy, Trigve; 1977: p. G27.

The author examined mineralization in the Mile 12, Cominco and Central zones and found E.O. Chisholm's description of the setting of mineralization and T. Høy's description of its character to be accurate. There seems to be no preferential concentration of mineralization in either calc-silicate or carbonate rocks throughout the property-area. Thus, both rock types are prospective.

The author's 2012 sampling is insufficient to predict an average tenor of mineralization at the Colby Mines property. In 1974, K.L. Daughtry calculated that Zones 'A' and 'B' in the Central zone could contain 1,672,727 tonnes (1,840,000 tons) of mineralization containing an average of 0.58% lead and 2.60% zinc (Table 5). His resource was calculated from the results of extensive sampling, both from surface exposures and from drill cores. In the author's opinion it is a fairly accurate assessment of the average tenor of mineralization that one could expect to find on the Colby Mines property.

The results of the author's 2012 sampling in the Mile 12, Cominco, and Central zones are as follow:

Table 7  
Ostler's 2012 Sampling Results

S. No.	U.T.M. Location	Claim	Zone	Description	Interval m ft.	Cu ppt	Pb %	Zn %	Ag gm/mt oz/t
CM1-1	5,622,523 N., 381,376 E.	12 MILE (692043)	Mile 12	bands and ribbons of Po, Sph in quartz gangue	0.50 1.64 composite chip	65.1	0.830	10.15	5.88 0.172
CM1-2	5,622,523 N., 381,376 E.	12 MILE (692043)	Mile 12	bands and ribbons of Po, Sph in quartz gangue	0.50 1.64 composite chip	68.5	0.195	4.81	0.72 0.021
CM1-3	5,622,523 N., 381,376 E.	12 MILE (692043)	Mile 12	intensely folded bands of Po, Sph in quartz gangue	0.40 1.31 composite chip	45.9	0.280	4.61	1.35 0.039
CM1-4	5,622,523 N., 381,376 E.	12 MILE (692043)	Mile 12	average of mineralization throughout the trench	composite grab	32.3	0.256	2.64	0.89 0.026
CM2-1	5,621,901 N., 379,107 E.	(no name) (337392)	Cominco	diss Sph + Po in boulder beside trench	chips off boulder	327	0.003	1.280	0.68 0.019
CM3- 6.0- 17.0m	5,621,961 N., 379,127 E.	(no name) (337392)	Cominco	average if greywacke throughout trench	11.0 36.1 composite chip	67.8	0.060	0.946	0.56 0.016
CM3- 7.9m	5,621,961 N., 379,127 E.	(no name) (337392)	Cominco	band of disseminated Sph, Po in greywacke	0.3 0.98 composite chip	171.5	0.333	2.89	2.25 0.066
CM3- 9.8m	5,621,961 N., 379,127 E.	(no name) (337392)	Cominco	band of disseminated Sph, Po in greywacke	0.03 0.09 composite chip	205	0.143	1.985	1.69 0.049
CM4-1	5,621,935 N., 379,135 E.	(no name) (337392)	Cominco	band of disseminated Sph, Po in greywacke	0.25 0.82 composite chip	41.8	0.187	3.06	2.37 0.069
CM4-2	5,621,935 N., 379,135 E.	(no name) (337392)	Cominco	band of disseminated Sph, Po in greywacke	0.02 0.08 composite chip	146.0	0.394	0.663	1.20 0.035
CM4-3	5,621,935 N., 379,135 E.	(no name) (337392)	Cominco	average if greywacke throughout trench	9.0 29.5 composite chip	23.8	0.005	0.459	0.53 0.015

Notes: For locations of samples, see Figures 3, and 45 to 50.

For complete analytical results, see Appendix 'B'.

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

Table 7 Continued  
Ostler's 2012 Sampling Results

S. No.	U.T.M. Location	Claim	Zone	Description	Interval m. ft.	Cu ppm	Pb %	Zn %	Ag gns/ml oz/t
CMS-9.5m	5,620,612 N., 377,156 E.	COLBY MINES (544490)	Central Chisholm's Zone 1	heavily diss Sph, Po, Gal in cut across stripped outcrop	1.5 4.92 composite chip	59.9	0.269	1.365	0.49 0.014
CMS-30m	5,620,628 N., 377,159 E.	COLBY MINES (544490)	Central Chisholm's Zone 1	heavily diss Sph, Po, Gal in cut across stripped outcrop	4.0 13.1 composite chip	27.2	0.242	2.30	0.44 0.067
CMS-48m	5,620,640 N., 377,167 E.	COLBY MINES (544490)	Central Chisholm's Zone 1	lightly diss Sph, Po, Gal in cut across stripped outcrop	6.0 19.7 composite chip	40.7	0.119	0.217	0.83 0.024
CMS-61m	5,620,647 N., 377,177 E.	COLBY MINES (544490)	Central Chisholm's Zone 1	lightly diss Sph, Po, Gal in cut across stripped outcrop	8.0 26.2 composite chip	17.9	0.212	0.635	0.28 0.008
CMS-86m	5,620,668 N., 377,182 E.	COLBY MINES (544490)	Central Chisholm's Zone 1	lightly diss Sph, Po, Gal across stripped outcrop	7.0 23.0 composite chip	13.6	0.330	0.538	0.26 0.008
CMS-99m	5,620,676 N., 377,190 E.	COLBY MINES (544490)	Central Chisholm's Zone 1	lightly diss Sph, Po, Gal in cut across stripped outcrop	2.0 6.56 composite chip	16.5	0.005	0.0934	0.27 0.008
CMS-121m	5,620,702 N., 377,197 E.	COLBY MINES (544490)	Central Chisholm's Zone 1	lightly diss Sph, Po, Gal in trench across stripped outcrop	6.4 21.0 composite chip	15.2	0.115	0.0239	0.10 0.003
CM6- CON	5,621,165 N., 377,421 E.	COLBY MINES (544490)	Central	brown-grey concentrate	grab from the 7 of 15 drums still in good enough condition to sample	67.0	6.17	0.931	3.83 0.103

Notes: For locations of samples, see Figures 3, and 45 to 50.  
For complete analytical results, see Appendix 'B'.  
Py = pyrite, Po = pyrrotite, Cpy = chalcopyrite, Ars = arsenopyrite, Gal = galena, Sph = sphalerite, msv = massive, diss = disseminated

Table 7 Continued  
Ostler's 2012 Sampling Results

S. No.	UTM Location	Claim	Zone	Description	Interval m ft.	Cu ppm	Pb %	Zn %	Ag gnt/mt oz/t
CM7-1	5,621,162 N, 377,306 E.	COLBY MINES (544490)	Central Chisholm's Zone 2	hand of msv to diss Po, Gal, Sph in silica gangue	1.5 4.92 composite chip	51.6	9.43	11.60	6.12 0.179
CM7-2	5,621,157 N, 377,302 E.	COLBY MINES (544490)	Central Chisholm's Zone 2	hand of msv to diss Po, Gal, Sph in silica gangue	1.5 4.92 composite chip	133.0	2.33	8.21	3.47 0.102
CM8-1	5,620,588 N, 377,160 E.	COLBY MINES (544490)	Central Chisholm's Zone 3	lightly diss Sph, Po, Gal in silica gangue across stripped outcrop	1.0 3.05 composite chip	66.0	0.151	0.717	0.55 0.016
CM8-2	5,620,628 N, 377,159 E.	COLBY MINES (544490)	Central Chisholm's Zone 3	msv to diss Sph, Po, Gal in rubble in northern part of trench	composite grab	355	2.54	5.11	1.43 0.042
CM8-3	5,620,640 N, 377,167 E.	COLBY MINES (544490)	Central Chisholm's Zone 3	msv to diss Sph, Po, Gal in silica gangue	2.5 8.20 composite chip	195.0	1.435	2.09	2.14 0.062
CM9-1	5,620,647 N, 377,177 E.	COLBY MINES (544490)	Central Chisholm's Zone 4	msv to diss Sph, Po, Gal in rubble across moss- covered outcrop	composite grab	60.6	0.230	1.365	0.99 0.029
CM10-1	5,620,668 N, 377,182 E.	COLBY MINES (544490)	Central Chisholm's Zone 5	lightly diss Sph, Po, Gal in silica gangue in blocks near trench across outcrop	composite grab	22.0	0.003	0.0778	0.24 0.007

Notes: For locations of samples, see Figures 3, and 45 to 50.

For complete analytical results, see Appendix 'D'.

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

#### 4.0 DEPOSIT TYPE

The mineral exploration targets on the Colby Mines property are Broken Hill-type sedimentary exhalite, massive sulphide deposits.

Broken Hill type massive sulphide deposits were described by Trygve Höy (1996) as follows:

#### **BROKEN HILL TYPE Pb-Zn-Ag +/- Cu S01**

##### **IDENTIFICATION**

SYNONYMS: Shuswap-type, Ammeburg-type Zn-Pb, Jervois-type.

COMMODITIES (BY-PRODUCTS): Pb, Zn, Ag, (Cu, Au, barite)

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

Cottonbelt (082M086), River Jordan (082M001), Ruddock Creek (082M082-084), Big Ledge? (082LSE012), Colby? (082ESW062); *Broken Hill and Pinnacles (New South Wales, Australia), Broken Hill and Black Mountain, Aggeneys district and Gammsberg area (South Africa), Knalla and Nygruvan, Bergslagen district (Sweden).*

##### **GEOLOGICAL CHARACTERISTICS**

###### **CAPSULE DESCRIPTION:**

Deposits comprise massive to semimassive galena, sphalerite, pyrrhotite and pyrite and/or magnetite layers or stacked lenses hosted by thin-bedded, commonly calcareous paragneiss successions. A complex gangue mineralogy includes a variety of calcsilicate minerals. These stratabound deposits are typically thin, but laterally extensive and were deformed and metamorphosed together with their hostrocks.

###### **TECTONIC SETTING:**

Strongly deformed and metamorphosed supracrustal rocks commonly referred to as 'mobile belts' which probably originated in an intracratonic rift or possibly continental margin setting.

###### **DEPOSITIONAL ENVIRONMENT / GEOLOGICAL SETTING:**

Marine sediments and associated minor bimodal (?) Volcanics (often felsic, possibly alkalic) reflect active extensional tectonics. Host successions include inferred evaporites and are generally interpreted as shallow marine. Underlying gneissic successions suggest some deposits formed on or along margins of tectonic highs. However, intense deformation and metamorphism have commonly masked relationships.

###### **AGE OF MINERALIZATION:**

Commonly Lower and Middle Proterozoic; some British Columbia deposits may be hosted by Late Proterozoic to Cambrian rocks.



#### HOST / ASSOCIATED ROCK TYPES:

Hosted by thin-bedded calcareous schists, impure marble, quartzites and, less commonly, graphitic schists. A common and important host rock is garnet quartzite which occurs as envelopes to the sulphide bodies; associated with well layered and heterogeneous successions of quartzite, crystalline marble, quartzo-feldspathic gneiss, hornblende gneiss, and abundant pelitic and calcareous schist and gneiss; locally associated carbonatite and amphibolite. Banded iron formations, chert, gahnite, quartzites and tourmalinites are common in the host stratigraphic succession as distal facies or in footwall successions. Scapolite-rich units and sulphur isotopes suggest associated evaporites. Metamorphic grades vary from amphibolite to granulite.

#### DEPOSIT FORM:

Stacked sulphide on sulphide/magnetite lenses are common; they are thin, irregular, discontinuous, strongly deformed massive sulphide bodies. Thickening in fold hinges is often critical to make economic thickness. Individual lenses vary from less than a metre to tens of metres and may extend hundreds of metres often grading laterally into quartzite, quartz gahnite, garnet quartzite or pyrite/pyrrhotite disseminated units that may persist for tens of kilometers.

#### TEXTURE / STRUCTURE:

Mineralization occurs as discontinuous massive to semimassive sulphide lenses or as disseminated stratabound sulphides. Sulphides are massive to irregular banded, with locally coarse "skarn" textures; locally well-layered or laminated sulphides and silicates occur. They are commonly medium to coarse grained and intimately intergrown with gangue calcisilicate minerals, quartz or magnetite; as well, there are occasional thin monomineralic sulphide layers. Disseminated sulphides are common in granular marble. Pegmatite zones are present in some ore (mineralized) zones.

#### ORE MINERALOGY (Principal and subordinate):

Galena, sphalerite, galena, magnetite pyrrhotite pyrite; chalcocopyrite, tetrahedrite, molybdenite arsenopyrite, löllingite. In some deposits, magnetite makes up more than 40% of the ore (mineralization). Some deposits display zoning from siliceous Zn-rich to distal carbonate-silicate Pb-Ag ore (mineralization).

#### GANGUE MINERALOGY:

Quartz, garnet, calcite, rhodonite, magnetite, siderite, pyroxenes and amphiboles, commonly manganeseiferous, fluorite, *Mn olivine*, *apatite*, *gahnite*, *plagioclase*, *biotite*, *chlorite*, *ankarite*, *epidote*, *graphite*, *barite*, *hematite*, *wollastonite*, *sillimanite*, *staurolite*, *vesuvianite*. The complex gangue mineralogy is characteristic of Broken Hill-type deposits.

#### ALTERATION MINERALOGY:

Original alteration assemblages are replaced by a complex variety of metamorphic minerals. Alteration envelopes and deposit zoning are common in larger deposits, but are generally not recognized in smaller ones. Footwall alteration pipes are generally not recognized, except for some of the Cu-rich deposits, which complicates their interpretation. Typically the alteration reflects enrichment of Fe, Si, Mn, Ca, P, F, K and CO<sub>2</sub>, and includes metamorphic silicates including amphiboles, olivine, biotite, phlogopite, sillimanite, orthoclase and clinozoisite as well as carbonates, fluorite and a variety of other minerals. Spessartine-quartz halos surround many deposits, with more regional silicification (quartz) and K (sillimanite) enrichment. In the Broken Hill area, Australia, with increasing intensity of mineralization, Fe-Si-Mn systems (typical of metamorphosed iron formations) are overprinted by extreme Ca-Mn-F enrichment with calcisilicate assemblages.

**WEATHERING:**

Large gossans are not common; however, pyrrhotite and pyrite in some deposits locally produce rusted outcrops. Some Australian deposits have deep weathered zones: gossanous quartz-garnet-gahnite rocks, with abundant Mn and Fe oxides (goethite and coronadite) and carbonates (dolomite, cerussite, and smithsonite). Leached sulphides mark the transition into underlying sulphide ore (mineralization).

**ORE CONTROLS:**

Not well understood; deposits appear to be restricted to Proterozoic "mobile belts", generally interpreted to be intracratonic rifts. Oxidized shallow marine basins, possibly developed due to extensional faulting above basement highs, and associated bimodal (?) Volcanism are local controls.

**GENETIC MODEL:**

Difficult to interpret due to high metamorphic grades. A sedimentary exhalite origin, with sulphide deposition in rapidly deepening rifts, is preferred because the deposits are associated with iron formations, chert and Mn-rich iron oxide facies. This environment, dominated by oxidized facies, contrasts with reduced, anoxic basins that commonly host sedex deposits. However, associated bimodal volcanics, ore and gangue chemistry and sulphide textures suggest similarities with volcanogenic massive sulphide deposition. Some workers have supported replacement models for the mineralization.

**ASSOCIATED DEPOSIT TYPES:**

Sedimentary exhalative deposits ..., carbonatites ..., nepheline syenites, polymetallic veins ... and W-Mo veins.

***EXPLORATION GUIDES***

**GEOCHEMICAL SIGNATURE:**

Anomalous enrichments of Mn, Cu, Au, Bi, Sb, W, Co, and As in the ore (mineralization) and some proximal exhalative units; high Ag:Pb ratios, Mn and K enrichment (with muscovite, k-feldspars and sillimanite) in alteration halos; elevated base metal values (concentrations) (particularly Zn) and Mn in more regional iron formations. In silt samples expect anomalous Pb, Zn, Ag, Mn and Ba.

**GEOPHYSICAL SIGNATURE:**

Deposits with associated magnetite produce strong magnetic anomalies. Electromagnetic and induced polarization surveys may detect those deposits with pyrrhotite and pyrite massive sulphide lenses. Associated graphite in some (e.g. Big Ledge) may provide local targets.

**OTHER EXPLORATION GUIDES:**

Main exploration guide is appropriate sedimentary/tectonic environment - thin-bedded succession of paragneiss with abundant carbonate. The mineralization may occur at, or near, the transition from quartzo-feldspathic basement rocks to fine-grained metasediments. Rapid lithologic facies change changes in the vicinity of deposits may indicate local hydrothermal systems. Associated volcanism is indicative of extension or rifting. Associated volcanism is indicative of extension or rifting. In closer proximity to deposits, unusual mineral assemblages include garnet quartzites, gahnite quartzites and Mn-rich calcsilicates with skarn textures.

## **ECONOMIC FACTORS**

### **TYPICAL GRADE AND TONNAGE:**

Deposits frequently occur in clusters with numerous small, uneconomic deposits. Broken Hill-type targets average less than 5 to 20 Mt, but may be in excess of 100 Mt (Broken Hill, Australia: 280 Mt containing 10.0% Pb, 8.5% Zn and 148 g/t Ag, including approximately 150 Mt of more than 20% Pb + Zn). Grades are variable, commonly with 2 to 10% Pb, 2 to 8% Zn and 10 to 150 g/t Ag. Some deposits contain no byproduct copper, others have 0.1 to 1% Cu. In British Columbia, known deposits range in size from less than one million to 6.5 Mt; geological reserves may be considerably larger. Grades range from approximately 2 to 5% Zn and 2.5 to 6.5% Pb with up to 50 g/t Ag. Ruddock Creek contains 5 Mt with 7.5% Zn, 2.5% Pb and Jordan River, 2.6 Mt with 5.6% Zn, 5.1% Pb and 35 g/t Ag.

### **ECONOMIC LIMITATIONS:**

Structural thickening is often critical to the genesis of economic deposits. Broken Hill-type deposits have not been mined in British Columbia, due mainly to their form - thin, though laterally persistent layers - and their location in remote, mountainous terrains.

### **IMPORTANCE:**

These deposits are an important source for lead, zinc and silver, and remain attractive exploration targets in British Columbia.

Høy, Trygve

in:

Lefebvre, D.V. and Høy, Trygve ed.: 1996, pp. 117-119.

## **5.0 CURRENT (2012) EXPLORATION**

### **5.1 Procedures and Parameters of the Current (2012) Exploration Program**

#### **5.1.1 Airborne Geophysical Surveys**

A total of 205.3 line-km (125.2 lin-mi) of airborne magnetic and electromagnetic survey covering an area of 22.59 km<sup>2</sup> (8.41 mi<sup>2</sup>) was flown over all of the claims except the COLBY JACK (978013) claim (Table 9). Lines spaced 100 m (328 ft) apart and oriented at 145°-325° were flown from northwest to southeast. Perpendicular tie lines oriented at 055°-235° were spaced 1,000 m (3,280 ft) apart.

Prikhodko et al. (2012) (Appendix 'A' of this report) described flight specifications and equipment as follows:

#### **Flight Specifications**

During the survey the helicopter was maintained at a mean altitude of 95 metres (311.7 ft) above the ground with an average survey speed of 80 km/hour (50 mph). This allowed for an average bird terrain clearance of 61 metres (200.1 ft) and a magnetic sensor clearance of 82 metres (269.0 ft).

The on board operator was responsible for monitoring the system integrity. He also maintained a detailed flight log during the survey, tracking the times of the flight as well as any unusual geophysical or topographic features.

On return of the aircrew to the base camp the survey data was transferred from a compact flash card (PCMCIA) to the data processing computer. The data were then uploaded to the Geotech office in Aurora (Ontario) for daily quality assurance and quality control by qualified personnel.

#### Aircraft and Equipment

The survey was flown using a Eurocopter Aerospatiale (Astar) 350 B3 helicopter, registration C-GTEQ. The helicopter is owned and operated by Geotech Aviation. Installation of the geophysical and ancillary equipment was carried out by a Geotech Ltd. Crew.

The electromagnetic system was a Geotech Time Domain EM (VTAM) system. VTAM, with the serial number 17 had been used for the survey ...

The VTAM receiver and transmitter coils were in concentric-coplanar and Z-direction oriented configuration. The EM bird was towed at a mean distance of 35 metres (114.8 ft) below the aircraft ... Thirty-two time measurement gates were used for the final data processing in the range of 0.096 to 7.036 msec.

#### VTAM System Specifications

##### Transmitter

Transmitter coil diameter: 17.6 m (57.74 ft)  
Number of turns: 4  
Effective coil area: 973 m<sup>2</sup> (10,473 ft<sup>2</sup>)  
Transmitter base frequency: 30 Hz  
Peak current: 225 A  
Pulse width: 3.41 ms  
Wave form shape: Bi-polar trapezoid  
Peak dipole moment: 248,151 N.A.  
Average EM bird terrain clearance: 61 metres (200.1 ft) above ground

##### Receiver

Z-coil diameter: 1.2 m (3.94 ft)  
Number of turns: 100  
Effective coil area: 113.04 m<sup>2</sup> (1,216.4 ft<sup>2</sup>)

#### Airborne magnetometer

The magnetic sensor utilized for the survey was Geometric optically pumped caesium vapor magnetic field sensor mounted 13 metres (42.65 ft) below the helicopter ... The sensitivity of the magnetic sensor is 0.02 nannoTesla (nT) at a sampling interval of 0.1 seconds.

#### Radar altimeter

A Terra TRF 3000/TR140 radar altimeter was used to record terrain clearance. The antenna was mounted beneath the bubble of the helicopter cockpit.

#### GPS navigation system

The navigation system used was a Geotech PC104 based navigation system utilizing a NovAtel's WAAS (Wide Area Augmentation System) enabled GPS receiver. Geotech navigate software, a full screen display with controls in front of the pilot to direct the flight and a NovAtel GPS antenna mounted on the helicopter tail ... As many as 11 GPS and two WAAS satellites may be monitored at any one time. The positional accuracy of circular error probability (CEP) is 1.8 m (5.9 ft). The co-ordinates of the block were set-up prior to the survey and the information was fed into the airborne navigation system.

#### Digital acquisition system

A geotech data acquisition system recorded the digital survey data on an internal compact flash card. Data is displayed on an LCD screen as traces to allow the operator to monitor the integrity of the system. (Sampling rates were as follow: THEM = 0.1 sec, Mag. = 0.1 sec., GPS position = 0.2 sec, and Radar altimeter = 0.2 sec.)

#### Base station

A combined magnetometer/GPS base station was utilized on this project. A Geometric Caesium vapor magnetometer was used as a magnetic sensor with a sensitivity of 0.001 nT. The base station was recording the magnetic field together with the GPS time at 1 Hz on a base station computer.

The base station magnetometer sensor was installed (118° 57.2481' W., 50° 50.6504' N.); away from electric transmission lines and moving ferrous objects such as motor vehicles. The base station data were backed up to the data processing computer at the end of each survey day.

Prikhodko, A. Et al.; 2012: pp. 5-10.

A complete report of that work by Alexander Prikhodko et al. of Geotech Ltd. forms Appendix 'A' of this report.

#### 5.1.2 Prospecting and Examinations of Mineralization

A total of 33.0 km (20.1 mi) of road and trail was prospected with varying degrees of intensity throughout the property-area (Table 9)(Figure 3). An estimated 33 hectares (81.5 acres) of area was prospected assuming an average investigation of a 10-m width from the centre line of a road or trail. Prospecting was conducted primarily to locate various workings and other features recorded in previous reports and other unpublished documents. Standard prospecting methods were employed.

The author examined an estimated 0.6 ha (1.48 A) of workings at the Mile 12 and Cominco zones, and at Chisholm's Zones 1 to 5 of the Central zone (Figures 3, and 45 to 50)(Table 9). Station locations



were established using Garmin XL12 and XL60 GPS units; structural measurements were taken with a Brunton Compass.

A total of 26 rock samples (Table 7) were analyzed at ALS Chemex in North Vancouver, B.C. by an induced coupled plasma (ICP) technique. Over-limit metal concentrations were re-analyzed by atomic absorption and fire assay. Methods of analysis and results form Appendix 'B' of this report.

## 5.2 Results and Interpretation of the Current (2012) Exploration Program

### 5.2.1 Airborne Geophysical Surveys

A. Prikhodko et al. (2012) (Appendix 'A') presented their conclusions regarding the data from the 2012 airborne magnetic and electromagnetic surveys as follows:

... Based on the geophysical results obtained, a number of TEM anomalies are identified across the property. In general, these conductive zones and EM anomalies correspond to lithological broad objects and local targets strongly associated with magnetic dyke similar anomalies as observed in the Time-constant (Tau) image presented with the calculated vertical magnetic gradient (GVC) contours (Appendix 'A').

The local conductive targets are presented in the RDIs of L1340 and L1371 (Figures 43 and 44) (Appendix 'A'). The approximate depths to tops of the targets is around 50 metres (164 ft).

One of the lithological conductors is presented in RDI section for L1170 (Figures 43 and 44) (Appendix 'A').

A power line is identified toward the south-eastern part of the property. Caution is recommended during further interpretation; as such cultural components might affect the geological response inherent in the data.

We recommend a detailed interpretation of the available geophysical data, in conjunction with the geology. It will include resistivity depth imaging of more surveyed lines and Maxwell modelling for the local conductors prior to ground follow up and more drill testing.

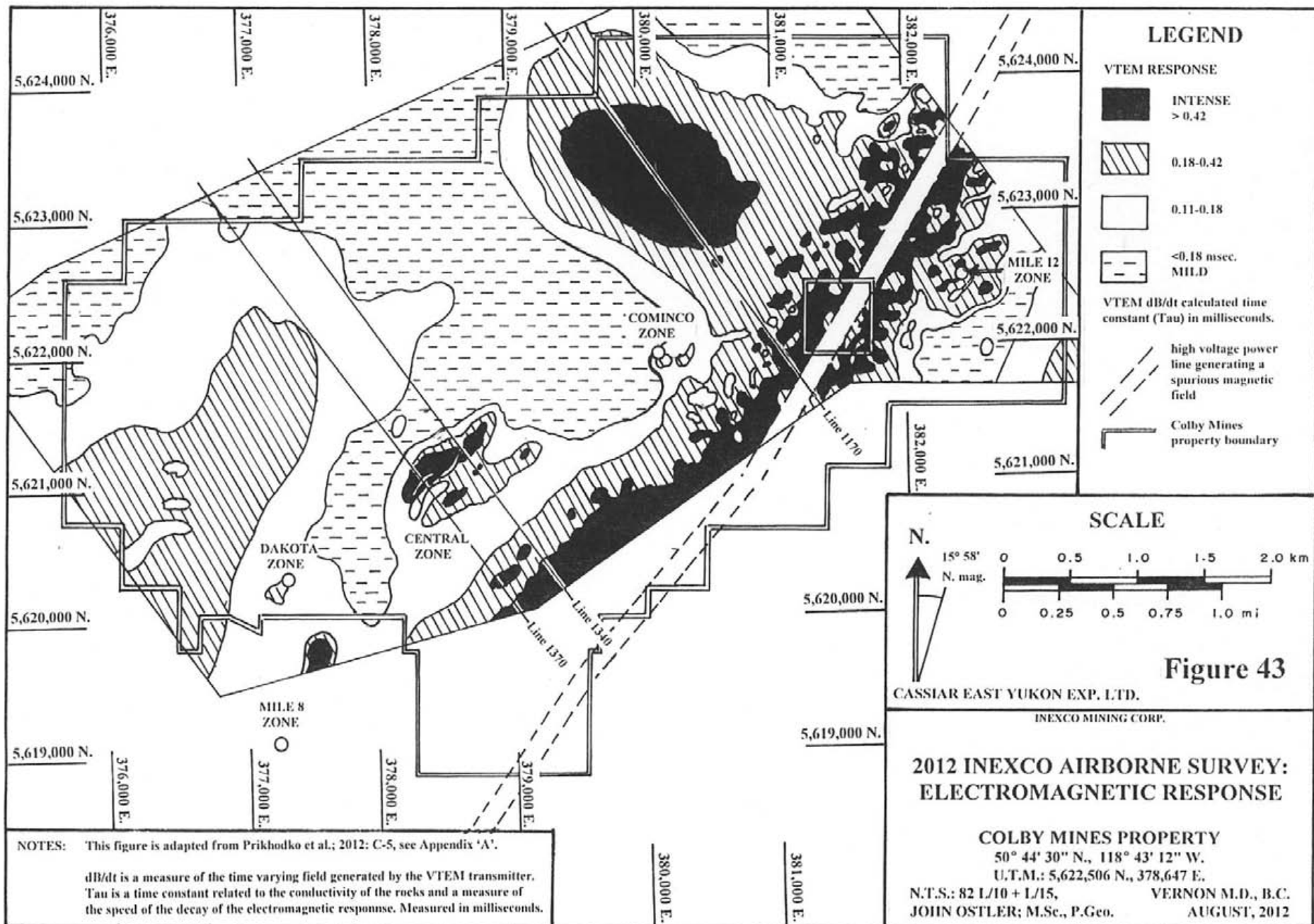
Prikhodko, Alexander, Orta, Marta  
and Venter, Nick; 2012: p. 17.

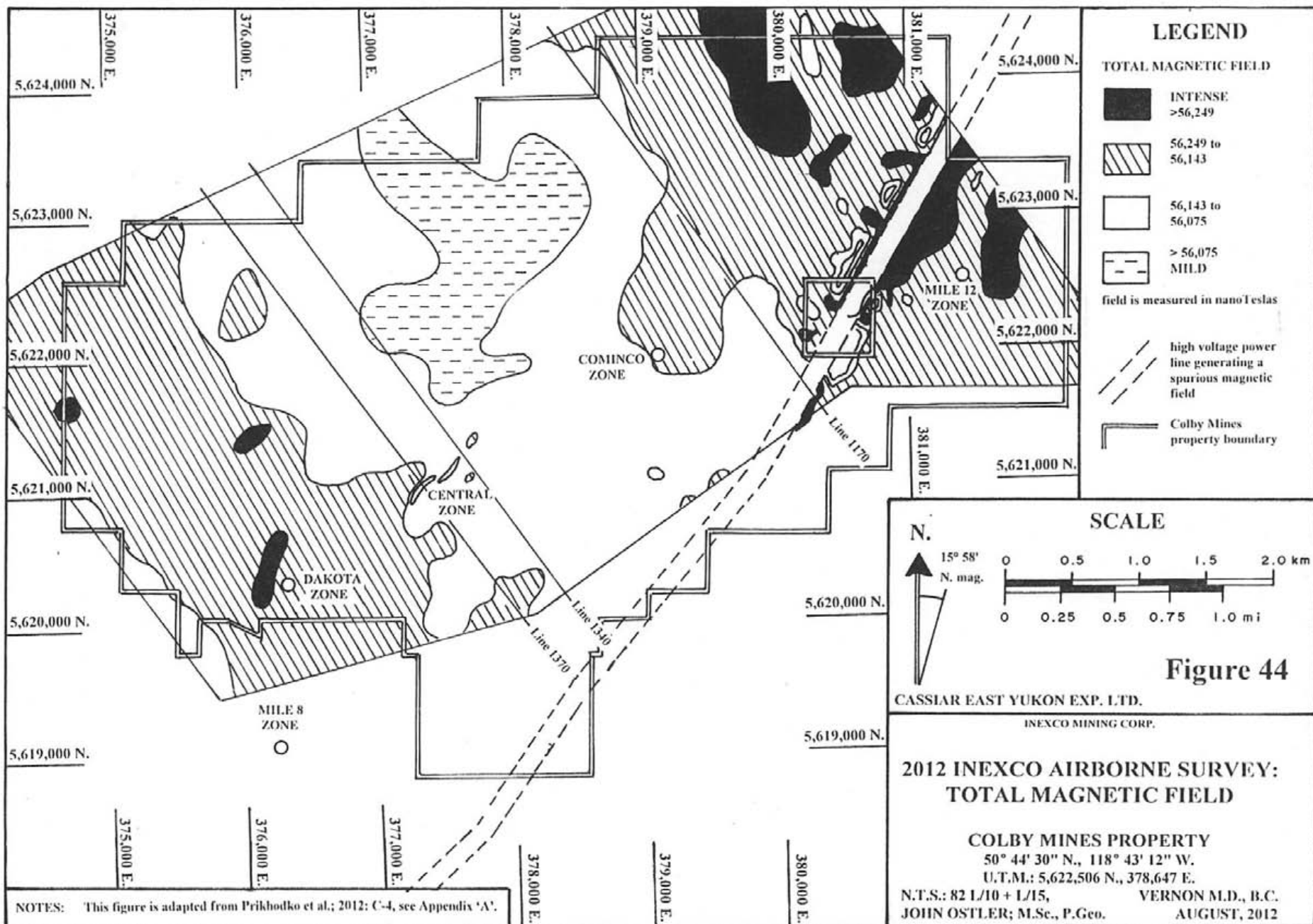
The current (2012) airborne magnetic survey provides an intermediate-level view of the total magnetic field across the property (Figure 44). It is more detailed than the results of the regional aeromagnetic survey across the property-area (Figure 39) and displays larger scale features than do the ground magnetic surveys conducted by Cominco in 1964 (Figure 5), by Colby Mines in 1973 (Figure 9N and 9S), and by Union Oil in 1976 (Figure 37).

Both the regional and current airborne magnetic survey results indicate the presence of a significant magnetic "low" north of the Central zone and northwest of the Cominco zone in the northwestern part of the property-area. Previous geological mapping indicates that this "low" was the result of the emplacement of a metamorphic plume related to the Cretaceous-age Shuswap metamorphic complex resulting in the conversion of rocks to granulite-grade gneiss and migmatite. Probably, migration of fluids carrying sulphide minerals away from the plume is the direct cause of the magnetic "low". The general pattern of low magnetism across the central part of the property-area is disturbed by a partial band of higher magnetism related to the stratigraphy hosting the Central and Cominco zones. This may be due to partial flushing of magnetic sulphide minerals from the rocks adjacent to mineralization in those zones.

If the mineralization in these two zones is a remnant of previously more extensive mineralization, then that mineralization must pre-date emplacement of the Cretaceous-age Shuswap metamorphic complex. Local geological mapping indicates that mineralization post-dates deposition of the local meta-sedimentary rocks in the early Palaeozoic Era. This would broadly confine the age of deposition of mineralization in the property-area to Early Palaeozoic to Cretaceous.

The area of low total magnetic field intensity in the central part of the property-area is flanked to the northeast and southwest by areas where the rocks are much more magnetic, and presumably more sulphide rich. Of particular interest are the area extending from the Mile 8 zone on the TXX-Kingfisher property northwestward through the Dakota zone to north of Kingfisher Creek on the south-central part of the COLBY STAR (854163) claim, and the area extending northwestward from the Mile 12 zone to the northern property boundary. The presence of sulphide mineralization near the Dakota zone is indicated by previous soil survey in that area (Figure 12). The presence of sulphide mineralization northwest of the Mile 12 zone is indicated by previous soil survey around that zone (Figure 7) and by ground magnetic survey just west of it (Figure 5). A significant ground-magnetic anomaly from the 1964 Cominco survey occurs in the northeastern part of the property coincident with the largest magnetic anomaly in that area generated by the current (2012) survey (Figures 5 and 44).





The local magnetic field generated by the high-voltage power line that crosses the property-area just northwest of the Mile 12 zone disrupts the pattern of magnetic results from the current (2012) airborne survey along the power line right of way.

The pattern of electromagnetic responses across the current (2012) survey-area confirms that of the magnetic data (Figures 43 and 44). The pattern of electromagnetic response across the magnetic "low" is essentially flat, as could be expected. Between the area of the magnetic "low" and the more highly magnetic rocks in the northeastern part of the property-area is an intense electromagnetic anomaly which indicates an area of rapid change in magnetic field strength. The power line generates a complex pattern of electromagnetic responses that effectively mask those of the current (2012) survey along the power line right of way. There is a distinct pattern of electromagnetic response related to the Mile 12 zone which is cut-off by disturbance by the power line on its northwestern side. Mineralization of the Central zone is clearly illustrated by the electromagnetic response in that area. As well, the two mineralized zones discovered during 1974 in "pure marble" southeast of the drilling area are accompanied by electromagnetic responses. There is an intense electromagnetic response located along the southeastern boundary of the current (2012) survey-area that crosses the power line at a low angle. This rapid change in the local magnetic field may indicate either the presence of magnetic rocks just south of the survey area or the presence of a "wet" fault structure beneath the swamps of Danforth Creek.

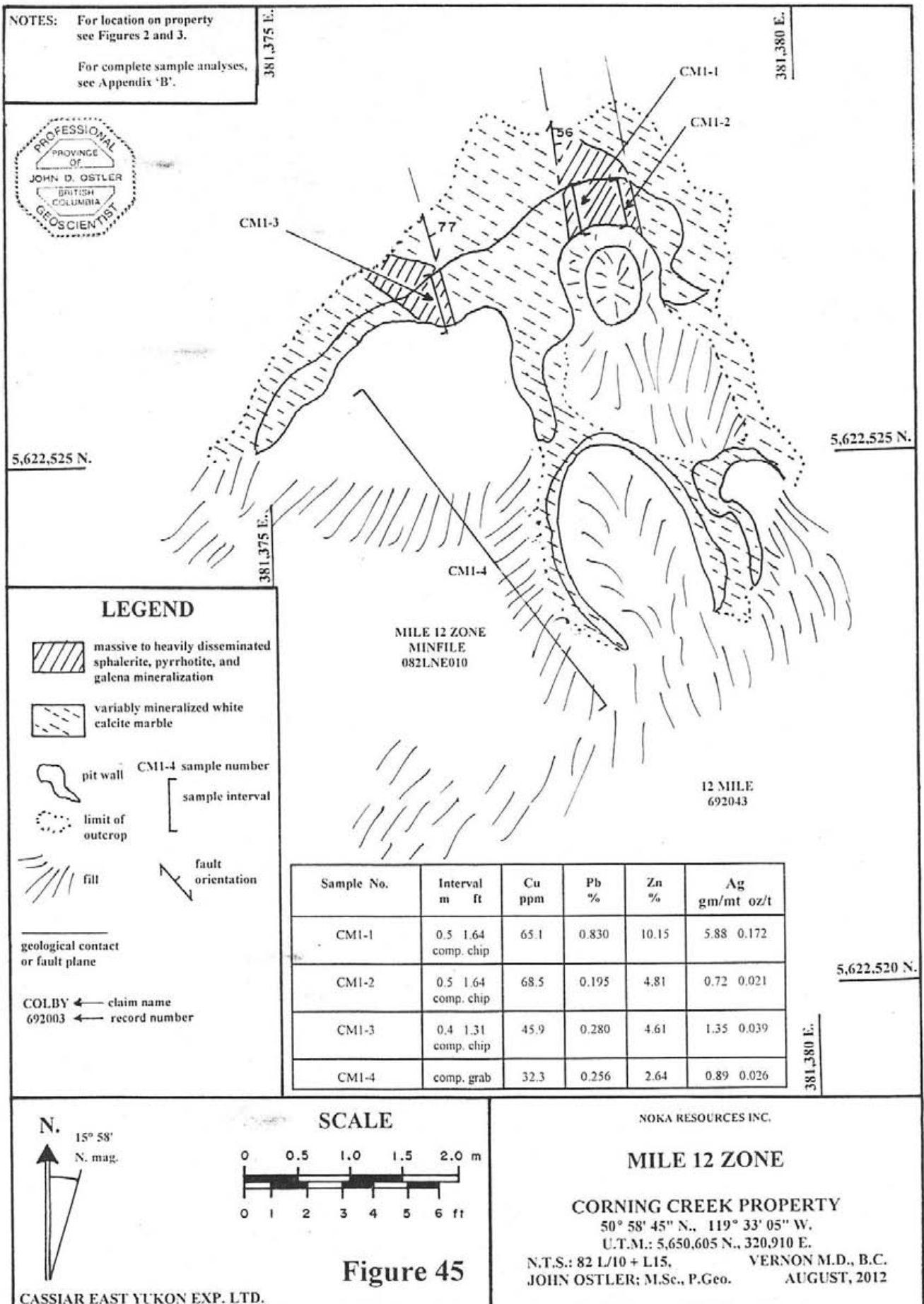
#### 5.2.2 Prospecting, and Examinations of Mineralization

Prospecting during the current (2012) exploration program resulted in the location and identification of workings in the major mineralized zones in the property-area, which greatly facilitated examination and sampling of them.

The author examined and sampled mineral showings in the Mile 12, Cominco and Central zones (Figures 45 to 50) (Table 7) (Appendix 'B'). For a discussion of the character and tenor of mineralization, see Section 3.4 of this report.

The showings of the Mile 12 zone are hosted by a single trench located on the eastern side of the old Kingfisher-Three Valley road on the 12 MILE (692043) claim. The trench appears to have been subjected to



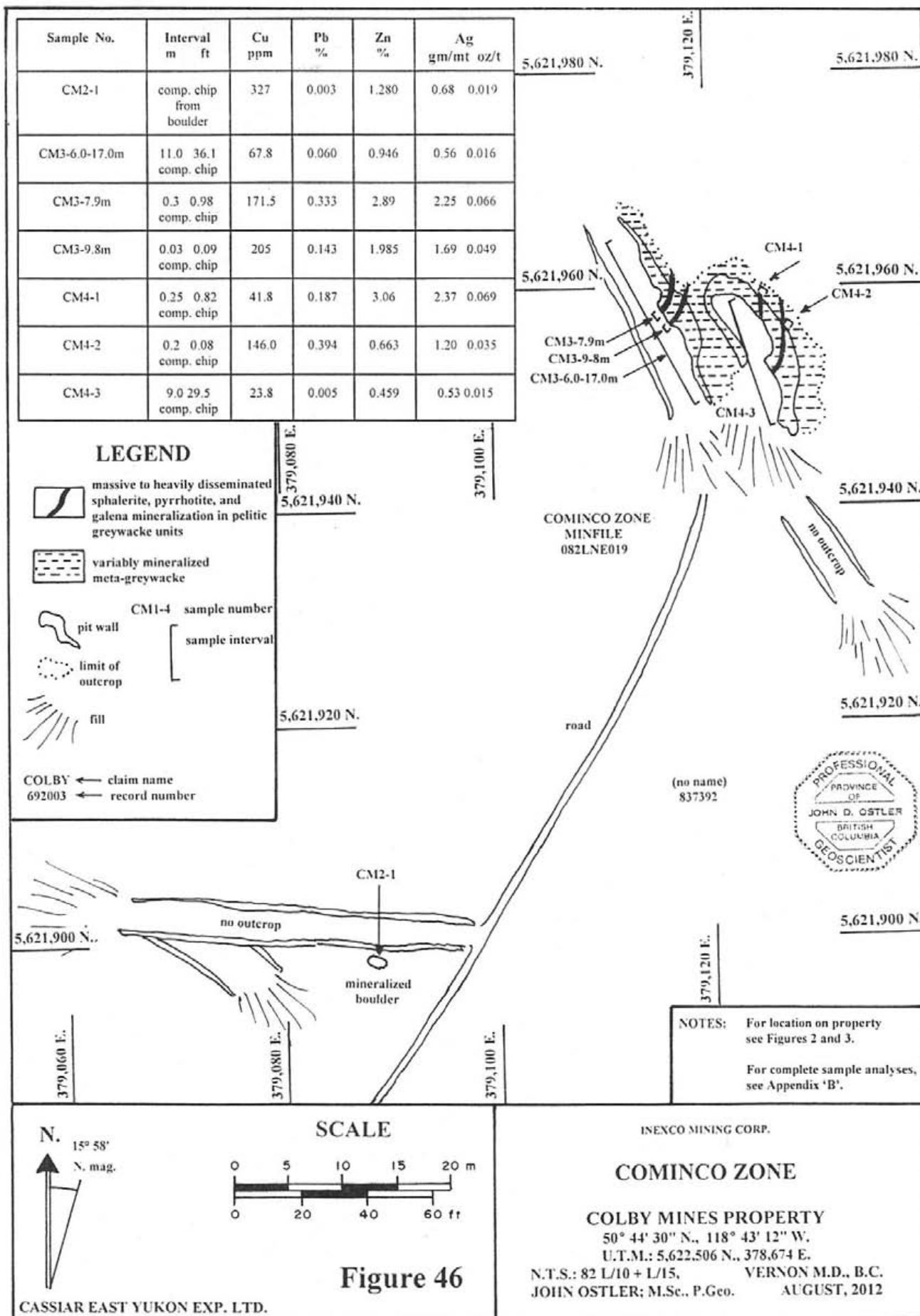


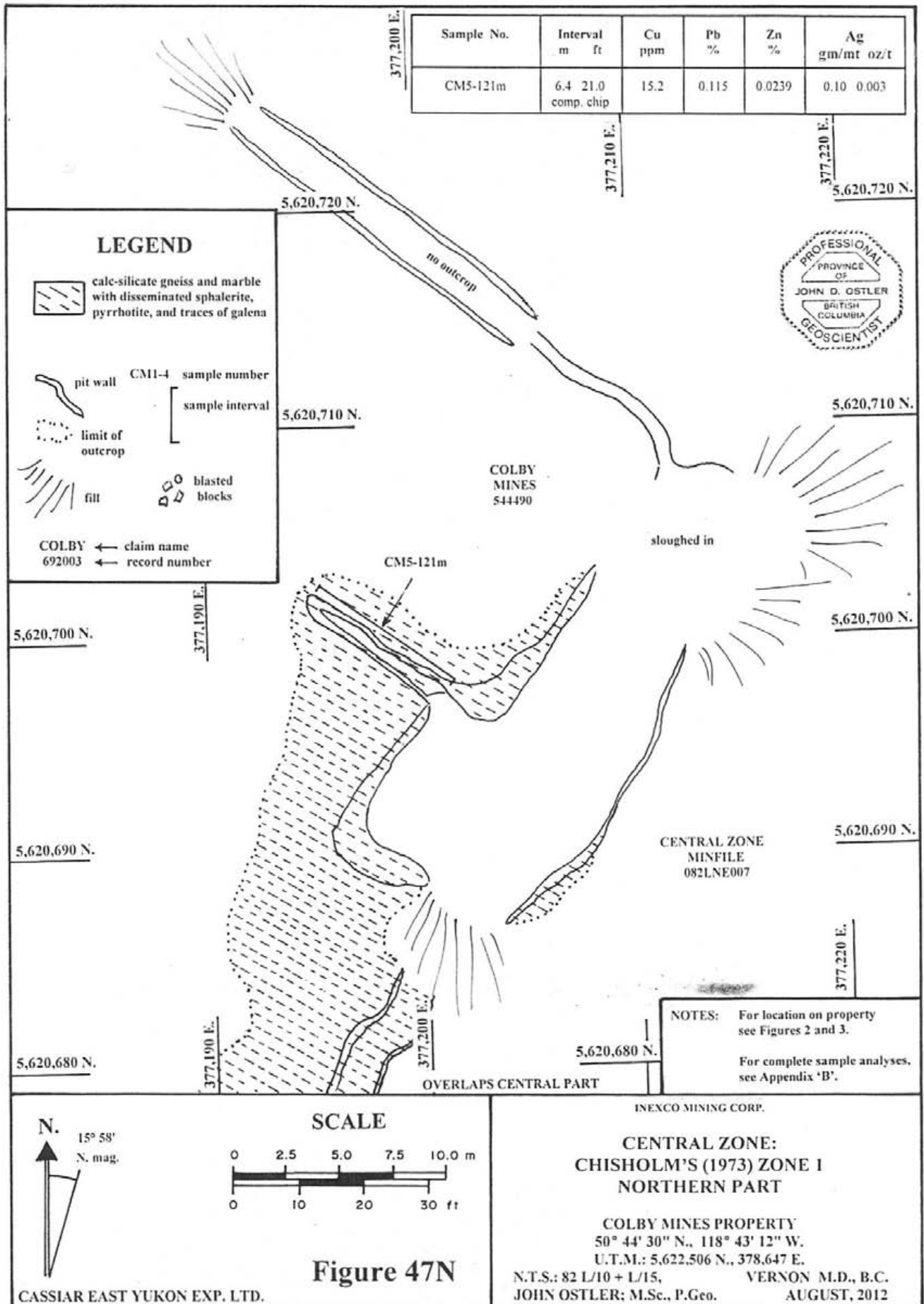
several blasts and bulldozer pushes that occurred at different times. This may be the reason for the complex profile of the trench (Figure 45).

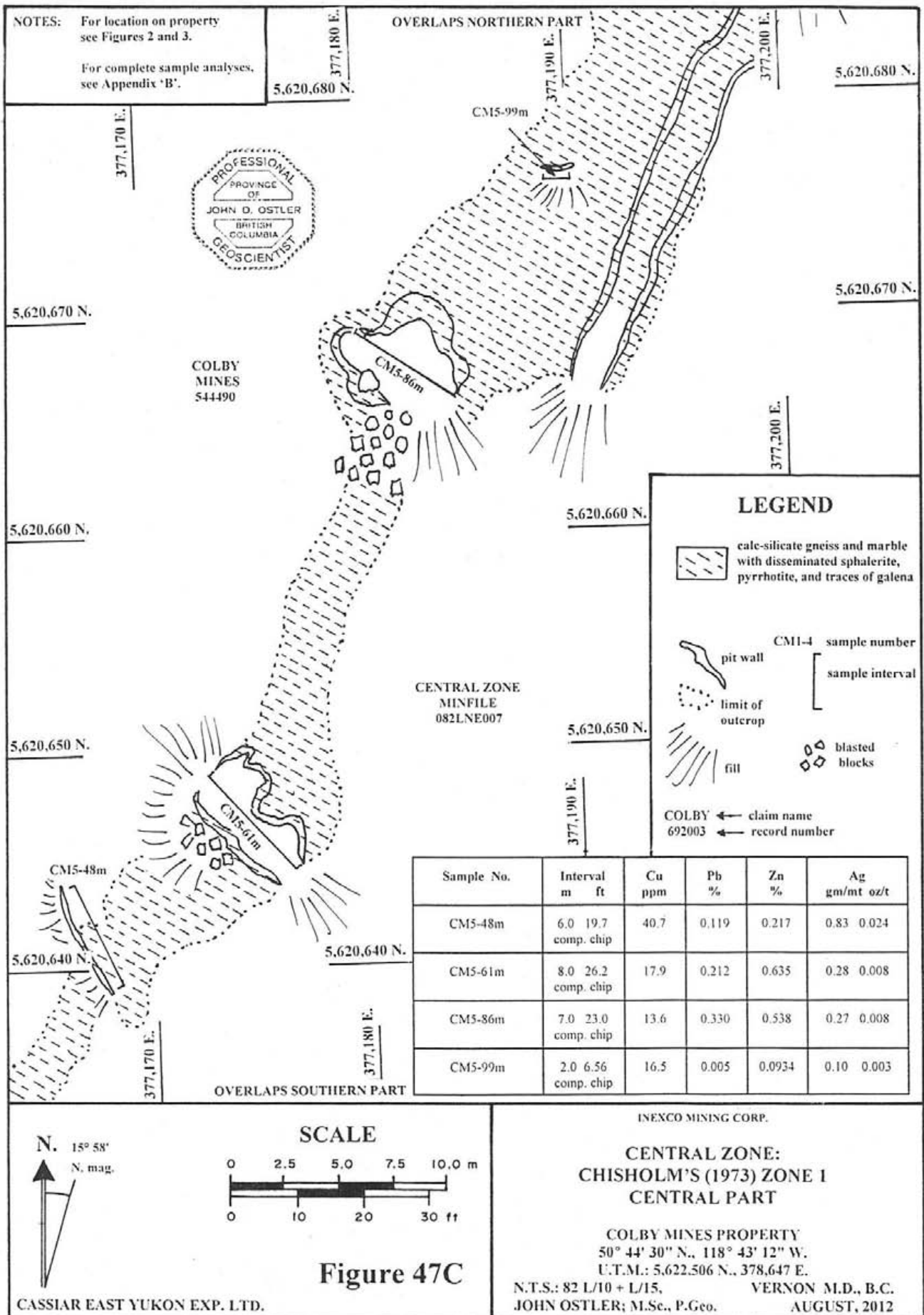
The host rock there is marble containing about 60% white calcite and 40% light green diopside. Throughout the marble are rusty weathering bands of pyrrhotite that weather to hematite and orange limonite, sphalerite that weathers to purple limonite, and traces of galena. Samples CM1-1 to CM1-3 were taken from bands of massive and heavily disseminated pyrrhotite-sphalerite mineralization. Concentrations of lead, zinc, and silver in those three samples range from 0.830% lead, 10.15% zinc, and 5.88 gm/mt (0.172 oz/ton) silver in sample CM1-1 to 0.280% lead, 4.61% zinc, and 1.35 gm/mt (0.039 oz/ton) silver in sample CM1-3. Sample CM1-4 was a composite grab and chip sample of the rock debris occurring across the trench floor. It contained 0.256% lead, 2.64% zinc, and 0.89 gm/mt (0.026 oz/ton) silver, which the author assumes is close to the average tenor of mineralization in the area of the trench.

Three bulldozer trenches and a blast pit located in the northern part of the (no name) (837392) claim comprise the Cominco-zone workings (Figure 46). Chips from a boulder beside the most southerly trench, sample CM2-1, contains 0.0030% lead, 1.28% zinc, and 0.68 gm/mt (0.019 oz/ton) silver. There is no outcrop in the floor of the trench; the author assumes that outcrop was not encountered there.

The main Cominco bulldozer trench and the blast pit were excavated into the western and southeastern sides respectively of a rock knob. There, the host rock is calc-silicate schist that originally was a series of calcareous greywacke beds. Pyrrhotite-sphalerite mineralization is concentrated in the upper pelitic turbidite 'E' units of the graded beds. This resulted in thin bands of massive to heavily disseminated mineralization from 2 to 25 cm (0.8 to 10 inches) thick separated by broader intervals of very sparsely disseminated mineralization. Four samples, CM3-7.9m, CM3-9.8m, CM4-1, and CM4-2, were taken from turbidite pelitic 'E' units. They ranged from sample CM4-1 which contained 0.187% lead, 3.06% zinc, and 2.37 gm/mt (0.069 oz/ton) silver, to sample CM4-2 which contained 0.394% lead, 0.663% zinc, and 1.20 gm/mt (0.035 oz/ton) silver. The two composite chip samples taken from all of the material in the two trenches contained: in sample CM3-6.0-17.0m 0.060% lead, 0.946% zinc, and 0.56 gm/mt (0.016 oz/ton) silver, and in sample CM4-3 0.005% lead, 0.459% zinc, and 0.53 gm/mt (0.015 oz/ton) silver. The author assumes that the average tenor of mineralization in the











rock knob is similar to the average of these two samples. Another bulldozer trench, located south of the rock knob, uncovered little outcrop and no significant mineralization.

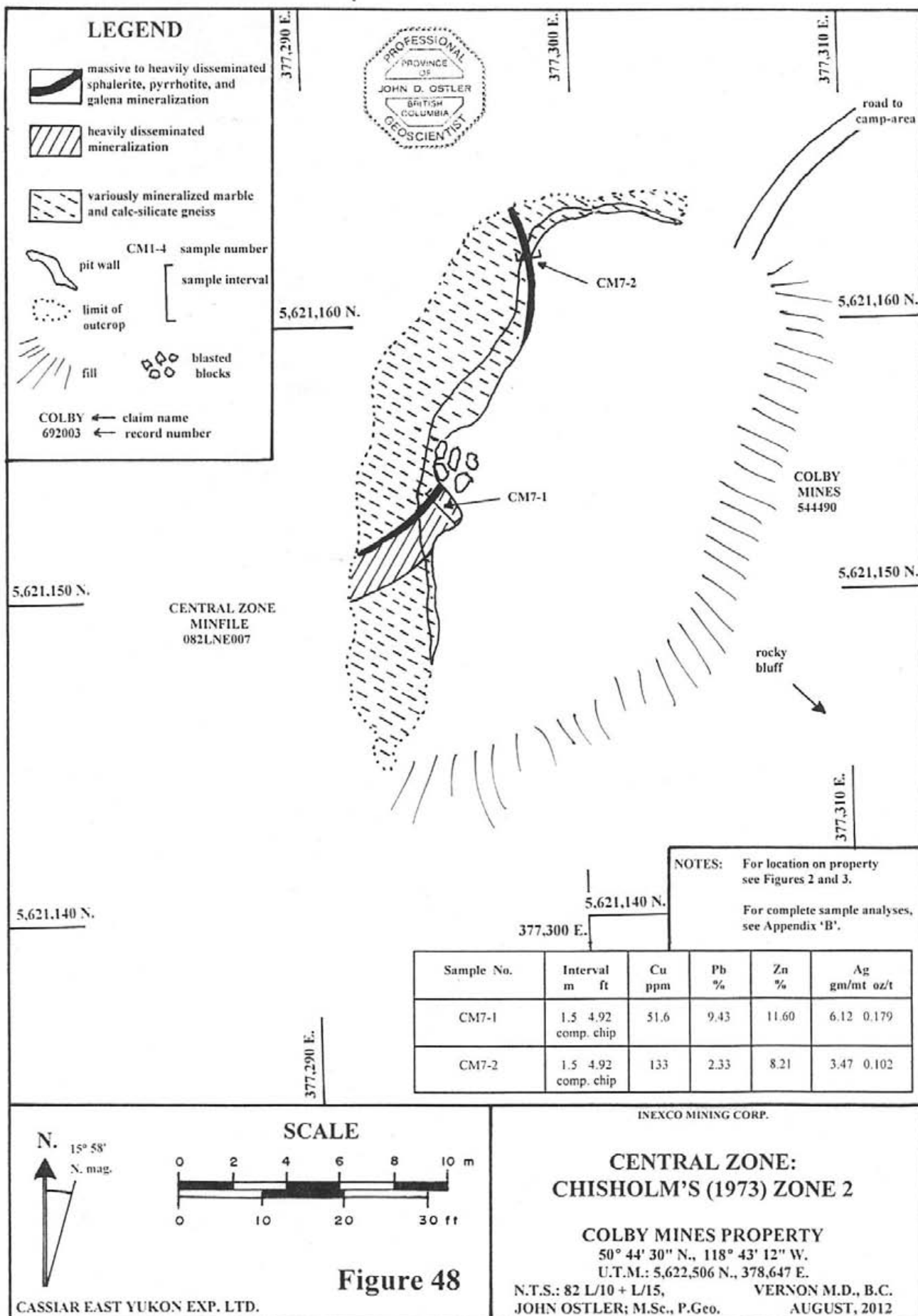
E.O. Chisholm (1973) examined six areas of mineralization that had been stripped at that time in the Central zone, all of which are located on the current COLBY MINES (544490) claim. He provided a general map of all of the zones and plans of the workings of his zones 1, 5, and 6. The results of his sampling are in Table 3. Presently, zones 1 and 4 closely resemble their forms when E.O. Chisholm sampled them in 1973. Zones 2, 3, and 5 have been blown apart subsequent to Chisholm's examination of them, presumably to provide physical work for assessment credit. They no longer resemble the workings that Chisholm sampled in 1973 (Figures 8, 47N to 47S, and 48 to 50). The author could not positively identify Chisholm's zone 6.

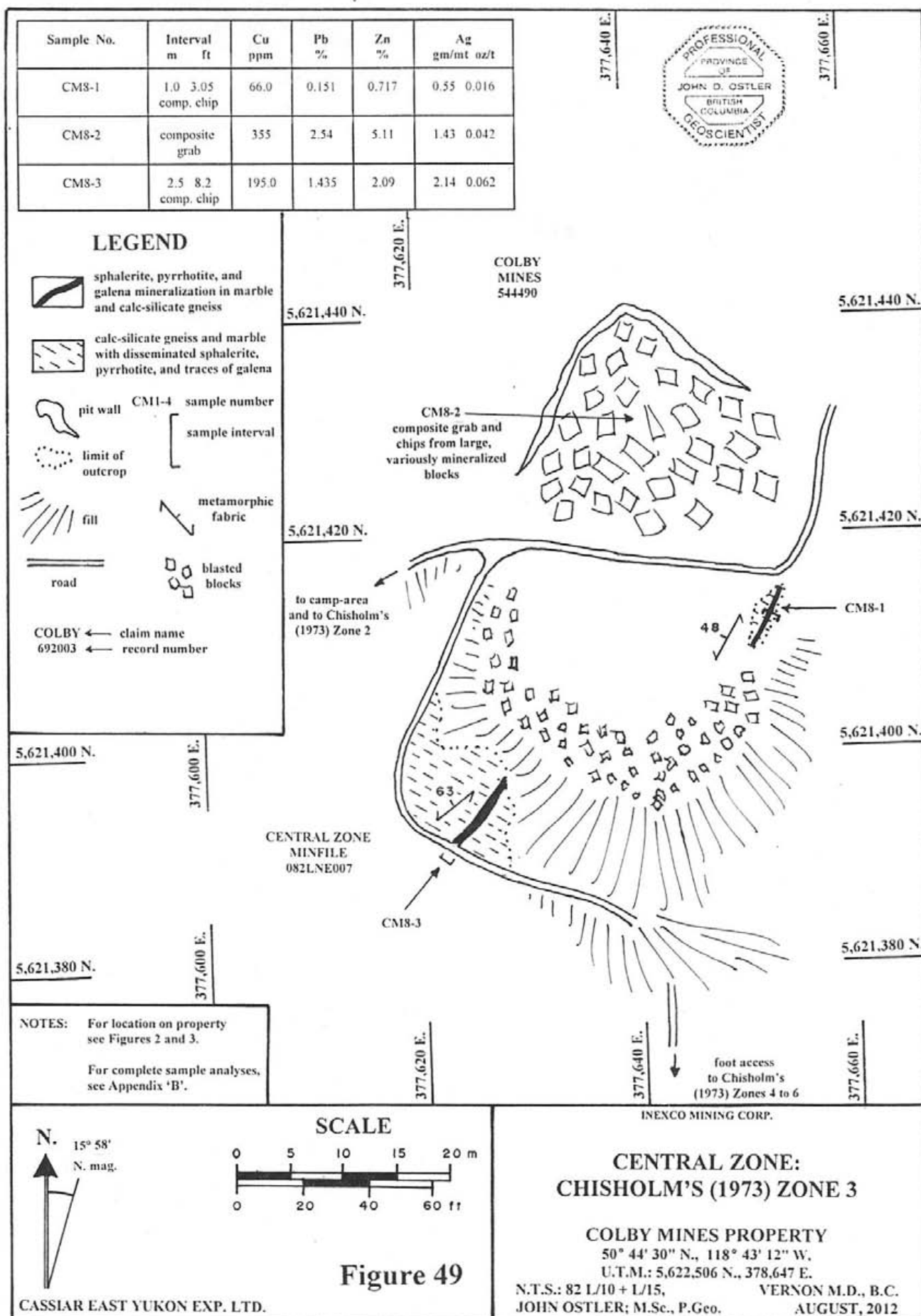
Zone 1 occupies a prominent north-northeasterly trending nose on a generally southeasterly facing slope. Its resistance to weathering seems to be due to a high quartz content in the gangue associated with pyrrhotite-sphalerite +/- galena mineralization.

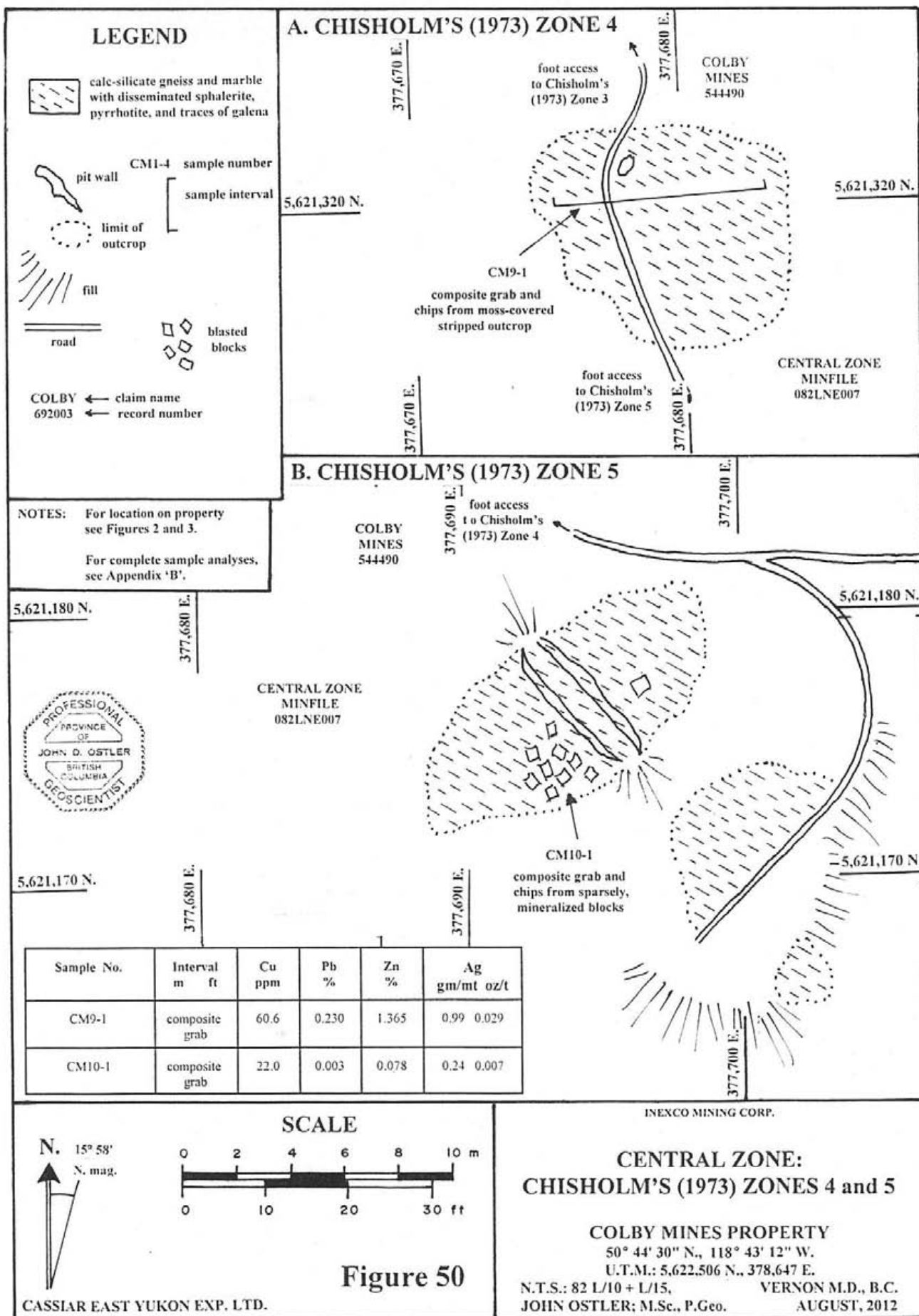
Mineralization occurs in lenses of massive and heavily disseminated sulphides in a quartz-orthoclase gangue hosted in sparsely mineralized calc-silicate gneiss and marble. The author presumes that mineralization and its associated gangue evolved from a single-phase fluid that separated into sulphide and silicate phases due to the decline of confining pressure and/or temperature during ascent and emplacement. The quartz associated with mineralization is commonly difficult to discern in hand specimen from that associated with the host rocks. A petrographic study could be employed to sort them out.

The author sampled several cuts across the stripped outcrop in the hope of repeating Chisholm's 1973 sampling (Figures 47N to 47S). Unfortunately, Chisholm's sampling locations could not be identified with certainty on the ground, and the author's sample-metal concentrations differed significantly from those of the earlier sampling (Tables 3 and 7). The seven samples that the author collected from zone 1 contained an average of 0.185% lead, 0.739% zinc, and 0.38 gm/mt (0.011 oz/ton) silver.

Chisholm's zone 2 was developed by a bulldozed trench located atop a bluff of marble and calc-silicate gneiss located just west of the camp area (Figure 8). A 1.5-m (4.92-ft) thick band of massive and heavily disseminated pyrrhotite-sphalerite-galena mineralization is exposed in the back wall of the trench.









The author sampled it at two locations (Figure 48) (Table 7). The average metal concentrations of the two samples are 5.88% lead, 9.91% zinc, and 4.80 gm/mt (0.139 oz/ton) silver. The comparatively high lead and silver concentrations in these samples seems to be related to the relative abundance of galena in the mineralization at this location.

Chisholm's zone 3 is located northeast of the camp-area (Figures 8 and 49). Currently, the showings-area is covered by an extensive bulldozer trench. A small outcrop containing a 1-m (3.05-ft) thick segregation of lean pyrrhotite-sphalerite mineralization is exposed at the eastern margin of the trench. The showings in the back wall area of the trench has been blasted into heaps of large variously mineralized blocks. A 2.5-m (8.20-ft) thick zone of massive and heavily disseminated pyrrhotite-sphalerite-galena mineralization occurs in calc-silicate gneiss and marble in outcrop down hill from the western edge of the trench. Of the three samples taken from this working, sample CM8-2 probably most represents the tenor of the mineralized zone in this area. It is a composite chip sample taken from the blocks in the northern part of the trench. It contains 2.54% lead, 5.11% zinc, and 1.43 gm/mt (0.042 oz/ton) silver (Table 7). Like at the zone-2 trench, the galena content in the mineralization is comparatively high, presumably resulting in elevated lead and silver concentrations.

Chisholm's zone 4 is located on a resistant siliceous knob that is variously mineralized with pyrrhotite and sphalerite with traces of galena (Figures 8 and 50). The stripped outcrop on the knob is mostly moss-covered now. The author's sample from zone 4, CM9-1, was a composite grab sample of rock across the knob that could be broken off it. That sample contained 0.230% lead, 1.365% zinc, and 0.99 gm/mt (0.029 oz/ton) silver.

Chisholm's zone 5 workings are hosted by calc-silicate gneiss and marble, sparsely mineralized with pyrrhotite and sphalerite. Subsequent blasting has masked the 1973 sample sites (Figures 8 and 50). The author's sample from this working, CM10-1, was a composite grab sample taken from blocks excavated from a trench cut across the main outcrop. It contained 0.003% lead, 0.078% zinc, and 0.24 gm/mt (0.007 oz/ton) silver.

6.0 Duration, Area, Location, Management, and Cost of the Current Exploration Program

Table 8  
Duration of the 2012 Exploration Program

Name	Airborne Geophysics	Working Exam. + Sampling	Prospecting	Tspt. + weather days	Research + data processing + reporting	Total man-days
Adrian Sarmsag Aurora, Ontario					2.000	2.000
Nick Venter Aurora, Ontario					4.000	4.000
Paul Taylor Aurora, Ontario	3.000			4.000		7.000
Yves Larouche Aurora, Ontario	2.000			4.000		6.000
Ioan Serbu Aurora, Ontario	2.000			4.000		6.000
Marta Orta Aurora, Ontario					2.000	2.000
Alexander Prikhodko, P.Geo., Aurora, Ontario					1.000	1.000
Liz Mathew Aurora, Ontario					6.000	6.000
Craig Lynes Grindrod, B.C.			12.000		1.000	13.000
Kevin Show Enderby, B.C.			12.000			12.000
John Ostler, M.Sc., P.Geo. West Vancouver, B.C.		6.500		0.166 (prorated)	40.750	47.416
David Nunuk, B.Sc. North Vancouver, B.C.					7.500	7.500
Bruce Squinas Williams Lake, B.C.		3.000		0.166 (prorated)		3.166
Total man-days	7.000	9.5000	24.000	12.332	64.25	117.082

NOTE: The author's sampling program was conducted out of a camp near Shuswap Lake as a minor program at the same time that another main program was being conducted. Thus some time and some of the camp and transport costs were prorated between the two programs.

Helicopter-borne geophysical surveys were flown on March 6 and 7, 2012. Geophysical data manipulation and reporting continued until April, 2012. Prospecting was conducted intermittently from May 29 to June 13, 2012. The author's sampling was conducted on June 11, 15, 21, and 22, 2012. The author's research, data compilation, and reporting was conducted intermittently from January 19, 2012 until the date of this report.

A total of 117.082 man-days (117.082 days X 8 = 936.656 man-hours) of work was conducted during the current (2012) exploration program.

**Table 9**  
**Area and Location of the 2012 Exploration Program**

Activity	Area in hectares (Acres)	Claims	
		Name	Record No.
Airborne Geophysical Survey	2,259 (7,411.4)	COLBY MINES	544490
		F-X ZINC	544492
		COLBY	692003
		FX- ZONE	692004
		FX-N	692023
		12 MILE	692043
		COLBY EAST	692083
		FX-N1	692134
		FX - N2	692303
		10 MILE - COLBY	705050
		COLBY 10 MILE	705919
		COLBY - DON	705902
		(no name)	837392
		COLBY-STAR	854163
		COLBY-KING	854164
BLACK JACK COLBY	864827		
COLBY TRIO	864847		
Prospecting	33 (81.5)	COLBY MINES	544490
		COLBY	692003
		FX- ZONE	692004
		FX-N	692023
		12 MILE	692043
		COLBY EAST	692083
		FX-N1	692134
		10 MILE - COLBY	705050
		COLBY 10 MILE	705919
		(no name)	837392
		COLBY-STAR	854163
		COLBY-KING	854164
		BLACK JACK COLBY	864827
		COLBY TRIO	864847
		Examination and Sampling of Workings	0.6 (1.48)
12 MILE	692043		
(no name)	837392		

**Table 10**  
**Contractors for the 2012 Exploration Program**

<b>Contractor</b>	<b>Activities</b>
Cassiar East Yukon Expediting Ltd. 1015 Clyde Avenue West Vancouver, British Columbia V7T 1E3 (604) 926-8454	Examination and sampling of workings, 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
Geotech Ltd. 245 Industrial Parkway North Aurora, Ontario L4G 4C4 (905) 841-5004	Airborne geophysical surveys
Rich River Exploration Ltd. Box 131 Grindrod, British Columbia V0E 1V0 (250) 832-2089	Prospecting
Arcprint and Imaging 4305 Dawson Street Burnaby, British Columbia V5C 4B4 (604) 293-0029	Scale changes, scans and copy of maps, figures, and text

Table 11  
Cost of the 2012 Exploration Program

Item		
Exam. and sampling of workings (Cassiar East Yukon Exp. Ltd.)		
Wages:		
John Ostler, M.Sc., P.Geo., 47.466 days @ \$500/day .....	\$ 23,733.00	
David Nunuk, B.Sc., 7.5 days @ \$280/day .....	\$ 2,100.00	
Bruce Squinas, 3.166 days @ \$280/day .....	\$ 886.48	
	\$ 26,719.48	\$ 26,719.48
Transport:		
Pick-up truck, 7.5796 days @ \$100/day (no mileage charge) .....	\$ 797.56	
Gasoline .....	\$ 588.10	
	\$ 1,385.66	\$ 1,385.66
Camp and Crew Costs:		
Hotel and cabin rental .....	\$ 671.08	
Meals and camp food, (\$199.80 of this is H.S.T. exempt) .....	\$ 343.70	
Field supplies .....	\$ 6.83	
	\$ 1,021.61	\$ 1,021.61
Analysis and Assay:		
ICP and over-limit analyses of 26 rocks (A.I.S. Canada Inv. 2646072)	\$ 1,200.87	\$ 1,200.87
Reporting Costs and Office Expenses:		
Maps, reports, and re-scaled base maps, mylar, blackline copies of maps, text, and diagrams, etc .....	\$ 895.65	\$ 895.65
Cost of the Current (2012) Examination and Sampling of workings .....		\$ 31,221.17
H.S.T.: 0.12 X \$31,023.37 .....		\$ 3,722.80
Total Cost of the 2012 Examination and Sampling of workings .....		\$34,943.97
Prospecting (Rich River Exploration Ltd.)		
Wages:		
Craig Lynes, 1.0 day @ \$400/day .....	\$ 400.00	
12 days @ \$550/day .....	\$ 6,600.00	
Kevin Show, 12.0 days @ \$350/day .....	\$ 4,200.00	
	\$ 11,200.00	\$ 11,200.00
Transport:		
1 SUV 13 days @ \$150/day inc. gasoline .....	\$ 1,950.00	
Gasoline inc. fuel taxes .....	\$ 633.77	
	\$ 2,583.77	\$ 2,583.77
Camp and Crew Costs:		
Camp food and meals, 24 man-days @ \$80/man/day .....	\$ 1,920.00	
Tools and equipment, 12 days @ \$75/day .....	\$ 900.00	
Satellite phone rental and time, 12 days @ \$30/day .....	\$ 360.00	
	\$ 3,180.00	\$ 3,180.00
Office Expenses:		
Maps, jump drives, etc. ....	\$ 220.40	\$ 220.40
Cost of the Current (2012) Prospecting .....		\$ 17,184.17
H.S.T.: 12% of \$16,550.40 .....		\$ 1,986.04
Total Cost of the 2012 Prospecting .....		\$ 19,170.21

**Table 11 Continued**  
**Cost of the 2012 Exploration Program**

Item		
Airborne Geophysical surveys (Geotech Ltd.)		
Survey Costs:		
Crew and equipment mobilization @ \$22,000 .....	\$ 22,000.00	
	\$ 9,000.00	
Helicopter mobilization @ \$9,000 .....	\$ 29,768.50	
205.3 line-km VTEM survey @ \$145/km .....	\$ 60,768.50	\$ 60,768.50
Fuel Costs:		
Fuel .....	\$ 1,937.43	
Fuel positioning .....	\$ 383.15	
Handling fee .....	\$ 232.06	
	\$ 2,552.64	\$ 2,552.64
<b>Cost of the Current (2012) Airborne Geophysical Surveys .....</b>		<b>\$ 63,321.14</b>
H.S.T. ....		\$ 7,598.54
<b>Total Cost of the Current (2012) Airborne Geophysical surveys ...</b>		<b>\$ 70,919.61</b>
Summary:		
<b>Cost of the Current (2012) Examination and Sampling of workings .....</b>		<b>\$ 31,221.17</b>
<b>Cost of the Current (2012) Prospecting .....</b>		<b>\$ 17,184.17</b>
<b>Cost of the Current (2012) Airborne Geophysical Surveys .....</b>		<b>\$ 63,321.14</b>
		\$ 111,726.48
Total H.S.T. ....		\$ 13,274.38
<b>Total Cost of the Current (2012) Exploration .....</b>		<b>\$125,000.86</b>

**NOTE:** The author's sampling program was conducted out of a camp near Shuswap Lake as a minor program at the same time that another main program was being conducted. Thus some time and some of the camp and transport costs were prorated between the two programs.



## 7.0 CONCLUSIONS AND RECOMMENDATIONS

### 7.1 Interpretation and Conclusions

The current (2012) exploration program comprised three aspects: helicopter-borne magnetic and electromagnetic surveys, prospecting, and sampling and examination of most of the known workings.

Results of the current airborne magnetic survey provide an intermediate-level view of the total magnetic field across the property being more detailed than the regional aeromagnetic survey, while displaying larger scale features than did previous ground magnetic surveys.

Both the regional and current airborne magnetic survey results indicate the presence of a significant magnetic "low" north of the Central zone and northwest of the Cominco zone in the northwestern part of the property-area. Previous geological mapping indicates that this "low" was the result of the emplacement of a metamorphic plume related to the Cretaceous-age Shuswap metamorphic complex resulting in the conversion of rocks to granulite-grade gneiss and migmatite. Probably, migration of fluids carrying sulphide minerals away from the plume is the direct cause of the magnetic "low". The general pattern of low magnetism across the central part of the property-area is disturbed by a partial band of higher magnetism related to the stratigraphy hosting the Central and Cominco zones. This may be due to partial flushing of magnetic sulphide minerals from the rocks adjacent to mineralization in those zones.

The area of low total magnetic field intensity in the central part of the property-area is flanked to the northeast and southwest by areas where the rocks are much more magnetic, and presumably more sulphide rich. The two most prospective targets on the property are the area extending from the Mile 8 zone on the TXX-Kingfisher property northwestward through the Dakota zone to north of Kingfisher Creek on the south-central part of the COLBY STAR (854163) claim, and the area extending northwestward from the Mile 12 zone to the northern property boundary on the COLBY KING (854164) claim. The presence of sulphide mineralization near the Dakota zone is indicated by previous soil survey in that area. The presence of sulphide mineralization northwest of the Mile 12 zone is indicated by previous soil survey around that zone and by ground magnetic survey just west of it. A significant ground-magnetic anomaly from the 1964 Cominco survey occurs in the northeastern part of the property coincident with the largest magnetic anomaly in that area generated by the

current (2012) survey.

The pattern of electromagnetic responses across the current (2012) survey-area confirms that of the magnetic data in the eastern and western parts of the property. The power line generates a complex pattern of electromagnetic responses that effectively mask those of the current (2012) survey along its right of way. There is an intense electromagnetic response located along the southeastern boundary of the current (2012) survey-area that crosses the power line at a low angle. This rapid change in the local magnetic field may indicate either the presence of magnetic rocks just south of the survey area or the presence of a "wet" fault structure beneath the swamps of Danforth Creek.

Prospecting during the current (2012) exploration program resulted in the location and identification of workings in the major mineralized zones in the property-area, which greatly facilitated examination and sampling of them.

Mineralization occurs in lenses of massive and heavily disseminated pyrrhotite, sphalerite +/- galena in a quartz-orthoclase gangue hosted in sparsely mineralized calc-silicate gneiss and marble. The author presumes that mineralization and its associated gangue evolved from a single-phase fluid that separated into sulphide and silicate phases due to the decline of confining pressure and/or temperature during ascent and emplacement. There seems to be no preferential emplacement of mineralization in any particular stratigraphic unit; thus, any stratigraphic unit may be prospective. Trigve Høy of the B.C Geological survey (1977) noted that mineralized sections in quartzites are of lower grade but are more continuous along strike with the layering than those in the marbles and that discontinuous high-grade pods are common in the marbles.

E.O. Chisholm's (1973) assumption that sub-vertical shears trending at about 025°-205° were responsible for mineralization is supported by results of the current airborne magnetic survey. In both the eastern and western parts of the property-area broad, north-northeasterly trending bands comparatively high magnetism occur. These could be expressions of conduits carrying pyrrhotite-sphalerite mineralization into the local stratigraphy.

Mineralization could have been deposited in sub-vertical dilations that trended at 055°-235°, parallel

with orientation of the greatest compressional stress. The least compressional stress could have been oriented at 145°-325°. The dominant, right-lateral shear plane would trend at 025°-205° as E.O. Chisholm reported, and a recessive, left lateral shear plane would trend at 085°-265°.

The author's 2012 sampling is insufficient to predict an average tenor of mineralization at the Colby Mines property. In 1974, K.L. Daughtry calculated that Zones 'A' and 'B' in the Central zone could contain 1,672,727 tonnes (1,840,000 tons) of mineralization containing an average of 0.58% lead and 2.60% zinc (Table 5). His resource was calculated from the results of extensive sampling, both from surface exposures and from drill cores. In the author's opinion it is a fairly accurate assessment of the average tenor of mineralization that one could expect to find on the Colby Mines property.

## **7.2 Recommendations**

A first-phase program of soil, ground magnetic and very low frequency electromagnetic surveys is recommended. Grids with east-west trending lines spaced 100 m (328 ft) apart should be established in the prospective areas of both the northeastern and southwestern parts of the property-area. Soil samples should be taken at 50-m (164-ft) intervals and magnetic and electromagnetic readings should be taken at 25-m (82-ft) intervals along the grid lines.

If the results of the first-phase recommended program generate sufficient encouragement, a second-phase exploration program should be conducted. That program should comprise closely spaced ground magnetic surveys over the most encouraging targets and drilling of those targets.

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August 14, 2012





APPENDIX 'A'

REPORT OF AIRBORNE GEOPHYSICAL SURVEYS

**APPENDIX 'B'**

**METHODS and RESULTS of ANALYSES**



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Project: Colby Mines  
 P.O. No.:  
 This report is for 26 Rock samples submitted to our lab in Kamloops, BC, Canada on  
 25-JUN-2012.

The following have access to data associated with this certificate:

ROBERT COLTUKA

JOHN OSTLER

**SAMPLE PREPARATION**

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample Login - Rcd w/o BarCode
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

**ANALYTICAL PROCEDURES**

ALS CODE	DESCRIPTION	INSTRUMENT
Pb-AA62	Ore grade Pb - four acid / AAS	AAS
Zn-AA62	Ore grade Zn - four acid / AAS	AAS
ME-MS61	48 element four acid ICP-MS	

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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*

Signature:

Colin Ramshaw, Vancouver Laboratory Manager



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Sample Description	Method Analyte Units LOR	WEI-21	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Recvd Wt. kg	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cu ppm	Pb ppm	S ppm
		0.02	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01
CM1-1		0.01	5.88	1.44	6	120	1.04	33.7	14.65	30.5	13.15	1.4	6	0.78	65.1	10.80
CM1-2		0.46	0.72	0.22	17	160	0.80	7.90	19.65	14.40	8.22	1.1	4	0.84	68.5	13.40
CM1-3		0.33	1.35	0.26	7	220	0.31	8.03	24.1	17.05	2.84	1.0	5	0.60	45.9	9.04
CM1-4		0.85	0.89	2.40	9	90	0.85	4.65	17.75	10.85	8.94	1.1	7	3.16	32.3	5.58
CM2-1		0.20	0.88	0.18	<5	40	0.73	0.73	12.70	18.50	1.79	3.6	4	0.11	327	10.95
CM3-6.0-17.0m		0.77	0.56	1.11	<5	620	2.12	3.51	16.10	12.05	9.50	1.3	8	1.73	67.8	7.94
CM-7.9m		0.34	2.25	0.42	<5	40	1.62	27.3	11.70	36.2	3.64	1.5	13	1.13	171.5	15.00
CM3-9.8m		0.18	1.69	0.77	<5	1010	1.23	8.89	11.15	28.5	3.92	2.1	10	2.20	205	10.50
CM4-1		0.53	2.37	3.49	<5	170	5.89	20.7	11.65	37.5	12.50	1.2	5	9.08	41.8	5.69
CM4-2		0.37	1.20	0.29	<5	40	0.19	7.73	25.1	15.60	4.68	3.5	6	0.25	146.0	11.75
CM4-3		1.14	0.53	0.76	<5	1870	1.68	3.62	15.75	5.03	6.51	1.0	8	2.05	23.8	2.67
CM5-9.5m		0.99	0.49	0.08	2.7	20	0.08	12.55	3.53	11.75	5.16	5.1	10	0.07	59.9	18.35
CM5-30m		1.30	0.44	0.13	1.0	30	0.10	9.32	3.33	17.80	0.70	1.7	13	0.00	27.2	9.18
CM5-48m		1.23	0.83	1.49	60.8	350	0.57	4.10	0.67	0.66	22.0	2.9	31	0.35	40.7	13.75
CM5-61m		1.19	0.28	0.06	0.5	30	0.08	0.42	3.76	4.08	0.15	2.8	9	<0.05	17.9	8.45
CM5-86m		0.52	0.26	2.13	<5	340	0.71	2.36	12.50	3.95	20.7	2.4	34	0.54	13.0	3.20
CM5-99m		0.88	0.27	5.36	0.2	6170	2.41	1.94	6.81	0.43	75.5	3.1	68	0.91	16.5	3.63
CM5-121m		0.66	0.10	5.46	1.6	2190	1.38	0.15	4.57	0.18	98.1	5.1	56	1.14	15.2	3.14
CM6-CON		0.60	3.83	0.07	1.2	230	0.10	4.40	3.14	14.40	1.84	0.5	13	0.05	67.0	7.88
CM7-1		1.02	6.12	0.06	4.0	50	0.07	19.85	1.06	282	1.10	0.6	13	0.06	51.6	4.84
CM7-2		0.94	3.47	0.47	2.2	30	0.20	20.8	1.69	146.5	9.27	1.6	13	0.77	133.0	8.55
CM8-1		0.67	0.55	0.06	0.9	60	0.10	1.62	3.52	14.65	1.23	0.6	10	<0.05	66.0	4.26
CM8-2		0.69	1.43	0.13	1.0	20	0.82	5.21	7.09	92.9	2.13	7.3	7	0.60	355	21.4
CM8-3		0.25	2.14	0.17	1.5	50	0.09	4.46	1.43	35.4	3.17	2.7	13	0.05	195.0	11.30
CM9-1		0.41	0.89	0.57	0.5	140	0.45	10.10	5.45	17.00	2.71	0.8	12	3.50	60.6	5.60
CM10-1		0.72	0.24	0.07	0.8	500	0.10	0.38	1.26	0.05	2.14	0.5	21	0.10	22.0	3.80



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Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Ca ppm 0.05	Ce ppm 0.05	Hf ppm 0.1	In ppm 0.005	K % 0.01	La ppm 0.5	Li ppm 0.2	Mg % 0.01	Mn ppm 5	Mo ppm 0.05	Nb % 0.01	Nb ppm 0.1	NI ppm 0.2	P ppm 10	Pb ppm 0.5
CM1-1		4.68	0.26	0.1	0.076	0.20	8.9	10.9	1.76	226	1.69	0.47	2.0	4.6	1940	8300
CM1-2		1.54	0.29	0.1	0.041	0.05	7.2	2.6	2.26	140	1.43	0.04	0.7	4.3	1820	1950
CM1-3		1.43	0.22	0.1	0.033	0.07	3.4	4.0	2.14	137	1.88	0.05	0.6	3.6	1210	2800
CM1-4		6.76	0.14	0.1	0.041	1.37	4.4	13.5	2.86	172	1.96	0.63	3.1	2.8	860	1555
CM2-1		2.52	0.24	0.1	0.437	0.02	1.8	5.8	6.64	398	5.82	0.09	0.3	3.5	710	33.1
CM3-6.0-17.0m		6.87	0.18	0.3	0.109	0.65	8.0	13.7	5.73	420	1.30	0.15	2.7	2.9	2760	597
CM-7.9m		4.42	0.31	0.1	0.284	0.18	3.3	5.1	6.47	231	3.08	0.05	4.7	3.9	4220	3330
CM3-9.8m		8.93	0.36	0.1	0.177	0.53	3.2	12.4	6.88	231	2.90	0.06	3.2	4.9	3610	1425
CM4-1		17.40	0.16	0.7	0.198	1.55	7.9	20.2	5.04	414	2.07	0.60	20.1	2.1	3250	1870
CM4-2		1.15	0.25	0.1	0.071	0.17	3.1	2.0	1.23	244	1.83	0.02	1.9	7.9	660	3940
CM4-3		4.22	0.08	0.2	0.051	0.47	4.8	13.4	3.46	260	0.95	0.11	5.1	2.2	1340	484
CM5-9.5m		0.64	0.34	<0.1	0.023	0.01	2.2	2.6	1.03	122	4.73	0.01	0.3	11.0	40	2690
CM5-30m		0.72	0.17	<0.1	0.033	0.01	<0.5	2.1	1.11	153	2.17	0.01	0.3	5.6	260	2420
CM5-48m		7.24	0.27	0.2	0.055	0.39	8.4	17.1	0.47	158	5.36	0.11	3.8	6.9	300	1185
CM5-61m		0.43	0.15	<0.1	0.008	0.01	<0.5	2.1	1.36	113	1.09	0.01	0.2	2.4	50	2120
CM5-86m		5.32	0.11	0.2	0.025	0.94	9.9	11.8	1.61	304	1.20	0.16	4.8	4.5	850	3300
CM5-99m		15.65	0.20	0.6	0.050	1.47	34.5	33.2	1.77	404	4.15	0.74	16.3	12.2	1320	542
CM5-121m		14.20	0.22	0.6	0.040	2.73	46.0	25.0	0.89	392	1.94	0.93	14.5	10.3	1450	134.5
CM6-COM		0.76	0.19	<0.1	0.061	0.03	2.7	1.6	1.31	106	2.84	0.02	0.4	3.2	4130	>10000
CM7-1		0.78	0.16	<0.1	0.103	0.01	1.5	1.0	0.44	146	0.49	0.01	0.2	1.5	1890	>10000
CM7-2		2.22	0.18	0.1	0.153	0.24	4.3	4.0	0.48	183	3.57	0.04	1.0	3.7	3470	>10000
CM8-1		0.63	0.08	<0.1	0.029	0.02	2.9	3.0	1.88	114	1.31	0.02	0.1	2.1	1610	1510
CM8-2		2.22	0.54	<0.1	0.054	0.07	2.5	3.9	3.01	165	4.84	0.02	1.0	8.9	5190	>10000
CM8-3		4.65	0.19	<0.1	0.080	0.01	6.3	2.5	0.12	83	0.93	<0.01	0.7	4.9	6240	>10000
CM9-1		2.77	0.10	0.1	0.112	0.24	3.1	6.8	2.69	181	1.43	0.11	0.9	1.9	1910	2300
CM10-1		0.66	0.07	<0.1	0.011	0.01	4.3	7.1	0.43	73	0.57	0.01	0.5	2.1	3580	275



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Project: Colby Mines

CERTIFICATE OF ANALYSIS KL12144639

Sample Description	Method Analyte Units LOR	ME-MS61 Rb ppm 0.1	ME-MS61 Re ppm 0.007	ME-MS61 S % 0.01	ME-MS61 Sb ppm 0.05	ME-MS61 Sc ppm 0.1	ME-MS61 Se ppm 1	ME-MS61 Sn ppm 0.2	ME-MS61 Sr ppm 0.2	ME-MS61 Ta ppm 0.05	ME-MS61 Te ppm 0.05	ME-MS61 Th ppm 0.2	ME-MS61 Ti % 0.005	ME-MS61 Tl ppm 0.02	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1
CM1-1		15.9	0.004	8.99	0.31	0.6	10	2.8	148.5	0.55	0.14	0.7	0.014	0.93	4.4	20
CM1-2		5.8	0.003	7.11	0.18	0.5	5	1.4	112.5	0.08	0.07	0.5	0.007	0.85	4.4	13
CM1-3		5.3	0.004	5.84	0.18	0.5	5	1.3	173.5	<0.05	0.12	0.2	0.010	0.74	4.4	19
CM1-4		83.8	0.002	4.05	0.22	0.9	3	0.8	196.0	0.46	0.06	1.5	0.017	3.78	4.7	18
CM2-1		0.7	0.016	7.17	0.14	0.3	6	1.0	98.9	<0.05	0.05	0.3	0.010	0.03	1.7	11
CM3-6.0-17.0m		47.2	<0.002	0.74	0.10	1.2	2	1.3	287	0.26	0.05	2.5	0.029	0.70	8.9	25
CM-7.9m		19.1	0.002	4.68	0.14	0.8	4	2.5	335	0.16	0.15	0.4	0.040	1.07	12.7	34
CM3-9.8m		38.1	0.002	0.35	0.12	1.0	3	1.3	461	0.12	0.09	0.3	0.100	4.94	3.2	42
CM4-1		156.0	0.004	1.68	0.10	2.0	4	3.7	351	1.71	0.25	8.5	0.034	1.08	30.8	15
CM4-2		4.8	0.002	7.55	0.08	1.0	2	2.1	217	0.10	0.00	0.4	0.045	1.19	2.4	14
CM4-3		44.1	0.002	0.62	0.10	0.6	2	1.5	272	0.41	0.05	4.1	0.018	0.50	0.6	10
CM5-9.5m		0.8	0.006	>10.0	0.13	0.5	2	2.2	227	<0.05	0.06	<0.2	<0.005	0.54	0.3	13
CM5-30m		1.1	0.002	5.78	0.12	0.4	2	1.5	82.8	<0.05	<0.05	<0.2	0.005	0.41	0.4	11
CM5-48m		17.6	<0.002	0.38	0.93	3.0	3	1.1	224	0.22	0.29	2.7	0.107	0.38	0.7	34
CM5-61m		0.3	<0.002	4.26	0.42	0.2	1	1.0	168.5	<0.05	<0.05	<0.2	<0.005	0.29	0.1	8
CM5-86m		39.7	0.002	0.82	0.32	0.8	2	0.7	687	0.31	<0.05	2.1	0.133	3.27	1.6	54
CM5-99m		69.3	0.004	0.32	0.14	11.5	3	2.6	286	1.20	<0.05	8.4	0.417	1.47	4.4	145
CM5-121m		94.2	0.002	0.78	0.10	10.5	2	1.7	240	0.92	<0.05	11.9	0.441	1.44	3.0	99
CM6-CON		0.0	<0.002	4.02	1.25	0.3	2	5.5	68.7	<0.05	0.09	<0.2	0.010	1.61	2.6	11
CM7-1		0.4	<0.002	9.37	1.99	0.2	10	5.1	29.8	<0.05	0.38	<0.2	<0.005	0.46	2.2	4
CM7-2		22.9	0.008	9.78	0.32	0.3	10	5.1	34.1	0.08	0.35	0.6	0.608	2.09	5.4	7
CM8-1		0.8	0.003	1.73	0.13	0.3	1	0.4	32.0	<0.05	0.05	<0.2	<0.005	0.13	2.2	6
CM8-2		9.6	0.008	>10.0	1.03	0.4	6	3.2	124.5	<0.05	0.18	<0.2	0.009	0.41	13.3	14
CM8-3		0.8	0.002	8.28	0.32	0.3	3	3.1	38.6	<0.05	0.06	0.2	0.009	0.36	7.2	16
CM9-1		29.1	0.002	2.27	0.13	0.4	2	1.7	72.4	0.07	0.10	1.2	0.009	0.92	0.9	17
CM10-1		0.7	<0.002	1.09	0.10	0.3	1	0.5	18.1	<0.05	<0.05	0.3	0.006	0.07	4.6	9





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 Finalized Date: 17-JUL-2012  
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CERTIFICATE OF ANALYSIS KL12144639

Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Pb-AA62	Zn-AA62
		W ppm	Y ppm	Zn ppm	Zr ppm	Pb %	Zn %
CM1-1		0.1	10.6	>10000	3.3		10.15
CM1-2		0.1	10.2	>10000	1.4		4.81
CM1-3		0.1	5.2	>10000	2.1		4.61
CM1-4		0.2	7.0	>10000	1.7		2.64
CM2-1		0.1	3.7	>10000	2.6		1.280
CM3-6.0-17.0m		0.3	10.2	9460	5.8		
CM-7.9m		0.8	7.2	>10000	1.8		2.89
CM3-9.8m		0.5	4.8	>10000	2.0		1.885
CM4-1		0.6	12.5	>10000	14.8		3.06
CM4-2		0.2	4.0	6630	1.6		
CM4-3		0.3	6.8	4590	4.0		
CM5-9.5m		0.3	1.6	>10000	<0.5		1.365
CM5-30m		7.3	1.4	>10000	<0.5		2.30
CM5-48m		2.3	0.3	2170	5.0		
CM5-61m		0.8	0.4	6350	0.6		
CM5-86m		1.1	8.8	5380	3.8		
CM5-99m		0.5	31.2	934	14.0		
CM5-121m		0.7	33.5	239	13.2		
CM6-CON		0.3	2.9	9310	0.7	6.17	
CM7-1		0.1	3.7	>10000	<0.5	9.43	11.60
CM7-2		0.1	8.4	>10000	1.7	2.33	8.21
CM8-1		0.1	6.8	7170	0.8		
CM8-2		0.2	7.3	>10000	0.6	2.54	5.11
CM8-3		0.3	13.9	>10000	0.6	1.435	2.09
CM9-1		0.1	7.6	>10000	2.7		1.365
CA10-1		0.2	10.2	778	0.7		

APPENDIX 'C'

CERTIFICATE of QUALIFICATION

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 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;

That I have been engaged in the study and practice of the geological profession for over 35 years.

That I have participated in exploration for various types of massive sulphide deposits since 1978 for clients in Canada, and in the United States of America;

That this report is based on data available in the literature, on current exploration, and on my personal sampling and examination of workings on the Colby Mines property during the following times: June 11, 15, 21, and 22, 2012;

That I am independent of the Colby Mines property and of Inexco Mining Corp.



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

West Vancouver, British Columbia  
August 14, 2012

