

830606

REPORT ON THE E-D 1 CLAIM

KAMLOOPS MINING DIVISION

82M/5W AND 92P/8E

LAT. 51 DEGREES 22 MINUTES

LONG. 119 DEGREES 59 MINUTES

FOR

WAYNE TYNER

By

D.C. MILLER, P. ENG.

D.C. MILLER GEOLOGICAL SERVICES

JANUARY 16, 1989

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## INTRODUCTION

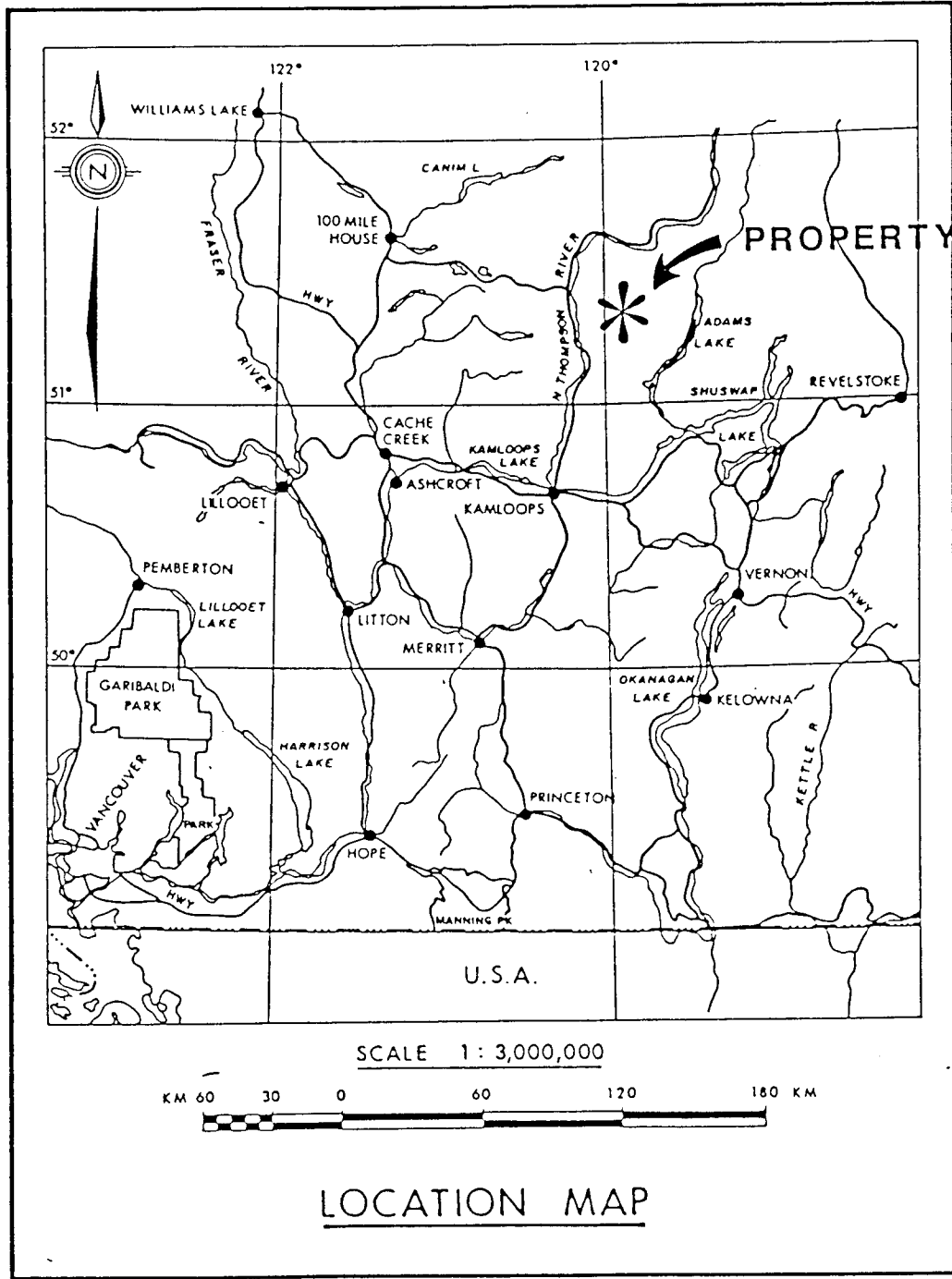
At the request of Wayne Tyner, the writer examined the E-D 1 claim on January 4, 1989. At the time of the examination the property was snow covered and meaningful work could not be done with the exception of locating the claim boundaries, determining access to the property and observing general features such as topography and forest cover. Fortunately, considerable data from previous work in the area was available to help assess the property.

## SUMMARY

The E-D 1 claim consists of 20 units underlain mainly by Unit EBP of the Eagle Bay Assemblage at its contact with the Baldy Batholith. Unit EBP consists mainly of phyllite and slate with interbedded siltstone and sandstone with lesser carbonate, quartzite, chlorite-sericite-quartz schist and metavolcanic rocks. The Fennell Formation is in contact with Unit EBP near the west boundary of the claim along a steeply dipping, easterly directed thrust fault.

The Enargite showing of Kam Creed Mines Ltd. lies about 600 m south of the E-D 1 claim and is located at the contact of Eagle Bay and Fennell rocks. Mineralization consists of galena, sphalerite, chalcopyrite and pyrite in quartz veins and lenses. Some high silver and moderate gold values are also present.

In 1985 Noranda Exploration Company Limited carried out an airborne magnetic and electromagnetic survey of a large area near

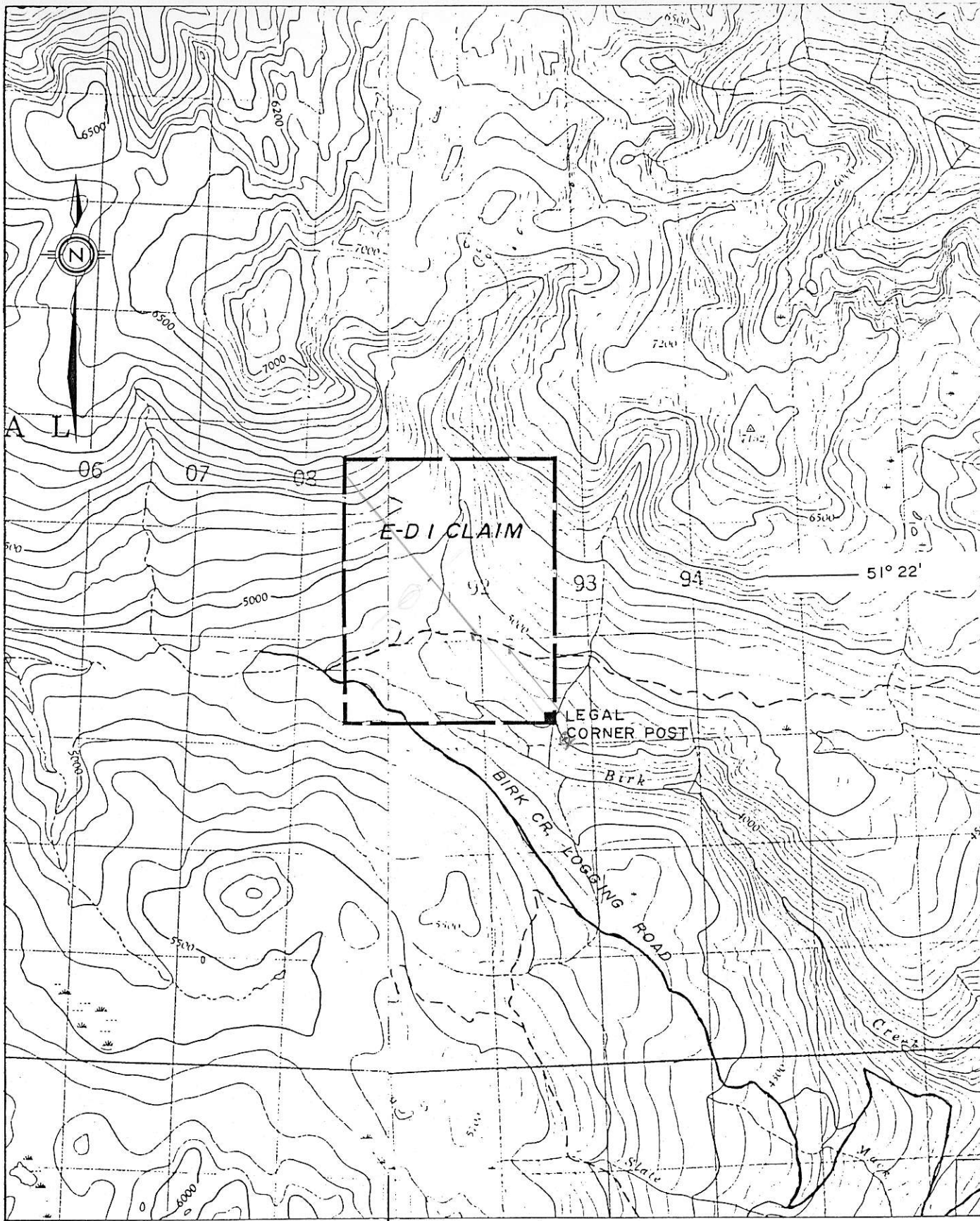


<b>E-D I CLAIM</b>		
<b>LOCATION MAP</b>		
DRAWN BY: DCM	NTS 82M/5W, 92P/8E	<b>FIGURE</b> 1
REPORT DATE JAN. 16, 1989	PROJECT NO. 8949	
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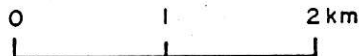
Birk Creek which included the subject property. This work indicated a number of northwesterly trending conductors to be present on the E-D property.

Previous geochemical surveys were carried out in the area of the E-D 1 claim by Craigmont Mines Limited in 1973. The target at this time was porphyry copper mineralization. North-south oriented lines were spaced 1000 Ft. apart with samples at 200 Ft. intervals along lines. Soil samples were analyzed for copper, molybdenum, lead and zinc. Some zinc anomalies were found, but not all were followed up.

Proposed work consists of geochemical soil sampling for gold and silver and other elements over a grid crossing the airborne conductors nearly at right angles. If results of this work are positive, further work including ground geophysical surveys, geological mapping, backhoe trenching and diamond drilling will be considered.



120° 00'



ELEVATIONS IN FEET

<b>E-D I CLAIM</b>		
<b>TOPOGRAPHY AND ACCESS</b>		
DRAWN BY: DCM	NTS 82M/5W, 92P/8E	<b>FIGURE 2</b>
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### LOCATION AND ACCESS

In a straight line, the property is located 80 km north-northeast of Kamloops, B.C. Road access to the property from Barriere, B.C. is gained by following the Barriere Lakes road eastward some 16 km to the junction of the North and East Barriere Lakes roads. From this point the North Barriere Lake road is followed for 8 km where the Birk Creek logging road turns off to the north. The Birk Creek road is followed some 12 km to point where a subsidiary road turns right. The legal corner post is located some 700 m south of this road as as indicated in Figure 2.

### PROPERTY

The property consists of one 20 unit claim as follows:

<u>CLAIM NAME</u>	<u>RECORD NO.</u>	<u>UNITS</u>	<u>EXPIRY DATE</u>
E-D 1	4742	20	16 Sept. 1989

The recorded owner is Edward Foran, 310-520 Battle Street, Kamloops, B.C. The east boundary of the claim is common with the adjoining B.C. 1 claim. The amount of overlap with adjoining claims to the north and west is thought to be about as shown on the government claim map (Figure 3). The amount of overlap with older 2-post claims to the south is unknown. A claim survey will be required if exploration results are encouraging.



CC 7  
1457(10)



B.C. 3  
5954(11)  
3N X 5W

4369(3) 4370(3)

73585

E-D 1

4742(9)  
5N X 4W

BC-1

4400(4)  
4N X 5E

CH 9  
1469(10)

CC 11  
1460(10)

43989  
Ver.

79125 43748

98225H ENERGITE 25	98226H ENERGITE 30	98227H ENERGITE 32	98228H ENERGITE 34	98309H ENERGITE 37
98229H ENERGITE 27	98230H ENERGITE 28	98231H ENERGITE 29	98232H ENERGITE 30	98233H ENERGITE 31
98234H ENERGITE 25	98235H ENERGITE 26	98236H ENERGITE 27	98237H ENERGITE 28	98238H ENERGITE 29
98239H ENERGITE 8	98240H ENERGITE 9	98241H ENERGITE 10	98242H ENERGITE 11	98243H ENERGITE 12
98244H ENERGITE 1	98245H ENERGITE 2	98246H ENERGITE 3	98247H ENERGITE 4	98248H ENERGITE 5
98387H ENERGITE 39	98388H ENERGITE 37	98389H ENERGITE 35	98390H ENERGITE 33	98391H ENERGITE 31
98392H ENERGITE 38	98393H ENERGITE 36	98394H ENERGITE 34	98395H ENERGITE 32	98396H ENERGITE 30

JEAN 3

5539(3)  
6S X 3E

SC 1  
5560(3)  
4N X 3E

CH 2  
1462(10)

4763(8)



0 500 1000 m

E-D 1 CLAIM

CLAIM MAP

DRAWN BY: DCM	NTS 82M/5W, 92P/8E	FIGURE 3
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## PHYSIOGRAPHY AND CLIMATE

The property straddles the main tributary of Birk Creek with elevations ranging from 4500 to over 6000 Ft. Topography is quite moderate except in the northern part of the claims where fairly steep slopes are present. Forest cover includes mainly commercial stands of spruce and balsam which are being logged in patches as shown on Figure 5. Soil cover is extensive and it is estimated bed-rock exposure is less than 5% based on previous reports in the area.

The climate is fairly moderate with fairly heavy snowfall in winter months which stays on the ground till about May.

## HISTORY

The area has been intermittently prospected and staked since the early 1900's. In 1924 the area immediately south of the property was staked and developed by trenches and an adit. Mineralization includes galena, sphalerite, chalcopyrite and pyrite which is carried in quartz veins within metasedimentary rocks. Variable gold values and good silver values were reported. Two showings are described in the B.C. Minfile: 82M 064 and 065 which are referred to as the North Star north and south showings. The north showing is also known as the Ace or Enargite (also spelled Energite in some publications). In 1972, 4.5 tons of crude ore which contained 39.8 grams /tonne gold, 707.9 grams /tonne silver, 27.4% lead, 13.3% zinc and 0.25% copper was shipped from the north showing to the Trail smelter .

In 1984 Kam Creed Mines Ltd. completed 5 diamond drill holes totalling 1251 Ft. near the north Northstar showing. The best intersection was in hole one which was reported to cut 0.30 oz./t gold from 331.2-333.0 Ft. in a pyritic, carbonaceous shale. This hole also intersected 0.16 oz./t gold from 342-347 Ft. in a pale green quartzite. Hole 3 intersected 0.06 oz./t gold from 65 -68 Ft. within pyritic shale.

In 1973 Craigmont Mines Ltd. carried out geochemical and ground geophysical surveys over a large area which included the present property. The surveys were carried out in search of porphyry copper mineralization along north-south lines spaced 1000 Ft. apart and along east-west lines spaced 3000 Ft. apart. Soil samples were taken along the lines at 200 Ft. intervals. Geochemical analysis was done for copper, molybdenum, lead and zinc. Several zinc anomalies were found, some of which were recently explored by Noranda Exploration Company Limited.

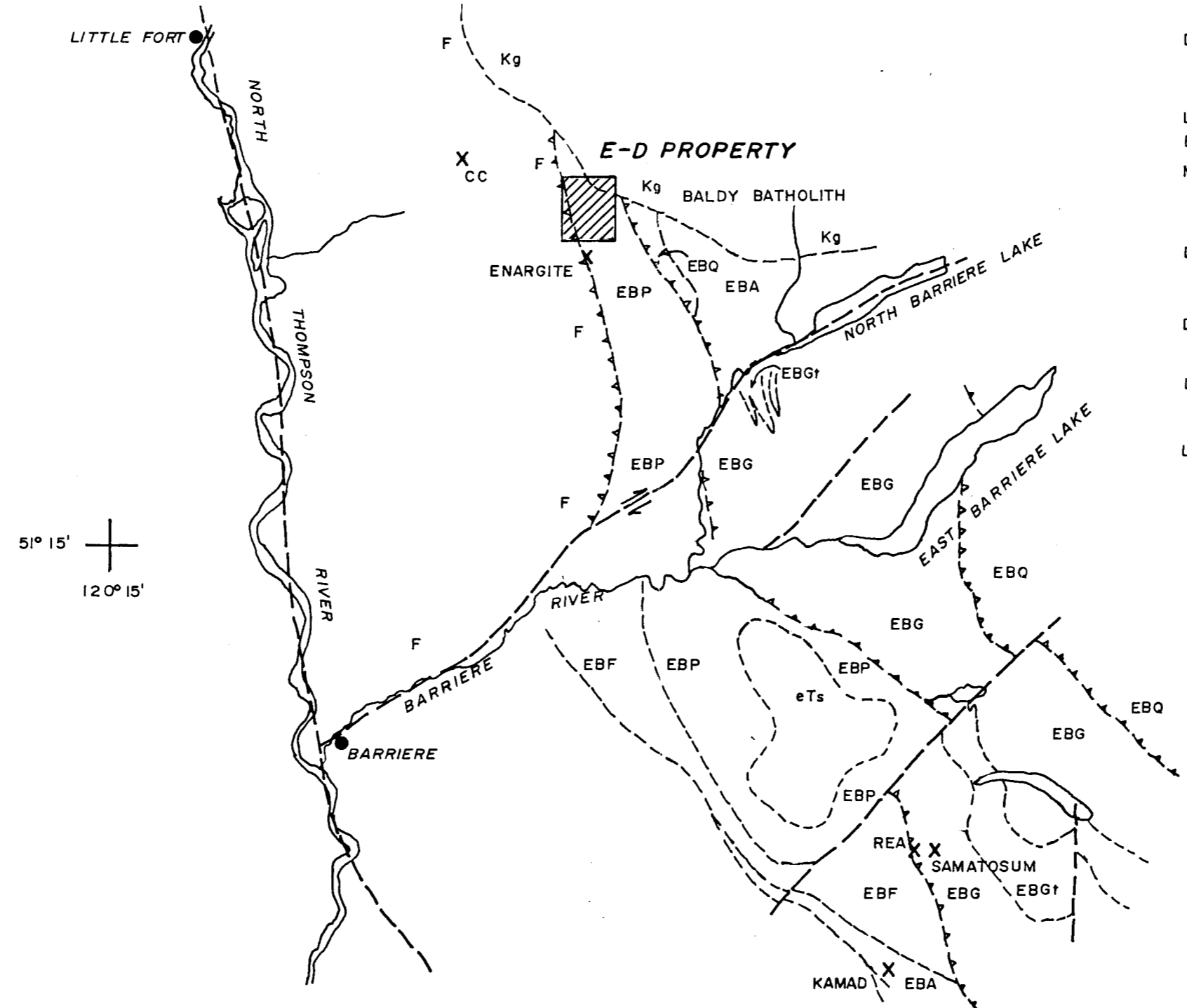
Noranda explored the adjoining B.C. 1 claim with ground and airborne geophysics, geochemistry (2215 soil samples), 12 trenches and 14 diamond drill holes totalling 1036.9 m. The work was done between 1983 and 1987 and discovered pods of stratiform massive sulphides and stringer-type mineralization including silver, lead, zinc and minor barite.

In general, there has been considerable exploration activity in the region as a result of the discovery of the CC copper deposit in 1978 and the REA-Samatosum silver-gold deposits in 1983-87.

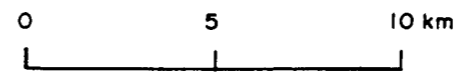
**LEGEND**

- EOCENE KAMLOOPS GROUP
  - [eTs] Mainly andesite and basalt, minor sediments
- CRETACEOUS
  - [Kg] Granite and granodiorite
- DEVONIAN TO PERMIAN FENNELL FORMATION
  - [F] Basalt, rhyolite, volcanics, gabbro, diorite, chert and conglomerate
- LOWER CAMBRIAN/OLDER TO MISSISSIPPIAN EAGLE BAY ASSEMBLAGE
- MISSISSIPPIAN
  - [EBP] Mainly phyllite, slate, siltstone and sandstone; lesser carbonates, quartzite, schist and metavolcanics
- DEVONIAN/MISSISSIPPIAN
  - [EBF] Mainly phyllite and schist derived from intermediate volcanics
- DEVONIAN
  - [EBA] Mainly phyllite derived from felsic to intermediate volcanics.
- LOWER CAMBRIAN?/OLDER?
  - [EBQ] Mainly quartzite, schist and phyllite
- LOWER CAMBRIAN
  - [EBG] Mainly greenstone and chlorite schist derived from mafic to intermediate volcanics; EBGt-Limestone and dolomite

- X CC Mineral property
- ▲▲ Thrust fault (approx.)
- Normal fault (approx.)
- - - Geological boundary



51° 15'  
120° 15'



<b>E-D I CLAIM</b>		
<b>REGIONAL GEOLOGY</b>		
After Preto et al, 1987		
DRAWN BY: DCM	NTS 82M/5, 4, 92P/8	FIGURE <b>4</b>
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## REGIONAL GEOLOGY

The property lies mainly within Unit EBP of the Eagle Bay Assemblage near its contact with the Baldy batholith to the north and the Fennell Formation to the west (Figure 4). The Eagle Bay Assemblage includes a structurally complex group of volcanic and sedimentary rocks which have been altered by generally low grade regional metamorphism to phyllites, schists, quartzites, marbles and metavolcanics. Various rock units strike mainly northwesterly and dip at various angles both eastward and westward. Rocks within the Eagle Bay range in age from Lower Cambrian? and/Older? to Mississippian.

From an economic point of view, the Eagle Bay rocks are of interest because they are host rocks for several mineral deposits including the Rea-Samatosum silver-gold deposit (Figure 4) which is currently being prepared for production as an open pit mine. Reserves for this deposit are quoted by Rea Gold Corporation as being 666,000 tons grading 32.08 Oz./T silver, 0.052 Oz./T gold, 3.5% zinc, 1.7% lead and 1.2% copper (undiluted).

The Fennell Formation may underlie the extreme western part of the property in fault contact with Eagle Bay rocks. Fennell rocks include several lithologies as indicated on Figure 4. The CC copper deposit occurs in mafic volcanic rocks within the Fennell and is reported to contain over 2,000,000 tons grading 2% copper.

Both the Eagle Bay and Fennell units have been intruded by the Baldy batholith near the north boundary of the property. No significant mineral showings are known within this intrusion, however, several occur along its border.

#### PROPERTY GEOLOGY

As mentioned previously no detailed geology is available for the property and little can be added to the regional geology summary. Mapping by Preto et al (1987) indicates much of the property is underlain by Unit EBP of the Eagle Bay Assemblage which is deformed into a complex anticlinal structure through the property. Fennell formation rocks along the west boundary of the property are thrust over Unit EBP along a steeply dipping easterly directed thrust fault.

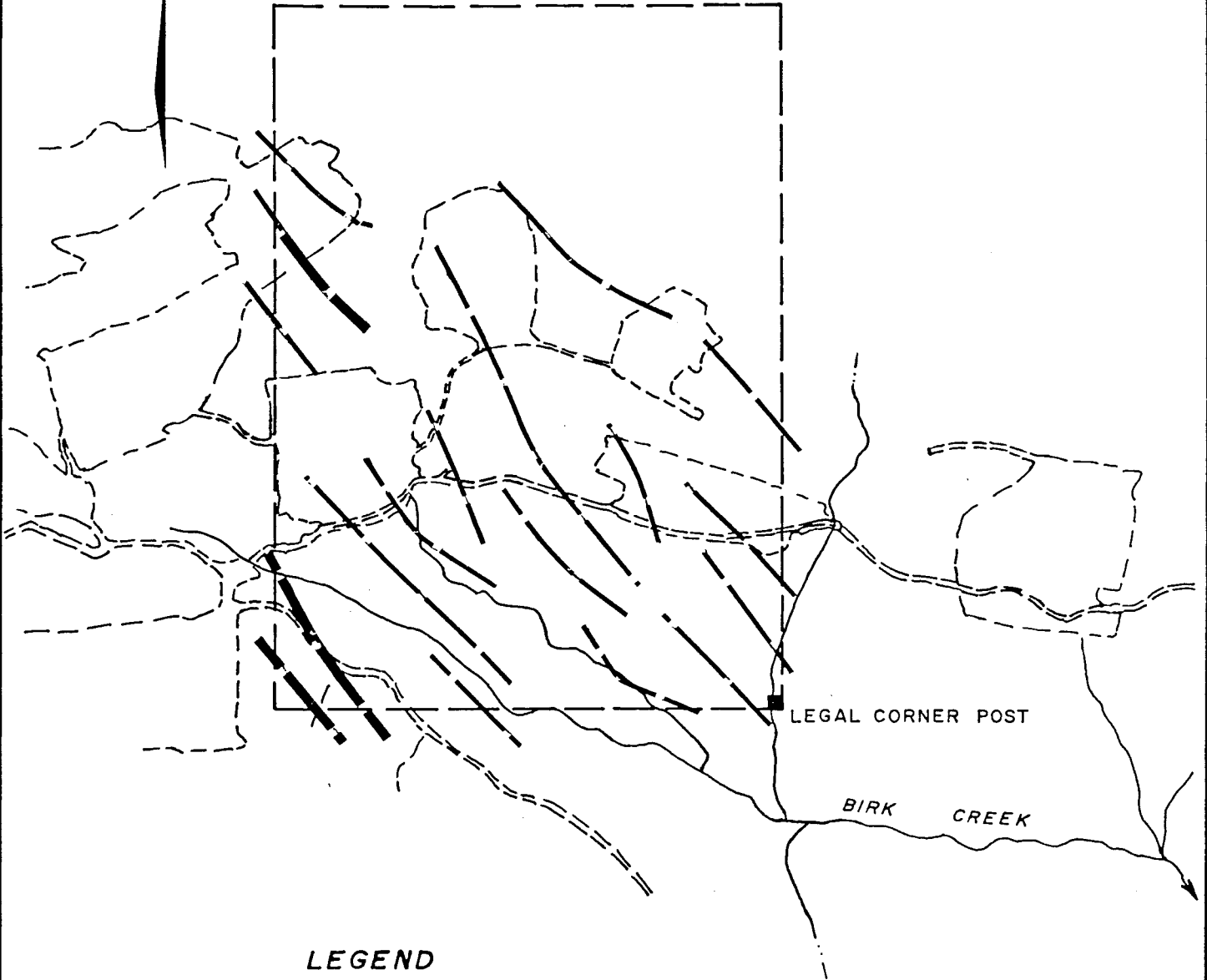
#### AIRBORNE MAGNETIC AND ELECTROMAGNETIC SURVEY

In August 1985 an airborne magnetic and electromagnetic survey was carried out by Aerodat Limited on behalf of Noranda Exploration Company Limited to explore a large area centered on Birk Creek. This survey covered the area held by the E-D 1 claim.



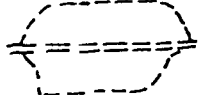

The survey was carried out using a helicopter equipped with a 3 frequency electromagnetic (EM) system, a magnetometer, a VLF-EM system and a base station magnetometer. Flight lines were spaced 200 m apart and were oriented at a 60 degree azimuth nearly at right angles to the regional strike of rock units. The survey

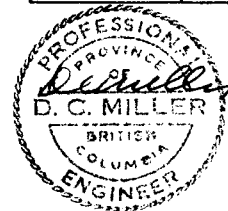
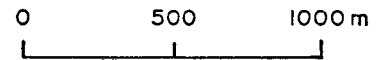


CLAIM BOUNDARY



**LEGEND**

-  Airborne EM conductor, 0-2 mhos.
-  " " " 2-4 "
-  Logging road and logged area.
-  Creek.



**E-D I CLAIM**

**AIRBORNE E M CONDUCTORS**

DRAWN BY: DCM	NTS 82M/5W, 92P/8E	FIGURE <b>5</b>
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aircraft was flown at a mean terrain clearance of 60 m and the EM system was towed in a bird 30 m below the aircraft. The magnetometer and the VLF-EM sensors were carried in a bird 12 m below the aircraft.

Electromagnetic peaks were plotted along flight lines together with conductivity-thickness products in mhos and sensor height in metres. On the accompanying Figure 5, interpreted conductor locations have been plotted taking into account the grain of the total magnetic intensity contour map. In general, these conductors are relatively weak and may represent conductive overburden, electrolytic conductors in shears and faults, or sulphide/graphite bearing rocks.

The magnetometer survey shows the area covered by the E-D 1 claim to lie within a regional northwest trending zone of low magnetic susceptibility which more or less outlines the boundaries of Unit EBP.

The results of the VLF-EM survey show only broad zones of higher and lower conductivity which were not used in the interpretation shown on Figure 5.



## EXPLORATION POTENTIAL

Based on similar geology to that at the nearby Enargite showings and because detailed exploration has not been undertaken on the property in the past, it is concluded the E-D 1 claim has the potential to host a precious and/or base metals deposit within its boundaries.

## CONCLUSIONS

1. The E-D 1 claim is underlain by metasedimentary rocks of Unit EBP of the Eagle Bay Assemblage near its contact with the Fennell Formation to the west and the Baldy Batholith to the north.
2. Rock exposure is sparse and no previous detailed exploration has been carried out.
3. A recent airborne EM survey shows the presence of several weak conductive bodies on the E-D 1 claim.
4. A significant mineral occurrence (Enargite), containing gold, silver, lead, zinc and copper mineralization, lies immediately south of the property in similar rocks.

## RECOMMENDATIONS

A systematic, phased exploration program is recommended to test the property.

1. Geochemical soil sampling should be done at 25 m intervals along grid lines spaced 200 m apart oriented on an azimuth of 60 degrees. Samples should be analyzed for gold, silver, copper, lead and zinc.
2. Contingent on soil sampling results, ground EM, geological, and additional geochemical surveys should be undertaken over the same grid with more detailed work on lines spaced 100 m apart where encouraging results are obtained. Backhoe trenching should be done to test coincident geochemical and EM anomalies.
3. Contingent on results of the preceding work, diamond drilling should be employed to test significant mineralization at depth.

ESTIMATED COST

Phase 1

1.	Linecutting 20 km @ \$350/km.....	\$ 7,000
2.	Soil analysis 1000 @ \$12.....	12,000
3.	Labour- 40 man-days @ \$160.....	6,400
4.	Room and board- 40 man-days @ \$60.....	2,400
5.	Vehicle.....	2,000
6.	Field supplies.....	1,000
7.	Supervision and report.....	8,000
	Total	\$ 38,800
		-----

Phase 2

Additional line cutting, geochemical sampling, geology, HLEM survey, backhoe trenching supervision and report .....	\$ 70,000
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Phase 3

Diamond drilling 1000 m @ \$100/m all support costs included.....	\$100,000
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CERTIFICATE

I, D.C. Miller, certify that:

- 1) I am a consulting Geological Engineer with an office at 769 Fraser Street, Kamloops, B.C. V2C 3H1.
- 2) I am a graduate of the University of British Columbia and earned a B.A.Sc. Degree in Geological Engineering in 1959. I am a member of the Association of Professional Engineers of B.C. and a Fellow of the Geological Association of Canada.
- 3) I have practiced my profession for over 25 years.
- 4) This report is based on personal observations at the subject property and from a study of reports on the property and nearby areas.
- 5) I have no direct or indirect interest in the property nor do I expect to receive any.



-----  
D.C. Miller, P.Eng.

Janury 16, 1989

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