83-#315 - #11386

GEOLOGICAL GEOPHYSICAL REPORT

EBL-REM CLAIM GROUP

East Barriere Lake, Kamloops M.D.

Latitude 51°19'N - Longitude 119°47'W

NTS 82M/5W

for

G. Moore

#707-1250 Comox Street
Vancouver B.C.
V6E-1K8

June 30, 1983

by K.E.NORTHCOTE PH.D.,P.ENG.

Agassiz B.C.

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GEOLOGICAL - GEOPHYSICAL REPORT

EBL-REM CLAIM GROUP

INTRODUCTION

TERMS OF REFERENCE

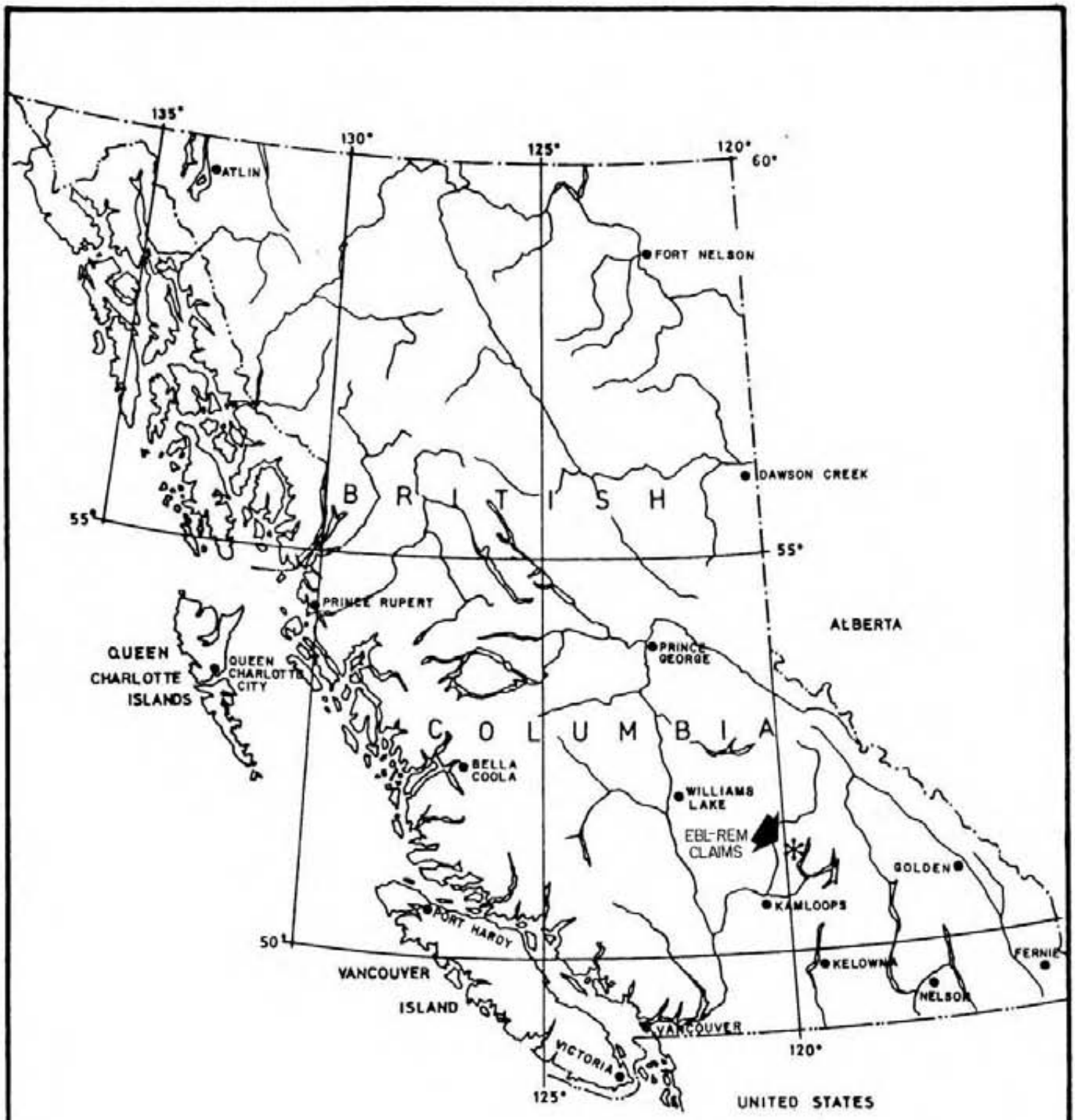
A geological-geophysical orientation program was supervised by K.E.Northcote during the period May 9 to May 23, 1983. Assistance in the field was provided by James F. Bristow P.Eng., S.C.Gower, (Blasters Certificate No.38277), Elaine Thompson (Blasters Certificate No.38278) B.K. Northcote and R. Bristow as geological assistants.

The EBL-REM claims are located on the north side of the east end of East Barriere Lake, latitude 51°19'N, longitude 119°47'W, NTS 82M/5W. The property lies on Barriere ridge between East and North Barriere Lakes approximately 30 km northeast of Barriere B.C. The claims are accessible by approximately 13 km of 4 wheel drive logging-mining access road leading from the Barriere-East Barriere Lake road.

The mining road access system on the property and part of the existing grid are useable at the present time. The northern portion of the claims has recently been logged and the slash burned. The former grid on this part of the claim block has been obliterated. However logging roads provide excellent access and rock outcrops are more visible and accessible.

CORE SPILLAGE

Core stored on REM 16 from all previous drill programs was



LOCATION OF EBL-REM CLAIMS

FIGURE: 1.	SCALE: 1:10,000,000
DRAWN BY:	DATE: MAY 23 1983

K.E. NORTHCOTE AND ASSOCIATES LTD.

pushed over, spilled and partly buried under debris during snow removal operations during the winter 1981-82. Some of this core might be reclaimed for general geologic information and some intervals might be used for assay. In this area of sparse outcrop the loss of this core is disastrous to future exploration on the property. It is no longer possible for one geologist to examine all the core and interpret complete sections in order to resolve problems of stratigraphy and structure.

The logging operator, Balco Industries Ltd, was informed of this spillage and representatives of the company visited the site. No compensation or assistance in reclamation of core was forthcoming without first taking legal action. For reasons of their age and limited financial resources the owners of the claims did not pursue their request for partial compensation.

WORK PROGRAM 1983

An assay of a sample of quartz diorite-quartz impregnated chlorite-sericite schist from claim EBL 30 yielded 0.10 ounces of gold per ton and 0.70% copper. This sample, taken in 1981, revived interest in the possibility of obtaining significant gold values from siliceous impregnated schistose rocks near the Baldy Batholith contact.

A small hand trenching, blasting and sampling program at three sites was carried out to test this possibility. In conjunction with testing a VLF-EM and magnetometer orientation survey was run in the northern and western part of the claim block. See Figure 4. A crew of six under supervision of K.E.Northcote, P.Eng. did this work during the period May 9 to 23, 1983.

CLAIM STATUS

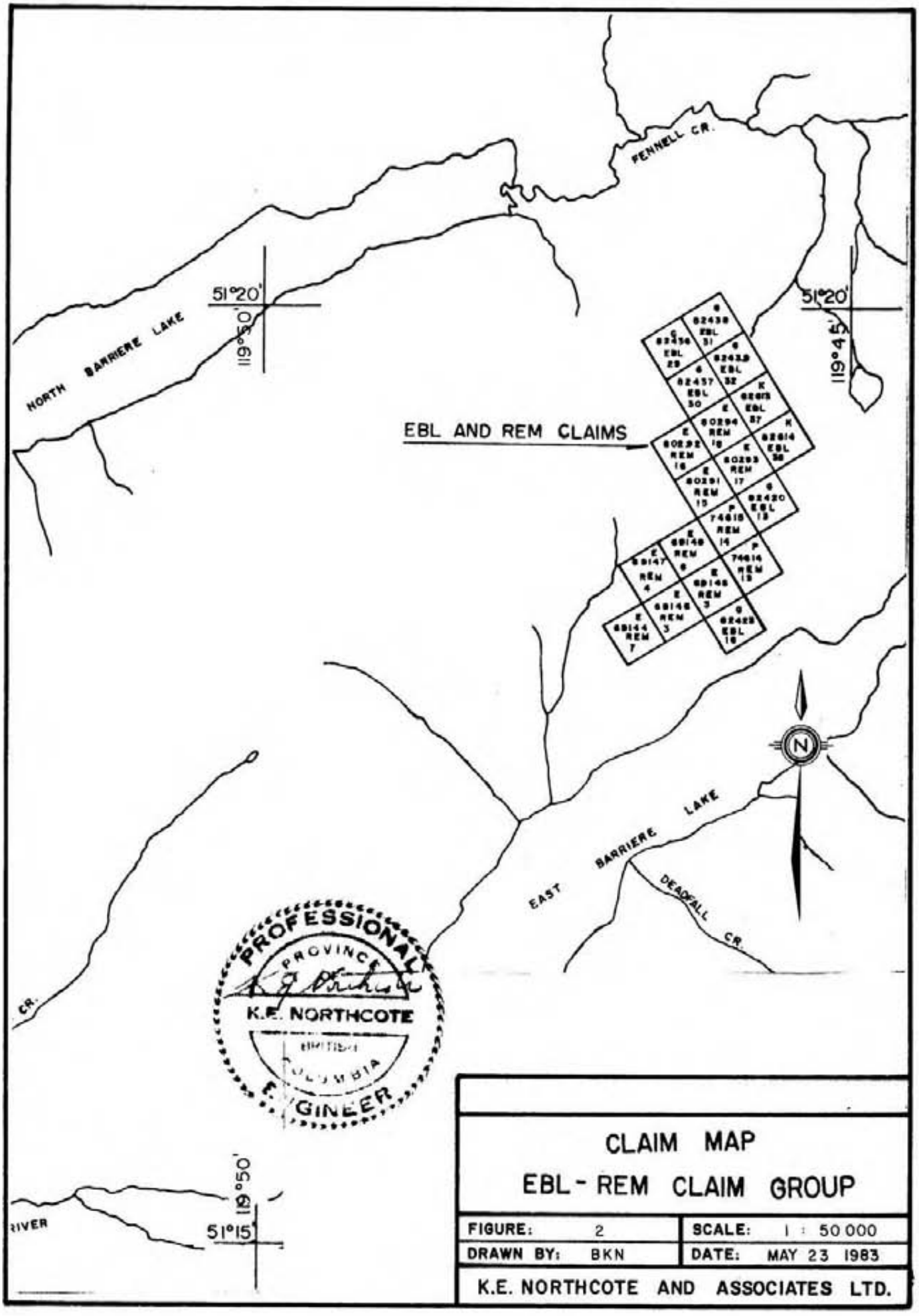
The EBL-REM claim group consists of 19 two-post claims shown on Figure 3 and listed in Table I.

TABLE I

EBL-REM CLAIM GROUP

CLAIM NAME	REGISTRATION NO,	EXPIRY DATE
REM # 1	69144	May 16,1983
3	69146	" 1983
4	69147	" 1984
5	69148	" 1984
6	69149	" 1983
13	74614	Nov.14 1983
14	74615	" 1983
15	80291	May 23 1983
16	80292	" 1983
17	80293	" 1983
18	80294	" 1983
EBL# 13	82420	June 25 1983
16	82423	" 1983
29	82436	" 1983
30	82437	" 1983
31	82438	" 1983
32	82439	" 1983
37	82613	Aug. 1 1983
38	82614	" 1983

*Assessment work recorded in this report is to be applied to claims in order of expiry dates.



CLAIM MAP
EBL - REM CLAIM GROUP

FIGURE: 2	SCALE: 1 : 50 000
DRAWN BY: BKN	DATE: MAY 23 1983

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GEOLOGY

REGIONAL GEOLOGY

The regional geology of the Barriere Lakes-Adam Plateau area has been described by Preto in Geological Fieldwork 1978, 1979 and 1980. Since then Preto's preliminary geologic map and cross sections showing mineral deposits of the Adams Plateau-Clearwater Area became available. This map and cross sections revises some of the data of the earlier publications. The regional geologic setting of the EBL-REM claims is summarized here.

The EBL-REM claims are centred over Units 1, 2, 5a and 8a of the Eagle Bay Formation of Late Devonian Age. The property is bounded on the east by Unit 14a, Baldy Batholith. This constitutes a revision of earlier data, (Preto op.cit.) and his lithologic descriptions for the revised units follows:

Unit 1 Amphibole, quartzite, marble, sillimanite-garnet-biotite schist. Field relationships indicted that this unit is a more highly metamorphosed part of the Eagle Bay Formation. The Baldy Batholith, Unit 14a, is in intrusive contact with Unit 1 and both units are separated from other units of the Eagle Bay Formation by a fault.

Unit 2 (Formerly Unit 3) Metasedimentary phyllite, grit, quartzite. impure limestone and minor greenschist.

Unit 5a (Formerly 7 and 7a) Felsie phyllite and schist. Rocks thought to be equivalent to this unit on the EBL-REM claims are composed of sericite-quartz schist with eyes of bluish grey quartz and is commonly pyritic. This unit may be of acid volcanic origin,

felsic lithic tuffs indicating proximity to a felsic volcanic centre in the North Barriere Lakes area. Unit 5a is associated with foliated rhyolite and grades laterally into less pyritic sericite and sericite-chlorite phyllite.

Unit 8 (Formerly 10) Greenschist, probably derived from mafic massive and pillowed flows, breccias and tuffs.

Unit 14 Baldy Batholith, granite, quartz monzonite, quartz feldspar porphyry.

STRUCTURE

Preto's recent geologic map shows Baldy Batholith and Unit 1 on the east separated by a fault from Units 2,5 and 8 on the west. In addition a crescent shaped synclinal axis is shown crossing Barriere Lake ridge in the vicinity of the EBL-REM claims. These postulated structures indicate that intense smaller scale complexity can be anticipated.

GEOLOGY OF THE EBL-REM CLAIMS

The geology of the EBL-REM claims was outlined in a report by Northcote dated June 19, 1981. New data acquired since that time support the geological discussion of that report.

The geology of the property is most certainly more complex than can be indicated by regional scale maps. The units described by Preto are present but intense interlayering of these units is indicated either as a result of primary interbedding and lateral facies changes

and/or lithologic displacements during isoclinal folding. Structural significance is suggested by the lensoidal nature of microlaminations in hand specimens and the lensoidal shapes of lithology and mineralization in outcrops.

The EBL-REM claims are underlain by a sequence of interlayered and interlaminated chlorite schist, phyllite, quartz sericite schist and minor amounts of skarnified limestone. Some of the quartz sericite schists have coarse-grained partially resorbed quartz eyes. The sequence probably represents a succession of rocks of volcanic origin with interbedded sediments. The chloritic schists may be derived from more basic volcanics and/or sediments; phyllites from sediments or felsic volcanics, quartz-sericite schists from sediments or felsic volcanics with those containing bluish quartz eyes representing former rhyolites (Preto, op. cit.).

The succession is intruded by dykes of granodiorite composition ranging from a few centimetres to tens of metres in thickness. Subsequently to work reported in 1982 it was found that there are significant areas of magmatic and siliceous impregnation in the vicinity of some of these dykes and sills near the Baldy Batholith contact.

STRUCTURE

The few exposures that occur on the EBL-REM claim group show little evidence of primary sedimentary structures such as bedding etc. The lensoidal nature of micro and macro layers suggests that structural deformation played a major role in producing layering. Gross compositional layering may be a reflection of original beds such as limestone, phyllite, chlorite schist etc. now lying paralled to axial planes along the limbs of isoclinal folds.

ECONOMIC GEOLOGY

GEOLOGICAL ENVIRONMENT

There are a number of mineralized occurrences in the Adams Plateau and Barriere Lakes area which are associated with the Eagle Bay Formation (See MEMPR Mineral Inventory Map 82M and Preto, Adams Plateau-Clearwater Area). There are five occurrences in Unit 5a on the north side of North Barriere Lake. These include Harper (Cu, Pb, Zn), Rainbow (Cu, Pb, Zn) Broken Ridge (Cu, Zn), Copper Cliff (Pb, Zn, Cu) and May (Cu,Zn). The most notable occurrence, however, is Homestake(Kamad Silver) (Pb, Zn, Ag, Cu, barite) in Unit 5a approximately 4½ km northwest of Skwaam Bay on Adams Lake.

The CC (Chu Chua) massive sulphide deposit (Cu, Zn), situated approximately 22 km northwest of the EBL claims, is in the Fennell Formation indicated as stratigraphically higher and younger than Eagle Bay Formation. These Unit 12a Fennell rocks are massive and pillow basalts of Upper Mississippian and (?) Older to Latest Permian and (?) Younger age (Preto, op. cit.). The CC geological environment is not present in the EBL-REM area.

The presence of quartz-eye sericite schists at North Barriere Lake and as interlayers on the EBL-REM claims suggests proximity to a rhyolitic volcanic centre, (Preto, 1980). This coupled with the presence of limestone and other metasedimentary units suggests a favourable geological environment for massive sulphide deposits.

MINERALIZATION

Mineralogy on the EBL-REM claims is fairly simple consisting of ubiquitous pyrite with lesser amounts in concentrations of pyrrhotite,

chalcopyrite and very minor amounts of sphalerite and galena found in place. The mineralization has several modes of occurrence including massive stratiform, in skarns, disseminated throughout the rock matrix or in planes of foliation, fractures and in quartz-carbonate veins.

The effect of structure may be to disperse rather than concentrate more massive continuous stratiform mineralization

WORK DONE

TRENCHING

Copco drilling, blasting and hand trenching were done at three locations on the EBL-REM claim group. See Figure 3. The trenches and pits were chip sampled across intervals of about 1.0 metres or less and lithology and planar structures measured and noted. The purpose of the hand trenching was to obtain unoxidized, impregnated bedrock for sampling for Au and Ag assays.

Pit Area 1 is located on the east side of the logging access road opposite geophysical station #78. See Figure 3. Approximately 6 m^3 of material was trenched. A total of 11 chip samples were taken and assayed for Ag and Au.

Pit Area 2 is located at the north end of the property on the south side of logging access road opposite geophysical station #187. See Figure 3. Approximately 2m^3 of material was trenched. One chip sample was taken across 1.5 metres and assayed for Au and Ag.

Pit Area 3 is located on the south side of the same logging access road as Pit Area 2 opposite geophysical station #188. See Figure 3. Approximately $2m^3$ of material was trenched. Four chip samples were taken across intervals of 1 metre or less and analyzed for Au and Ag. Chip sample 83-G-43 represents a 0.15metre width of pyrite and chalcopyrite mineralization.

GEOPHYSICAL SURVEYS

A grid was established using compass and topofil for control with stations picketed and flagged every 25 metres. Existing grid lines and access roads were utilized. A geophysical orientation survey was conducted using a VLF-EM Receiver Sabre Model #21, manufactured in Burnaby, B.C. A base station was established and vertical null (dip) and field strength readings were taken at 25 metre intervals. Cutler Maine was used as a transmitting station and 122 readings were taken before the station ceased transmission. It was felt that sufficient data were obtained over a broad enough area to assess application of VLF-EM survey. What is lacking, however, is sufficient grid control to allow correlation of positive Fraser filtered values across adjacent grid lines. Null dip values and field strength are plotted on sections. See Figure 4. Positive Fraser filtered values are shown on Figure 3 with the results of the magnetic survey.

A magnetometer orientation survey was run using a Scintrex MP-2 Proton Precession Magnetometer which measures the earth's magnetic field in gammas to an accuracy of ± 1 gamma. A base station was established and measurements were made at that station every two hours. Diurnal variation corrections were made using these readings.

A total of 266 readings were taken and corrected values are plotted and contoured on Figure 3.

RESULTS

The assays of chip samples from the trenches showed no significant gold or silver values. Copper is the only commodity of significance found to date on this property.

The geophysical surveys are inconclusive. The VLF-EM survey shows flat area of positive Fraser filtered values but there is no close correlation with magnetic highs of the magnetic survey. Magnetic highs appear localized to one or two station anomalous values which give weak correlation to adjacent lines indicating a northwesterly to northerly trend. Much closer grid control is required for both VLF-EM and magnetic surveys.

RECOMMENDATIONS

In view of the loss of the core for careful stratigraphic-structural studies and ore reserve estimates for copper no further work is recommended on this property pending significant increase in world price and demand for copper. Expensive re-drilling would be required in order to re-evaluate the potential of this property.

REFERENCES

McMillian, W,J., 1980, CC Prospect, Chu Chua Mountain, MEMPR Geological Fieldwork, 1979, Paper 1980-1, p 37-48

Preto, V.A.; 1980, Barriere Lakes-Adams Plateau Area, MEMPR Geological Fieldwork, 1979, Paper 1980-1, p 28-36

1981, Barriere Lakes-Adams Plateau Area, MEMPR Geological Fieldwork, 1980, Paper 1981-1, p 15-23.

Circa 1982, Adams Plateau-Clearwater Area Geological Map. Scale 1:100,000.

STATEMENT OF QUALIFICATIONS

I, Kenneth E. Northcote, of 2346 Ashton Road, R.R.#1 Agassiz, B.C. do hereby state that:

1] I have been performing as a professional geologist for a period of approximately 25 years for various petroleum exploration companies, mining exploration and consulting companies, and federal and provincial agencies.

2] I obtained a Ph.D. in geology from U.B.C. in 1968 and qualified for registration with the Association of Professional Engineers of B.C. in 1967.

3] This assessment report is a result of my personal work and supervision fo work reported herein. Government publications in particular those of V.A.Preto and earlier Assessment Reports prepared by Northcote were utilized for background information,

4] I have no shares in the EBL-REM property at the present time. It is possible, however, that I may wish to obtain some interest in this or adjacent properties at some future date.

K.E.Northcote Ph.D., P.Eng.

COST OF 1983 PROGRAM

Personnel (Geology and Geophysics)	
K.E.Northcote Ph.D.,P.Eng. May 9,10,20,21,23.	
field 6 days @ $300.00/day	$1,800.00
office 4 days @ $200.00/day	800.00
J.Bristow P.Eng. May 20,21,22,23	
4 days @ 250.00/day	1,000.00
S.C.Gower (Blaster's Cert. #38277) May 20-23	
4 days @ 200.00/day	800.00
E. Thompson (Blaster's Cert.#38278) May 20-23	
4 days @ 100.00/day	400.00
B.K.Northcote-Geological Asst. May 20-23	
4 days @ 75.00/day	300.00
R.Bristow-Geological Asst. May 20-23	
4 days @ 75.00/day	300.00
Field Costs	
Assays (16 Au,Ag plus preparation)	168.00
Drill rental	159.00
Geophysical- Scintrex MP-2-Sabre VLF-EM	127.00
Vehicles (3 including[4X4])	
4300 km @ 20¢/km	860.00
Explosives	366.71
Board and lodging	
26 man days @ $22.50 + $10.00	845.00
Report preparation	
Typing and assembling report 5 hrs @ $10.00/hr.	50.00
Drawings 12 hrs @ $8.00/hr	96.00
Reproduction, telephone, sample shipping etc	45.00
Total costs	$8,116.71

APPENDIX A

DESCRIPTIONS OF CHIP SAMPLED INTERVALS

APPENDIX B

APPENDIX A

EBL-REM CHIP SAMPLES FROM PITS

PIT AREA I East side of road opposite 78

Trench #1 (North trench) Brg 075. L4.30m, W.1.0m, D 0.5m

Chip Sample G-83-30 length 1.0 metres

Schist; chlorite, sericite, quartz (biotite), thinly but strongly foliated, warped. Contains small quartz lensoids in plane of foliation. Strong chlorite interlayers containing disseminated pyrite. Foliation 142/64 SW

Chip Sample G-83-31 length 0.80 metres

Schist; chlorite, biotite containing quartzone or siliceous lensoids, fine-grained sugary texture. Some layers more chloritic.

Chip Sample G-83-32 length 1.20 metres

Silicified, massive, fine sugary texture, light to medium grey, quartzitic appearance with chlorite-sericite partings. Cut by irregular coarse-grained quartz associated with mariposite (?). Coarser chloritic material contains irregular blebs and blobs of pyrite and chalcopyrite.
Fracture surface 020/60 SE

Chip Sample G-83-33 length 1.30 metres

Light colored phyllitic schist, irregular granular quartz masses Laminated/foliated lensoidal biotite-quartz schist. Light colored phyllitic schist.
Schist; laminated green-grey, fine grained/sugary, high quartz-feldspar content, disseminated mica. Disseminated sulphides.

Trench #2 (Centre trench) Brg 075 L4.3m,W1.0m, D0.5m.

Chip Sample G-83-34 length 1.2 metres

Schist; chlorite-sericite, well foliated, laminated. Some impregnation by silica and diffuse magmatic material (granodiorite). Some disseminated sulphides.

Chip Sample G-83-35 length 1.4 metres

Schist; chlorite, impregnated sugary texture. Local impregnations sugary texture producing massive appearance.
Disseminated sulphides and diffuse lensoids.

Chip Sample G-83-36 length 1.7 metres

Schist, sericitic, very fine grained with black "stylolitic"-like structures crossing foliation. Crinkling of foliation by later cross foliation.
Some siliceous impregnations producing massive appearance.

Trench #3 (South trench) Brg 075 L4.0m, W1.0m, D0.5m

Chip Sample G-83-37 length 0.8 metres

Schist; chlortie (biotite), abundantly impregnated by fine to coarse granular quartz lensoids and lenses to 1cm thick. Some massive granular quartz.

Chip Sample G-83-38 length 1.2 metres

Schist; chlorite-biotite-sericite with quartz lensoids, fine to medium granular. Cut by irregular quartz masses, minor carbonate
Foliation 150°/40° SW

Chip Sample G-83-39 length 1.0 metres

Schist; chloritic, quartz impregnation, disseminated sulphides, iron staining

Foliation 175°/55°W

Slip surface 010°/65°E

Chip Sample G-83-40 length 1.0 metres

Schist; chlorite-sericite, strong foliation, varied stages of quartz impregnation

PIT AREA II South side of road opposite 187

Pit #2 L 2.0m, W 2.0m D 0.5m.

Chip Sample 83-G-41 length 1.5 metres

Schist; chlorite, sericitic laminations, crinkled foliation, few coarse grained quartz lensoids in foliation plane.

PIT AREA III South side of road opposite 188

Pit #3 L 2.5m W 2.0m D 0.5m.

Chip Samples 83-G-42 to 45 General description

Schist; chlorite, (sericite), sheared, brecciated. Impregnated by quartz and diffuse magmatic material (granodiorite). Disseminated and massive sulphides lenses and clusters of grains, non magnetic pyrite, chalcopyrite. Iron stained, particularly in brecciated hanging wall.

Foliation 110 to 120°/55° to 65° SW

Chip Sample 83-G-42 hanging wall, 0.10 metres

Schist; brecciated, iron oxide infilling, fragments to 5cm

Chip Sample 83-G-43 sulphide mineralization, 0.15 metres wide
Schist; chlorite, with lensoidal quartz and sulphides (pyrite, chalcopyrite)

Chip Sample 83-G-44 footwall 0.15 metres
Schist; chlorite, 5% sulphides

Chip Sample 83-G-45 in road base, 010 metres
Schist, silicified, quartzose

MIN-EN Laboratories Ltd.

705 WEST 15th STREET,
NORTH VANCOUVER, B.C., CANADA V7M 1T2
TELEPHONE (604) 980-5814

ANALYTICAL REPORT

Project EBL-REM(83) Date of report May 27/83.

File No. 3-295 Date samples received May 25/83.

Samples submitted by: Ken Northcote

Company: Ken Northcote

Report on: 16 rock (assay prep) Geochem samples

Assay samples

Copies sent to:

1. Ken Northcote, Agassiz, B.C.
2. Steve Gower
3.

Samples: Sieved to mesh Ground to mesh -100

Prepared samples stored ☒ discarded ☐

rejects stored ☒ discarded ☐

Methods of analysis: Ag-nitric,perchloric digestion,A.A., Au-fire.

Remarks:

COMPANY: en Northcote

PROJECT No.: EBL-REM(83)

ATTENTION: Ken Northcote

GEOCHEMICAL ANALYSIS DATA SHEET

MIN - EN Laboratories Ltd.
705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2
PHONE (604) 980-5814

File No. 3-295

DATE: May 27, 1983.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb	
19935-G-83-30							0·8					8	
36		31	Trench #1				1·2					1	
37		32					0·6					6	
38		33					0·7					8	
39		34			Pit #2		1·4					1	
40		35	Trench #2				1·2					1	
41		36					0·6					3	
42		37					0·4					2	
43		38	Trench #3				0·6					3	
44		39					0·8					9	
45		40					0·6					1	
46		41	Pit #1				1·3					1	
47		42					1·8					8	
48		43	Pit #3				1·9					8	
49		44					1·6					3	
19950-G-83-45							1·7					5	
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fire

To:

Mr. George Moore

707 - 1250 Comox St.,

Vancouver, B.C.

V6E - 1K8

Attention:

CAN TEST LTD.
1650 PANDORA STREET, VANCOUVER, B.C. V5L 1L6
Telephone 254-7278
04-54210

Certificate of Assay

File No. 3246E-6

Date Sept. 23, 1981

We hereby Certify that the following are the results of assays made by us upon submitted ore samples.

Sample Identification	GOLD Ounces Per Ton	SILVER Ounces Per Ton	Copper Percent Cu	Lead Percent Pb	Zinc Percent Zn	Nickel Percent Ni	Percent	Percent
82 K-1. 1 ore KGN.	0.10	0.08	0.70	0.08	0.07	0.02		

Note. Pulps retained three months.

Rejects retained two weeks.

Form No. 13-C

CAN TEST LTD.

Provincial Assayer

EBL 31

EBL 32

EBL 29

EBL 30

EBL 37

EBL 38

REM 18

REM 16

REM 17

REM 15

REM 16 LCP

PIT I

PIT II

PIT III

Positive VLF-EM
Fraser Filtered Values

Anomalous high magnetometer values
> 59000 gammas

SCALE
0 50 100 150 metres

LEGEND

Magnetometer readings 8397=58397 gammas

VLF-EM Fraser Filtered Values -12,8 etc.

N

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,386

EBL-REM CLAIMS

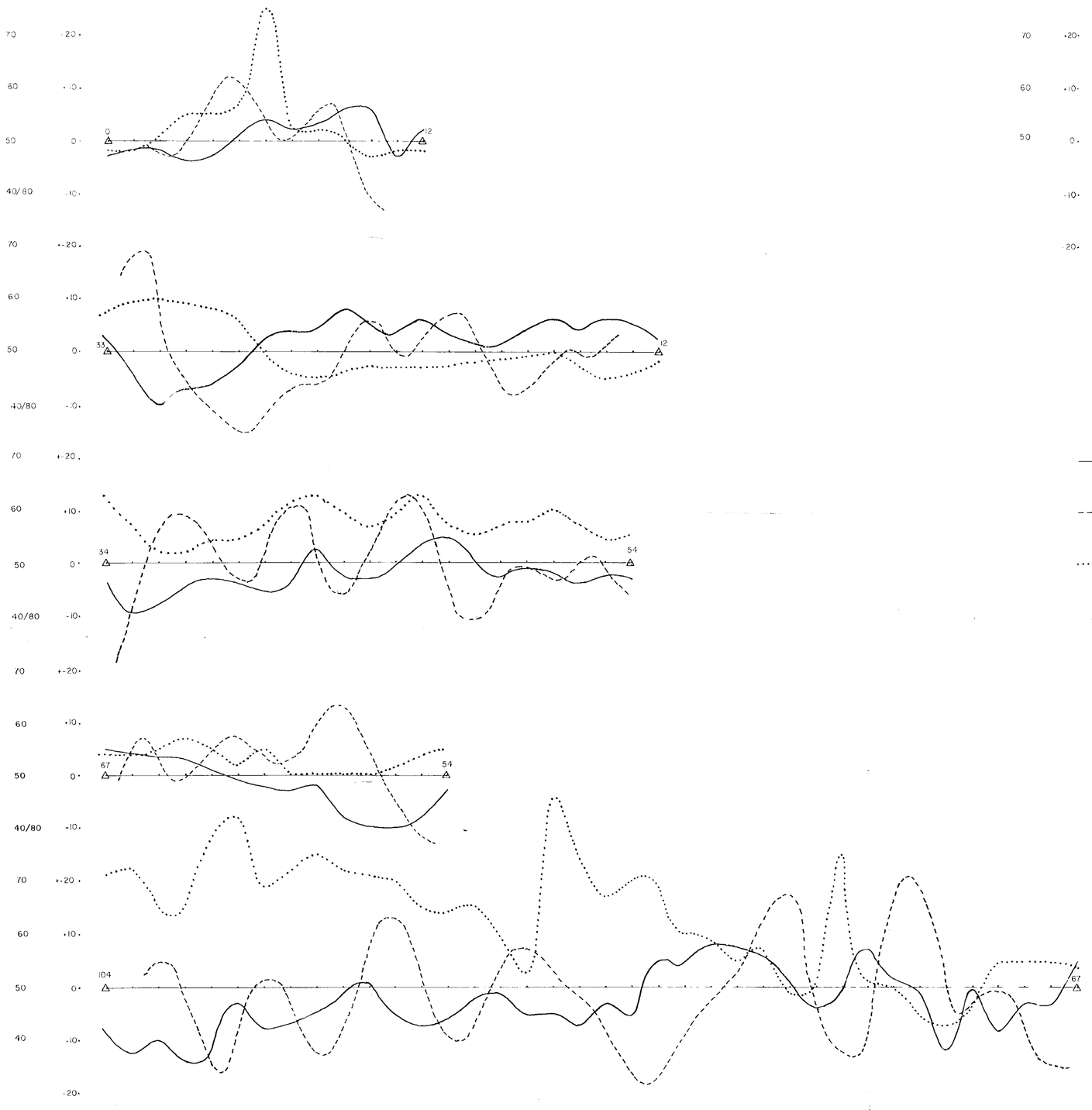
MAGNETOMETER AND
VLF SURVEYS

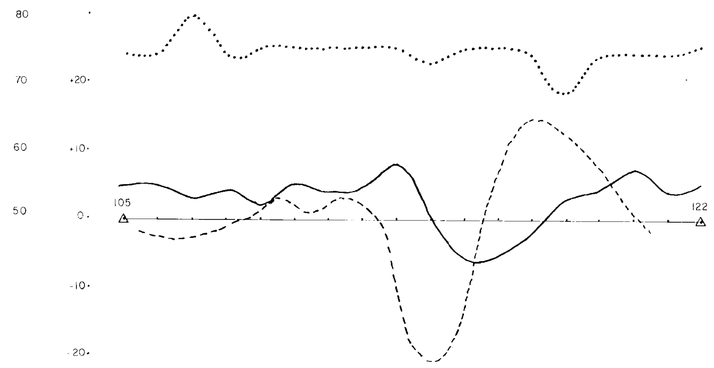
FIGURE 3

DRAWN BY BKN

DATE JUNE 23 1983

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
K.E. NORTHCOTE





NULL VALUES

FRASER FILTERED VALUES

FIELD STRENGTH

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,386

SCALE 1:50 metres

EBL - REM CLAIMS	
VLF - EM SURVEY DATA	
FIGURE: 4	
DRAWN BY: BKN	DATE: JULY 25 83