

2496

REPORT ON
MAGNETOMETER GEOPHYSICAL SURVEY
DONE BY
HELGE SMESTAD AND LARRY SOSTAD
ON
THE EX GROUP OF 40 CLAIMS
AND
THE EL GROUP OF 37 CLAIMS

FOR
EXEL EXPLORATIONS LTD. (N.P.L.)

BY
F. C. TOMLINSON, P. ENG.

March 26, 1970

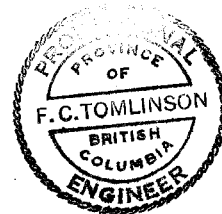


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ATTACHED: *(Rear)*

Certification

#1 KEY MAP

#2 LOCATION MAP

Sample Calculation Sheet 1/2 Size of Overlay

#3 TOPOGRAPHICAL MAP

" " " "

#4 *Partial Location Plan*

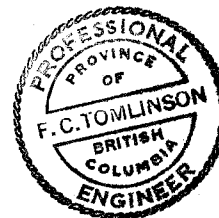
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PLAN OF LINES WITH MAGNETOMETER READINGS

Addenda

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 2496 MAP



INTRODUCTION:

The report on the magnetometer survey done by Larry Sostad and Helge Smestad on contract agreement with Exel Explorations was requested by Mr. Ken Newton, an official of the Exel Explorations of 404 - 550 Burrard Street, Vancouver, B. C.

The RWS group of claims and the Isy group, an adjoining group to the south of the RWS group, are the subject of a report written by Alfred R. Allen, P. Eng., dated November 30th, 1969, in which an estimated expenditure of \$140,000 was recommended on the property. The Alfred R. Allen report should accompany this report for general information regarding the property.

LOCATION AND EXTENT:

The property is located fifteen miles north of Merritt via the Highland Valley road. The group includes Mammit Lake in the western portion of the group and extends easterly from Mammit Lake and Guichon Creek. See attached Key Map and Plan of Claims as recorded on Department of Mines recording map. The RWS claims are staked and recorded on Department of Mines recording map. The RWS claims are staked and recorded in a contiguous group of 77 claims which, for the purpose of recording assessment work, have been



grouped as follows:

The Ex Group	RWS 1 to 6 incl.	Record Nos. 39950 - 39955 incl.	6
	RWS 16 to 21 incl.	Record Nos. 39965 - 39970 incl.	6
	RWS 63 to 77 incl.	Record Nos. 40012 - 40026 incl.	15
	RWS 88 to 96 incl.	Record Nos. 40037 - 40045 incl.	9
	RWS 117 to 120 incl.	Record Nos. 40066 - 40069 incl.	4
			<u>40</u>

The E1 Group	RWS 7 to 15 incl.	Record Nos. 39956 - 39964 incl.	9
	RWS 22 to 30 incl.	Record Nos. 39971 - 39979 incl.	9
	RWS 79 to 87 incl.	Record Nos. 40028 - 40036 incl.	9
	RWS 97 to 106 incl.	Record Nos. 40046 - 40055 incl.	10
			<u>37</u>

Messrs. Smeestad and Sostad state that they located a claim post on a location line near the centre of the 77 claim group. This post is common to RWS 20, 21, 22 and 23. From this post a base line was cut on due north astronomic bearing. Lines were cut normal to the base line at 400 ft. intervals with picket stations at 100 ft. intervals on the lines. The distance from the base line, east or west, was marked on the pickets.

Four Sharpe MF No. 1 Magnetometers were used for the survey. The procedure was according to Mr. Sostad.

One "master magnetometer" was set up at a central point on the base line, using the same point each day during the time of the survey. All the magnetometers, including the master magnetometer, were set at zero reading over this point at the beginning of each working day. Readings were taken at 20 minute intervals from the master magnetometer, which remained over the same point during the working day.



All watches were synchronized at the beginning of each shift and the time was noted for each reading taken by the three magnetometers on the lines.

A constant of 1000 gammas was used and added to all readings of all magnetometers which were taken at 100 ft. intervals on the lines and on the master magnetometer. The time, location on the line and readings were noted for each 100 ft. interval.

All readings taken on the lines have been adjusted for diurnal variation from readings on the master magnetometer.

A special form was used for making the adjustment for each reading on the lines. A sample form is attached to this report.

The writer has not inspected the work done by Mr. Sostad and Mr. Smestad. I have known Helge Smestad for over ten years and Mr. Larry Sostad for two years. I have found them to be conscientious workmen and technically qualified to carry out a survey of this nature.

Plans submitted by Larry Sostad in the form of transparent overlays included a claim map, a topographical map with contours, and a plan showing the location of the lines and the adjusted readings taken on the lines relative



to the master magnetometer, all on a scale of 500 feet equals 1 inch.

These plans for inclusion with this report showing the Topography and Magnetometer readings were reduced to half size and prints made from the sepias.

A key map showing the location of the claims with respect to Merritt and a location plan is also included with this report.

CONCLUSION:

Time has not permitted a thorough study of readings taken on the lines as recorded. There are very few negative readings. It is possible that the arbitrary 1000 gammas was chosen at too high a figure, but the readings are relative and will be useful combined with geochemical, geological and geophysical-induced polarization survey or electromagnetic survey.

There are high reading 2000 gammas and over on lines 44+00 N to 28+00N to the west of Mammit Lake.

There are minus readings or below 200 gammas on lines 24+00N to 40+00N to the west of the base line.



RECOMMENDATIONS:

The RWS EX and EL groups of claims totalling 77 claims warrant the expenditure of \$100,000, which is pro-rate of the \$140,000 recommended by Alfred R. Allen in his report on 130 claims dated November 30, 1969.

F. F. Tomlinson

F. F. Tomlinson, P. Eng.



C E R T I F I C A T I O N

I, F. C. Tomlinson, residing at Apt. 117 -
1650 West 13th Avenue, Vancouver, certify that:

I am a graduate Mining Engineer, University of
Toronto, 1923, with a B.A.Sc. degree.

I have been employed continuously since gradua-
tion, in all phases of mining, except for three years dur-
ing the last war, when I was an engineering officer with
the R.C.A.F.

I am a Life Member of the Association of Prof-
essional Engineers of British Columbia and a Member of
the Canadian Institute of Mining and Metallurgy.

I have not inspected the work performed by Mr.
Sostad and Mr. Smestad on the ground. The report is based
on information, plans and maps supplied by them and a report
written by Alfred R. Allen, P. Eng., dated November 30th,
1969.

A copy of Mr. Allen's report should accompany
this report.

I have no direct or indirect interest in the RWS
group of mineral claims and hold none of the securities of
the Exel Explorations Ltd.

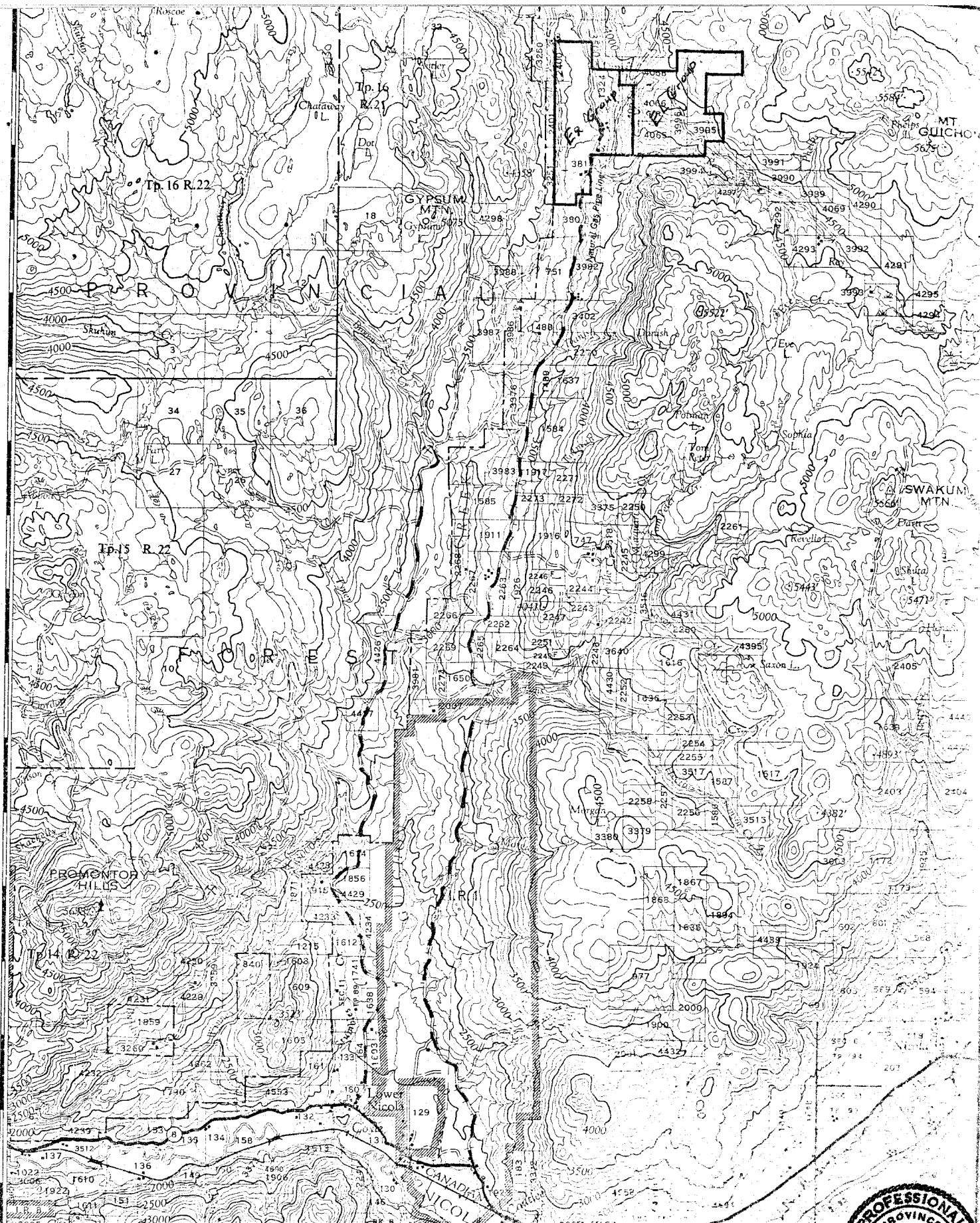
DATED at Vancouver, B. C., this twenty-sixth day
of March, A.D. 1970.



F. C. Tomlinson, P. Eng.



To Spencer Bridge 29 miles



KEY MAP
EXEL EXPLORATIONS LTD. 'N.P.L.
R.W.S. GROUP OF MINERAL CLAIMS
F. C. Tomlinson, P. Eng.
 502-470 Granville St., Vancouver, B.C.
 March 26, 1970.



MAGNETOMETER CALCULATION SHEET

NEWCASTLE EXPLORATIONS LTD.

818 - 510 W. Hastings Street, Vancouver, B.C. Canada

PROPERTY EXFL

INSTRUMENT M.E. - 1-605-202
(MAKE, MODEL & SERIAL No.)

LINE & CONTROL STATION(S) L. 56501 N. E

OPERATOR G. LeBlond

DATE March 9, 1920 B.L. 36+00 N

PAGE 26 OF PAGES

Station	Reading	Time	Constant	Constant ± Reading	Diurnal Time Correction	Corrected Reading	Remarks
15.00 E	-120	9:57	+1000	+820	0	+820	Creek.
16	-135	9:58	+1000	+865	0	+865	
17	-110	9:59	+1000	+890	0	+890	
18	-285	10:02	+1000	+715	+5	+720	
19	+130	10:07	+1000	+1130	+5	+1135	
20.00 E	+120	10:07	+1000	+1120	+5	+1125	
21	+145	10:10	+1000	+1145	+5	+1150	
22	+15	10:14	+1000	+1015	+5	+1020	
23	-22	10:19	+1000	+940	+10	+910	
24	+265	10:22	+1000	+1265	+10	+1275	
25	-290	10:25	+1000	+710	+15	+725	
26	+110	10:35	+1000	+1110	+15	+1125	
27	+70	10:37	+1000	+1070	+15	+1085	
28	+45	10:39	+1000	+1040	+15	+1055	
29	-100	10:41	+1000	+900	+10	+910	
30.00 E	+155	10:45	+1000	+1155	+10	+1165	
31	-110	10:58	+1000	+890	+5	+895	
32	+30	11:00	+1000	+1030	0	+1030	
33	+30	11:02	+1000	+1030	0	+1030	
34	-80	11:05	+1000	+920	0	+920	
35	-50	11:12	+1000	+950	0	+950	
36	-10	11:14	+1000	+990	0	+990	
37	+5	11:16	+1000	+1005	+5	+1010	Power
38	-25	11:19	+1000	+975	+5	+980	
39	-15	11:21	+1000	+985	+10	+995	
40.00 E	-70	11:22	+1000	+930	+10	+940	
41	+30	11:24	+1000	+1030	+15	+1045	
42	-15	11:26	+1000	+985	+15	+1000	
43	-10	11:28	+1000	+990	+20	+1010	
44	+40	11:30	+1000	+1040	+20	+1060	
45	-235	11:33	+1000	+765	+20	+785	



ADDENDA TO REPORT ON
MAGNETOMETER SURVEY

DONE BY

HELGE SMESTAD AND LARRY SOSTAD

ON EX AND EL GROUPS OF

RWS MINERAL CLAIMS

DATED MARCH 26, 1970

BY

F.C. TOMLINSON, P. ENG.

Helge Smestad reports that he took a couple of specimens from a mineralized outcrop on Line 60+000 at 6,300 feet west of the base line. The specimen retained by him and Sostad ran over 1% Cu. The one assayed by Mr. Ken Vincent assayed 2% Cu.

The boundary line of the property must be near where the specimens were taken and in an area of high magnetometer readings up to 4,500 gammas. The high readings over 2,000 gammas extend to the shore of Mammit Lake on line 44+000 north 5,000 feet west. These comparatively high readings should be on claims RWS 63 or 66 depending on the location of the boundary and overlap of staking, if any.

The location line between MLM 59 and 60 will have to be located and 1,500 feet measured presumably to the left (east) to locate the boundary.



The assays on the specimens are interesting but do not mean much until the boundary and its bearing is established.

High magnetometer readings over 2,000 gammas on lines 20+00, 24+00 and 28+000 north at around 5,000 feet west. These readings should be on claims RWS 65, 66, 67 or 68 depending on the boundary location of MLM 95 and 96, which is presumably prior staking.

The magnetic lows, less than 400 gammas and minus readings, combined with a sharp drop from high readings on lines 16+00N to 44+00N, from 1,400 feet west on line 16+00 to 1,700 west on line 44+000, may be significant and warrant further investigation in the form of prospecting, soil sampling or trenching, depending on the depth of overburden, etc.

This area is east of Mammit Lake, presumably on RWS 3, 4, 5 and 6 claims according to the overlay plans and between elevations of 3,100 and 3,500 feet.

F. C. Tomlinson
F. C. Tomlinson, P.Eng.



EXEL EXPLORATIONS LTD. (N.P.L.)

MAGNETOMETER SURVEY

MAMIT LAKE PROPERTY

HIGHLAND VALLEY (50 22 N 120 48 W)

NICOLA MINING DIVISION

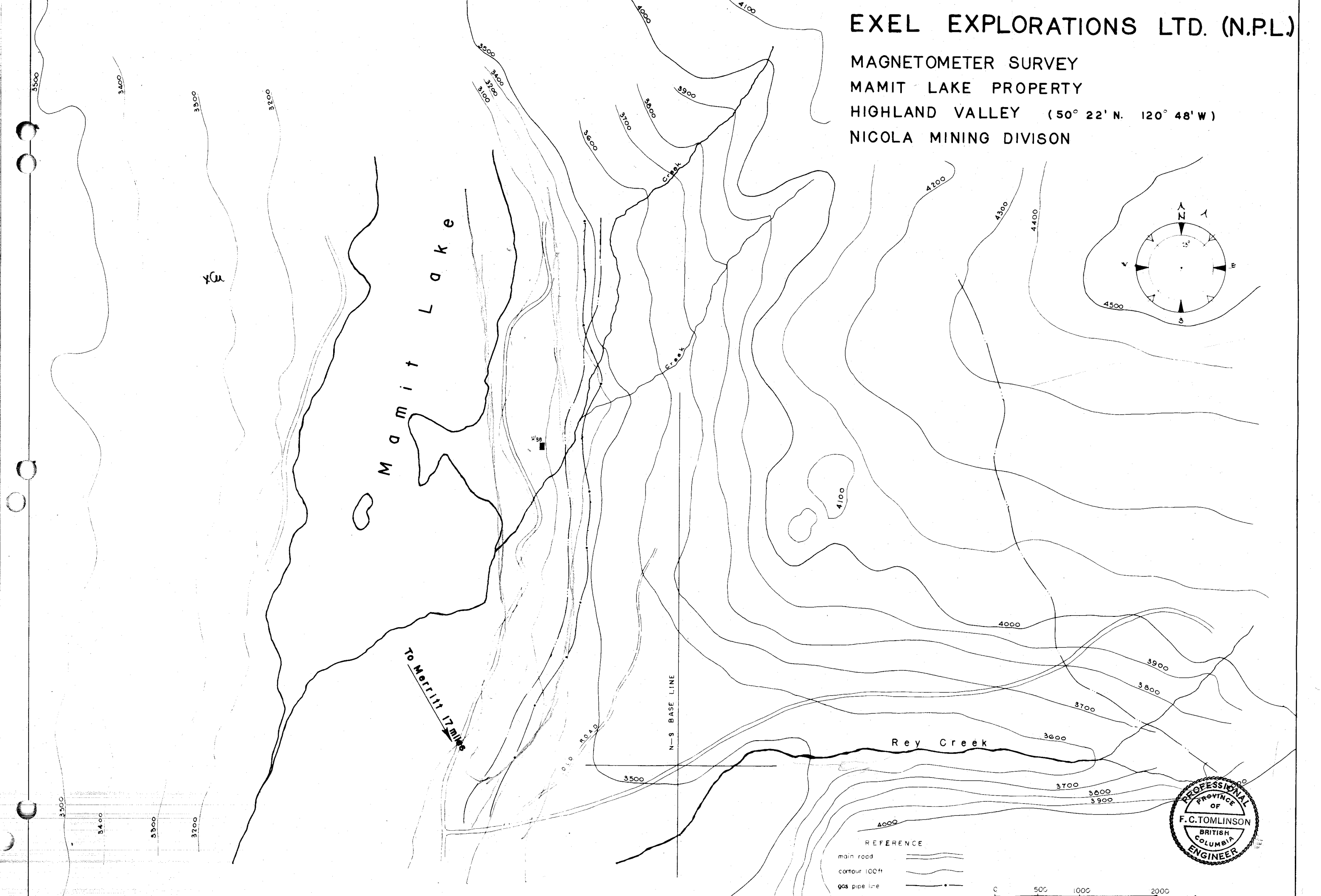
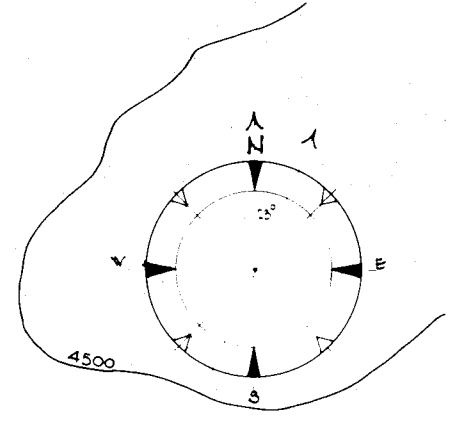


Scale in feet 0 500 1000 2000

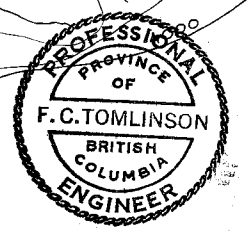
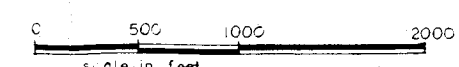
To accompany report by F.C. Tomlinson P.E.

EXEL EXPLORATIONS LTD. (N.P.L.)

MAGNETOMETER SURVEY
MAMIT LAKE PROPERTY
HIGHLAND VALLEY (50° 22' N. 120° 48' W)
NICOLA MINING DIVISON



- REFERENCE
- main road
 - contour 100ft
 - gas pipe line
 - power line



To accompany report by
F.C. Tomlinson P. Eng.

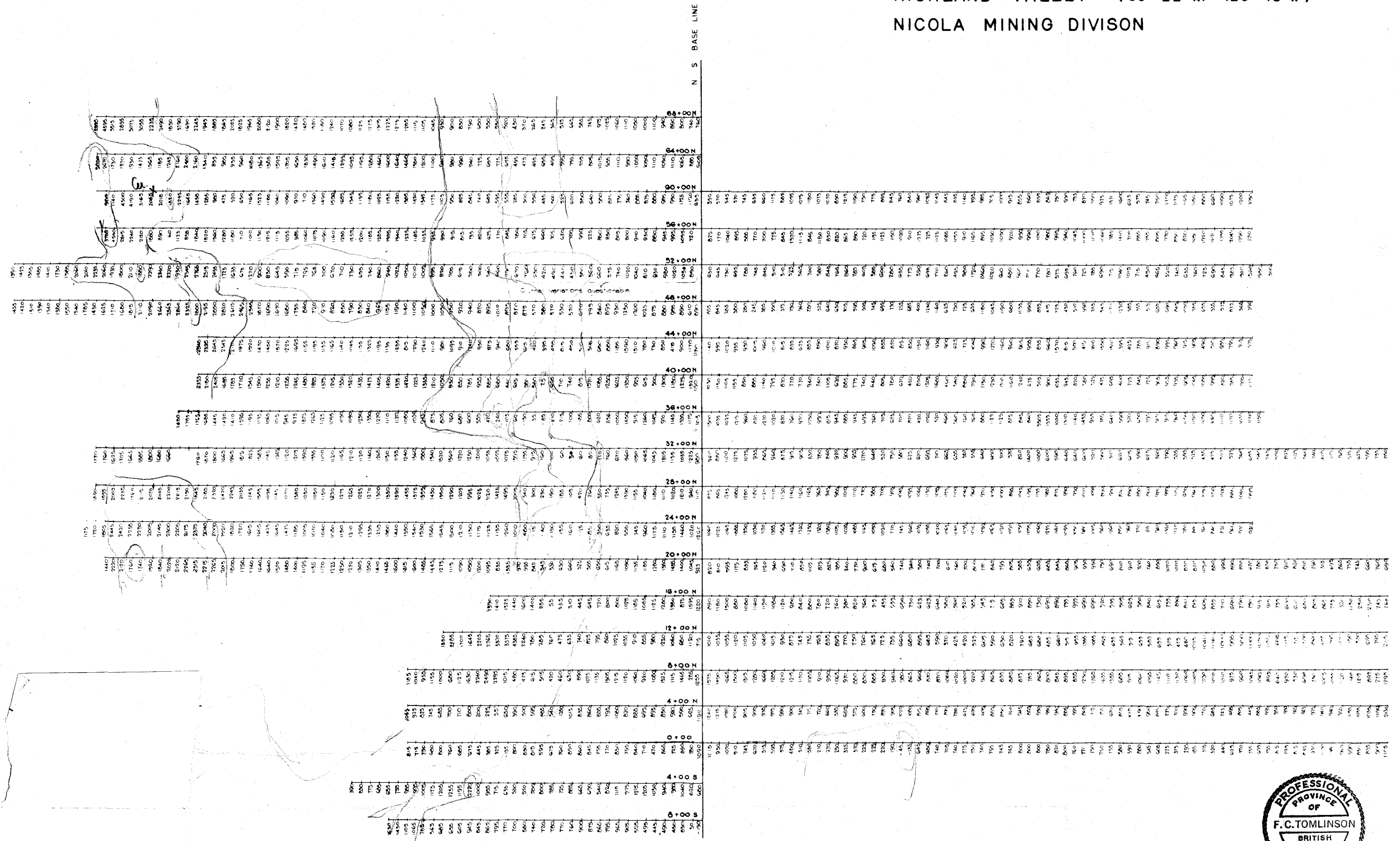
EXEL EXPLORATIONS LTD. (N.P.L)

MAGNETOMETER SURVEY

MAMIT LAKE PROPERTY

HIGHLAND VALLEY (50° 22' N. 120° 48' W)

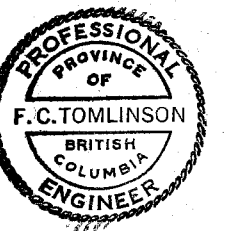
NICOLA MINING DIVISION



All magnetometer readings are in gammas at 100' intervals.

Instrument used SHARPE M.F.I.

Date: 15 3 70



In accordance with report by F.C. Tomlinson, P. Eng.

VALUATION OF WORK

Mar 26 1970

EX & EL Mineral Claim Groups
 Geophysical Survey
 Nicola Mining Division
 Mamit Lake Area Highland Valley

Line cutting and Magnetometer Survey took place between Feb 24 - Mar 9 1970
 The writer along with 4 other men : 1. H. Smestad - Magnetometer Operator
 2. G. LeBrun - Magnetometer Operator & Line cutter
 3. B. Happell - Magnetometer Operator & Line cutter
 4. C. LeBrun - Line cutter
 came directly from Vancouver arriving in Merritt 24 FEB 70. Food and Accomodation was supplied. Food and Accomodation was not supplied to men hired in Merritt.

WAGES

L. SOSTAD @ \$80 da Feb 24 - Mar 10	-----	\$1200
H. Smestad @ \$50 da Feb 24 Mar 10	-----	\$ 750
C. LeBrun @ \$40 da Feb 24 - Mar 10	-----	\$ 600
G. LeBrun @ \$40 da Feb 24 Mar 1- <u>i</u>	----- Line cutter	\$ 240
G. LeBrun @ \$50 da Mar 2 Mar 9	----- Mag Operator	\$ 400
B. Happell @ \$40 da Feb 24 Mar 1	----- Line cutter	\$ 240
B. Happell @ \$50 da Mar 2 Mar 9	----- Mag Operator	\$ 400
L. McLelland @ \$40 da Feb 28 Mar 1	-----	\$ 80
K. Isitt @ \$40 da Feb 28 Mar 1	-----	\$ 80
K. White @ \$40 da Feb 27 Mar 1	-----	\$ 120
L. Coutlee @ \$40 da Feb 27 Mar 1	-----	\$ 120
D. Charters @ \$40 da Mar 3 Mar 7	-----	\$ 200
R. Bauer @ \$40 da Mar 3 Mar 7	-----	\$ 200
R. Burnett @ \$40 da Mar 4 Mar 5	-----	\$ 80
A. Cox @ \$40 da Mar 4 Mar 5	-----	\$ 80
Bernard McLeod @ \$40 da Feb 26 Mar 5	-----	\$ 320
Antoine Moses @ \$40 da Feb 26 Mar 5	-----	\$ 320
W. Barnes @ \$50 da --Mar 15--Mining Engineer--Diurnal Variation Calcs.	-----	\$ 50
L. Sostad @ \$50 da --Mar 15 Mar 17--Diurnal Variation Calcs.	-----	\$ 150
P. Langrick----Professional Draftsman --Drafts Maps	-----	\$ 200

LIVING EXPENSES

Accomodation 5 Men @ \$4 da	-----	\$ 280
Meals 5 Men @ \$6.50 da	-----	\$ 455

EQUIPMENT

Flagging--@ \$1 Roll	-----	\$ 25
Axes-----@ \$6 each (10)	-----	\$ 60
Chains----@ \$20 each (6)	-----	\$ 120
Power Saws@ \$ 5 da (6)	-----	\$ 420
Trucks Two 4 Wheel Drive Power Wagons @ \$25 da	-----	\$ 750
Magnetometers One-Feb 24-Mar 10 Two-Mar 1-Mar 10 --Coast Eldridge	-----	\$ 498
Magnetometer One Mar 1-Mar 10 -----R. Trepanier	-----	\$ 132

TOTAL \$8570

SGD: _____
 (L.R.W. SOSTAD)

Declared before me at the City
Vancouver, in the
 Province of British Columbia, this 31
March, 1970, A.D.

[Handwritten Signature]

L. J. Gervette
 A Commissioner for taking Affidavits within British Columbia or
 A Notary Public in and for the Province of British Columbia.

SUB-MINING RECORDER