

4640

REPORT ON THE
MAGNETOMETER SURVEY
ES AND SA MINERAL CLAIMS
of
MINAS DE CERRO DORADO LTD (NPL)
MERRITT, BRITISH COLUMBIA
NICOLA MINING DIVISION

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4640 MAP _____

Vancouver, B.C.
October 18, 1973

F. Holcapek, P.Eng.,
Consulting Geologist

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ILLUSTRATIONS

- #1 PROPERTY LOCATION MAP 1" = 110 miles
#2 MAGNETOMETER SURVEY - Values (1)
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#4 Magnetometer Survey - Values
#5 - Contours

REPORT ON THE
MAGNETOMETER SURVEY
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of

MINAS DE CERRO DORADO LTD (NPL)
MERRITT BRITISH COLUMBIA
NICOLA MINING DIVISION

1-00 INTRODUCTION

The ES and SA mineral claims were located in September 1971 and September 1972 respectively, east of Indian Reserve No. 1, north of Merritt, B.C. During the summer of 1972 an exploration program of geochemical sampling along a 400-foot by 200-foot grid and geological mapping was completed. The mapping program proved to be inconclusive because of limited outcrops.

The magnetometer survey was initiated during June 1973. The purpose of this survey was to obtain information of possible areas of intrusives and hence favourable to mineralization.

2-00 LOCATION AND ACCESS

The ES and SA mineral claims lie five miles north of Merritt on the eastern boundary of Indian Reserve No. 1. The claim group is known as the Morgan Creek property.

The centre of the claim group is located $50^{\circ} 12' N$ latitude and $120^{\circ} 48' W$ longitude.

Access to the property is by dirt road up Jesse Creek from the Merritt to Highland Valley road. Old logging road access exists over much of the claim group, but four-wheel drive vehicles are necessary.

3-00 PHYSIOGRAPHY

The property is located on a gently rolling plateau. The only steep sections are along Morgan Creek and Jesse Creek. Elevations range between 4000 to 4500 feet. West of the property the plateau drops steeply towards Guichon Creek.

Precipitation in the area is light, the summers are hot and dry and winters cold with light snowfall. Light stands of pine and spruce cover the property. Grassland and aspen groves are along the southern part of the property.

4-00 PROPERTY

The property consists of the following mineral claims:

<u>Claim Name</u>	<u>Record Number</u>
ES 1 Fraction	50099M
ES 2-34	50100M - 50132M
ES 35-42	50100M - 50140M
ES 43-45	50141M - 50144M
ES 47-48	50145M - 50146M
SA 1-6	57225 - 57230
SA 7 Fraction	57231

5-00 GEOLOGY

The property lies along the eastern to south eastern extension of the Guichon Batholith. It is underlain by altered Nicola volcanics, in part resembling hybrid phases of the Guichon intrusion. The south eastern portion of the claims is underlain by what appears to be a medium to fine-grained Bethlehem phase quartz diorite.

Floats from the northern part of the property appear to be derived from the Cenozoic Coldwater beds, a sedimentary sequence.

In all of the hybrid outcrops and in part of the Bethlehem phase outcrops fine-grained secondary biotite, minor k-feldspar alteration, accompanied by chloritization was noted. Traces of chalcopyrite were found adjacent to the claim group on the Indian Reserve near Meadow Creek.

6-00 GEOCHEMICAL SURVEY

The geochemical survey was completed during the summer of 1972 over the northern portion of the grid, ES 1-34 and a small grid on two claims on Jesse Creek, ES 47-48. Ground control was obtained by a 400 foot by 200 foot flagged grid.

The result of this survey is inconclusive because of heavy glacial drift and fairly dry climate. Caliche was noted in some areas in road cuts in the glacial overburden. This soil environment is not conducive to the development of good geochemical profiles.

In general, the data shows a random distribution of all levels of geochemical values.

Two anomalies, the first consisting of five samples between lines 32N and 40N, the second consisting of three samples on line 60N, 24W - 28S, have been outlined. The significance of these anomalies have not been ascertained.

7-00 MAGNETOMETER SURVEY

7-10 Object: The purpose of the magnetometer survey was to hopefully help in the interpretation of the geology as known from limited outcrops. If porphyry copper type mineralization exists on the property, and if the geological setting is similar to the Highland Valley type copper deposits, then areas of low magnetic intensity, possibly coinciding with geochemical highs, will be worthwhile to investigate further.

But, at the same token, the Craigmont Mine is located to the west across Guichon Creek. This deposit is a contact metasomatic type copper mineralization associated with hematite and magnetite, hence high magnetic intensity areas coinciding with geochemical highs can also be indicative of copper mineralization.

7-20 Instrument: The instrument used was a Sharp MF1 Fluxgate magnetometer. This instrument measures the vertical component of the earth magnetic field. It is self-orienting, requiring only coarse levelling and has a built-in temperature compensation.

7-30 Field Procedure: Ground control was obtained by lines established on a 400 foot by 200 foot grid pattern. The old lines, from the geochemical survey, were reflagged and the grid was extended to cover the whole claim group. All lines are compass lines, flagged and stations marked at 200 foot intervals. A total of 24 line miles were re-established and approximately 12.5 line miles of new lines were established.

The magnetometer was zeroed for the property and a base station established by taking three readings over a one-half hour time interval. The readings were averaged and the obtained value used as a base reading.

All subsequent secondary base stations were established the same way, only each reading obtained was corrected for short term variations before averaging. All secondary base stations have been tied into a master base station.

7-40 Corrections:

For purposes of magnetic correction, it was assumed that all magnetic variations are linear over a short time interval. Based upon this assumption, the following equation gives a good approximation:

Let - Bc = Corrected base station reading (obtained by averaging a number of readings),
 Bx = Base station reading at a later time,
 Bb = Base station reading at the start of traverse,
 Be = Base station reading at the end of traverse,
 Ry = Reading at Station Y
 Rc = Corrected reading for Station Y
 T = Total time elapsed from beginning to end of traverse

t = Time elapsed from start of traverse to time when reading at station Y has been taken.

Then:

$$R_c = (B_c - B_x) + R_y + \frac{(B_b - B_e) t}{T}$$

.	.
.	.
.	.
Long Term	Short Term

Corrections

Elapsed time for individual traverses was always less than one hour. Diurnal variation for any traverses was less than 1 gamma per minute, this is considered tolerable.

The field data was corrected, plotted and contoured for interpretational purposes.

7-50 Interpretation: The general magnetic relief varies from less than 1,000 gammas to 5,500 gammas. In the northern portion of the grid, from 68N, 28W, trending in a general south-easterly direction, the magnetic intensity shows little relief and is less than 1,500 gammas. The little outcrops found during geological mapping suggest that this area is underlain by the Coldwater Beds, a sedimentary unit.

The central part of the grid shows a gently rolling magnetic relief broken by two small and one broad magnetic high in excess of 2,500 gammas.

The southeastern part shows steep magnetic gradients of low amplitude. This part of the grid has been mapped as being underlain by intrusive rocks.

None of the magnetic features, neither strongly nor weakly anomalous show coincidence with the geochemical highs.

The area of hybridization of the Nicola and of Bethlehem phase intrusion showing alteration feature lie within the southern part of the surveyed area, the area of steeper magnetic gradients.

On the Jesse Group the magnetic relief is smooth. The main feature is a magnetic low trending along Jesse Creek, coinciding with a fault zone as indicated on air photographs. Several high copper values lie within this magnetic low.

8-00 CONCLUSION


The results of the magnetometer survey without reliable geological information is inconclusive. The same was found in respect to the geochemical survey. The presence of isolated small outcrops of Hybrid and Bethlehem phase equivalent showing evidence of alteration, i.e. secondary biotite, k-feldspar alteration and chloritization, warrant more investigation.

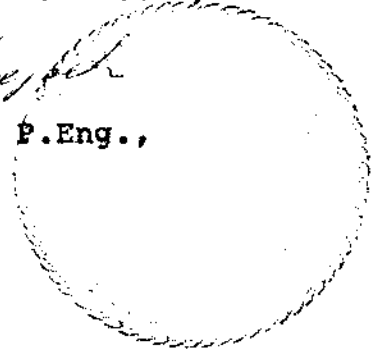
9-00 RECOMMENDATIONS

The lack of outcrops combined with the inconclusive results from geochemical and magnetic surveys suggest the best follow-up program to be cat trenching in the area of altered outcrops.

If the exposures show favourable alteration indicative of a possible porphyry copper environment or sulfide mineralization, an induced polarization survey is warranted to delineate the extent and to help to locate drill targets.

Respectfully submitted,


F. Holcapek, P.Eng.,
Geologist



Vancouver, B.C.
October 18, 1973

CERTIFICATION

I, Ferdinand Holcapek of 92-10842 152nd Street,
Surrey, British Columbia, do hereby certify that:

1. I am a graduate of the University of British Columbia, Vancouver, British Columbia, with a Bachelor of Science degree in Geology, 1969.
2. Since 1961 I have been engaged in mining exploration in British Columbia, Yukon Territory, North West Territories, Quebec, Nevada, Arizona and Australia.
3. I am a registered member, in good standing, of the Association of Professional Engineers of British Columbia.
4. I am a consulting geologist.



F. Holcapek, P.Eng.,
Geologist

Vancouver, B.C.

October 18, 1973

DOMINION OF CANADA:
 PROVINCE OF BRITISH COLUMBIA.
 To Wit:

In the Matter of the magnetometer survey conducted on the
 ES 1-48 and SA 1-6, 7FR. claims of Minas de Cerro Ltd. (NPL),
 Merritt, B.C.

I, J. B. Talbot

of c/o 107 - 325 Howe St., Vancouver, B.C.

in the Province of British Columbia, do solemnly declare that the following personnel were employed and costs incurred in conducting the above work in June 1973.

Personnel

F. Holcapek - Supervision field	2.75 days @ 125.00 /day	343.75
J. Needoba - Geologist	8.50 days @ 77.26 /day	656.71
S. McColl - crew leader, mag. operator	9.75 days @ 40.90/day	398.77
	11.85 days @ 45.44/day	538.46
R. Turner - field	2.75 days @ 72.72/day	199.88
F. Zishka "	5.25 days @ 43.20/day	226.80
M. Veerman "	24.85 days @ 40.90/day	1,016.36
H. Barsje "	2.57 days @ 40.90/day	105.11
J. Ramsay "	2.57 days @ 45.44/day	116.78
B. Talbot - drafting	30.50 hrs. @ 8.50/hr.	259.25
R. Rollings - drafting	6.50 hrs. @ 8.50/hr.	55.25
		<u>3,917.12</u>

Disbursements

Supplies and Equipment	832.20
Groceries	191.42
Travel	161.46
Camp costs	101.12
Truck rental	839.00
Gas	55.79
Magnetometer rental	172.80
Miscellaneous; prints, phone	19.80
+ 10% service charge on disbursements	264.17
	<u>2,637.76</u>

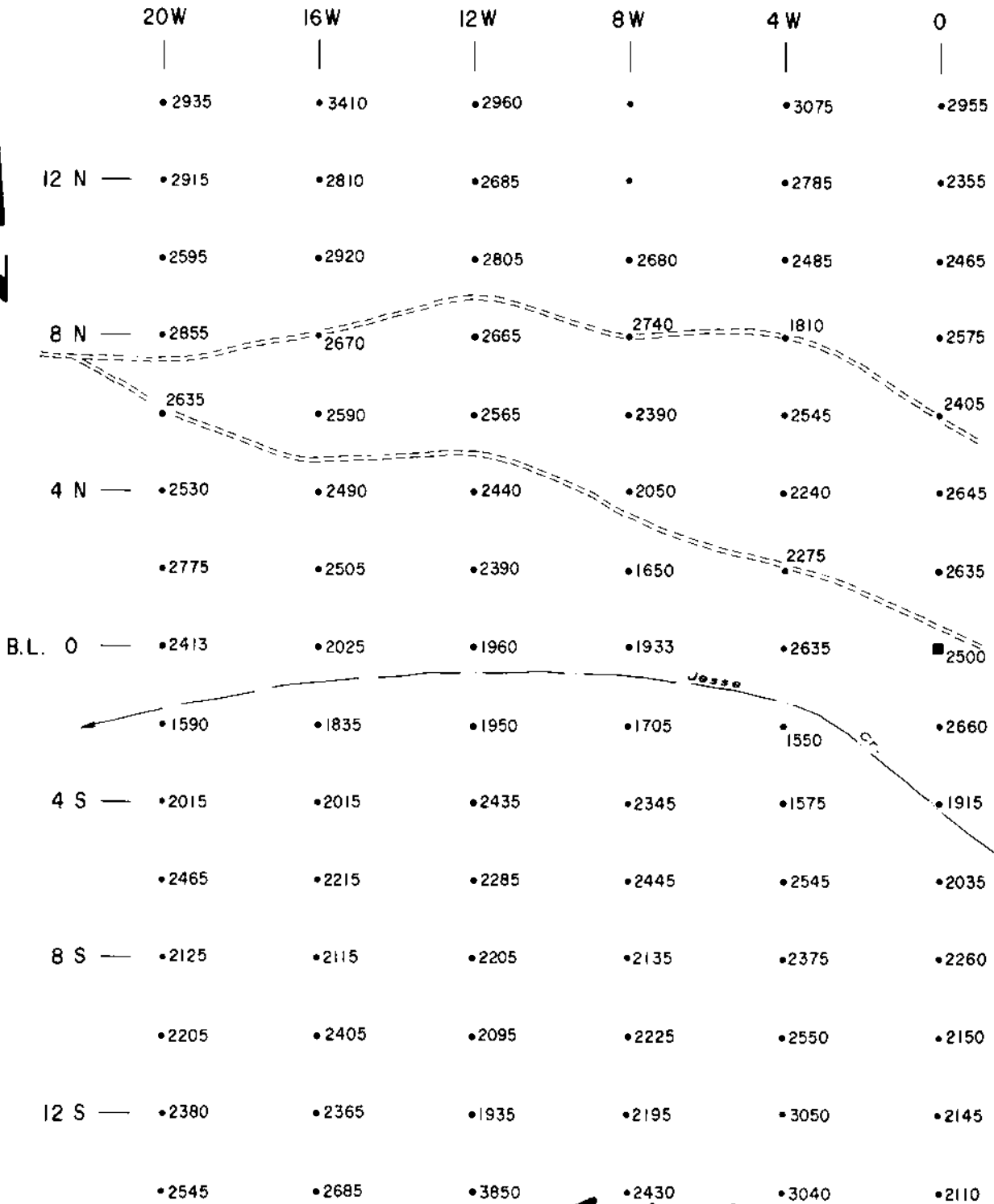
And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Total Amount \$6554.88

Declared before me at the City
 of Vancouver, in the
 Province of British Columbia, this 24
 day of October, 1973, A.D.

J. B. Talbot

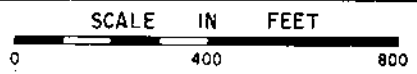
A. J. Jernette
 A Commissioner for taking Affidavits for British Columbia or
 A Notary Public in and for the Province of British Columbia.



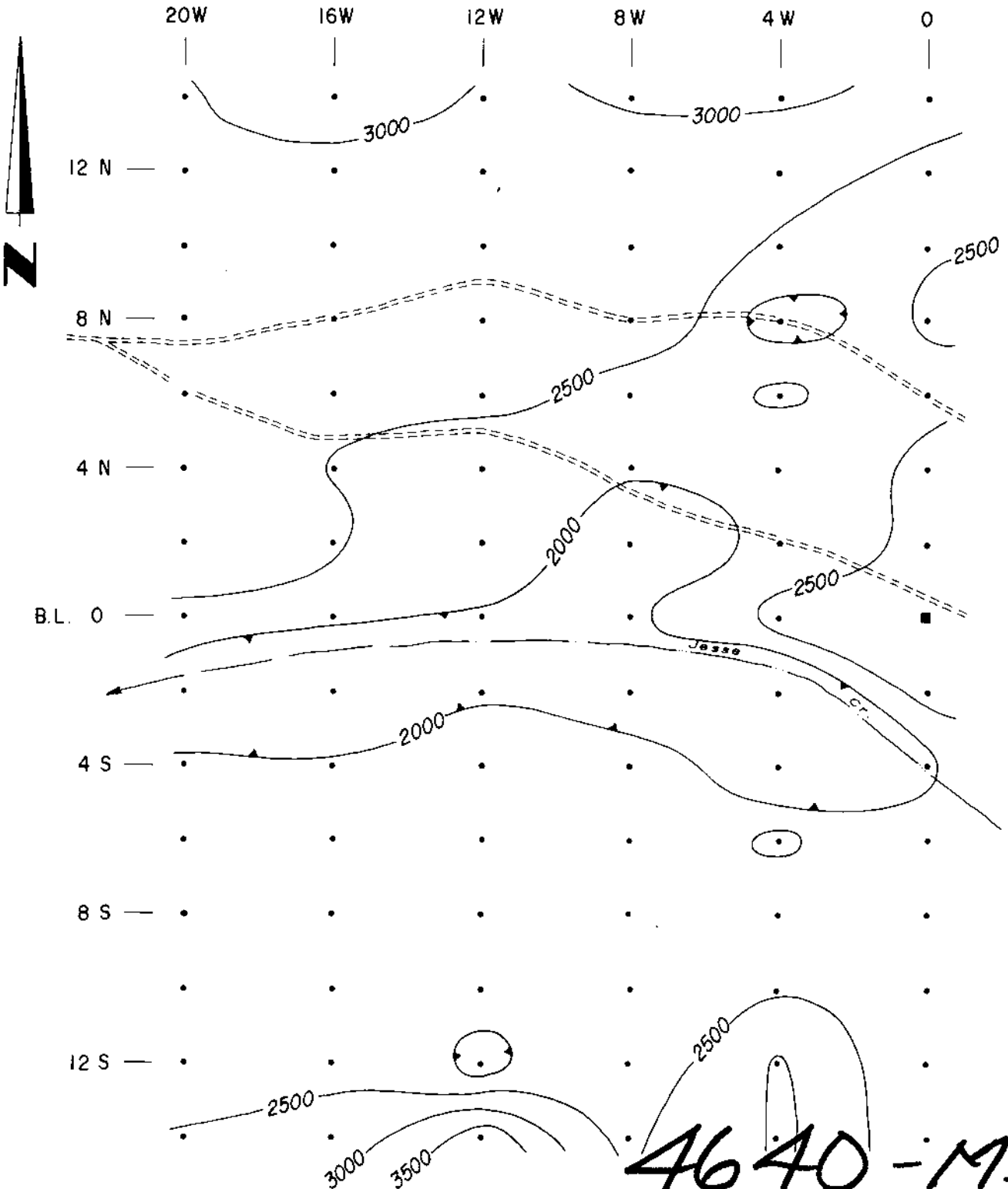
4640-M2

MINAS DE CERRO DORADO LTD. (NPL)
 JESSE GROUP MERRITT AREA
 NICOLA MINING DIVISION, B.C.

MAGNETOMETER SURVEY
 (Values in Gammas)



AGILIS ENGINEERING LTD. SEPT., 1973

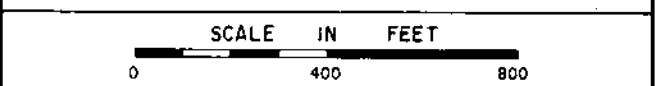


4640-M3



MINAS DE CERRO DORADO LTD. (NPL)
 JESSE GROUP MERRITT AREA
 NICOLA MINING DIVISION, B.C.

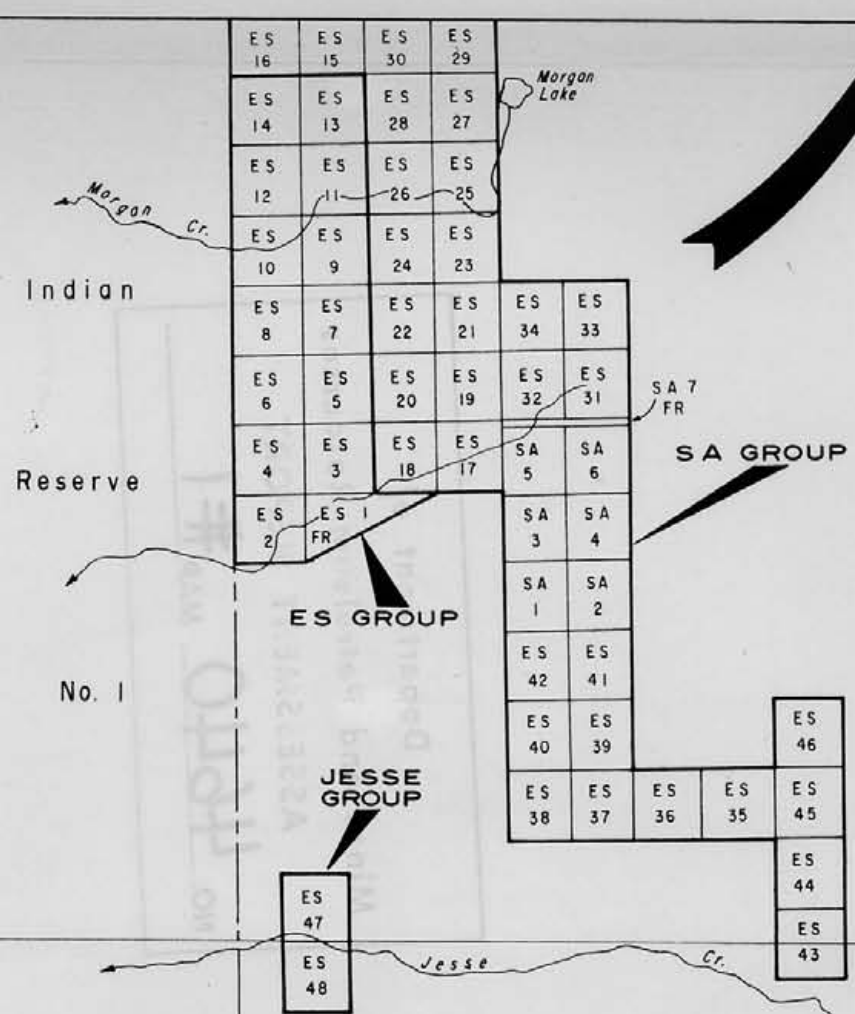
MAGNETOMETER SURVEY
 (Contour Interval: 500 Gammas)



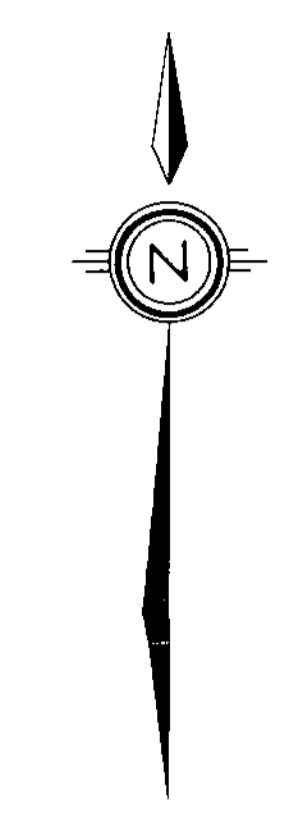
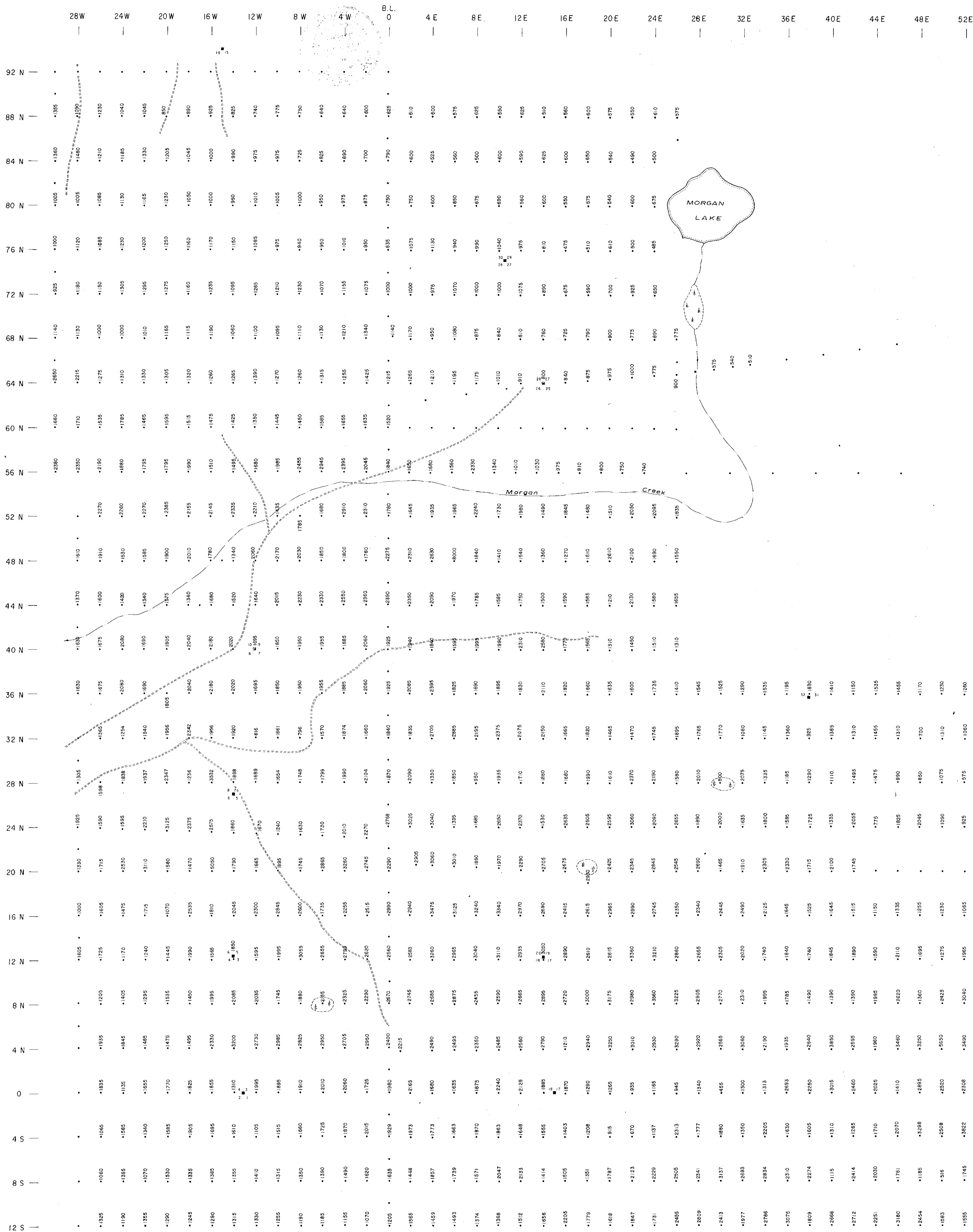
AGILIS ENGINEERING LTD. SEPT., 1973

BRITISH COLUMBIA
MINAS DE CERRO DORADO LTD. (NPL)
ES, SA and JESSE
CLAIM GROUPS
PROPERTY LOCATION MAP
NICOLA MINING DIVISION

SCALE IN MILES
 50 0 50 100 150 200



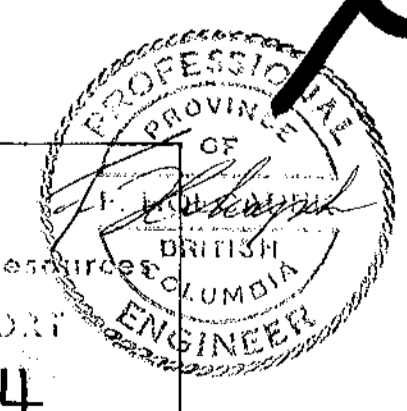
4640-M1



LEGEND
 --- Road
 --- Creek
 () Swamp
 □ Claim post

4640 MA

Department of
 Mines and Geology Resources
 AGING REPORT
 NO. 4640 M.P. #4

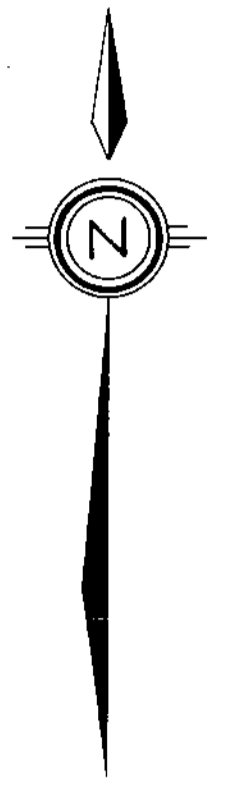
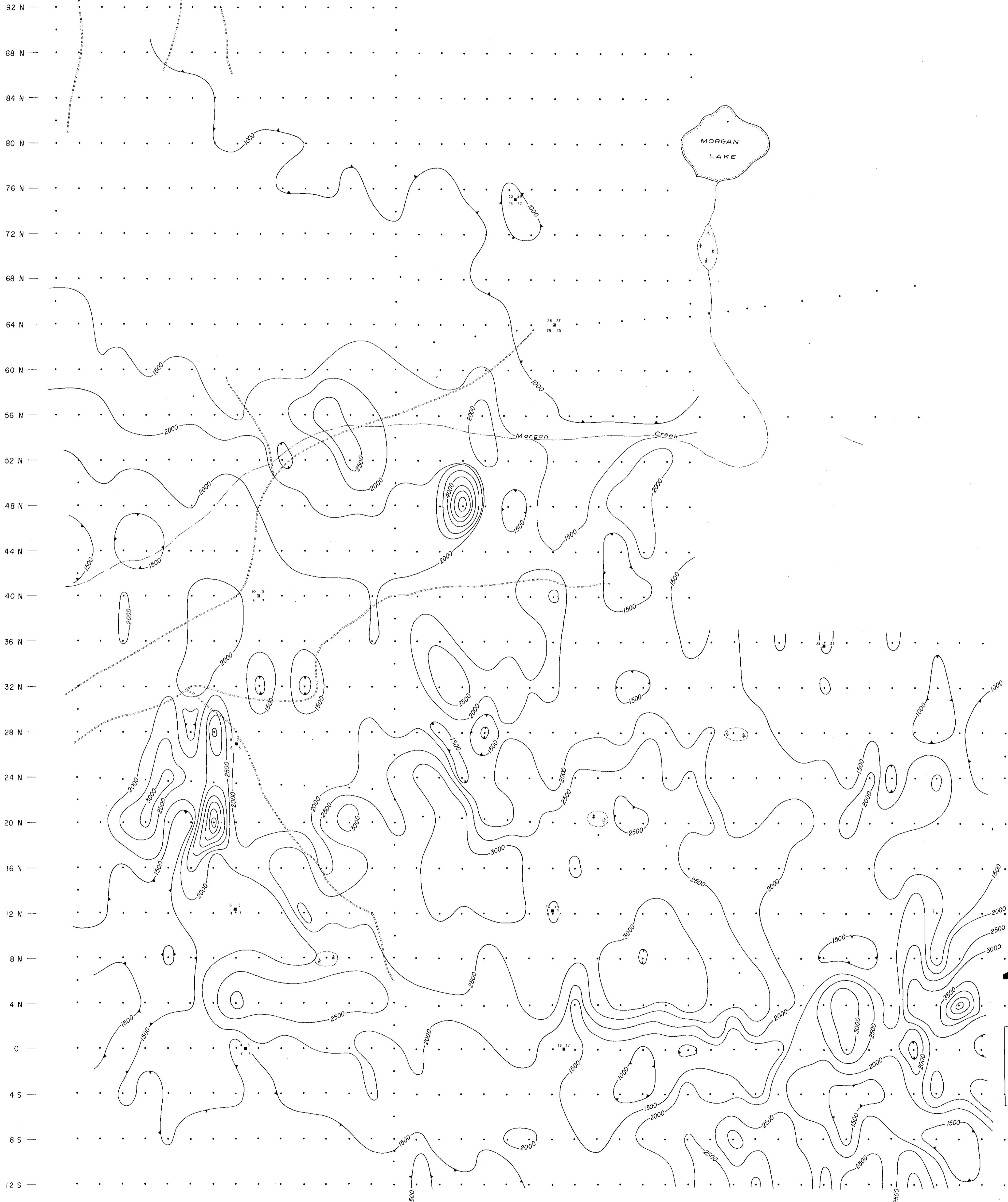


MINAS DE CERRO DORADO LTD. (NPL)
 ES and SA CLAIM GROUPS
 MORGAN CREEK AREA - MERRITT, B.C.
 NICOLA MINING DIVISION

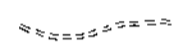
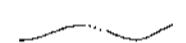
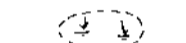

MAGNETOMETER SURVEY
 (Values in Gauss)

SCALE IN FEET
 400 0 400 800 1200
 AGILIS ENGINEERING LTD. SEPTEMBER, 1973

28W 24W 20W 16W 12W 8W 4W B.L. 0 4E 8E 12E 16E 20E 24E 28E 32E 36E 40E 44E 48E 52E



LEGEND

-  Road
-  Creek
-  Swamp
-  Claim post

4640 M5

Department of
Mines and Technical Surveys
AGILIS ENGINEERING LTD.
NO. 4640 ASP #5



MINAS DE CERRO DORADO LTD. (NPL)
ES and SA CLAIM GROUPS
MORGAN CREEK AREA - MERRITT, B.C.
NICOLA MINING DIVISION

MAGNETOMETER SURVEY
(Contour Interval: 500 Gammas)

SCALE IN FEET
0 400 800 1200

AGILIS ENGINEERING LTD. SEPTEMBER, 1973