3769

93M/16E

GEOCHEMICAL AND GEOPHYSICAL REPORT

ON THE

CARR GROUP OF MINERAL CLAIMS

TAKLA LAKE AREA, B.C.

for

CANADIAN SUPERIOR EXPLORATION LTD.

by

RICHARD J. OVERSTALL, B.Sc.

WILLIAM RAINBOTH, P. Eng.

Property Name	:	CARR Group
Location	:	Takla Lake Area
		Omineca Mining Division, B.C.
		55°N, 126°W, N.E.
Date started	:	July 15, 1972
Date completed	:	August 2, 1972

93 M /16E

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INTRODUCTION

The CARR Group of 16 mineral claims and fractions is located 13 miles NNE of Bulkley House at the north end of Takla Lake in the Omineca Mining Division. The claims are exclusively owned by Canadian Superior Exploration Limited, and geochemical and geophysical surveys in 1972 by personnel of that company are the basis of this report.

The claims form a contiguous block on a saddle between two peaks four miles east of Iktlaki Peak at the south end of the Hogem Ranges. The elevation of the group is 5,000 ft. asl, just below timber line. The vegetation then is of stunted alpine fir and alpine meadow plants.

Access to the property is currently by helicopter only, a distance of 95 air miles from Smithers. Fixed wing aircraft can land at Bulkley House and heavier freight can be barged up from Fort St. James at the south end of Takla Lake.

At the time of writing the northern extension of the B.C. Railway system is under construction along the north shore of Takla Lake. Easy grades exist between the claim group and the railway right of way. (Plate 68-72-1).

HISTORY

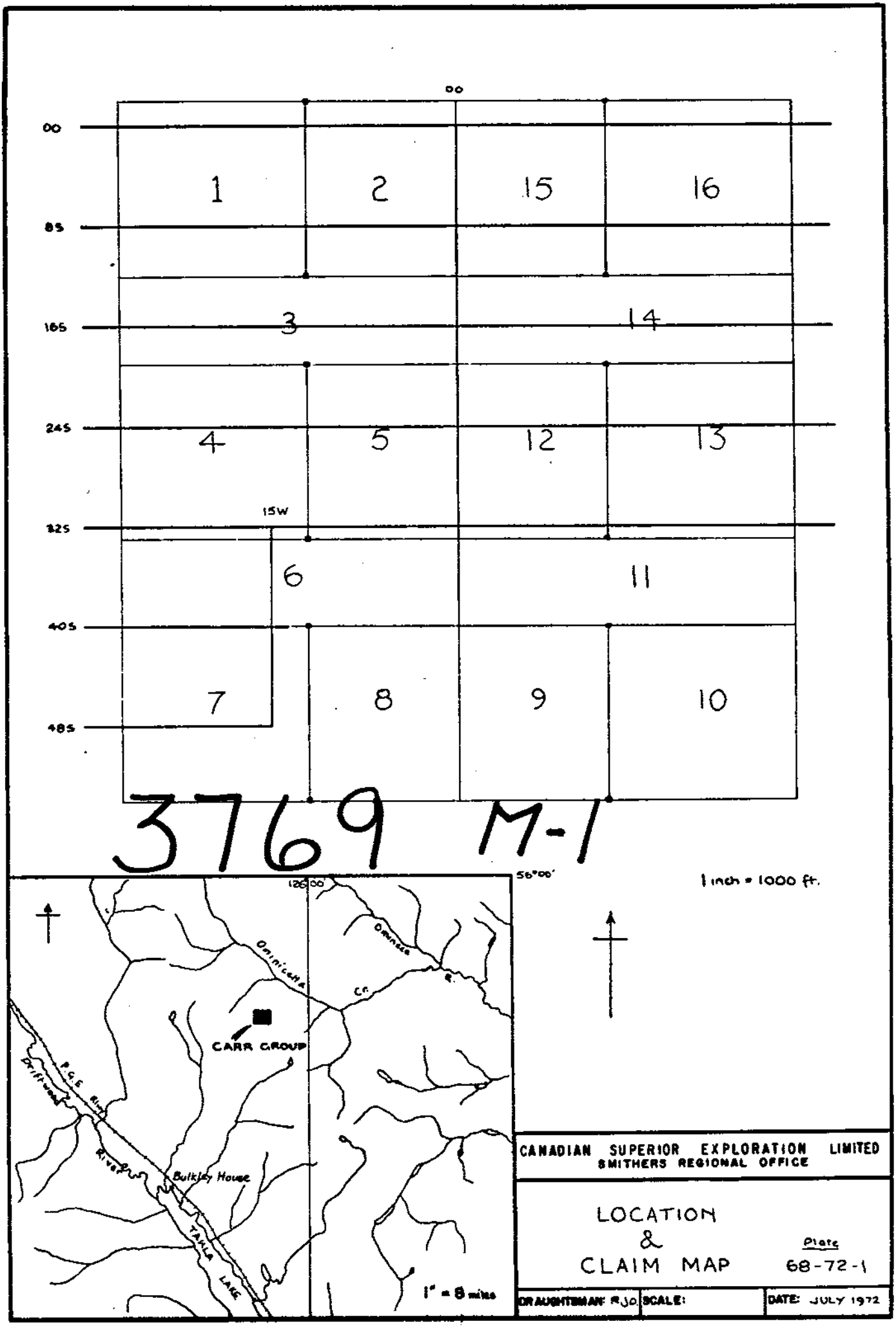
The claims were staked to cover an area drained by creeks anomalous in copper and molybdenum. The samples were taken during the 1971 Takla reconnaissance project from an area of complex aeromagnetics as indicated on Federal/Provincial Aeromagnetic Map 5285 G.

There is no evidence of any other claims having been held on the property.

CONCLUSIONS & RECOMMENDATIONS

The magnetic and geochemical patterns indicate a possible porphyry copper-molybdenum occurrence some 4,000 ft. by 2,000 ft. in size. Further surveys are needed however to determine, firstly, if the copper and molybdenum content is near economic grade and, secondly, to more precisely locate drill targets. With these objectives the following recommendations are made:-

1. The claim group be increased on all sides by some 40 claims and fractions
2. Geology and sampling of mineralized outcrops be mapped on 1" = 400 feet scale over the whole enlarged claim group.
3. Soil sampling and magnetometer surveys be extended to new boundaries of claim group.
4. If outcrop sampling indicates a possible economic deposit this could be followed by I.P. surveys (approx. 20 line-miles) and diamond drilling.


00
00
8S
16S
24S
32S
40S
48S
15W
1
2
15
16
3
14
4
5
12
13
6
11
7
8
9
10
3769 M-1
1 inch = 1000 ft.
126°00'
56°00'
Omineca R.
Omineca Cr.
CARR GROUP
P.G.E. Railway
Driftwood
Bulkley R.
Bulkley House
TAHLA LAKE
1" = 8 miles
CANADIAN SUPERIOR EXPLORATION LIMITED
SMITHERS REGIONAL OFFICE
LOCATION
&
CLAIM MAP
Plate
68-72-1
DRAUGHTSMAN: RJO
SCALE:
DATE: JULY 1972

GENERAL GEOLOGY

The area of the CARR group has not been mapped by the G.S.C. or the Provincial Department of Mines although some idea of the geology can be extrapolated into the area from the McConnell Creek (94D) map sheet to the north and the Takla (94N) map sheet to the east.

The Skeena Arch, north easterly trending uplift of Lower Jurassic island arc volcanics and sediments is bounded by Jurassic/Cretaceous Bowser sediments to the northwest and Cretaceous and Tertiary continental extrusives to the southeast. At its eastern end the Arch is brought into contact with the Cassiar-Omineca crystalline belt by the northwesterly trending Pinchi Fault zone.

Within the Skeena Arch is a prominent north-south graben, the Takla Fault zone. The CARR claims are at the northern end of the graben, a few miles south of the Pinchi Fault.

Preliminary reconnaissance geology suggests a deep seated monzonite-diorite stock, possibly related to the Hogem Batholith, has intruded Lower Jurasic Hazelton/Takla volcanics. The western boundary of the stock crosses the property.

SOIL GEOCHEMISTRY

In the period July 25th to July 27th, 1972, 192 soil samples were taken at 200 feet intervals along east-west lines 800 feet apart covering the claim group.

The samples were analyzed for total copper and molybdenum by Core Laboratories, Smithers, B.C.

(a) Geochemical Methods

1. The soil samples were taken with the aid of a hammer-mattock (grub-hoe) at fairly shallow depths (6 to 12 inches). In most cases the grub-hoe was all that was necessary to clear away the superficial humus material ("A" Horizon) and expose the reddish brown sandy loam and clay comprising the "B" Horizon to be sampled.

2. The samples were packaged in soil sample envelopes supplied by Canada Envelope Company of Montreal and made of "High Wet Strength, Kraft" brown paper with a wet strength of 32 lbs., measuring 3½ inches by 8½ inches when the flap of the envelope is folded.

3. The samples were partially dried in the field by suspending them in the bags under the roof of a tent. In the laboratory, the samples were dried in a warm oven while still in the bags. The samples were screened through an 80 mesh nylon screen, the fines being used for analysis.

4. The tests were performed as follows:

(i) Total Copper

A sample of the fines from screening the dried sample was digested with fuming perchloric acid for four hours in a pyrex beaker. The siliceous sediment was allowed to settle and the solution diluted to a measured volume with distilled and de-metallized water. An aliquot of the test solution was then taken and analyzed for copper using an atomic absorption spectrophotometer manufactured by Perkins-Elmer. Carefully prepared standards were used for control.

(ii) Total Molybdenum

A ½ gram sample of the fines was fused in a nickel crucible with 1 gram of a fusion mixture made up of 5 parts anydrous sodium carbonate,

4 parts sodium chloride and 1 part potassium nitrate. The mixture was fused until frothing ceased and allowed to cool, then 2 millilitres of water added. After standing for several hours, the solution and melt were transferred to a calibrated test tube and adjusted to 5 millilitres with water. The solution was then boiled until the melt disintegrated. A 2 millilitre aliquot of the resulting solution was pipetted into 2 millilitres of 2½% hydroxylamine hydrochloride solution contained in a test tube. The tube was shaken to liberate carbon dioxide and left to cool below 30°C. Half a millilitre of 1% dithiol solution (hydrochloric acid) was then added and the mixture shaken gently at intervals over a period of 20 minutes. The resulting green colour developed was compared with a series of similarly prepared standards containing differing amounts of molybdenum. The standard matching the colour of the sample solution was found and knowing the amount of molybdenum therein the amount of the unknown was found via the formula:

Molybdenum in ppm = 10 x micrograms of Molybdenum in the matching standard.

(b) Discussion of Results

A rapid scanning of the results indicates a good proportion of the soils are anomalous in both copper and molybdenum although there is insufficient background data to calculate threshold values. However, it would appear that the main anomalous area is defined by the 100 ppm contour for copper and the 10 ppm contour for molybdenum.

Both metals show a distinct 'C' shaped pattern about 2,500 feet in diameter and open to the northeast. The width of the 'arms' is between 500 feet and 1,200 feet. Anomalous values range up to 650 ppm copper and

80 ppm molybdenum.

Overburden is thin at the south end of the grid and thickens to the north with no rock seen north of line 24 south. The property sits on a saddle so the west half drains north-westward and the east half eastwards.

MAGNETIC SURVEY

(a) Methods

Magnetic data was collected with a Sharpes MF-1 flux-gate magnetometer which measures the vertical component of the earth's magnetic field.

Diurnal variations in the field were corrected by establishing a primary base station at 24S on the baseline and secondary base stations where the survey lines crossed the baseline. The secondary base stations were corrected to the primary base station and individual survey readings were corrected relative to the secondary base station. The magnetometer was adjusted to read zero at the primary base.

The collected data is presented as a plan contoured at 500 gamma intervals showing survey lines, stations and the corrected magnetic readings obtained at these stations (Plate 68-72-3).

(b) Discussion of Results

There is considerable magnetic relief over the CARR Group with readings ranging from -50 gammas to over 6,000 gammas.

The main feature is a magnetic depression some 4,000 feet long in the east-west direction and 2,000 feet in the north-south direction. This low is about 1,500 gammas below background. Another depression of similar amplitude may exist at the east end of the grid but is largely beyond the

survey limits.

On the northern lines there exists an irregular pattern of magnetic 'highs' still incompletely defined.

ECONOMIC CONSIDERATIONS

The magnetic and geochemical anomalies show a distinctive 'porphyry copper/molybdenum' pattern. The 'C' shaped soil anomaly encircles the magnetic depression on three sides. Float boulders and mineralized outcrop briefly examined in the vicinity of the anomalies have been weakly mineralized with chalcopyrite and molybdenite.

There may be sufficient outcrop on the south part of the grid to judge the economic potential from geological mapping and surface sampling but to the north, under thickening overburden, a geophysical method such as I.P. followed by diamond drilling may be necessary.

Dated at Smithers.

July 31st, 1972.

Richard J. Overstall

Richard J. Overstall B.Sc.

William [illegible] P.Eng.

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA

APPENDIX I

ASSESSMENT DETAILS

PROPERTY NAME	:	CARR GROUP
OWNER	:	Canadian Superior Exploration Ltd. 2201 - 1177 West Hastings Street, Vancouver 1, B.C.
LOCATION	:	Takla Lake Area, Omineca Mining Division, British Columbia
NUMBER OF CLAIMS	:	16
NATURE OF SURVEYS	:	Soil Geochemistry Magnetic Survey
TIME APPLIED FOR	:	One years work on each claim

APPENDIX II

LABOUR COST BREAKDOWN BY EMPLOYEE

Employee	Position	Days Worked	Rate/Day	Cost/Employee
Bristol, J.M.	Prospector	12	$25.00	$300.00
Ferguson, D.B.	Prospector	10	25.00	250.00
Overstall, R.J.	Geologist	4	40.00	160.00
Rainboth, W.	Exploration Manager	2	50.00	100.00
				$810.00

APPENDIX III

COST STATEMENT

In support of an affidavit on application of certificate of work on CARR claims #1 - 16 inclusive.

Costs incurred carrying out geochemical and geophysical surveys from July 15 to August 2, 1972.

LABOUR	
Salaries as per Appendix II	$ 810.00
EXPENDABLE MATERIAL	
Groceries	69.81
Operating Supplies	10.86
EQUIPMENT RENTAL	
Magnetometer 10 days at $250.00/month	83.33
TRANSPORTATION	
Fixed wing to Bulkley House	200.00
Helicopter	474.37
DRAFTING	24.50
	$1,672.87

APPENDIX IV

CERTIFICATE

I, Richard J. Overstall, of the village of Telkwa, Province of British Columbia, do hereby certify:

1) I am a geologist resident at West Highway 16, Telkwa, British Columbia.
2) I am a graduate of the University of London, England (1964) with a B.Sc (Hons) degree in Geology.
3) I have been practising my profession for six years.
4) I am a Fellow of the Geological Society of London and a member of the Institution of Mining and Metallurgy.

Dated at Smithers

This 31st day of July, 1972.

Richard J. Overstall

Richard J. Overstall, B.Sc.

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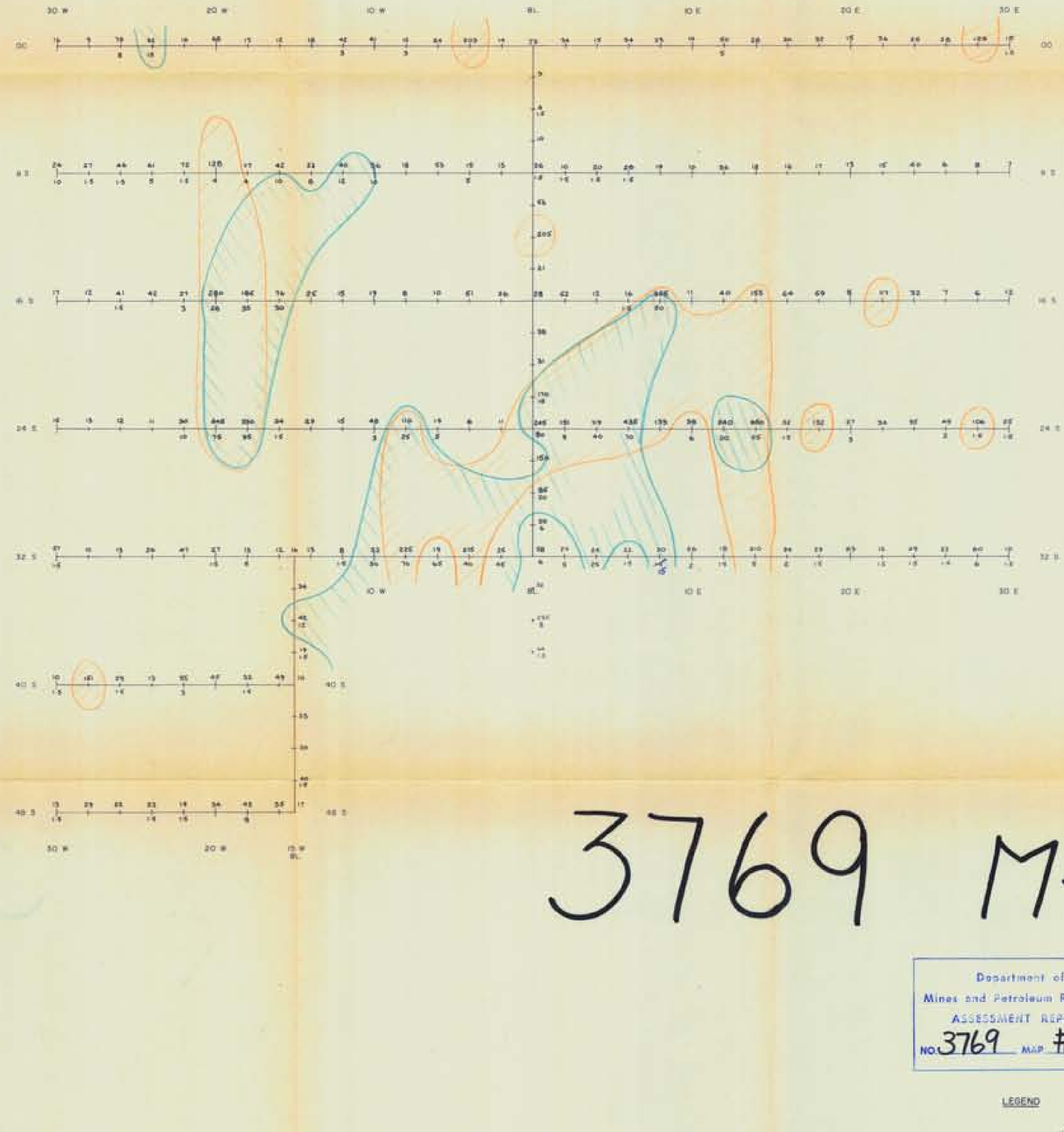

3769 M-2

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3769 MAP #2

LEGEND

COPPER PPM
MOLYBDENUM PPM
(All Values Less Than 1.5 PPM
Except Where Shown)

> 100 ppm Cu

> 10 ppm Mo

CANADIAN SUPERIOR EXPLORATION LIMITED
SMITHERS REGIONAL OFFICE

CARR GROUP
TAKLA AREA

SOIL GEOCHEMISTRY
TOTAL COPPER & MOLYBDENUM

DRAUGHTSMAN	SCALE 1" = 400'	DATE JULY 1972	66-72-2

TO ACCOMPANY REPORT BY R. J. OVERSTALL
AND W. RAINBOTH P.ENG. OMINECA M.D.
JULY 1972

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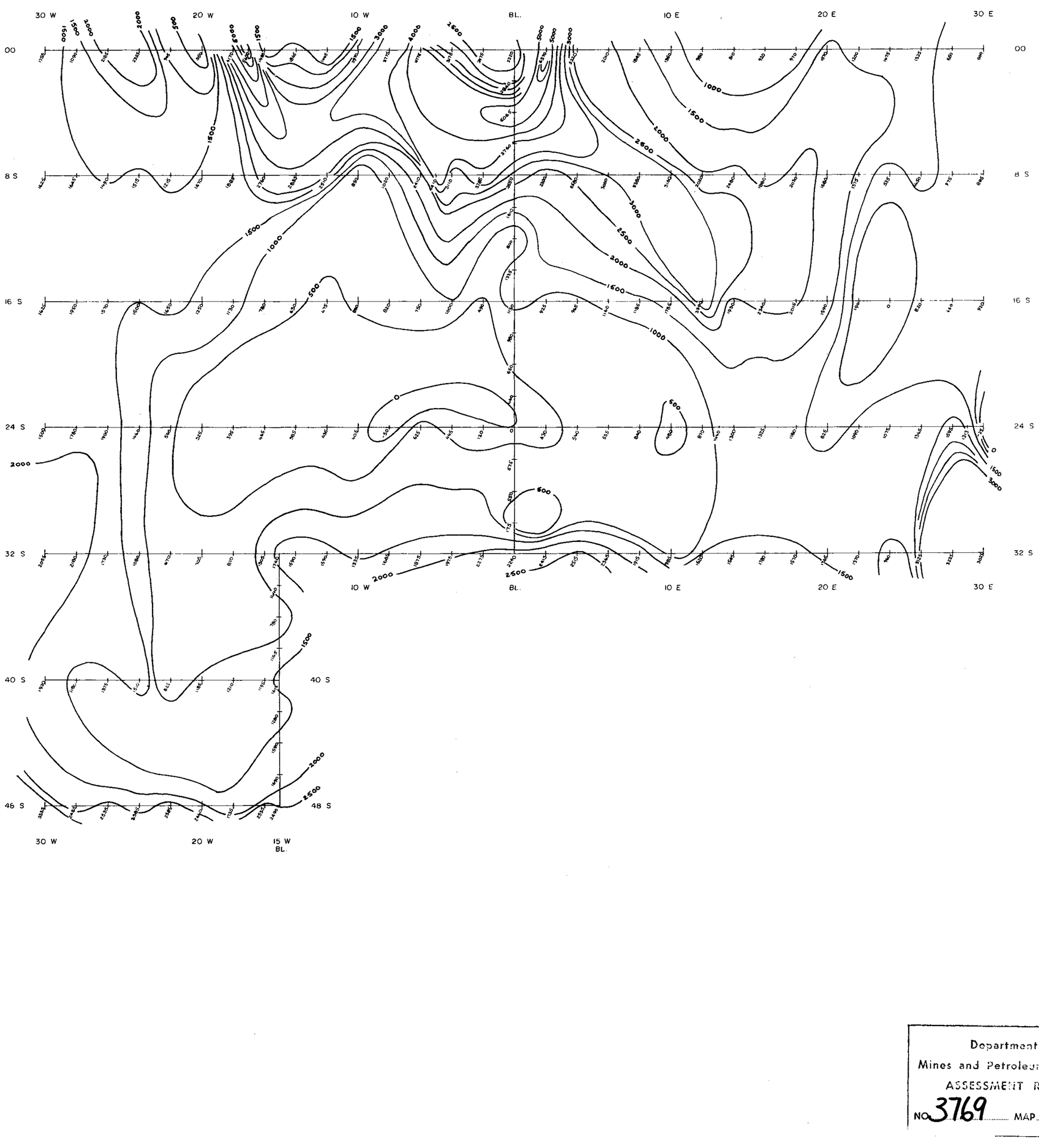

TO ACCOMPANY REPORT BY R. J. OVERSTALL
AND W. RAINBOTH P.ENG. OMINECA M.D.
JULY 1972

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3769 MAP #3

GAMMAS VALUES EXPRESSED RELATIVE TO ARBITARY BASE AT B.L. 24S.
CONTOURS DRAWN AT 500 GAMMA INTERVALS.

CANADIAN SUPERIOR EXPLORATION LIMITED
SMITHERS REGIONAL OFFICE

CARR GROUP
TAKLA AREA

GROUND MAGNETOMETER SURVEY

DRAUGHTSMAN:	SCALE: 1" = 400'	DATE: JULY 1972	68-72-3