4500

GEOLOGY, GEOCHEMISTRY AND GEOPHYSICS

OF THE

NAPIER LAKE PROPERTY

NAP CLAIMS

KAMLOOPS MINING DIVISION

NTS 92-I-8W

50°25'N, 120°18'W

BY

C. M. REBAGLIATI, P. ENG.

FOR

NEWCONEX CANADIAN EXPLORATION LTD.

JULY 31, 1973

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CONCLUSIONS

The geology is favourable for the formation of a mineral deposit. The soil geochemistry indicates that copper and zinc mineralization are present, and the magnetics suggest that the siliceous pyritic zone extends eastward beneath the cover of glacial till and gravel.

RECOMMENDATIONS

The property is of reasonable potential and further work such as bulldozer trenching, an induced polarization survey and percussion drilling is warranted and should be seriously considered.

LOCATION

The property is approximately 21 miles south of Kamloops in the Kamloops Mining Division. The western-most row of claims covers most of Napier Lake and extends just west of Highway #5.

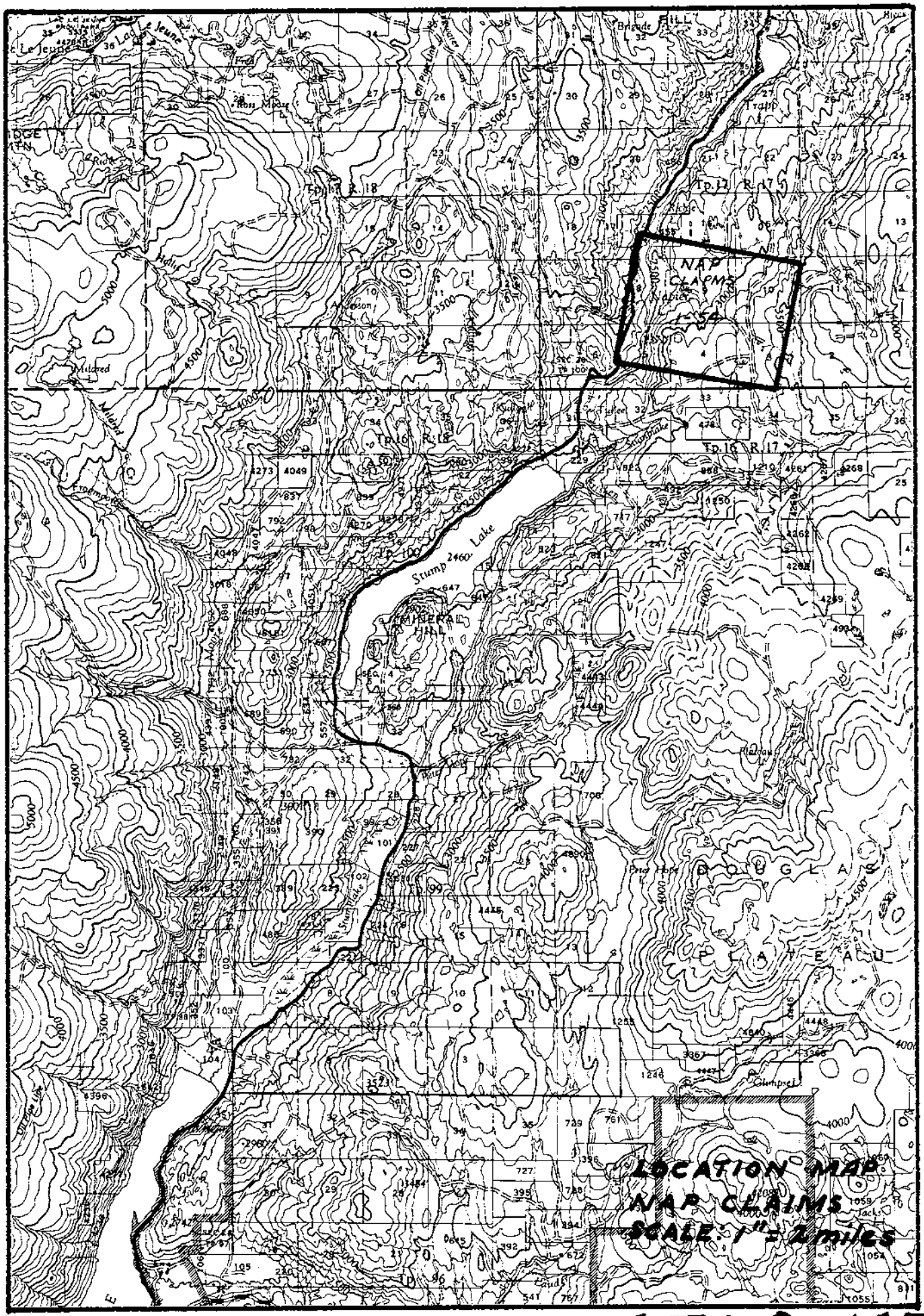
ACCESS

Highway #5 traverses the western edge of the property. The central portion of the claim block is serviced by a fairly good gravel road which joins Highway #5 at the north end of Napier Lake.

TOPOGRAPHY

Napier Lake lies at an elevation of 2,371 feet in a narrow, steep-sided valley about 300 feet deep. From the edge of the valley eastward the country rises steadily in gentle rolling terraces to an elevation 3,500 feet above sea level.

These rolling terraces are vegetated by several species of grass and only very sparsely by firs, pines and poplars. Most of the trees are confined to narrow string-like lines along moist depressions.



LOCATION MAP
NAP CLAIMS
SCALE: 1" = 2 miles

4500-M5

NAP 37 125898 G	NAP 39 125900G	NAP 41 125902G	NAP 43 125904G	NAP 45 125906G	NAP 47 125908G	NAP 49 125910G	NAP 51 125912G	NAP 53 125914G
NAP 38 125899G	NAP 40 125901G	NAP 42 125903G	NAP 44 125905G	NAP 46 125907G	NAP 48 125909G	NAP 50 125911G	NAP 52 125913G	NAP 54 125915G
NAP 1 125862 G	NAP 3 125864G	NAP 5 125866 G	NAP 7 125868G	NAP 9 125870G	NAP 11 125872G	NAP 13 125874G	NAP 15 125876G	NAP 17 125878G
NAP 2 125863 G	NAP 4 125865G	NAP 6 125867G	NAP 8 125869G	NAP 10 125871G	NAP 12 125873G	NAP 14 125875G	NAP 16 125877G	NAP 18 125879G
NAP 19 125880 G	NAP 21 125882G	NAP 23 125884G	NAP 25 125886G	NAP 27 125888G	NAP 29 125890G	NAP 31 125892G	NAP 33 125894G	NAP 35 125896G
NAP 20 125881 G	NAP 22 125883G	NAP 24 125885G	NAP 26 125887G	NAP 28 125889G	NAP 30 125891G	NAP 32 125893G	NAP 34 125895G	NAP 36 125897G

NAP CLAIMS 1 - 54
NAPIER LAKE
SCALE: 1 inch = 1500 feet
92-I-8W

NORTH

4500-M6

OUTLINE OF WORK PERFORMED

22.82 miles of picket lines with a central base line were laid out on the property to give control for the geological mapping and the geochemical and magnetic surveys which were to follow.

Two hundred and eight soil samples were collected and analysed for copper and zinc, 15 miles of magnetometer surveying were done and the property was geologically mapped.

The work was carried out intermittently but systematically between June 19 and July 30, 1973.

GEOLOGY

Hornfelsed pyroclastic rocks of the Upper Triassic Nicola Group are the oldest rocks exposed on the property. These rocks have been intruded, along the northern edge of the property, by the Jurassic Wildhorse Batholith which has caused them to be hornfelsed. Contemporaneous to the intrusion of the batholith, an east-west fracture system developed, and was intruded by a dense siliceous rock containing from 1 to 10% fine-grained disseminated pyrite. Subsequent to its intrusion, shearing was again initiated along this zone. Presently the rock, ranging from a competent very fine-grained quartz diorite to a quartz sericite schist, occupies this east-west structure. Slabs of these various rocks, cut by a diamond saw, show that as the density of the fracture cleavages increase so does its schistosity. This suggests that the whole zone is of the same composition and the textural differences are due only to the intensity of shearing present.

The siliceous pyritic zone is cut by easterly striking lamprophyre dykes which are probably related to late magmatic phases of the Wildhorse Batholith.

The Wildhorse Batholith consists of a gneissic coarse-grained granite that shows little discernible variation from one outcrop to another.

Rhyolitic to basaltic flows and pyroclastics of the Tertiary Kamloops Group unconformably overlie the Nicola

Group, the Wildhorse Batholith and its related rocks.

Napier Lake fills a relatively deep, narrow northerly trending depression which is an expression of a late or post Tertiary fault. Nicola Group rock exposures on the east side of Napier Lake suggest that this is the up-throw side.

GEOCHEMISTRY

(a) Method of Sampling

Soil samples were collected at 200 foot and 400 foot intervals along north-south picket lines which were spaced 300, 600 and 1,200 feet apart. The sample density varied as some areas were sampled in detail and others were sampled in a reconnaissance manner. The samples were collected by digging a hole approximately 14 to 18 inches deep with a shovel to collect a few ounces of the "B" soil horizon. In places of outcrop or suboutcrop where the upper soil horizons were poorly developed, samples of the "C" horizon were taken. In all, 208 samples were collected.

Standard soil sampling envelopes were used. These are made of high wet strength kraft paper. The envelopes are manufactured by Canada Envelope Company, and were obtained through Acme Analytical Laboratories Ltd.

(b) Method of Analyses

All analyses of soil samples were done by Acme Analytical Laboratories Ltd. of 6455 Laurel Street, Burnaby 2, B. C. The samples were oven-dried at the laboratory. The -80 mesh portion of the samples were separated, a weighed amount digested in a hot nitric-perchloric acid solution and the copper and zinc contents were determined with an atomic absorption machine.

(c) Results of Survey

An area of coinciding high copper and zinc values was outlined west of line 57E between 6 north and 12 south. No high values were obtained east of line 57E. Glacial till and gravel over 20 feet in thickness masks the possible eastward extension of the anomalous zone.

The high copper and zinc values occur in an area of few rock exposures. However, the outcrops present indicate the geochemical anomalies are underlain by the zone of siliceous pyritic rock.

No obvious source of the copper and zinc is present.

GEOPHYSICS

Magnetometer Survey

A trained operator, using a Geometric Model G-816 Proton Magnetometer and using methods outlined in the Operator's Manual, conducted a 15 line mile survey over the property. The recently established picket lines were used for control.

A weak, poorly defined magnetic depression closely correlated with the siliceous pyritic zone, and appears to extend it eastward beneath the cover of till and gravel. This depression is interrupted on line 102E by a magnetic high with over 400 gammas of relief. The high is sharply

truncated on the north side and gradually tapers off southward indicating that the magnetic body dips moderately to the south. The cause of this high is not apparent, but as it interrupts the east-west magnetic trend on the property and lies on the eastward strike extension of the siliceous pyritic zone near the contact of the Wildhorse Batholith it could be of economic significance. No outcrop is present in the area of the anomaly.

The strong magnetic high at 30S on L42E coincides with a topographic high and a large outcrop of olivine basalt containing visible grains of magnetite.

STATEMENT OF EXPENSES

Geochemistry			
Copper and zinc analyses	208	@ $ 1.10	$228.80
A. L. MacGregor sampler	3 days	@ 31.13	93.39
Picket Lines			
22.82 Line Miles			
A. L. MacGregor	9 days	@ 31.13	280.17
T. Segler	9 days	@ 34.09	306.81
Pickets and paint			68.16
Magnetometer			
15 Line Miles			
Rental	14 days	@ 10.00	140.00
A. L. MacGregor operator	3 days	@ 31.13	93.39
Geology			
C. M. Rebagliati, P.Eng.	8.5 days	@ 45.45	386.33
Drafting			
A. L. MacGregor	9 days	@ 31.13	280.17
Drafting materials and reproductions			114.00
Supervision			
P. W. Richardson, P.Eng. Ph.D	1 day	@	60.00
Meals and accommodation	42.5 days	@ 14.00	595.00
Truck Rental			
4 wheel drive 3/4 Ton Ford Pick-up	1.5 month	@ 420.00	630.00
Geological, Geochemical and Geophysical Report			
C. M. Rebagliati	2 days	@ 45.45	90.90
			$3,367.12

Declared before me at the , in the

of

Province of British Columbia, this

day of , A.D.

A Commissioner for taking affidavits within British Columbia or

A Notary Public in and for the Province of British Columbia

STATEMENT OF QUALIFICATIONS

A. L. MacGregor - Several years of experience as a geological draftsman, magnetometer operator, geological assistant and soil sampler.

C. M. Rebagliati - P. Eng. (B.C.)

B.Sc. (1969) Michigan Technological University
Geological Engineering
Mineral Exploration

Mining Technologist (1966)
Haileybury School of Mines

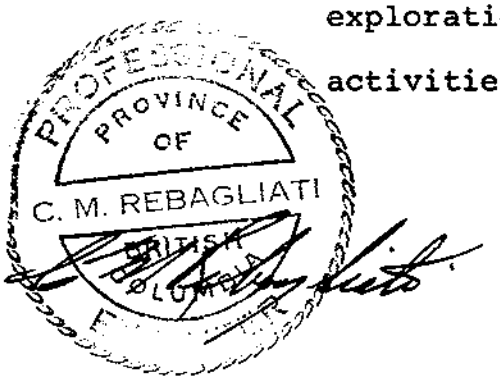
P. W. Richardson - P. Eng. (B.C.)

B.A.Sc. (1949) UBC - Geological Engineering

M.A.Sc. (1950) UBC - Geology

Ph.D. (1955) MIT - Economic Geology & Geochemistry

T. Segler - Mining Technologist (1966)
Haileybury School of Mines
Has been employed in mineral exploration and related activities since 1966.




20 miles to Kamloops
NAPIER LAKE
NAP 37
NAP 38
NAP 1
NAP 2
NAP 19
NAP 20
NAP 53
NAP 54
NAP 17
NAP 18
NAP 35
NAP 36
MAIN ROAD
ROAD
LAKE
LAKES
HIGHWAY 5
GOSSAN
water hole
BASE LINE
L24E
L36E
L51E
L57E
L60E
L63E
L69E
L72E
L75E
L84E
L48E
L30E
L42E
L54E
L66E
L78E
L90E
L102E
L4E
L11E
2500
3000
3500
LEGEND
RECENT
6 Grit
KAMLOOPS GROUP
5a–g a – Light coloured rhyolite and rhyolite tuffs
b – Black quartz eye rhyolite
c – Vesicular volcanic breccia
d – Basaltic volcanic breccia
e – Olivine basalt
f – Vesicular rhyolite
g – Volcanic sandstone
COAST INTRUSIONS
4 Lamprophyre dykes
3 Granite (gneissic)
SILICEOUS PYRITIC ZONE
2a–d a – Quartz diorite very fine-grained
b – Dense siliceous rock
c – Sericitic dense siliceous rock
d – Quartz sericite schist
NICOLA GROUP
1a–d a – Augite porphyry breccia
b – Hornfels
c – Hybred mixture of tertiary dykes and hornfels
d – Hornfels containing thin beds of marble
4500
M1
Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4500 MAP #1
NEWCONEX CANADIAN EXPLORATION LTD.
73 FIG. 1, 92-I-8
NAP CLAIMS
GEOLOGY MAP
N.T.S. 92-I-8
SCALE 1 inch = 400 feet
Map by C.M. Rebagliati
Drft. A.L.M.
Date 7/73
To Accompany NAPIER LAKE PROPERTY REPORT
KAMLOOPS MINING DIVISION
Author
Date 7/30/73


20 miles to Kamloops
NAPIER LAKE
NAP 37
NAP 38
NAP 1
NAP 2
NAP 19
NAP 20
NAP 53
NAP 54
NAP 17
NAP 18
NAP 35
NAP 36
MAIN ROAD
ROAD
LAKE
HIGHWAY 5
BASE LINE
LEGEND
W 645 Sample number and location
62 ppm Zinc
COLOUR CODE
0 ppm – 99 ppm
100 ppm – 199 ppm
200 ppm – 299 ppm
300 ppm +
4500
M2
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4500 MAP #2
NEWCONEX CANADIAN EXPLORATION LTD.
73 FIG.3, 92-I-8
NAP CLAIMS
GEOCHEMICAL MAP
ZINC
N.T.S. 92-I-8
SCALE 1 inch = 400 feet
C. M. REBAGLIATI
Drft. A.L.M.
Date 7/73
To Accompany NAPIER LAKE PROPERTY REPORT
Kamloops Mining Division
Author
Date 7/30/73

LEGEND

W 645 Sample number and location
50 ppm Copper

COLOUR CODE

- 0 ppm – 99 ppm
- 100 ppm – 199 ppm
- 200 ppm – 299 ppm
- 300 ppm – 399 ppm
- 400 ppm +

4500
M3

Department of
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ASSESSMENT REPORT
NO. 4500 MAP #3

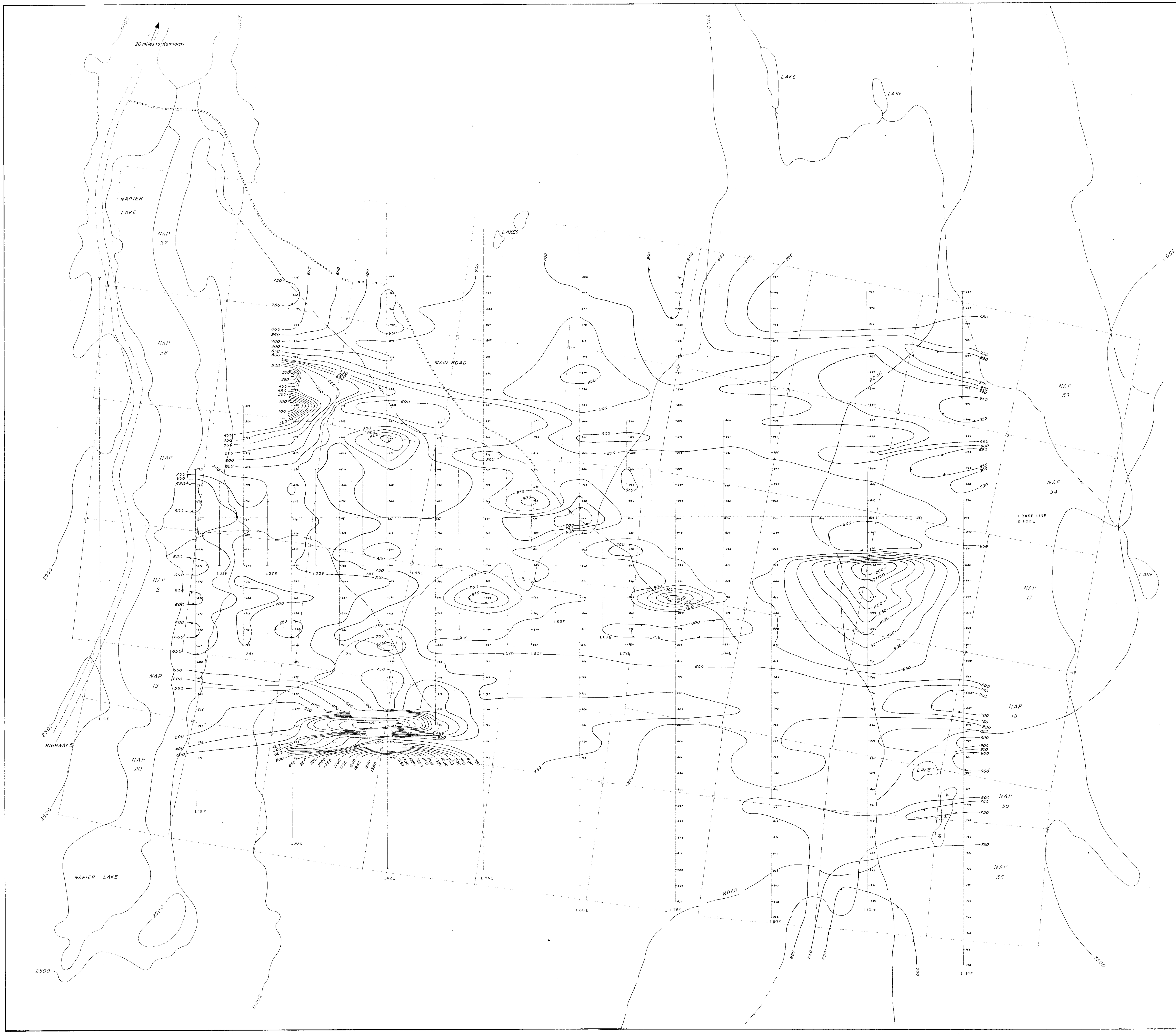
NEWCONEX CANADIAN EXPLORATION LTD.

73 FIG. 2, 92-I-8
NAP CLAIMS
GEOCHEMICAL MAP
COPPER

N.T.S. 92-I-8	SCALE 1 inch = 400 feet	
	Drft. A.L.M.	Date 7/73

To Accompany NAPIER LAKE PROPERTY REPORT
KAMLOOPS MINING DIVISION

Author [signature] Date 7/30/73



L E G E N D

Contour Interval – *50γ*
Magnetometer Model – *Geometrics, G-816, Proton*
Operator – *A.L. MacGregor*
Note: 57,000γ subtracted from each reading

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M4

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NO. 4500 MAP #4

NEWCONEX CANADIAN EXPLORATION LTD.		
73 FIG. 4, 92-I-8 NAP CLAIMS GROUND MAGNETOMETER SURVEY		
N.T.S. 92-I-8	SCALE 1 inch = 400 feet	
	Dr'ft A.L.M.	Date 7/73
To Accompany NAPIER LAKE PROPERTY REPORT KAMLOOPS MINING DIVISION		
Author [signature]		Date 7/30/73