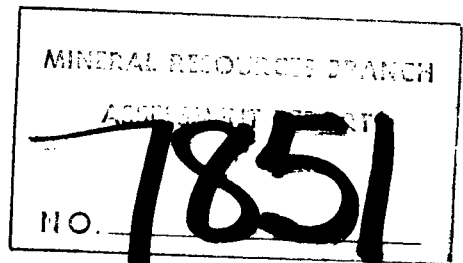


GEOLOGICAL REPORT
ON THE CLARK-1 MINERAL CLAIM
BRENT LAKE, B.C.
OSOYOOS MINING DIVISION

Latitude $49^{\circ} 30' N$ Longitude $119^{\circ} 46' W$
N.T.S. Map Sheet 82E/5W

By
D.G. Leighton

D.G. Leighton & Associates Ltd.



31 January 1980

D. G. LEIGHTON & ASSOCIATES LTD.
GEOLOGICAL CONSULTANTS

• 3155 WEST 12TH AVENUE
VANCOUVER, B.C.
V6K 2R6

GEOLOGICAL REPORT ON THE CLARK-1 CLAIM
BRENT LAKE, B.C.

INTRODUCTION

This report describes the results of geological mapping on part of the CLARK-1 mineral claim during May of 1979. Work was follow-up to reconnaissance geological, geochemical and prospecting work in 1977 and 1978. Object was to assess the property for uranium. Since anomalous radioactivity in this area seems correlated with certain beds, emphasis has been on defining stratigraphic relationships. Several geologists have participated in the work to date, however the mapping described here was done mainly by R.J. Beaty under the direction of R.R. Culbert and the author.

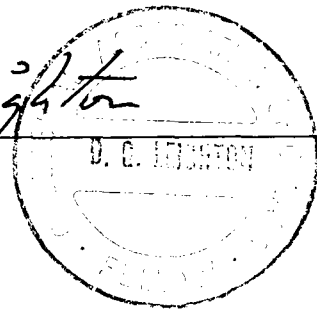
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

1. The CLARK property consists of three mineral claims (56 units) located at Farleigh Lake, west of Penticton, B.C.
2. This region is underlain by Mesozoic granite which is covered in part by a variety of Tertiary volcanic and sedimentary rock including comagmatic intrusives.
3. Radioactive paelo channels and uranium-rich coal have been identified in this area, in fact an environment analogous to that of the Sherwood Mine in Washington State is indicated.
4. Additional work is warranted, specifically a diamond drill test of the uraniferous coal zone in the CLARK-1 claim.

Respectfully submitted,

D. G. Leighton

D.G. Leighton



31 January 1980

GENERAL DESCRIPTIONS

Location and Access

The CLARK property is located in the south central portion of British Columbia about 25 kilometers west of Penticton. The claims are readily reached via the Apex Mountain road. There is a good all weather surface as far as Farleigh Lake. Beyond that a network of new logging roads criss-crosses most of the claimed area.

History

The CLARK property was staked to cover geochemical anomalies in uranium identified from regional surveys carried out in 1976-1978. Follow-up geological work in 1979 verified the anomalies and defined radioactive zones.

Pacific Petroleum Ltd. and Occidental Petroleum Ltd. are also looking for uranium in the Farleigh Creek area. Apart from these and our own activities, no other exploration for uranium is known, past or present, from the area.

Claims

The CLARK property consists of three mineral claims held in the name of British Newfoundland Exploration Ltd. as follows:

<u>Claim Name</u>	<u>Units</u>	<u>Record Date</u>	<u>Record No.</u>
CLARK-1	20	February 14, 1977	198
CLARK-2	20	April 12, 1977	262
CLARK-3	16	April 12, 1977	253

GENERAL GEOLOGY

The Farleigh Lake area is underlain by an assemblage of Eocene volcanic and sedimentary rocks which in turn overlie a Mesozoic intrusive basement complex. The unconformity is marked by a variably developed sequence, mainly conglomerate, referred to as the Springbrook Formation.

Three CLARK claims located west and south of Farleigh Lake on the basis of uranium geochemical anomalies were mapped in moderate detail in 1978 to establish stratigraphic relationships. These are best seen in the steep slopes of Farleigh Creek Valley.

NORTH CLARK PROPERTY GEOLOGY

Detailed mapping (see pocket) of the north CLARK property in 1979 disclosed a rather complex succession of Tertiary plutonic, sedimentary and volcanic rocks, the complexity being due to widespread faulting, rapid facies changes in both volcanic and sedimentary units, steep topography and enigmatic breccia zones.

The geological section is as follows, from youngest to oldest:

Butte-forming augite-anorthoclase
"phonolite" flows

Recessive apatite-rich "phonolite";
biotite-rich "phonolite"; lithic
tuff

Cliff forming shaly weathering
grey augite porphyry "dacite"

Marron Formation
(Yellow Lake Member)
(Eocene)

Boulder conglomerate; agglomerate; green to white greywacke (tuffaceous pebbly sandstone); poorly indurated; variable thickness; rapid lateral facies changes; granite and rhyolite pebbles and boulders common; radio-active coaly detritus

Pre-Eocene

Granite to quartz monzonite; pyrite; medium grained; friable; intrudes rhyolite and is overlain by clastic rocks associated with rhyolite extrusions

? Paleocene

Pink rhyolite: cross-cut by granite dikes; strongly brecciated and altered by silica-hematite in places; breccia zones resemble pebble conglomerate

Shingle Creek

Springbrook conglomerate: not present in mapped area; basal conglomerate with schist, andesite and chert fragments

? Pre-Tertiary

Granodiorite basement

Cretaceous

On the basis of the granite dikes cross-cutting rhyolite, the sharp contact between these units, the strong brecciation and silica-hematite alteration of parts of the rhyolite section (likely due to gas streaming during granitic rock intrusion) and the absence of brecciation in overlying clastic rocks, it is considered that the granitic rocks postdate, though are closely related in time to, rhyolite extrusion.

From the poorly bedded nature of the clastic rocks, their rapid vertical and lateral facies changes, the absence of cross-bedding or other sedimentary structures, the large boulder sizes (to 1 m in diameter) and the presence of coaly detritus, it is considered that the sediments were deposited in a terrestrial, high to medium energy environment in a paleodepression in the rhyolite

and granite basement. Colour variation in the sandy units from green and red to white is largely the result of oxidation.

Five small patches of strongly radioactive coal (to 9,000 cps) were located within a small zone in conglomerate and adjacent greywacke on the west side of Farleigh Creek. Assays of up to 1.5% uranium were recorded from selected grab samples of coaly patches. The coal is low grade lignite, and is not developed in seams but only as isolated fragments within the matrix of the clastic beds. As such, it may represent detritus from thicker organic seams in other areas of the basin, or may be eroded from seams in the underlying Springbrook Formation.

In addition to the five radioactive coal occurrences, a 10 m zone of radioactive soil (300 cps) overlying green pebbly sandstone occurs along the same horizon as the radioactive coal. A pit was dug to six feet without encountering bedrock.

The uranium in the coal may merely be a result of adsorption or local reduction by the organic material from uranium in groundwater. However, the spatial concentration of the occurrences, the favourable lithologies for "channel" or "roll-type" deposits, the likelihood of further coal seams and the relative ease of drilling make the uranium-in-coal zone a favourable drill target.

The uranium-in-coal zone and the radioactive soil over green sandstone zone are both recommended for testing by diamond drilling. Drilling should proceed with the object of intersecting the groundwater table within the clastic rock sequence.

BREAKDOWN OF COSTS (For Assessment Purposes)

Wages and Salaries*	\$2,260.00	
Benefits @ 12%	<u>271.00</u>	\$2,531.00
Transportation - mainly truck rental		250.00
Room and Board - based on rate equal to \$35.00 per man per day		490.00
Miscellaneous; includes, equipment expended, drafting and compilation charges, geophysical equipment (scintillometer) rental, assays, etc.		750.00
		<hr/>
CLARK-1 Total		<u>\$4,021.00</u>

*See payroll record following this page for details.

PAY ROLL RECORD

Project(s)

Code

Client(s)

1 CLARK-1
 2
 3
 4
 5

103A

Primex P.V.L

PAY PERI

Name/Project	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Time Total	Rate	Amount	Ber
<u>R J Peaty</u>		X	X	X	X	X		X	X																			X	X	X	10 D	125 ⁰⁰	1250 -		
<u>J Page</u>		X	X	X	X	X		X	X																						7 D	50 ⁰⁰	350 -		
<u>S Gulbis</u>		X																											X	2 D	165 ⁰⁰	330 -			
<u>D Lighton</u>					X																								X	2 D	165 ⁰⁰	330 -			

CLASSIFICATIONS

- | | |
|---|---|
| A Airphoto Work
B Budget
C Compilation/Drafting
D Drill Supervision
E Expediting
F Line Cutting/Surveys
G Geological (Mapping)
H Geochemical (Sampling)
I Geophysical (Surveys)
J Trenching
K Cooking/Camp
L Logging Core
M Mobilization/Demobilization | N General Supervision
O Data Analysis
P Prospecting
Q Consultation
R Research
S Staking
T Travel
U Underground Surveys
V Property Examination
W Legal
X Accounting
Y Secretarial/Office
Z |
|---|---|

TOTALS

22.60 -

BENEFITS: includes; W.C., U.I.C. & Insurance 12 % Salary Total

REMARKS;

PREPARED BY:

D. J. Lighton

APPROVED:

CERTIFICATION

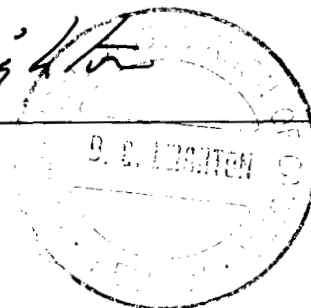
I, D.G. Leighton, do hereby certify that:

1. I am a professional geologist with offices at 3155 West 12th Avenue, Vancouver, B.C.
2. I am a graduate of the University of British Columbia, B.Sc. (1968).
3. I have practiced mining exploration work for eleven years, most of which was based in British Columbia.
4. I am a member (Fellow) in good standing of the Geological Association of Canada.
5. I have personally visited the CLARK property and supervised exploration work carried out there.

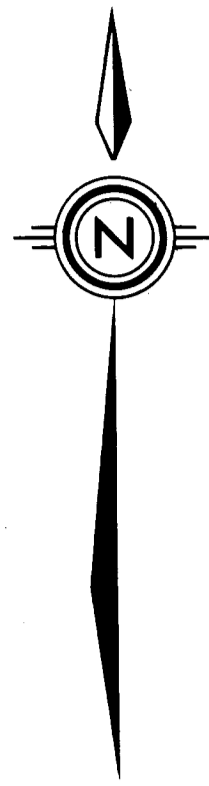
Respectfully submitted,

D. G. Leighton

D.G. Leighton



31 January 1980



LEGAL CORNER POST
500 m. WEST
1E, 0S

NORTH BOUNDARY
CLARK-1 CLAIM

EAST BOUNDARY

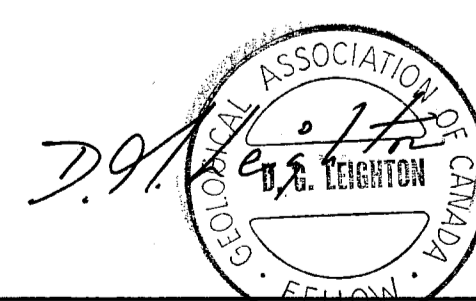
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L 200S
L 400S
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L 800S
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L 1000S
L 1100S
L 1200S

1100 W. 1000 W. 900 W. 800 W. 700 W. 600 W. 500 W. 400 W. 300 W. 200 W. 100 W. BASE LINE 100 S. 200 S. 300 S. 400 S.

EXPLANATION

RECENT		Alluvium		Geological contact
MARRON FM. (YELLOW LAKE MEMBER) EOCENE		Augite-anorthoclase porphyry phonolite		Fault (observed, inferred)
		Anorthoclase porphyry phonolite		Outcrop
		Augite-olivine porphyry phonolite		Outcrop cliff edge
		Lithic tuff, anorthoclase porphyry phonolite, agglomerate		Radioactive occurrence
		Augite-phlogopite porphyry phonolite		Base of steep slope (valley bottom)
		Augite-apatite porphyry phonolite		Logging roads
		Augite porphyry dacite		Contour line (200 foot interval)
EOCENE		Cobble conglomerate, agglomerate		Ground control line (50 m stations)
		Boulder conglomerate		
		Pebbly greywacke		
? PALEOCENE		Pink rhyolite: strong bx in places		
		Pink granite to quartz monzonite		

MINERAL RESOURCES BRANCH
ASSIGNMENT NO.
7851
NO.



D. G. LEIGHTON & ASSOCIATES LTD.

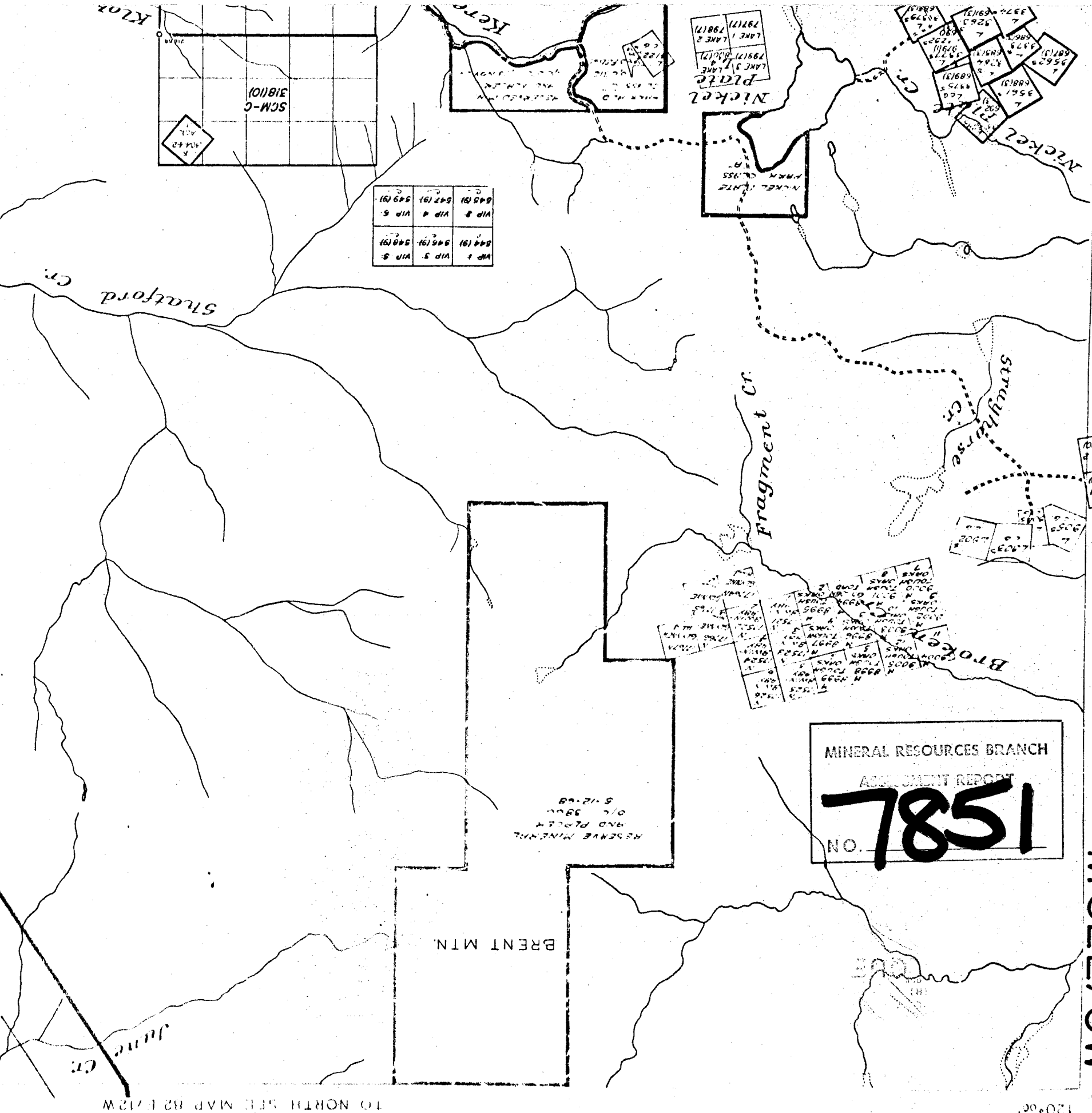
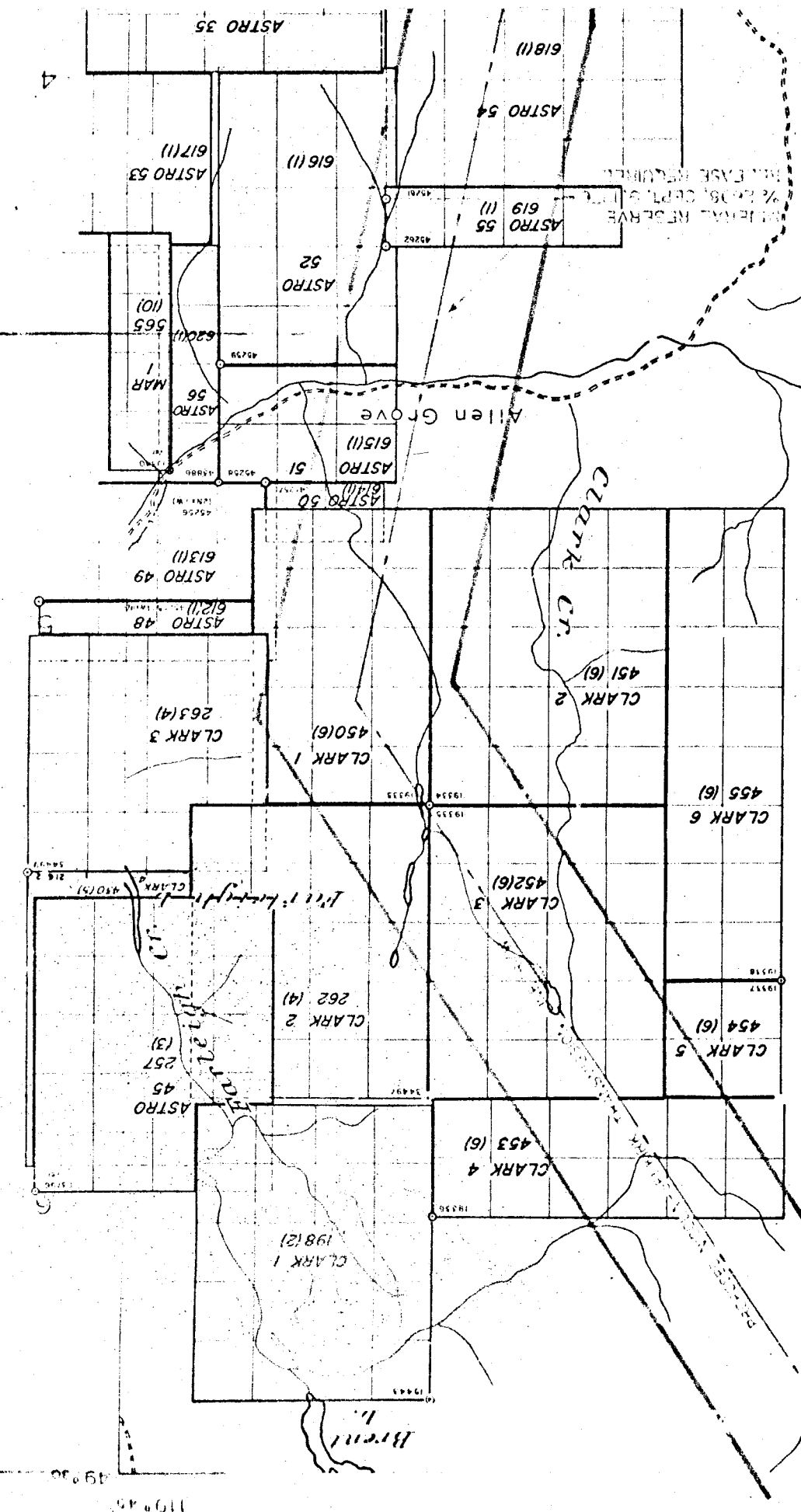
NORTH CLARK PROPERTY
GEOLOGY

METERS 50 0 50 100 150 METERS

PROJECT	PROJECT No. 103 A	SCALE 1:2500	DATE MAY - 1979
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Geology by R.J. Beatty

3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100



TO NORTH SEE MAP M82E/12W

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
1587L
NO.

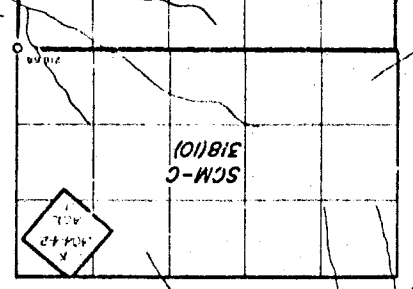
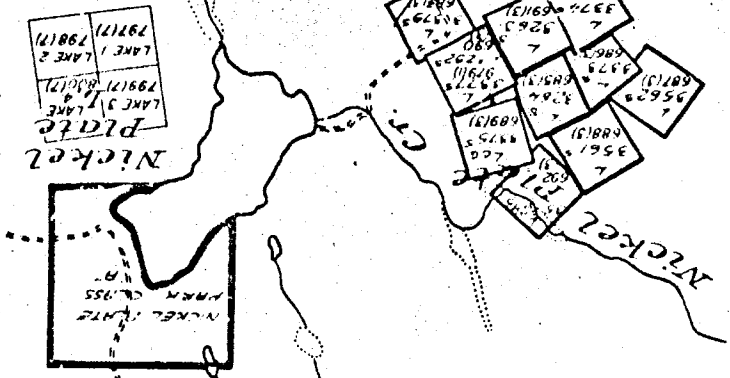
M82E/5W

120°00'

119°45'

VIP 1	VIP 3	VIP 5
444 (9)	545 (9)	546 (9)
VIP 2	VIP 4	VIP 6
445 (9)	547 (9)	549 (9)

RESERVE MINERAL
AND PLANT
O.C. 5800
5-12-68



ACT 1
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