

ARIS SUMMARY SHEET

District Geologist, Victoria

Off Confidential: 90.01.23

ASSESSMENT REPORT 18591

MINING DIVISION: Alberni

PROPERTY: Central  
LOCATION: LAT 49 20 00 LONG 125 19 00  
UTM 10 5466874 331688  
NTS 092F06W  
CLAIM(S): Central 1-2  
OPERATOR(S): Trove Res.  
AUTHOR(S): Chung, P.L.  
REPORT YEAR: 1989, 22 Pages  
KEYWORDS: Jurassic, Triassic, Island Intrusions, Bedwell Formation  
Karmutsen Formation, Quartz diorite, Andesite

WORK  
DONE: Prospecting, Geochemical  
PROS 500.0 ha  
ROCK 18 sample(s) ; CU, PB, ZN, AG, AU

RELATED  
REPORTS: 16046

LOG NO: 0404	RD.
ACTION:	
FILE NO:	

REPORT  
on the  
CENTRAL PROPERTY  
Alberni Mining Division  
British Columbia

FILMED

North Lat. 49°20' West Long. 125°19'  
NTS 92F/6

Prepared for

TROVE RESOURCE LTD.  
505 - 850 Burrard Street  
Vancouver, B.C.  
V6Z 2J1

SUB-RECORDER  
RECEIVED  
MAR 28 1989  
M.R. # ..... \$ .....  
VANCOUVER, B.C.

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**18,591**

Prepared by

BOA SERVICES  
P.O. BOX 11569  
840-650 West Georgia Street  
Vancouver, B.C.  
V6B 4N8

March 28, 1989

Paul P.L. Chung, F.G.A.C.  
Consulting Geologist

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## INTRODUCTION

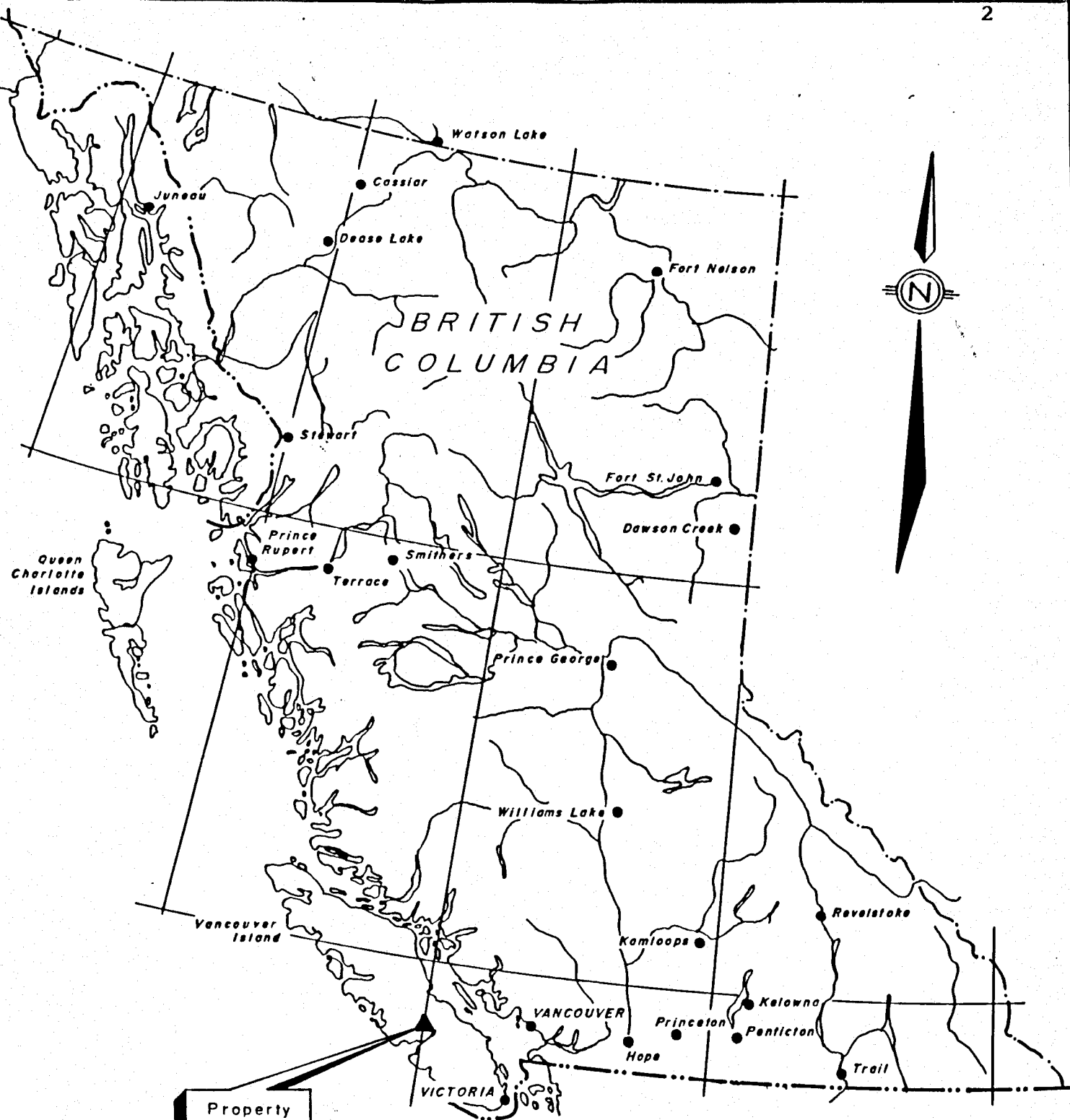
Trove Resources Ltd. of suite 505, 850 Burrard Street, Vancouver, British Columbia owns the Central property, which is situated on the south shore of Great Central Lake, in the Alberni Mining Division. This report on the Central property, prepared at the request of the directors of the company, describes the prospecting program conducted on the property between November 25, and December 1, 1988.

## SUMMARY

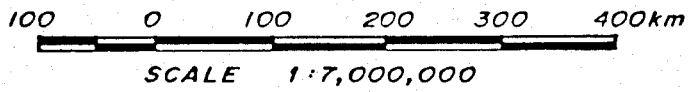
The Central property is comprised of two contiguous claim blocks, Central 1 and Central 2, which together total 40 units. The claims are located on the south shore of Great Central Lake, approximately 40 kilometers west/northwest of Port Alberni in the Alberni Mining Division, Vancouver Island, British Columbia. The geographic coordinates of the claims are 49°20' North latitude by 125°19' West longitude.

Access to the property is possible via Highway 4 west, and taking the paved turnoff northwest to Great Central Lake. Once at the Lake, a boat is needed to travel 25 kilometers down the lake to the property.

In 1984, mineralized float was discovered by Sam Craig in creek beds. Later that year, Royalon Petroleum Corp. conducted a limited exploration program on the property which included blasting of three trenches. During February of 1987, Murjoh Resources Inc. conducted a small mapping and rock sampling program on the present claims.



Property  
Location



Trove Resources Ltd.

**LOCATION MAP**

**CENTRAL CLAIMS**

**NTS: 92 F/6W**

March, 1989 Figure 1

Boa Services Ltd.

The 1988 exploration program was greatly curtailed due to adverse weather conditions. However, the limited program did produce rock samples anomalous in gold values. The property lies in a favourable geological setting and limited exploration has produced some encouraging results. A program to further test the potential of the property is recommended at a cost of \$13,000.00.

#### PROPERTY AND OWNERSHIP

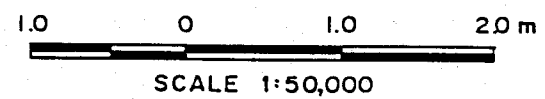
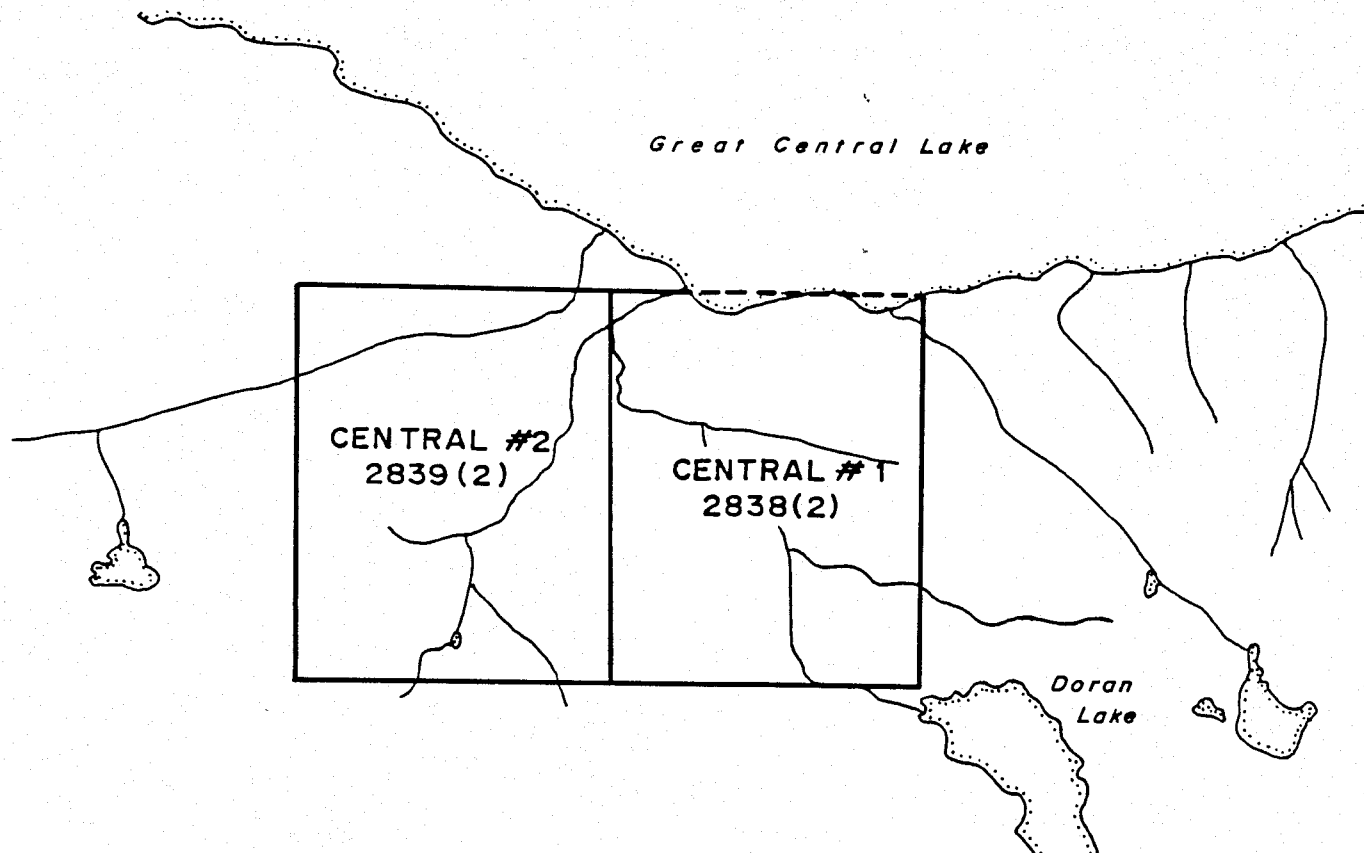
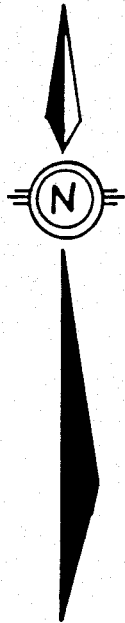
The property is comprised of two 20 unit claim blocks, Central 1 and Central 2, which together total 40 units and cover 1000 hectares. The claims are situated in the Alberni Mining Division, British Columbia. The location and configuration of the claims are shown on Figures 1 and 2 respectively. The following table summarizes all pertinent claim data.

<u>Claim</u>	<u>Record No.</u>	<u>Units</u>	<u>Record Date</u>	<u>Owner</u>
Central 1	2838	20	Feb 18/86	Trove Resources Ltd.
Central 2	2839	20	Feb 18/86	Trove Resources Ltd.

#### LOCATION AND ACCESS

The property is located on the south shore of Great Central Lake in south-central Vancouver Island. It is approximately 40 kilometers west/northwest of the town of Port Alberni. The geographic coordinates for the property are 49°20' N. latitude by 125°19' W. longitude on NTS map sheet 92F/6.

Access to the property is possible by travelling 13 kilometers west from Port Alberni along Highway 4, and then taking the paved turnoff northwest to Great Central Lake. Once at the lake, a boat is needed to travel approximately 25 kilometers down the lake to the northern boundaries of the property.



Trove Resources Ltd.

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**CLAIM MAP**  
**CENTRAL CLAIMS**  
**NTS: 92 F/6W**

March, 1989 Figure 2

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Boa Services Ltd.

## PHYSIOGRAPHY

The terrain, which may become rugged in sections, is generally moderate. Elevations range from 83 meters above sea level at the lake level, to over 1000 meters at the peaks. Logging was effected to about the 200 meter elevation with all higher slopes being covered with tall timber. Obstructive vegetation beneath the virgin forest canopy is minimal.

The climate in this region is typical of Vancouver Island, with heavy annual rainfall and mild temperatures. Winters are characterized by heavy precipitation, with the summers being fairly hot. The lower reaches of the property may be worked quite late or early in the season.

## HISTORY

The property itself received no known exploration or development until 1984 when Sam Craig discovered mineralized float in the creek beds. He then staked the ground as the Doran Claims. In July of that year, Royalon Petroleum Corp. conducted a limited exploration program on the property, which consisted of silt and heavy sediment sampling of various creeks and the blasting of three trenches across a mineralized structure.

In 1986, the property was staked as the Central 1 and 2 claims by Murjoh Resources Inc. The company cut 7 kilometers of lines and conducted a reconnaissance geology survey in 1987. Rock samples taken from the old trenches return values up to .115 oz/ton Au.



## REGIONAL GEOLOGY

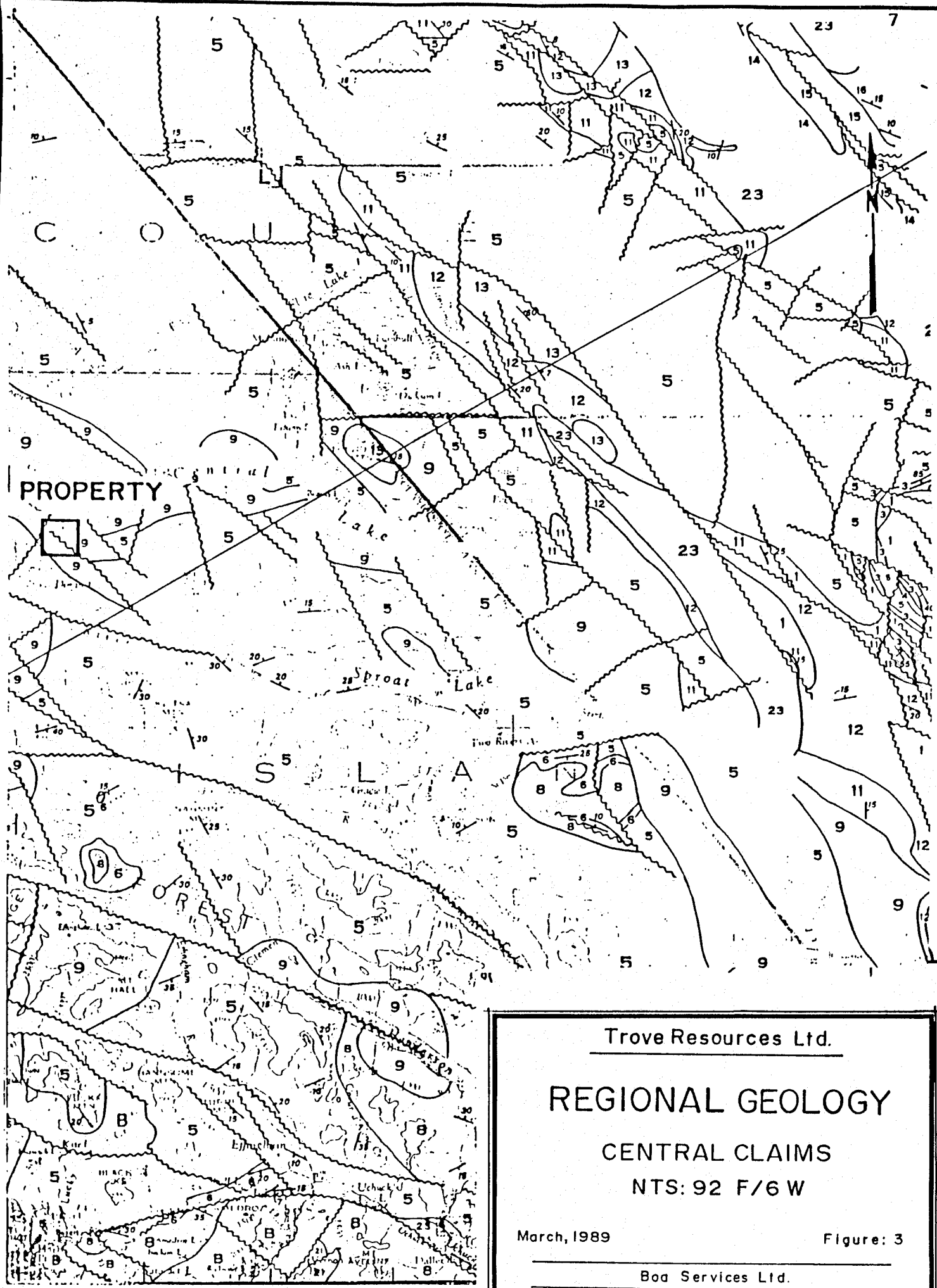
The Central property lies in a simple geological setting. Only two different rock packages exist: Jurassic intrusives and Upper Triassic Karmutsen Formation (Figure 3). The only structural complications exist as northwesterly tear faults and northeasterly block faults.

Basaltic and andesitic pillow flows with interlava breccia, tuff, and minor sedimentary units constitute the Karmutsen Formation. Government geologists estimate the thickness of the formation to be at least 3000 meters in most localities. Most of the Karmutsen is weakly metamorphosed (green schist facies) although narrow, hornfelsed zones may be found adjacent to intrusive masses.

Intruding the volcanics are large Jurassic intrusive bodies, or "Island Intrusions". Contacts are usually sharp and steeply dipping. Plutons around Great Central Lake belong to the larger Bedwell batholith to the west, which is characterized by porphyritic quartz diorites and granodiorites with prominent quartz "eyes". Two K-Ar age determinations, 162 and 166 m.y., have been obtained for the batholith.

## 1988 EXPLORATION PROGRAM

A contour soil sampling and prospecting program covering the Karmutsen volcanics was planned to follow up the encouraging results from the previous program. However, due to adverse weather conditions (up to 3 feet of snow at the 200m contour level) which resulted in most of the property to be inaccessible, much of the proposed program was abandoned. Instead, work was concentrated to prospecting in areas with minimum snow coverage, namely the lower, relatively flat areas near the lake shore and along creek beds.



PROPERTY

Trove Resources Ltd.

REGIONAL GEOLOGY

CENTRAL CLAIMS

NTS: 92 F/6 W

March, 1989

Figure: 3

Boa Services Ltd.

## LEGEND

## MIDDLE TO UPPER JURASSIC

Unit 9: Island Intrusions: biotite-hornblende granodiorite, quartz diorite.

## TRIASSIC AND JURASSIC

Unit 8: andesitic to latitic breccia, tuff and lava.

Unit 7: limestone and argillite, thin bedded, silty carbonaceous.

Unit 6: Quatsino Formation: limestone, mainly massive to thick bedded, minor thin bedded limestone.

Unit 5: Karmutsen Formation: pillow-basalt and pillow-breccia, massive basalt flows; minor tuff volcanic breccia. Jasperoid tuff, breccia and conglomerate at base.

## TRIASSIC OR PERMIAN

Unit 4: Gabbro, peridotite, diabase.

## PENNSYLVANIAN, PERMIAN AND OLDER

Unit 3: Buttle Lake Formation: limestone, chert.

Unit 2: Argillite, greywacke, conglomerate; minor limestone, tuff.

Unit 1: Volcanic breccia, tuff, argillite; greenstone, greenschist; dykes and sills of andesite-porphry.

The property is underlain by two different formations: a Middle to Upper Jurassic aged quartz diorite, belonging to the Island Intrusions; and an Upper Triassic aged, massive, green volcanic of the Karmutsen Formation.

The quartz diorite consists of quartz (35%), plagioclase (60%), and hornblende/biotite (5%). The unit has undergone weak propylitic alteration, with the mafic grains being altered to chlorite and epidote. The three trenches which were put in during 1984 exposed quartz veining in an apparent shear zone hosted in the quartz diorite. The zone strikes east/west and dips 55° to 60° to the south.

The Karmutsen volcanics occupy mainly the southwestern portion of the claim area. The volcanic is green, medium-grained and massive, and appears to be of andesitic composition. Alteration minerals include quartz, calcite and chlorite which would suggest a low metamorphic grade, probably in the sub greenschist pumpellyite facies. Sulfide mineralization includes pyrite, chalcopyrite, and malachite.

Mr. D. Ridley and Mr. F. Thane, both competent prospectors, conducted the prospecting program. A total of 19 rock samples were collected (Figure 4) and 15 samples were sent to Acme Analytical Laboratories Ltd. in Vancouver, where the samples were pulverized and screened. The -80 mesh portions were then analyzed for copper, lead, zinc and silver by ICP and gold by atomic absorption. The Certificate of Analysis and the sample descriptions accompany this report as Appendix I and II respectively.

The samples collected were mostly of the quartz diorite with only two specimens of the volcanic, one of which is a float sample. The analytical results are rather encouraging as 5 of the 15 samples returned anomalous values in gold and copper. 4 out of 5 of these anomalous samples are of quartz veins within the quartz diorite. The highest gold value obtained was 4670ppb (.136 oz/ton) from a float sample of quartz vein in andesite.

#### DISCUSSION AND CONCLUSIONS

The Central property lies in a favourable geological setting for epithermal gold-bearing quartz veins. The silicification + calcite + pyrite is mineralogically typical of many epithermal systems, and the elevated precious and base metal values from exploration on the claims has supported this potential. On the basis of these results, further exploration of the Central property is warranted.

#### RECOMMENDATIONS


After analysis of the results of previous work performed on the property, the following program is recommended for further exploration of this property:

- (1) detailed mapping and prospecting, with emphasis in the area underlain by volcanic units; and
- (2) reconnaissance geochemical soil survey lines should be run over the property and analyzed for copper, lead, zinc, gold and silver.

## COST ESTIMATES

Mapping, prospecting and soil collection	\$4,000.00
Assays	3,000.00
Field Support Expenses room, board, vehicle and boat expense	1,500.00
Miscellaneous communications, consumables	500.00
Contingency	1,000.00
Management	1,000.00
Report	2,000.00
	-----
TOTAL	\$13,000.00
	=====

Submitted by



GEOLOGICAL ASSOCIATION OF CANADA  
 PAUL CHUNG  
 Paul P. L. Chung F.G.A.C.  
 FELLOW

Vancouver, British Columbia  
 March 28, 1989

## STATEMENT OF COST

## Personnel

D. Ridley - prospector 6 days at \$180/day	\$1,080.00
F. Thane - prospector 6 days at \$180/day	1,080.00

## Vehicle Rental

4x4 truck: 6 days at \$35/day	210.00
582 km at \$.35/km	203.70

Field Supplies	57.55
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## Boat Rental

4 days at \$60/day	240.00
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Lodging	172.80
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Food	213.93
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Analysis	190.00
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Miscellaneous (ferry, LLD)	70.97
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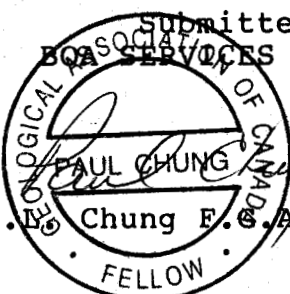
Recording Fees	200.00
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Management Fee	351.90
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Report	2,000.00
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TOTAL EXPENDITURE	----- \$6,070.85 =====
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Submitted by  
BQA SERVICES LTD.


  
 Paul P. Chung F.S.A.C.

## BIBLIOGRAPHY

Chung, P.P.L. (1987): Geological Report on the Central Property Assessment Report for Murjoh Resources Inc.

Geological Survey of Canada, Open File 463: Geology of Vancouver Island.

Muller, J.E. and Carson, D.J.T.(1969): Geology and Mineral Deposits of Alberni Map-Area; Geological Survey of Canada, Paper 68-50.



## STATEMENT OF QUALIFICATIONS

I, Paul P.L. Chung, of the City of Richmond, Province of British Columbia, DO HEREBY CERTIFY THAT:

- (1) I am a Consulting Geologist with business address office at Suite 840 - 650 West Georgia Street, Vancouver, British Columbia, V6B 4N8; and President of Boa Services Ltd.
- (2) I am a graduate in geology with a Bachelor of Science degree from the University of British Columbia, in 1981.
- (3) I have practised my profession continuously since graduation.
- (4) I am a Fellow of the Geological Association of Canada.
- (5) I have conducted various mineral exploration programmes in B.C., Yukon, Manitoba, Ontario, Quebec, Nova Scotia, and Nevada.
- (6) I am a director of Trove Resources Ltd.
- (7) I supervised the work program conducted on the Central property between November 25 and December 1, 1988.

  
Paul P. L. Chung, F.G.A.C.  
FELLOW

Dated at Vancouver, British Columbia, this 28th day of March, 1989.

APPENDIX I

CERTIFICATE OF ANALYSIS

ACME ANALYTICAL LABORATORIES LTD.  
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
PHONE(604)253-3158 FAX(604)253-1716

DATE RECEIVED: DEC 1 1988

DATE REPORT MAILED: Dec. 5/88

### GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.  
- SAMPLE TYPE: ROCK AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

SIGNED BY *C. Long*. D.TOYE, C.LEONG, B.CHAN, J.WANG; CERTIFIED B.C. ASSAYERS

BOA SERVICES LTD. PROJECT B8812 FILE # 88-6111

SAMPLE#	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Au* PPB
88DR-1	436	9	12	.7	1780
88DR-1A	390	15	11	.8	1030
88DR-2	367	2	36	.4	640
88DR-3	949	2	17	.7	1070
88DR-7	56	2	26	.1	18
88DR-11	235	4	23	1.3	4670
88DR-15	17	6	28	.1	8
88DR-18	5	5	15	.4	17
STD C/AU-R	59	42	133	7.2	520

ACME ANALYTICAL LABORATORIES LTD.  
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
PHONE(604)253-3158 FAX(604)253-1716

DATE RECEIVED: DEC 29 1988

DATE REPORT MAILED: *Jan. 6/89.*

### GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.  
- SAMPLE TYPE: ROCK AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

SIGNED BY *C. Long*. D. TOYE, C. LEONG, B. CHAN, J. WANG; CERTIFIED B.C. ASSAYERS

BOA SERVICES LTD. PROJECT B8812 FILE # 88-6379

SAMPLE#	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Au* PPB
88D-4	8	9	16	.1	8
88D-5	17	2	33	.1	2
88D-8	11	2	32	.1	1
88D-12	27	2	10	.1	2
88D-13	31	2	45	.1	1
88D-14	8	2	24	.1	1
88D-17	39	4	65	.1	1
STD C/AU-R	63	43	132	7.3	505

APPENDIX II

ROCK SAMPLE DESCRIPTIONS

SAMPLE NO.SAMPLE DESCRIPTION

88-DR-1 selected grab sample of sulfide rich quartz vein in trench, up to 15% pyrite with minor chalcopyrite.

88-DR-2 float sample of chloritized feldspar porphyry with minor euhedral pyrite (1-2%) and chalcopyrite.

88-DR-3 sample of quartz vein from trench No. 1 with minor malachite stain.

88-D-4 quartz diorite with minor epidote stringers.

88-D-5 10 metre wide, north trending diorite dyke.

88-D-6 quartz diorite with magnetite and quartz stringers.

88-DR-7 altered volcanic (andesite) float sample with minor epidote and some pyrite.

88-D-8 quartz diorite.

88-D-9 quartz diorite with minor epidote stringers.

88-D-10 medium grain quartz diorite.

88-DR-11 silicified volcanic (andesite) with quartz vein, 5% fine, disseminated pyrite.

88-D-12 medium grain quartz diorite with epidote flooding and in veinlets, minor pyrite.

88-D-13 0.5 metre wide feldspar porphyry dyke striking 90° cutting across quartz diorite.

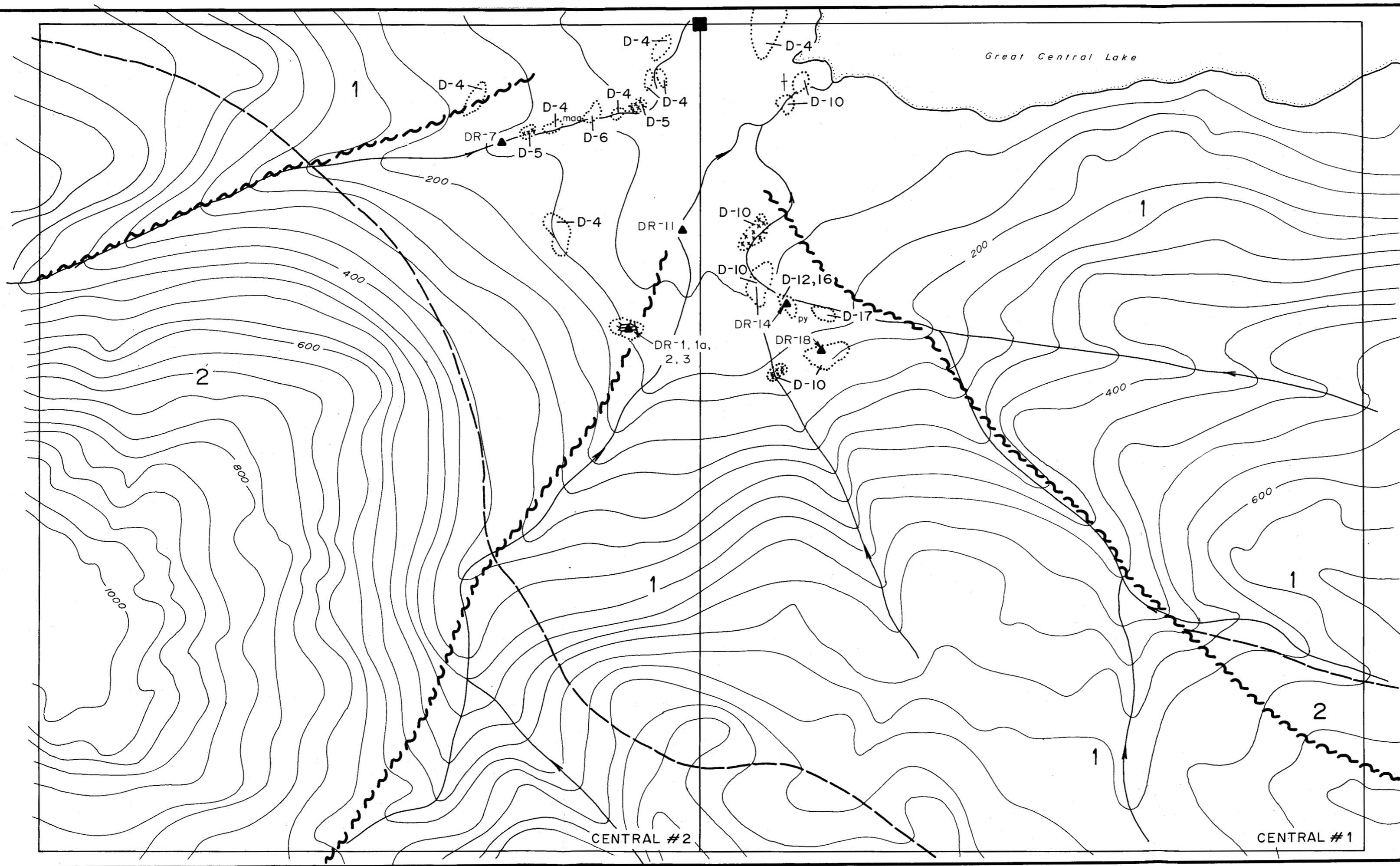
88-DR-14 medium grain quartz diorite with epidote stringers and minor pyrite.

88-DR-15 chip sample across 1.5 metres of quartz diorite with epidote stringers and an aplite dyke.

88-D-16 7 cm wide aplite dyke striking 130°.

88-D-17 diorite.

88-DR-18 rusty float of diorite (?) at base of quartz diorite cliff.

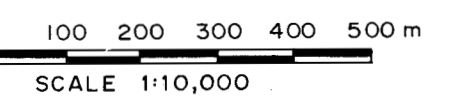


**LEGEND**

- JURASSIC
- 1 Quartz diorite, Bedwell Formation
- TRIASSIC
- 2 Andesite, Karmutsen Formation
- Geologic contact
- Fault
- Trench
- Outcrop
- Subcrop or trace
- Fracture cutting
- Magnetite
- Pyrite
- Legal corner post

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**18,591**



Note: Contour interval 40m, topographic control from enlarged 1:50,000 map.  
Sample sites and geology by D.W. Ridley

Trove Resources Ltd.

**GEOLOGICAL PLAN**

**CENTRAL CLAIMS**

NTS: 92 F/6W

March, 1989 Figure 4

Boa Services Ltd.