

BRITISH COLUMBIA
PROSPECTORS ASSISTANCE PROGRAM
MINISTRY OF ENERGY AND MINES
GEOLOGICAL SURVEY BRANCH

PROGRAM YEAR: 1998/99

REPORT #: PAP 98-7

NAME: BRUCE HOLDEN

**PROSPECTING REPORT- NORTHERN LIGHTS
MINERAL PROPERTY**

**WHITESAIL RANGE
93E10W,93E11E**

54 35 42 126 02 30

1998 PROGRAM

FOR

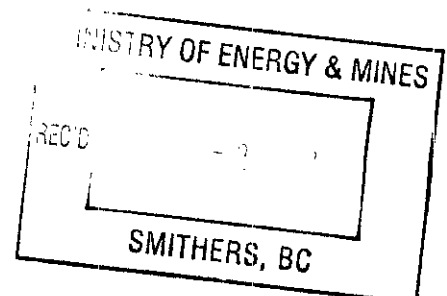
PROSPECTORS ASSISTANCE PROGRAM

BY

**BRUCE HOLDEN
RANDY LORD**

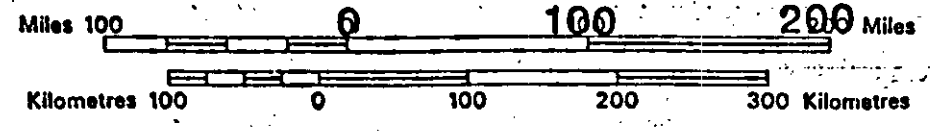
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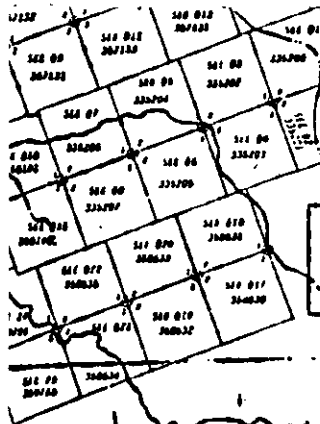
OCTOBER 13, 1998





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FOX
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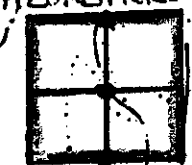
MAP 093E11E
FEB 198

R
A
N
G
E

NORTHERN LIGHTS
360572
/00150

NORTHERN LIGHTS
360572
00150
1511001

RAZORBACKS



Scattered
Snow

TROITSA
PK.

CUMMINS NORTH
238550
45 0
48100

00150
1511001

3000'

CUMMINS

PROSPECTING REPORT- NORTHERN LIGHTS

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PROSPECTING REPORT- NORTHERN LIGHTS MINERAL PROPERTY

LOCATION AND ACCESS

The Northern Lights Opal claim is located in the Omineca Mining District on the south east flank of the Whitesail Mountain range some 90 kilometers south of Houston, B.C. The NTS map sheet which corresponds to this property is 93E10W. Copies of the current Mineral titles reference maps and topographical map are attached as Appendix A. The deposit is located at approximately 6000 feet in elevation with snow cover from mid September until July. Access to the area is by helicopter only from a pick up point reached by vehicle at the Tahtsa Reach barge crossing.

PROPERTY HISTORY

Surface showings of precious opal bearing material were found in the Whitesail range in the 80's and early 90's by Bruce Holden and in 1995 claims were staked. In 1996 a 6 week field season revealed further surface showings and in 1997 a 5 week field season resulted in further discoveries so the property was restaked in 1997 by the applicant with a 4 post, 20 unit claim. A fly-in camp has been established and so far all expenses for each field season including necessary helicopter access has been funded entirely by ourselves with the addition of a Prospectors Assistance grant for the 1998 season. The 1998 field season resulted in further discoveries and 7 new units were staked. Appropriate Work permits, reports and an active reclamation bond has been obtained and filed. A copy of completed Notice of work form is included as Appendix B.

REGIONAL / LOCAL GEOLOGY

The Northern Lights property is located in the west central part of the intermontaine belt of the B.C. cordillera along the southern margin of a major east-northeast trending transverse tectonic belt know as the Skeena arch. Rock units across the intermontaine belt include Upper Paleozoic to Miocene volcanics, sediments and intrusive rocks. The Hazelton group dominates the lithologies in this area. Volcanics of the upper Cretaceous Kasalka and lower tertiary Ootsa lake group were deposited in a series of basins across much of the area. This volcanic -tectonic episode is responsible for the development of most of the significant mineral deposits in West- central BC. Attached as Appendix C is a copy of a map of the geological setting and mineral deposits of west-central BC. The precious opal occurs as open space fillings within fractures and vesicles in volcanic lahar and lapilli tuff units in the Ootsa Lake group. Eocene-aged rhyolite and dacite flows, breccia, tuff, basalt and conglomerates also contain significant amounts of agate, common opal and zeolites . This deposit appears to have tonnage potential of some size as indicated by the continuity of units across the structure.

WORK DONE

1998 Program Summary - August 1 to September 9, 1998 (40 field days)

<u>Personnel:</u>	Bruce Holden	40 days
	Randy Lord	40 days
	Larry Hamula	40 days
	LeeAndra Jacobs	16 days
	David Graham	<u>16 days</u>
		152 days

Prospecting work - 87 days - ground search of areas marked on topo map in Appendix A , surface sampling, flagging all in-situ precious opal surface showings

Physical work - 53 days - hand trenching priority areas, evaluation and preparation of samples in field, claim staking

Miscellaneous work - 12 days - camp related activities, reclamation work

Continued surface prospecting on and beyond the established claim resulted in the discovery of several new occurrences of precious opal bearing material in different types of host rock. This resulted in the staking of 4 additional opal claims namely Razorbacks 1, 2, 3 and 4. in an area west of the Northern Lights property. Four further occurrences of precious opal bearing material were found this season on the Northern Lights property and continued trenching will be required to determine their potential. Trenching and sampling from 2 priority locations on the property occurred as well as flagging and mapping all in-situ precious opal surface showings.

This season we used a Cobra drill and gas saw to work on areas that showed the greatest potential. Hand trenching, drilling and wedging with hand chisels and sledge hammers was used to break the rock. The material was inspected, cobbled then sorted at the face. Approximately 800 kg of precious opal bearing samples were recovered. Paul Wojdak, the regional geologist for Northwest British Columbia, and Dr. George Simandl of the Industrial Minerals Branch, BCGS and his assistant examined the property this season.

In an area prospected southwest towards Cummins Creek, quartz veins were found and sampled for precious metal numbers. These veins were found to contain tetrahedrite, galena, chalcopyrite, and other metal sulfides. Seven grab samples were taken for geochemical ICP analysis. These results are contained in Appendix D. The results of previous work and the very little work done in the past and the very positive appearance of the material , many parallel veins and alterations to the country rock, encouraged us to stake 3 units and make another project of it. Further trenching and exposing of the veins and enriched alteration zones will be required.

LIST OF CLAIMS

<u>Claim</u>	<u>Record No.</u>	<u>Type</u>	<u>Units</u>	<u>Owner</u>	<u>Recording date</u>
Northern Lights	360572	4 post	20	B. Holden	Nov 18,1997
Razorback # 1	658393	2 post	1	B. Holden	Sept 5,1998
Razorback # 2	658394	2 post	1	B. Holden	Sept 5,1998
Razorback # 3	658395	2 post	1	B. Holden	Sept 5,1998
Razorback # 4	658396	2 post	1	B. Holden	Sept 5,1998
Cummins # 1	681805	2 post	1	B. Holden	Aug 27,1998
Cummins # 2	681806	2 post	1	B. Holden	Aug 27,1998
Cummins # 3	681807	2 post	1	B. Holden	Aug 27,1998

ASSAY RESULTS

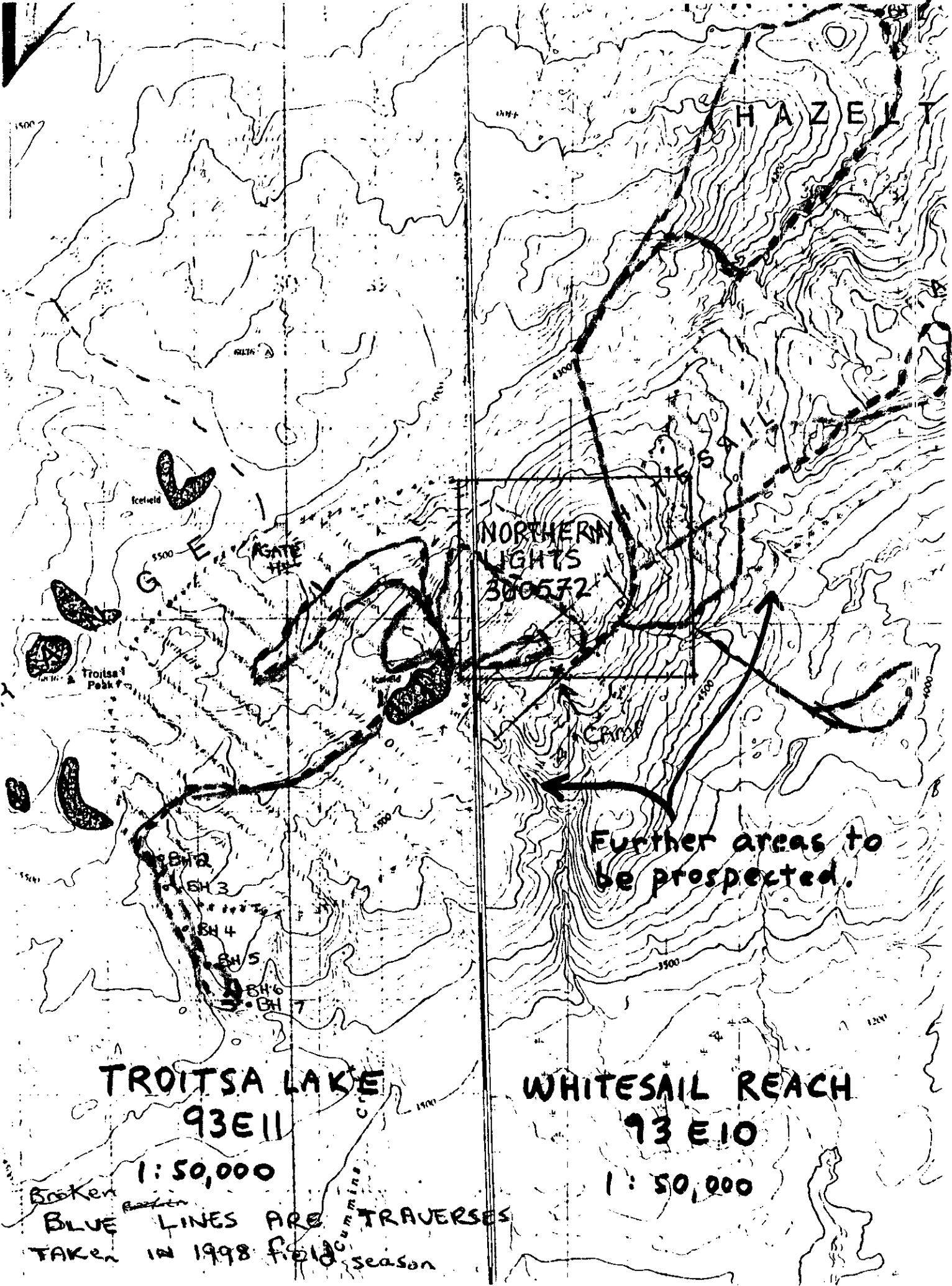
As it is not possible to detect precious opal other than with close visual inspection, all material must be examined closely then further sorting, grading and evaluation occurs. A diamond saw is used in the field on select pieces then the material is graded according to size and grade then sacked.

Sample evaluation consists of the sorting and cutting of polished sections and gemstones to determine marketability and price. As no analytical technique can be used to define gem quality this on-going procedure is necessary in order to assess the value of the material and the deposit. We have our own cutting, coring, grinding, lapping and polishing equipment and are actively evaluating the material. As well several opal cutters are assisting in the evaluation of this material. Cut and polished sections of this precious opal bearing material have been shown to be stable while exhibiting intense and brilliant play of colour. The base colour of the opal ranges from water clear, white, orange to black with clarity ranging from transparent through translucent to opaque.

The results from the seven grab samples taken for geochemical ICP analysis are contained in Appendix D. Duplicate samples were retained.

SUMMARY AND CONCLUSIONS

We are extremely encouraged by the results this season. The additional opal claims and potential precious metal claims staked this season confirm the need for close visual examination of the areas. On the Northern Lights property our main goals of examining material past the weathering and establishing continuity were well met. We expect to bring this property to the next stage as soon as possible and plan to test market the matrix opal as cutting, carving and jewelry grade material. Our goal is to become a producer and to market high value added material through established channels. We are very thankful to the the Ministry of Employment and Investment for their financial support through the Prospectors Assistance Program.



HAZELTOWN

NORTHERN LIGHTS
300572

TROITSA LAKE
93E11

WHITESAIL REACH
93E10

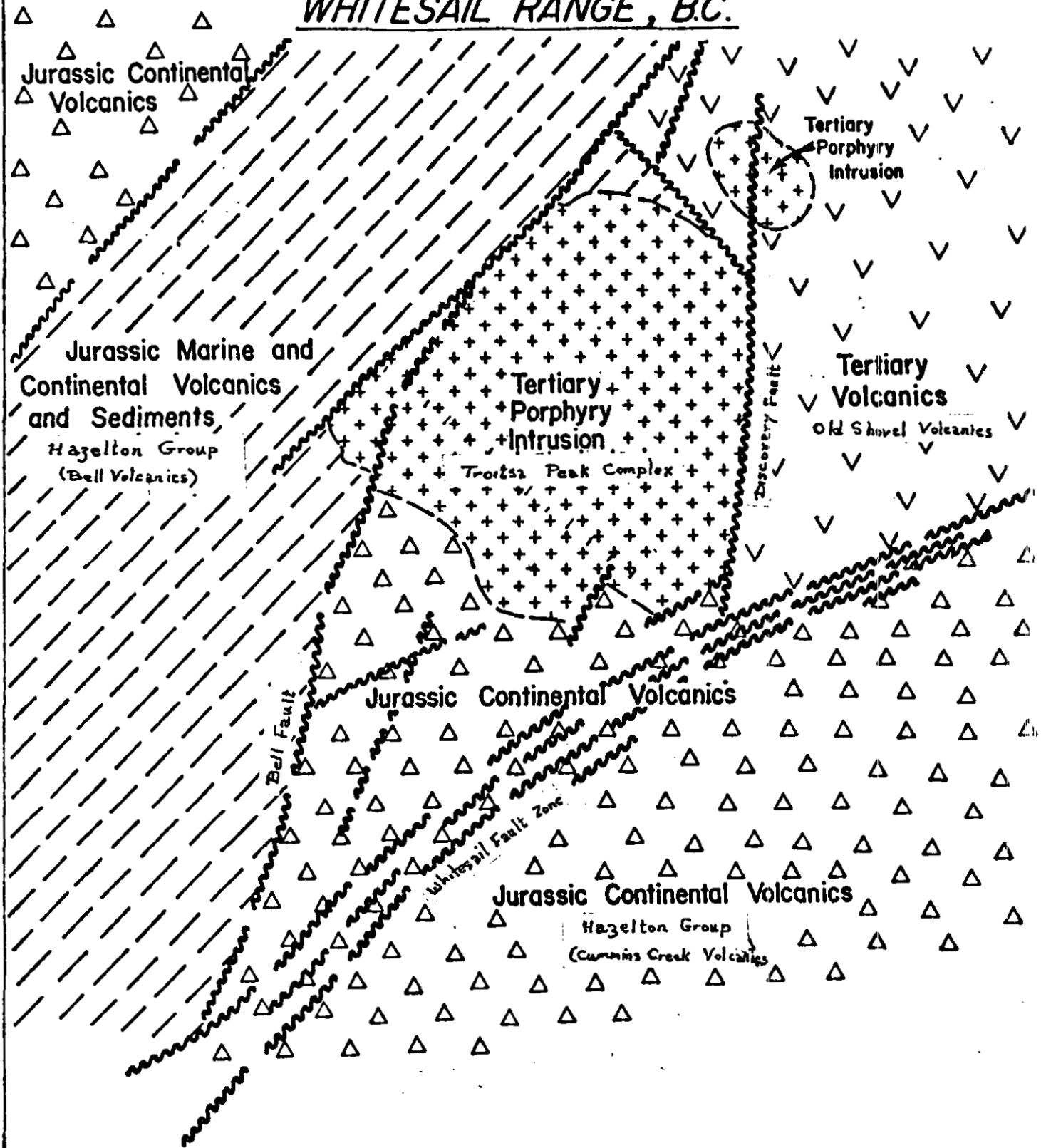
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BROKEN BLUE LINES ARE TRAVERSES
TAKEN IN 1998 FIELD SEASON

Further areas to
be prospected.

GENERALIZED GEOLOGIC ELEMENTS
WHITESAIL RANGE, B.C.



**BRITISH COLUMBIA
PROSPECTORS ASSISTANCE PROGRAM
PROSPECTING REPORT FORM (continued)**

B. TECHNICAL REPORT

- One technical report to be completed for each project area.
- Refer to Program Requirements/Regulations, section 15, 16 and 17.
- If work was performed on claims a copy of the applicable assessment report may be submitted in lieu of the supporting data (see section 16) required with this TECHNICAL REPORT.

Name BRUCE HOLDEN Reference Number Sm198-020485-141

LOCATION/COMMODITIES

Project Area (as listed in Part A) WHITESAIL-NORTHERN LIGHTS MINFILE No. if applicable _____

Location of Project Area NTS 93 E 10 W Lat 53 36' 42" Long 127 02' 00"

Description of Location and Access AREA IS IN WHITESAIL MOUNTAINS. ON THE SOUTHEAST FLANK OF NORTHERN LIGHTS CLAIM. ACCESS BY HELICOPTER AND FLAGGED TRAIL FROM WS 207 LOGGING ROAD AFTER CROSSING TAHTSA REACH BY BARGE.

Main Commodities Searched For OPAL & GOLD-SILVER EPITHERMAL

Known Mineral Occurrences in Project Area SEVERAL, PLUS PROXIMITY TO HUCKLEBERRY, DEERHORN, etc.. TROITSA PEAK and HAZELTON VOLCANICS

WORK PERFORMED

1. Conventional Prospecting (area) 87 DAYS COVERING AREA OF CLAIM AND BEYOND
2. Geological Mapping (hectares/scale) _____
3. Geochemical (type and no. of samples) 7 EPITHERMAL GRAB SAMPLES
4. Geophysical (type and line km) _____
5. Physical Work (type and amount) 53 DAYS OVERBURDEN STRIPPING, TRENCHING, ROCK BREAKING
6. Drilling (no., holes, size, depth in m, total m) _____
7. Other (specify) STAKING, BACK FILLING

SIGNIFICANT RESULTS

Commodities OPAL Claim Name NORTHERN LIGHTS

Location (show on map) Lat. _____ Long _____ Elevation 6,000' FT

Best assay/sample type LARGE BOULDERS OF MATRIX OPAL

Description of mineralization, host rocks, anomalies OPAL IS INCLUDED INTO VESICULAR BASALT AS CLASTS, IN HIGH ENERGY LAHARS AS FILLING AND AS MATRIX IN VERY POROUS BASALT. SOMETIMES OCCURS AS CRACK FILLING.

CUMMINS CREEK IS A SERIES OF QUARTZ VEINS EXPOSED IN CREEK BOTTOM. EPITHERMAL-TYPE DEPOSIT WITH SULFIDES.

Supporting data must be submitted with this TECHNICAL REPORT

Information on this form is confidential for one year from the date of receipt subject to the provisions of the *Freedom of Information Act*.



INTERNATIONAL PLASMA LABORATORY LTD.

CERTIFICATE OF ANALYSIS

IPL 98J1100

2036 Columbia Street
Vancouver, B.C.
Canada V5Y 3E1
Phone (604) 879-7878
Fax (604) 879-7898
[110015:15:06:89101698]

Northern Lights
Project : Whitesail
Shipper : Bruce Nolden
Shipment: PO#:
Analysis:
ICP(AqR)30

7 Samples Out: Oct 16, 1998 In: Oct 14, 1998

Comment:

Document Distribution

1 Northern Lights
1111 North Central Road
Derman Island
B.C. VOR 1T0
Canada
Att: Bruce Nolden

EN RT CC IN FX
1 2 1 2 1
DL 3D EM BT BL
0 0 0 0 0

CODE	AMOUNT	TYPE	PREPARATION DESCRIPTION	PULP	REJECT		
B211	7	Rock	crush, split & pulverize	12M/Dis	03M/Dis		
Analytical Summary							
##	Code	Method	Units	Description	Element	Limit	Limit
						Low	High
01	0721	ICP	ppm	Ag ICP	Silver	0.1	99.9
02	0711	ICP	ppm	Cu ICP	Copper	1	20000
03	0714	ICP	ppm	Pb ICP	Lead	2	20000
04	0730	ICP	ppm	Zn ICP	Zinc	1	20000
05	0703	ICP	ppm	As ICP	Arsenic	5	9999
06	0702	ICP	ppm	Sb ICP	Antimony	5	999
07	0732	ICP	ppm	Hg ICP	Mercury	3	9999
08	0717	ICP	ppm	Mo ICP	Molydenum	1	999
09	0747	ICP	ppm	Tl ICP (Incomplete Digestion)	Thallium	10	999
10	0705	ICP	ppm	Bi ICP	Bismuth	2	9999
11	0707	ICP	ppm	Cd ICP	Cadmium	0.1	99.9
12	0710	ICP	ppm	Co ICP	Cobalt	1	9999
13	0718	ICP	ppm	Ni ICP	Nickel	1	9999
14	0704	ICP	ppm	Ba ICP (Incomplete Digestion)	Barium	2	9999
15	0727	ICP	ppm	W ICP (Incomplete Digestion)	Tungsten	5	999
16	0709	ICP	ppm	Cr ICP (Incomplete Digestion)	Chromium	1	9999
17	0729	ICP	ppm	V ICP	Vanadium	2	9999
18	0716	ICP	ppm	Mn ICP	Manganese	1	9999
19	0713	ICP	ppm	La ICP (Incomplete Digestion)	Lanthanum	2	9999
20	0723	ICP	ppm	Sr ICP (Incomplete Digestion)	Strontium	1	9999
21	0731	ICP	ppm	Zr ICP	Zirconium	1	9999
22	0736	ICP	ppm	Sc ICP	Scandium	1	9999
23	0726	ICP	%	Ti ICP (Incomplete Digestion)	Titanium	0.01	1.00
24	0701	ICP	%	Al ICP (Incomplete Digestion)	Aluminum	0.01	9.99
25	0708	ICP	%	Ca ICP (Incomplete Digestion)	Calcium	0.01	9.99
26	0712	ICP	%	Fe ICP	Iron	0.01	9.99
27	0715	ICP	%	Mg ICP (Incomplete Digestion)	Magnesium	0.01	9.99
28	0720	ICP	%	K ICP (Incomplete Digestion)	Potassium	0.01	9.99
29	0722	ICP	%	Na ICP (Incomplete Digestion)	Sodium	0.01	5.00
30	0719	ICP	%	P ICP	Phosphorus	0.01	5.00

EN=Envelope # RI=Report Style CC=Copies IN=Invoices FX=Fax(1=Yes 0=No) T=Title 1=Copy 2=Invoice 0=3rd Disk
DL=Download 3D=3 1/2 Disk EM=E-Mail BT=BBS Type BL=BBS(1=Yes 0=No) ID=C010901
* Our liability is limited solely to the analytical cost of these analyses.

BC Certified Assayer: David Chiu



INTERNATIONAL PLASMA LABORATORY LTD.

CERTIFICATE OF ANALYSIS
IPL 98J1100

2036 Columbia Street
Vancouver, B.C.
Canada V5Y 3E1
Phone (604) 879-7878
Fax (604) 879-7898

Client: Northern Lights
Project: Whitesail

7 Samples
7=Rock

[110015:15:06:89101698]
Out: Oct 16, 1998 Page 1 of 1
In: Oct 14, 1998 Section 1 of 1

Table with 28 columns (Sample Name, Ag, Cu, Pb, Zn, As, Sb, Hg, Mo, Tl, Bi, Cd, Co, Ni, Ba, W, Cr, V, Mn, La, Sr, Zr, Sc, Ti, Al, Ca, Fe, Mg, K, Na, P) and 7 rows of data for samples BH #1 through BH #7.

Min Limit 0.1 1 2 1 5 5 3 1 10 2 0.1 1 1 2 5 1 2 1 2 1 1 1 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01
Max Reported* 99.9 20000 20000 20000 9999 999 9999 999 999 9999 99.9 9999 9999 999 9999 9999 9999 9999 9999 9999 9999 9999 9999 1.00 9.99 9.99 9.99 9.99 9.99 5.00 5.00
Method ICP
---No Test Ins=Insufficient Sample Del=Delay Max=No Estimate Rec=ReCheck m=x1000 %=Estimate % NS=No SampleR=Rock