

83-#933 - 11852

12

**GEOLOGICAL PRELIMINARY REPORT
ON THE PBL 1 (6 UNIT) MINERAL CLAIM
PROSPECT CREEK AREA
NICOLA MINING DIVISION
NTS 921/3B
(Perlite Prospecting)**

Latitude 50°01'
Longitude 121°05'

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

11,852

OWNER: William B. Kure
OPERATOR: Aurun Mines Ltd.
AUTHOR: E.J. Horne

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Map 1 Claim Location Map 1:5,000 Scale

1.0 INTRODUCTION

1.1 General

This geological preliminary report is submitted to the Department of Energy Mines and Petroleum Resources for application of assessment credit for work performed on the Perl 1 (6 unit) mineral claim, Record Number 1321, date of approval 15th of December, 1983. Work on this claim was performed by the author and Mr. R. Dean on the 6th of November 1983. The work consisted of perlite prospecting and general geological reconnaissance mapping for further perlite prospecting potential. Outcrops on the claim were investigated for perlite and obsidian showings, altered glassy volcanic rocks, felsic volcanic tuffs or welded tuffs. Eight rock samples were selected for petrographic description and rock type classification. No perlite was seen on the claim. Blow torch expansion testing done on five glassy "looking" volcanic rocks gave negative tests (no expansion) hence no samples were collected for expansion tests.

1.2 Location and Access

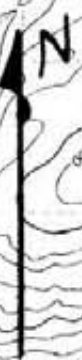
The Perl 1 (6 unit) mineral claim is located at latitude 50°01' longitude 121°05' in the Prospect Creek area of the Nicola Mining Division NTS 921/3E. A claim location map is shown of Figure 1-1.

Access to the claim is by the Prospect Creek forestry road approximately 20 kilometres from the community of Canford, British Columbia. This community is approximately 10 kilometres northwest of the community of Lower Nicola.

The forestry road starts at Canford and consists of an all weather road for 5.5 kilometres that crosses the Nicola River and Spius Creek. This road follows the western bank of Spius Creek until a farm is reached. From this point onwards, the road is a dry season forestry road for a distance of 14.5 kilometres.

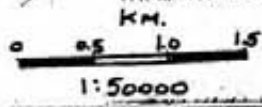
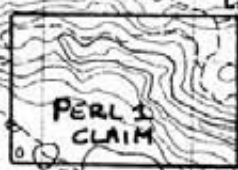
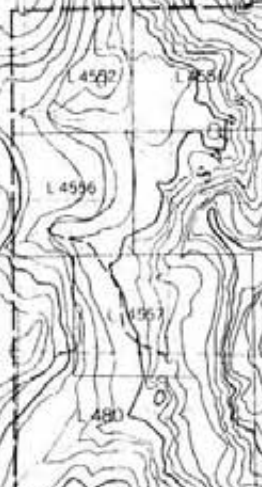
The topography of the claim area is quite steep, with cliffs on both sides of the Prospect Creek Canyon. The elevations vary from 732 metres to 945 metres A.M.S.L. Cliffs in the range of 150 metres occur near the junction of Spius and Prospect Creeks.

Tp 13 R23



05'
10'
45'
47'
46
45
44
43
42
50'00

KAMLOOES DIVISION OF YALE LAND DISTRICT
YALE DIVISION OF YALE LAND DISTRICT



PERL 1 CLAIM
LOCATION MAP
FIG. 1
NTS 82I/3E

117° 121°00'

1.3 History and Ownership

The claim is presently held by Mr. William B. Kure, FMC Number 211452. The operator of the claim is Aurun Mines Ltd. of 910, 640 - 8th Avenue S.W., Calgary, Alberta under the "Pacific Perlite Agreement". The FMC number for Aurun Mines Ltd. is 214646.

The owner and operators prime interest in the area originated from perlite having been reported in the area by J.W. McCammon, 1954, British Columbia Minister of Mines Report, in which Mr. L. Frenier recorded the Obsidian mineral claim on a small showing of volcanic glass in the valley of Prospect Creek. This glass reportedly outcrops three metres above the water level of Prospect Creek approximately 0.8 kilometres upstream from the junction of Spius and Prospect Creeks. Past reported laboratory testing has indicated that this glassy perlitic obsidian expanded readily when heated to form a light and fragile product. Further efforts will be required in the area to locate this showing and confirm by test the expansion characteristics of the material.

1.4 Summary of Work Done

1.4.1 Geological Prospecting

Approximately 2.0 line kilometres of prospecting was done on units 1, 2, 16, 17 of the Perl 1 mineral claim. Prospecting was generally restricted to heavy outcrop areas such as the Prospect Creek Canyon and river bank. No perlite was noted. The previously reported perlite outcrop is small, approximately three metres thick and only exposed in one locality of the cliff face. No perlite float was observed during this field investigation.

The prospecting traverse locations are shown on map 1-1 along with the location of outcrop encountered, the geological rock types and any structural features are also shown. While doing this prospecting, it was noted that the reported perlite occurrence location is in an area that would imply a very high overburden stripping ratio, in the order of plus 25:1 and further that the enclosing rocks are considered to be of Cretaceous age and hence glassy formations would be devitrified.

No line cutting or grid establishment work was done. The geological prospecting consisted of map assisted pace and compass survey only.

1.4.2 Hand Specimens

Samples were collected for rock type classification by petrographic means, all sample locations are shown on map 1-1. Petrographic descriptions were done on six samples which consisted of felsic to mafic volcanic rocks with some potential for glassy matrix of glassy affinity. No perlite or high glassy content materials were noted. Macroscopically the rocks were classified to be rhyolite, dacite, andesite and basalt. The hand specimen samples collected were numbered # 1 to # 8. The locations of these samples are shown on map 1-1 and the macroscopic sample descriptions are included in Section 2.2.

1.4.3 Petrographic Thin Section Work

Six petrographic thin sections were prepared from the eight hand specimens collected. The thin section locations are numbered # 1 to # 6 and are also shown on map 1-1, petrographic descriptions, sketches and photographs of the thin sections are shown in Section 2.3.

2.0 DETAILED TECHNICAL DATA AND INTERPRETATION

2.1 Geological Prospecting

The rock types encountered on the geological traverses consist of predominantly basaltic and andesitic lavas. These volcanic rocks are predominantly flat lying and exposed over thick sequences in creek and river valley areas. The lava flows are generally porphyritic fine to medium grained and exhibit a variety of colours, red, purple, mauve, grey, green and maroon. The basalts are commonly amygdaloidal with amygdules of 0.5 - 25 mm size consisting of radiating quartz, calcite and some zeolites, predominantly greenish prehnite and orange laumontite. Chlorite and calcite appear to be common alteration products. Also present are welded tuffs and flow layered felsic dacitic and rhyolitic volcanic rocks of a light grey to maroon colour. The flow banding is well exhibited by colour variation (light grey to maroon). The higher elevations have rocks composed of predominately basaltic composition, the lower elevations have rocks composed of predominately felsic composition. The basaltic composition rocks show some columnar jointing, and coarse lahar breccia sequences.

The rock types in the area are tentatively correlated to the Kingsvale Group of late lower Cretaceous (Albian) age. If so, perlite and obsidian quality should be strongly suspected of having undergone intense devitrification and expansion characteristics of this glass would be adversely affected.

2.2 Outcrop and Sample Descriptions

All sample locations are approximately shown on map 1-1.

Sample # 1 Specimen of greenish grey amygdaloidal basalt with quartz filled vesicles ranging in size for 0.5 - 10.0 mm, outcrop exhibits columnar jointing, basalt is flat lying to dipping slightly northeast approximately 5°, lahar breccia type deposits of greenish grey colour with common fracture filling as well as amygdules of quartz.

- Sample # 2 Specimen of quartz fracture fill with pale greenish zeolite (prehnite) minor chlorite alteration; composed of 80% quartz and approximately 20% zeolite.
- Sample # 3 Specimen of cream coloured horn blende andesite chalky altered appearance; fine grained with 5% phenocrysts of altered horn blende 1 mm size. Unit on outcrop approximately 10 metres thick and flat lying.
- Sample # 4 Specimen of fine grained altered glassy basalt; sample was tested for expansion with propane brazing torch. No expansion noted, sample fused unit very fine grained. pyroclastic agglomerate appearance to outcrop.
- Sample # 5 Specimen of dacite agglomerate, with rounded fragment (lapilli) welded in fine grained to glassy matrix and approximately 5% phenocrysts of feldspar 0.5 - 1.0 mm size. Specimen did not expand when heated with propane brazing torch, sample glowed red and fused.
- Sample # 6 Maroon-grey dacite-rhyolite, agglomerate and banded flow very fine grained, glassy with bands 0.5 - 2.0 mm size. Specimen did not expand when heated with a propane brazing torch, sample fused after glowing red. Unit strike Az. 140° dipping 5-10° north.
- Sample # 7 Rhyolite welded tuff and agglomerate, maroon grey banded appearance, very fine grained, glassy as above sample did not expand when heated with brazing torch.
- Sample # 8 Rhyolite porphyry with feldspar phenocrysts 1.0 - 2.0 mm size. Minor flow banding in maroon-grey colour, bands 0.5 - 2.0 mm size. Unit very fine grained, glassy as above sample did not expand when heated with brazing torch. Outcrop narrow, 10 metres wide and 10 metres high, joint strikes Az 325 dipping 80°W.

Note: The propane brazing torch expansion test is a relatively quick means of testing for macroscopic expansion characteristics, perlite expands when exposed to a flame at 1600-1800°F, the torch used is a hand held propane brazing torch capable of maintaining these temperatures.

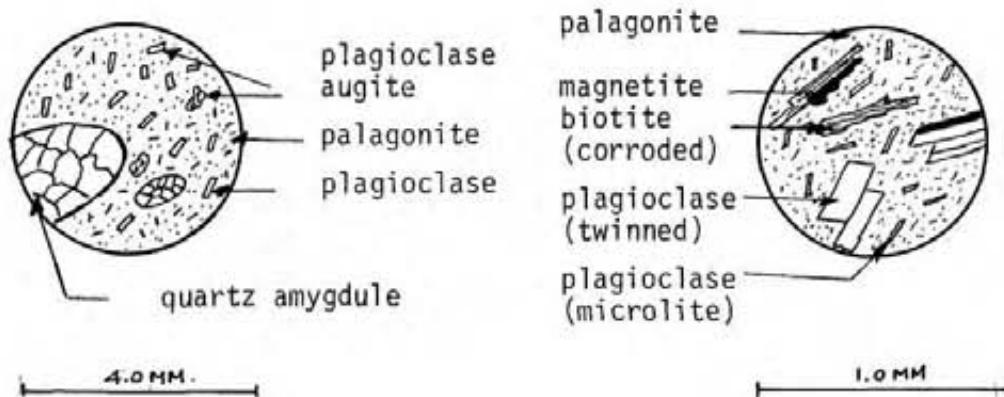
2.3 Petrographic Descriptions

A total of six hand specimen samples were collected for further rock type identification and petrographic examination, to determine the nature of the volcanic glass (stage of devitrification) presence of perlitic structure, and to obtain more geological knowledge of the area to assist in further perlite prospecting in the future. The petrographic descriptions of the samples, some sketches and photographs follow.

o Sample # 1

Rock type: amygdaloidal basalt

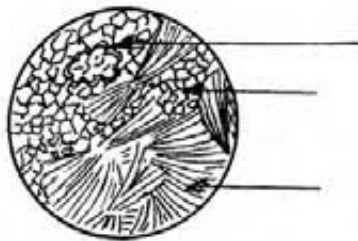
Sample Description: Unit has 40% euhedral zoned microphenocrysts, laths and microlites. An. content approximately 40-60. 5% altered anhedral grains of augite, and corroded biotite in matrix of brown palagonite, 2% opaque magnetite blebs. Quartz amygdules compose approximately 20% of unit and exhibits undulatory extinction.



o Sample # 2

Rock Type: quartz-zeolite fracture fill

Sample Description: sample consists of 80% coarse grained vuggy quartz fill exhibiting undulatory extinction and 20% prehnite exhibiting radiating acicular and bow tie structure (high birefringence) minor chlorite, magnetite?.

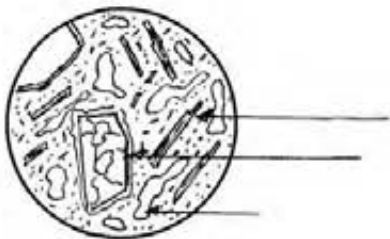


chloritic rimmed zeolite
 quartz (undulatory extinction)
 prehnite

o Sample # 3

Rock Type: altered andesite

Sample Description: Uniform very fine grained volcanic rock with 10% phenocrysts of pleochroic altered biotite (chloritized?) with pleochroism greenish brown to olive brown. 50% altered subhedral microphenocryst 0.2 - 1.5 mm size of albitized plagioclase. Highly propylitized to carbonate-saussurite minerals. The calcite alteration is pervasive throughout making it difficult to determine original mineral composition. Unit also has 10% palagonite with plagioclase? microlites.

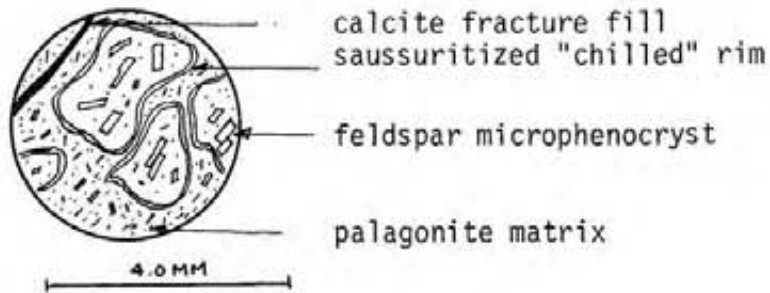


pleochroic mica
 albitized plagioclase (albite rim)
 calcite alteration

o Sample # 4

Rock Type: basalt (flow breccia or lahar deposit)

Sample Description: Unit has 60% euhedral microphenocrysts of plagioclase feldspar and spicules, microlites and palagonite in sub-rounded fragments forming 60% of unit and of 0.5 - 4.0 mm size within a matrix of palagonite with 20% spicules of plagioclase feldspar. An. approximately 60 with minor calcite fracture filling, also minor augite and biotite microphenocrysts and 1% magnetite blebs.



o Sample # 5

Rock type: Dacite-rhyolite tuff agglomerate

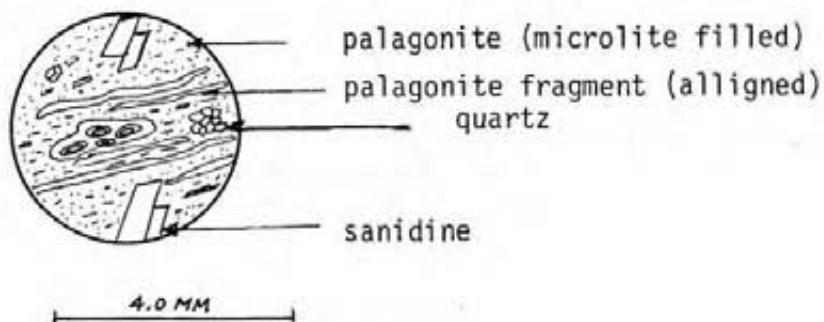
Sample Description: Unit has 20% microphenocrysts, spicules and crystallites of sodic plagioclase An. approximately 20 with carbonate, sericite, kaolinite, alteration 5% quartz microphenocrysts in perlitic or spherulitic rounded textured highly altered volcanic glass crystallites microlites, spicules of feldspar are pervasive throughout this glass accessory chlorite and magnetite.

See photographs following page.

o Sample # 6

Rock type: Rhyolite dacite flow

Sample Description: Unit has 20% microphenocrysts of sanidine orthoclase, 10% quartz crystallites, 20% feldspar spicules, and crystallites imbedded in groundmass of microlitic glass exhibiting shard like texture and spicule flow alignment. Accessory magnetite-hematite.





0 0.25 0.50 0.75 1.00
MM

Sample #1 (Cross-Nicols)

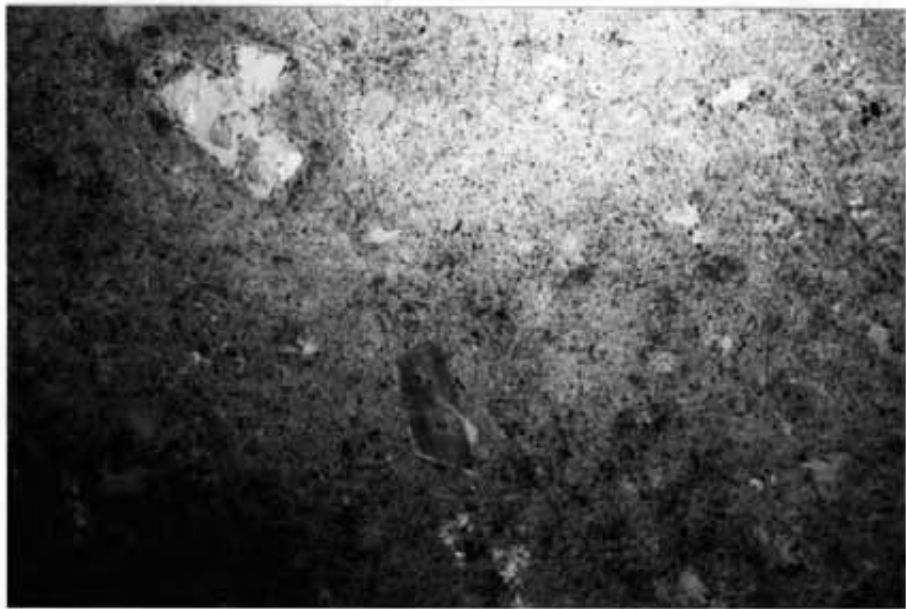
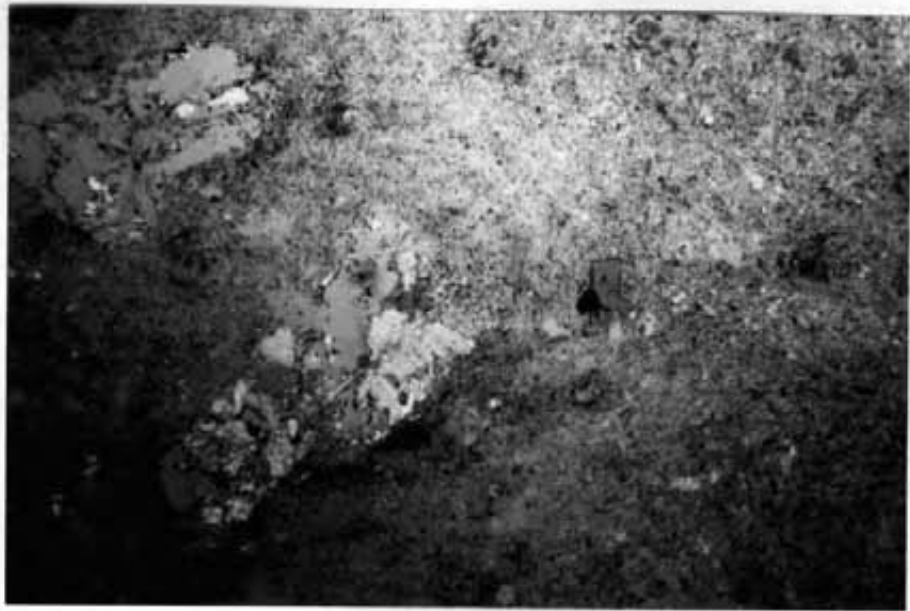
Basalt with microphenocryst of plagioclase in "glass" palagonite matrix. Upper part of top picture shows quartz filled amygdule. Plagioclase content high, minor augite microphenocryst and chloritic alteration.



0 0.25 0.50 0.75 1.00
mm

Sample #2 (Cross-Nicols)

Radiating clusters of prehnite, exhibiting "bow tie" structure
in matrix of euhedral quartz.

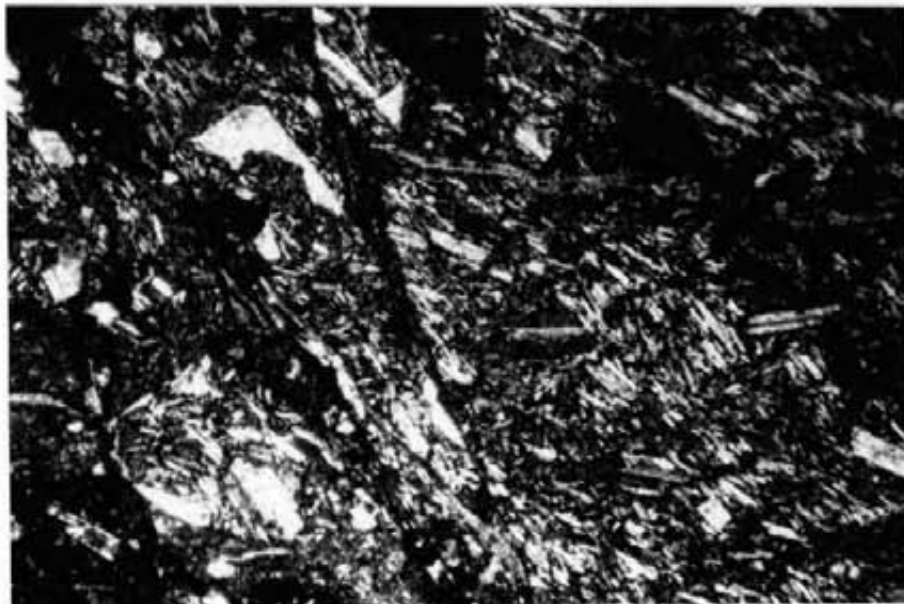
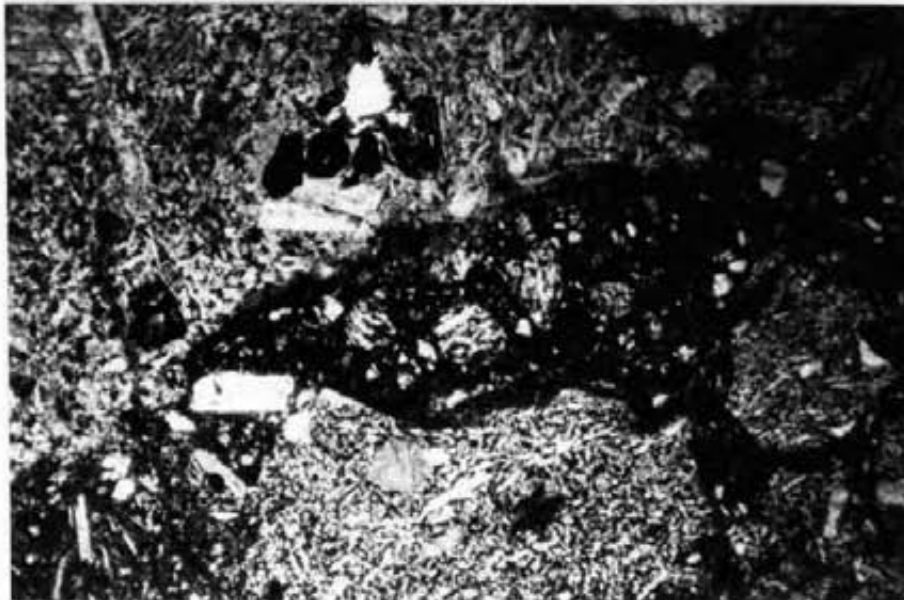


0 0.25 0.50 0.75 1.00

A horizontal scale bar with four segments, labeled with the values 0, 0.25, 0.50, 0.75, and 1.00.

Sample #3 (Cross-Nicols)

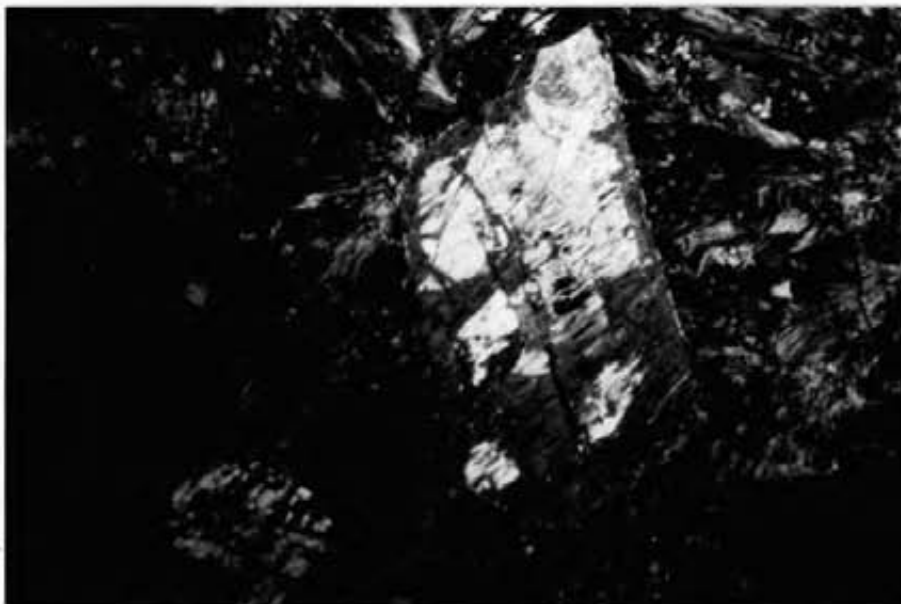
Andesite - note highly altered microphenocrysts of plagioclase, with calcite replacement, hornblende microphenocrysts in very fine matrix of altered crystallites.



0 0.15 0.50 0.75 1.00
Mm

Sample #4 (Cross Nicols)

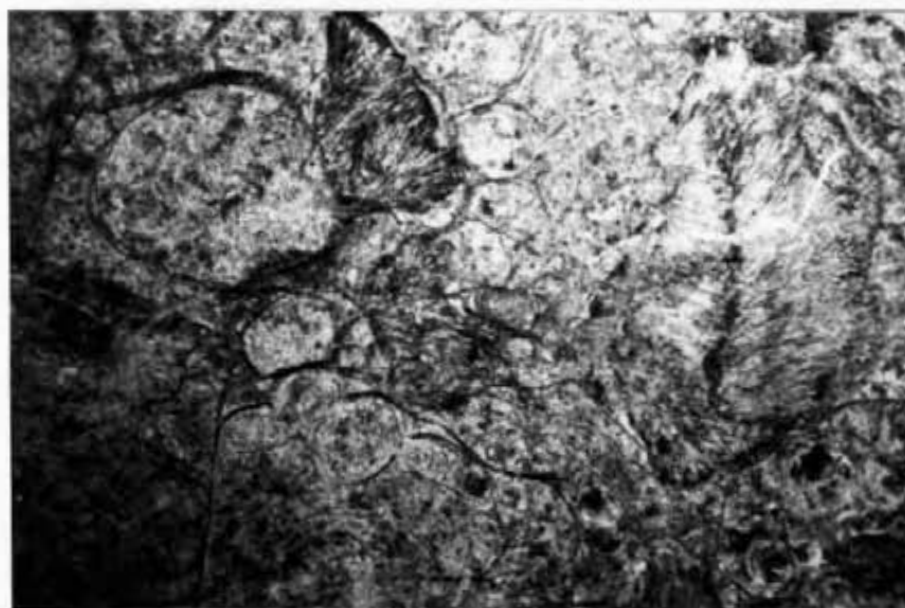
Basalt with microphenocrysts of subhedral "lathlike" feldspar in matrix of palagonite. Top photograph shows fragmental texture. Bottom photograph exhibits partial flow alignment of plagioclase laths.



0 0.15 0.50 0.75 1.00
MM.

Sample #5 (Cross-Nicols)

Dacitic rhyolite tuff exhibiting sodic plagioclase microphenocrysts in altered glass. Bottom photograph shows spherulitic or remnant perlitic structure of glassy matrix. Note: radiating feldspar quartz (cristobalite?) structures in matrix of top photograph.



0 0.25 0.50 0.75 1.00
MM

Sample #6 (Cross-Nicols)

Rhyolite-dacite flow. Sanidine microphenocrysts in matrix of altered glass composed of microlite filled palagonite. Note remnant perlitic texture of bottom photograph and radiating quartz feldspar devitrification on top photograph.

3.0 ITEMIZED COST STATEMENT**3.1 Wages**

Number of mandays = 2		
1.0 days	1 person on November 6th, 1983 @ \$215/day	\$215.00
1.0 days	1 person on November 6th, 1983 @\$125/day	125.00
	1 x \$340 Actual salaries paid	Total \$340.00
For purposes of statement salaries reduced 50% on basis of work accomplished due to weather to a Total of		\$170.00

3.2 Food, Accommodation and Supplies

Number of mandays = 2		
1.0 days	2 persons @\$20/manday	
		Total \$40.00

3.3 Transportation

Number of vehicle days = 1		
	@\$50/day	Total \$50.00

3.4 Testing (Petrographic Thin Sections & Photographs) \$60.00

3.5 Cost of Report

Cost of Report (included drafting)		
Typing & Xeroxing		Total \$150.00
Operations		\$470.00

3.6 Withdrawal from Pac. Account (28%) \$130.00

TOTAL VALUE OF WORK REQUESTED \$600.00

4.0 QUALIFICATIONS

4.1 Statement of Qualifications (Author)

I, Emmett J. Horne of the City of Calgary in the Province of Alberta and the City of Victoria, British Columbia do certify the following.

1. I have been employed as a geologist with Aurun Mines Ltd. since July of 1982, both as a permanent employee and as a contract geologist.
2. I am a graduate of the University of Saskatchewan with a degree in Geology in 1967 and have practiced my profession continually since then.
3. I am a member of the Canada Institute of Mining and Metallurgy.
4. Previous employers and positions are as follows:
 - a) Saskatchewan Department of Mines and Resources (field season)
 - b) Ontario Department of Mines (field season, Senior Geologist)
 - c) Noranda Mines, Geco Division (two years Staff Geologist)
 - d) Scurry-Rainbow Oil Ltd. and Bolivia Limitada (two years Project Geologist)
 - e) Iron Ore Company of Canada (six years, Geologist and supervisory positions)
 - f) Syncrude Canada Ltd. (four years, Senior Geologist, Operations)
 - g) Alsands Energy Ltd. (one and a half years, Senior Geologist)
5. I visited the site with Mr. R. Dean (assistant) on the 6th of November, 1983.
6. I have no direct financial interest in the property, however, I do have shares in Aurun Mines Ltd.



E.J. Horne
Geologist

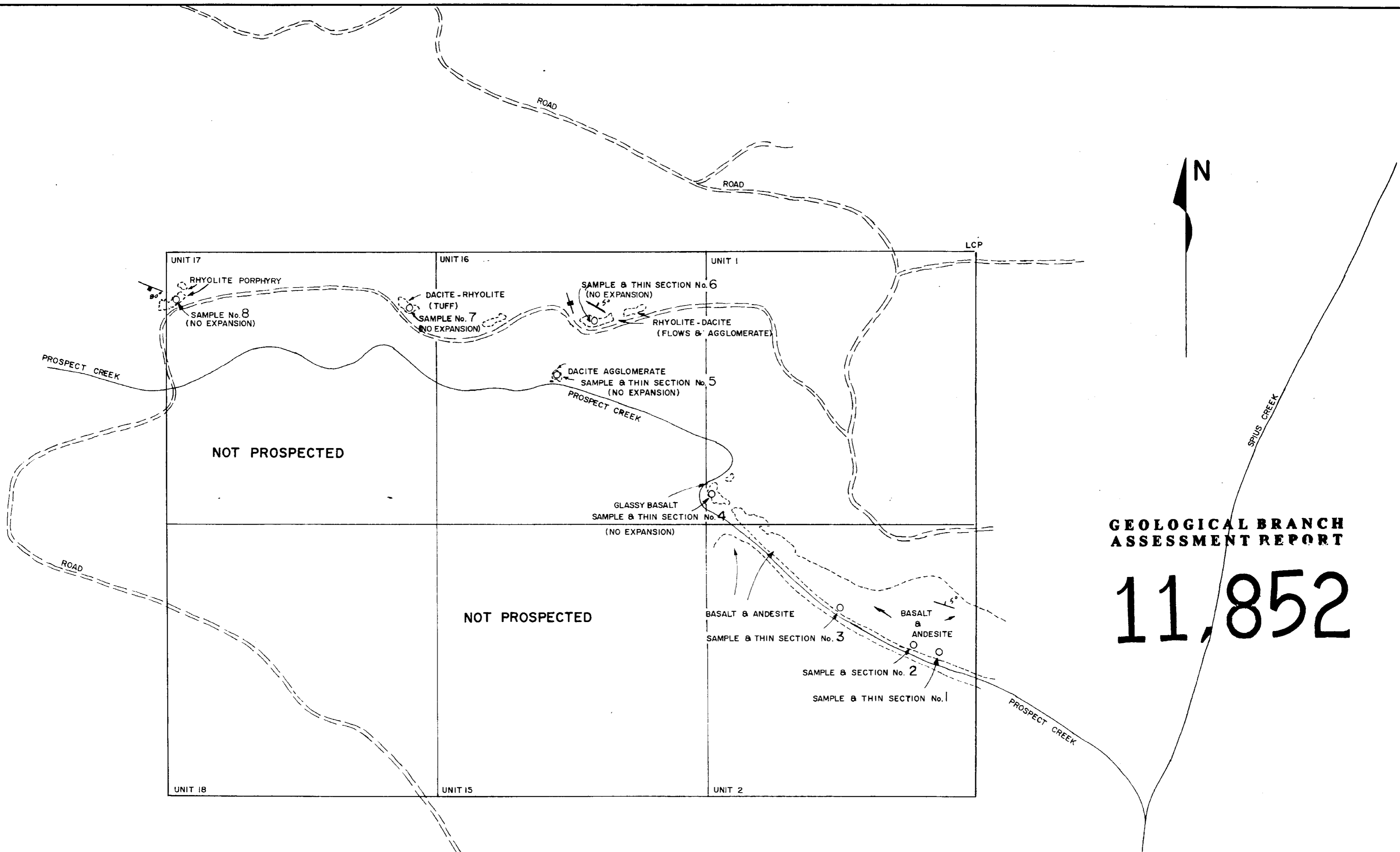
4.2 Professional Certification

I, John Norman Schindler, of the City of Calgary, in the Province of Alberta, do hereby declare that:

- (1) I am registered as a Professional Geologist in the Province of Alberta.
- (2) I am a practising Consulting Geologist, and my office is located at 22 Lake Christina Close S.E., Calgary, Alberta, T2J 2R9.
- (3) I hold the following degrees: B.Sc. Hons Geology (1960), McGill University, Montreal; M.Sc. Geology, University of London, England (1963); Ph.D. Geology, McMaster University, Hamilton, Ontario.
- (4) I have practised my profession since graduation in 1960, and have held permanent position with the following companies: The Iron Ore Company of Canada Ltd., Amax Exploration Inc., Western Mines Ltd. (now Westmin Resources Ltd.), Union Oil Company of Canada Ltd.
- (5) That this report entitled "Geological Preliminary Report on the Perl 1 (6 unit) Mineral Claim, Prospect Creek Area, Nicola Mining Division" is a summary or work performed on said claim in 1983.
- (6) That to the best of my knowledge the acquisition of the data and expenditure claimed for the performance of work as presented in the Statement of Exploration dated December 8, 1983 is correct.
- (7) That I have no financial interest, direct or indirect, in the property or in Aurun Mines Ltd.

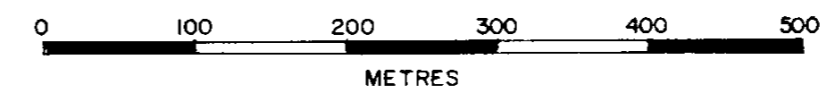
J.N. Schindler, Ph.D., P.Geol.





**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

11,852



LEGEND

- OUTCROP
- SAMPLING AND TEST LOCATION

NOTE: ALL WORK DONE BY PACE & COMPASS

PERL I MINERAL CLAIM		
SCALE: 1:5000	APPROVED BY: <i>[Signature]</i>	DRAWN BY: E. HORNE
DATE: JANUARY 1984	NTS 921/3E	REVISED: <i>[Signature]</i>
MAP I-1		
		DRAWING NUMBER