2461

Report on

Geological Mapping of Mineral Claims Garnet 1-4 Record # 9007-9010

Boulder Creek, Atlin Mining Division, B.C.

These claims are located in the Atlin Quadrangle 12 miles NE of Atlin, 59°N 133°W

for

Canadian Johns-Manville Company Ltd. Box 1500, Asbestos, Que

Mapping: June 2-8, 1970 Report: June 10, 1970

Submitted by:

Nicholas Clive Aspinall, B.Sc



TABLE OF CONTENTS

Property and Ownership Location and Access Topography	1
Climate and vegetation	1
History of the Area	2
Field Work covered by this report	3
Procedure Followed in Geological Mapping	3
General Geology	4
Structure	6
Geochemistry Samples	6

APPENDIX 1:

STATEMENT OF COSTS

APPENDIX 2:

STATEMENT OF QUALIFICATIONS - H.K. CONN and C.ASPINALL

MAP's (heard Picket).

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Department of Mines and Petroleum Resources ASSESSMENT REPORT NO 2461 MAP

Property and Ownership:

Canadian Johns-Manville Co. Ltd., Box 1500, Asbestos, Quo staked and own 4 Mineral Claims (Garnet 1-4, Record # 9007-9010) on Boulder Creek. These four claims are located immediately South of a much larger block of claims owned by the Company. (i.e. The Hobo, Thor, AT and X Groups).

Location and Access:

The Geographical location of the Garnet 1-4 mineral claims is 59° 43'N and 133° 25' W (Re: Atlin Map Sheet 104N). The property is situated 12 miles NE of Atlin (pop 150) and $2\frac{1}{2}$ miles North of the West end of Surprise Lake on the West side of Boulder Creek.

Access to the property can be made from Atlin by a good secondary road to Surprise a Lake and then by a 4-wheel drive road up Boulder Creek.

Topography:

Boulder Creek valley is a wide U-shaped glaciated valley 4 miles long. The mountain ridges in the area attain elevations in excess of 6,000' and the relief of the area is 3,000'. The claims are located near the base of the West side of the valley.

Climate and Vegetation:

Boulder Creek valley is free of snow from July to September . Lower elevations in the valley are usually free of snow for longer periods. Snow fall is approximately four feet and winter

-1-

temperatures range from 10°F(above) to 60°F (below) zero. Summer temperatures average 50°F and rain showers are frequent in July and August.

For the most part, Boulder Creek valley is above tree line. Scattered Balsam occur along the lower valley sides. Most of the vegetation consists of buckbrush and willow. At the higher elevations short alpine grass prevails.

History of the Area:

Canadian Johns-Manville Co. Ltd. became interested in the Boulder Creek area during the summer of 1968 after it had found interesting discoveries of Molybdenite on Ruby Creek immediately to the North and East. The presence of Molybdenite, Lead-Silver, and Wolframite located in trenches on the West side of Boulder Creek warranted that the area should be staked.

Originally Boulder Creek area was the property of Cominco and then Transcontinental Resources, from the 1930's to the 1950's. The creek has been worked by private interests for Gold and Tungsten.

Development work on Boulder Creek was carried out by Transcontinental Resources Ltd. (Black Diamond Tungsten Ltd). The trenches reported on in this report were dug by that Company, and old diamond drill cores located near old drill holes in some of these trenches are believed to be remenants of their development work.

-2-

Field Work covered by this Report:

Geological mapping and soil sampling was carried out by the writer assisted by Peter Nicholson. The purpose of this mapping was to:

- Locate all the former trenches dug by Transcontinental Resources Ltd.
- (2) Investigate the Gossan zones and mineralization in the trenches.
- (3) Attain a better understanding of the Geology of the area and the mineral potential of the claims.

The soil sampling was undertaken to investigate the glacial till content of Cu, Mo, W, Pb-Ag, Au, Zn, Sn, Ni, and MN. All samples were taken at the base of the trenches dug years before by Transcontinental Resources Ltd.

Procedure Followed in Geological Mapping:

A 3,000' baseline was cut following the Garnet Claims location line(35°NE). Offset lines were cut every 400'. These offset lines extend on both sides of the baseline for 1500'. All lines were chained and picketed. This grid system was used for all distance control while Geological mapping, locating trenches and soil sampling.

Almost all the claim group is covered by a mantle of glacial till. Only six trenches were dug deep enough to reach bedrock. Rock exposures outside the trenches are limited to three outcrops. Consequently a detailed examination of the Geology is impossible without deeper trenches or diamond drilling.

-3-

TABLE OF FORMATIONS					
ERA	PERIOD	FORMATION	LITHOLOGY		
C enezoic	Quaternary	Map Unit ;7	Glacial till		
	Recent		Talus		
Mesozoic	Cretaceous	Map Unit 13	Alaskite		
Paleozoic	Permain	Atlin Intrusion	Peridotite		
		Cache Creek Group 6,8	Gossan zones, Breccia,Argillaceous Quartzites, Recrystallized Laminated Limestones		

General Geology, with some aspects of Economic Geology:

Cache Creek Group of Rocks: Map Unit 6 & 8.

The rocks of this group on the Garnet Claims are restricted to Argillaceous quartzites, quartzites, recrystallized laminated limestones and Gossans and limonated breccia zones.

The Argillaceous quartzites are grey, fine grained cherty looking rocks with a limonated weathered surface. These rocks grade into a coarse sugary and hard rock type which exhibit a good deal of biotite and contain accessory pyrrhotite and pyrite disseminated in the rocks. These quartzites are dark grey on the fresh surface with a slight green tint.

Recrystallized laminated limestones are a light grey rock with lineations of darker grey material. The grains range from fine to coarse, and are euhedral in form. Many of the above

-4-

rocks examined were in the form of old drill core formerly drilled by Transcontinental Resources (?).

Most of the Cache Creek rocks on the surface are highly limonated and brecciated, the original texture of the rock being destroyed. From the limited exposures available, it is apparent that the Gossan zones are confined to the rock surface, with a thickness of only a few feet. Some limonated exposures exhibited massive pyrrhotite with some pyrite.

A peridotite intrusive occurs on the West side of Boulder Creek valley and falls within the SW corner of the Garnet Claim Group. Ther peridotite is a hard porphyritic rock, dark grey to black on the fresh surface and dark brown on the weathered surface. Pyroxene makes up to 40% of the rock. These pyroxenes stand out in relief on the weathered surface.

Picrolite veinlets are scattered in a preferred orientation throughout the Peridotite. Serpentine occurs along some fracture surfaces.

The Alaskite in place was only observed in trench G-3. It is very coarse, carrying a high percentage of coarse quartz. Other minerals are plagioclase and orthoclase, with a little biotite. At treachG-6 a large massive milky white quartz vein is located. This quartz vein is estimated to be twelve feet wide. The strike of this quartz vein is believed to be 35° NE. It is only exposed at trench G-6, but numerous quartz fragments in the trenches G-1, G-3, immediately to the North of G-6 suggest it to continue in that direction. Mineralization in the quartz consists of Wolframite, Lead silver, and Molybdenite.

-5-

The freshly broken quartz gives off an arsenic odor. The weathered surface on the quartz is Fe stained and locally Mn stained.

Structure:

Due to the limited outcrop exposures on the Garnet Claim Group, the Geological contacts shown on the attached map are mainly interpreted from observations made outside the Garnet Claims.

Geochemistry Samples:

36 samples were collected. These samples were shipped to Bondar-Clegg & Company, 1500 Pemberton Ave, N. Vancouver, for testing and at the time of writing of this report the results were not received .

-6-

Statement of Costs

Two Men

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 5 days Geological mapping @ \$40 per da 4 days Soil Sampling and Prospecting @ \$17 per da 1 day Soil Sample Preparation @ \$17 per da 	68.00
Field expenses for two men $@$ \$10 per da each for 5 da	. 100.00
Cost of Report and Maps	200.00
Cost of 36 Soils analized for Cu, Mo, Pb, Au, Sn, Zn, Mn, Ni, W	300.00
Cost of 4 semi quantitative Spectrographic analysis on 4 rock samples	60.00
Total Expenditures	\$945.00

Statement of Qualifications

- I, Nicholas Clive Aspinall, do hereby certify that,
- (1) I am a Geologist employed by Canadian Johns-Manville Co, Ltd Box 1500, Asbestos, Que.
- (2) I am a graduate of McGill University, Montreal with a Bachelor of Science Degree, 1964.
- (3) I have no financial interest in the Garnet Claims, nor do I expect to receive any.
- (4) This report is based on field observations.

Clive Aspinall Canadian Johns-Manville Co. Ltd. Box 69 Atlin, B.C. June 14, 1970

STATEMENT OF QUALIFICATIONS

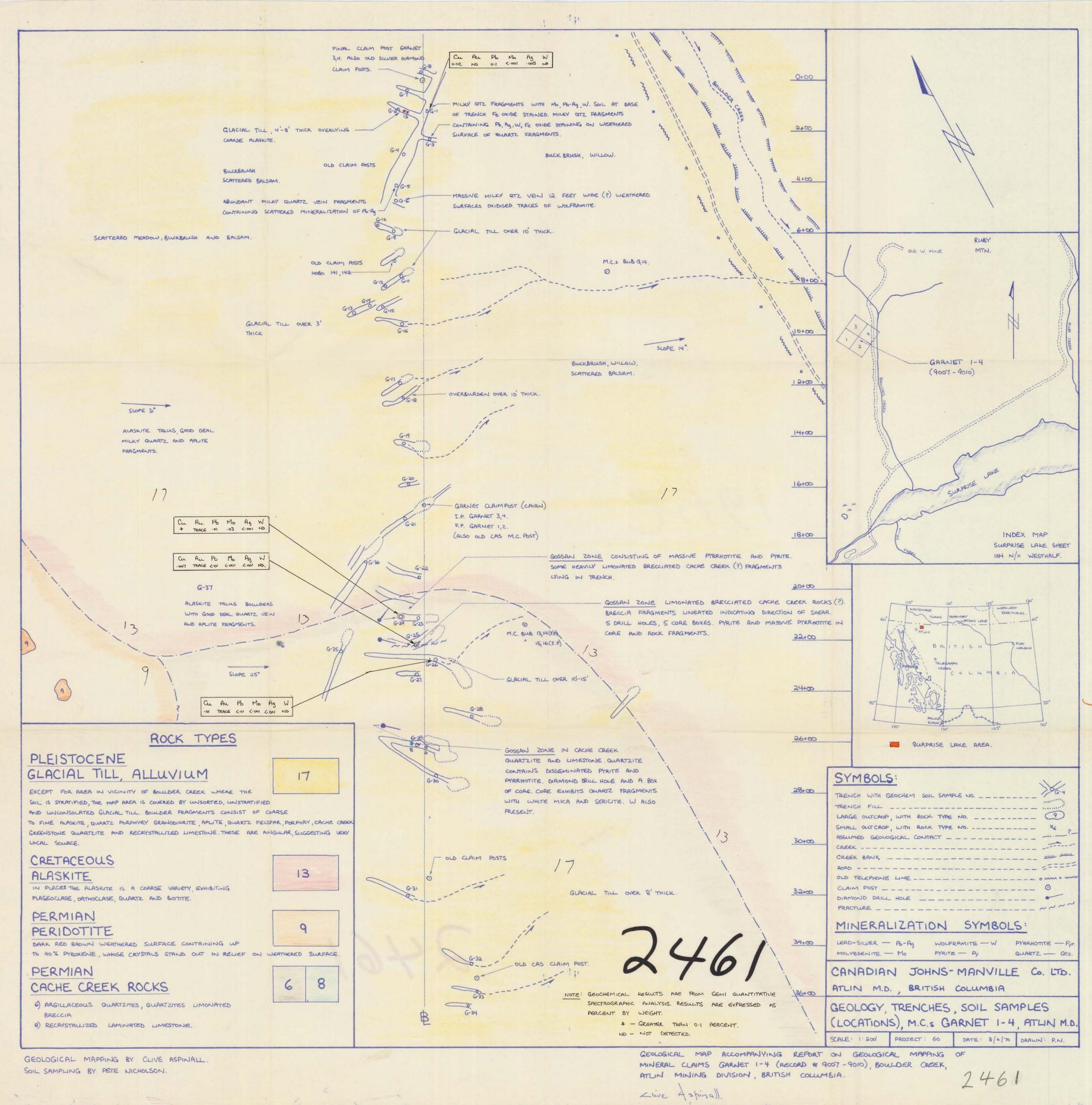
I, Herbert Keith Conn, of the town of Asbestos, Quebec, do hereby declare that:

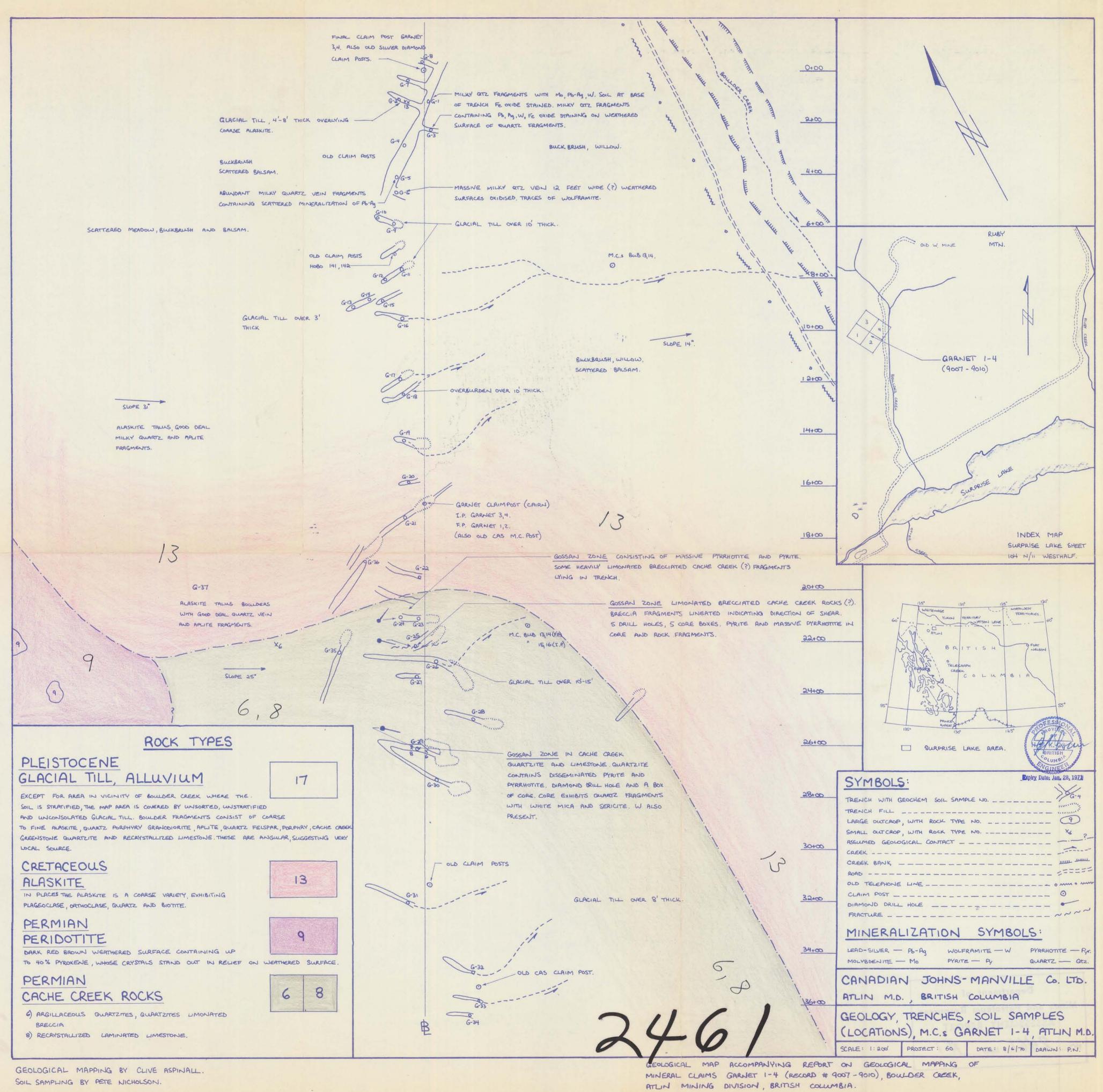
- I am a mining geological engineer employed as Exploration Manager for Canadian Johns-Manville Company, Limited, P.O. Box 1500, Asbestos, Quebec.
- (2) I have practised in the geological profession for 21 years and specialized in economic geology and exploration procedures for the past 20 years.
- (3) I am a graduate of the University of Toronto, Toronto, Ontario with the degree of B.A.Sc. (Mining Geology), 1948.
- (4) I am a member of the following professional associations:
 - (a) Corporation of Engineers of Quebec
 - (b) Non-resident member of the Association of Professional Engineers of the Province of British Columbia
 - (c) Fellow of the Geological Association of Canada
 - (d) Fellow of the Society of Economic Geologists
 - (e) Member of the Canadian Institute of Mining and Metallurgy
 - (f) Member of the American Institute of Mining Engineers
- (5) This report is based on published and unpublished information and personal observations on the property.

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June 1970





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