

5350

BRITISH NEWFOUNDLAND EXPLORATION LIMITED

94G/4W

PROSPECTING REPORT

JR AND MARK CLAIMS

LIARD MINING DIVISION, B.C.

By: Michael G. Williams

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 5350 MAP

Brinex Report No. G74506

NTS Map Ref: 94 G/4W

CLAIM OWNER: British Newfoundland Exploration Limited

FIELD PERIOD: August 12 to September 11, 1974
REPORT PERIOD: October 14, 1974 to January 21, 1975

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INTRODUCTION

This report describes the results of intensive prospecting carried out on the JR and MARK claims situated a few miles east of Mt. McCusker in the Liard Mining Division. The area is about 15 miles north of Robb Lake.

The exploration programme was conducted by British Newfoundland Exploration Limited under the terms of a joint venture agreement with Metallgesellschaft Canada Ltd.

The Index Map (Fig. 1) shows the location of the claims with respect to the geographic co-ordinates.

The principals involved in the programme are:

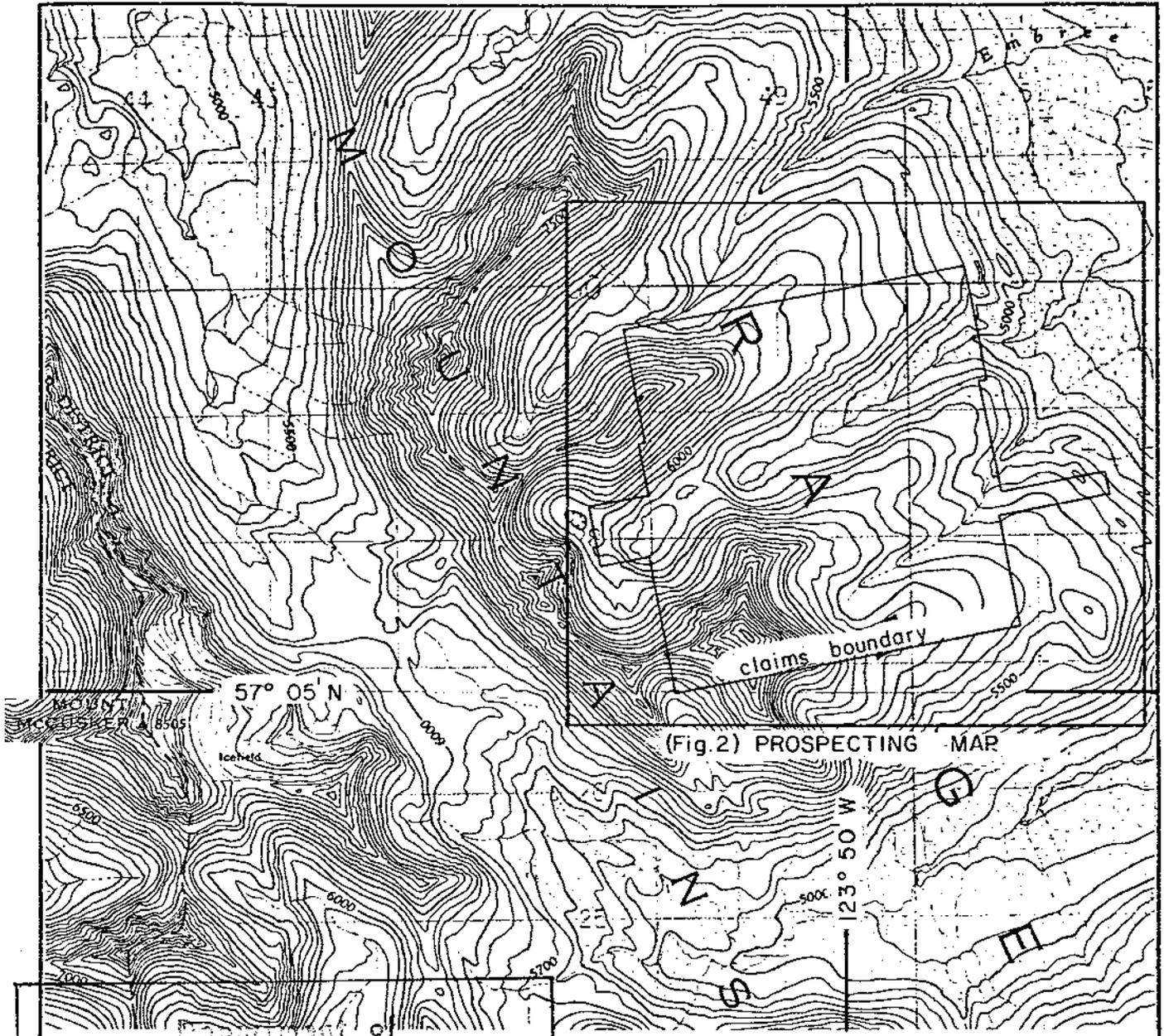
Dr. Neil Westoll, Manager - Western Exploration
British Newfoundland Exploration Limited
704 - 602 West Hastings Street, Vancouver, B.C. V6B 1P2

Dr. Dieter Müller, Metallgesellschaft Ltd.
6000 Frankfurt (Main) 1
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Mr. Michael G. Williams, Regional Geologist
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PROPERTY LOCATION AND ACCESS

This report concerns work done on a block of 45 mineral claims owned by British Newfoundland Exploration Limited, located about 3 miles east of Mt.



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No. **5350** # **1**

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MAP 1



British Newfoundland Exploration Limited		
Figure I. INDEX MAP - JR & MARK claims		
Date: Jan. 1975	SCALE: 1: 50,000	DRAWN BY: M.G.W.
	MAP REF: 94 G/4W	TRACED BY: M.G.W.
	MAP No.: G74506-1	CHECKED BY: M.G.W.

McCusker near the Rocky Mountain crest. The area lies near the headwaters of the Sikanni Chief River, about 50 miles west of Pink Mountain at Mile Post 147 on the Alaska highway, or about 135 miles north of Mackenzie, B.C.

The topography is youthful and rugged, with elevations varying from 5,000' to over 8,000'. Most of the claim area lies above timberline.

The nearest point at which float equipped fixed wing aircraft can land is Cranswick Lake 12 miles to the north; access to the property is practicable only by helicopter.

PURPOSE AND SCOPE OF EXPLORATION

Previous Work

During the 1972 field season, preliminary geological mapping was carried out by G.J. Dickie and a geochemical soil sampling grid was established on which zinc soil anomalies were detected (Westoll and Sullivan, 1973). In 1973 more detailed geological mapping was carried out at a scale of 1" - 2,000', and additional geochemical soil samples were collected and analyzed (Pearson and McHale, 1974). Interpretation of the latter work led to the correlation of a zone of zinc anomalies with a possible facies change from brecciated and recrystallized dolomite to black shale in the underlying Devonian succession. Detailed mapping, soil sampling, and prospecting using colorimetric techniques was recommended for 1974.

1974 Field Programme

Exploration was carried out on the claim block with helicopter support from a field base camp at Lady Laurier Lake, about 28 miles to the south. Work in this area was done in conjunction with work on other claim groups in the Robb Lake Area, in accordance with priorities established at the beginning of the season. Although the area was intensively prospected, the complete programme, including detailed mapping and sampling recommended by Pearson and McHale (1974), could not be carried out before an early snow fall brought an end to the field programme in September.

GEOLOGICAL SETTING

The claim block is underlain by a series of imbricate thrust sheets which contain rocks, chiefly dolomite, of Lower Silurian to Upper Devonian age.

The higher, well exposed rocks on the west side of the claim block are predominantly light to medium grey, slightly brecciated dolomites of Lower Silurian to Lower Devonian age (Nonda and Stone Formations) which dip uniformly to the west (Fig. 2). East of the thrust fault which cuts across the centre of the claim block, a more complex sequence of Devonian shales, quartzites and strongly brecciated dolomite forms an anticlinal dome. Except where the creek cuts across this sequence, rock exposures are poor. The geochemical soil anomalies referred to previously are developed within this area.

PROSPECTING

Techniques

Zinc mineralization, principally in the form of sphalerite, but with occasional occurrences of hydrozincite and smithsonite, is known to occur within the Silurian and Devonian rocks of the Robb Lake Area. The colour and textures of these minerals and the nature of their distribution in the brecciated dolomites is such that they cannot be easily recognized on the weathered rock surface. Mineralized zones are thus easily overlooked even by experienced prospectors.

A colorimetric technique has been utilized in this region with great success and has largely overcome this handicap. The technique consists in applying a zinc oxide test solution to the weathered surfaces of favourable host rocks; if a zinc oxide film resulting from weathering of zinc minerals is present, the surface turns bright red within a few seconds.

The test solution was developed and supplied by Van Geochem Lab of Vancouver, B.C. It is said to react to any oxidized surface containing > 5% Zn. It is evident, from assay results, that a very small amount of zinc sulphide in the rock is sufficient to produce an oxidized coating of the required strength.

Use of this solution has enabled prospecting teams to concentrate their efforts in areas where the reaction occurs; besides encouraging their efforts,

the teams gradually develop an "eye" for potentially mineralized rock which further increases their effectiveness.

Prospecting was carried out in this area by Jim Winslow and Nils Hagglund, under the supervision of the writer. Traversing was accomplished by zigzagging across exposed areas, zones of talus, and covered areas with abundant float. Main routes are shown on Fig. 2. Field observations were recorded on airphoto overlays and later transferred to base maps.

Results

Although no mineralized zones of economic grade or width were encountered at surface, a number of colorimetric anomalies were detected, and one zone of dolomite breccia with sphalerite mineralization was discovered. Most of these occurrences correspond closely to the position of the thrust fault which cuts across the central part of the claim block, but which is not actually exposed over much of its length.

The mineralized breccia is very similar in appearance to that seen on the LAD and LASS claims about three miles to the west on Mt. McCusker (McHale and Pearson, 1974). It consists of light and dark grey fragments of very finely crystallized dolomite with a matrix of sparry white dolomite containing scattered aggregates of reddish-brown sphalerite grains. A grab sample of this material assayed 1.74% Zn and 0.22% Pb. This material occurs in a fault or fracture zone 3 to 4 feet wide on a steep bluff. It

is not easily accessible. It does not appear to be extensive, however, since the surrounding area is well exposed and no other occurrences were noted.

The only other zone where a zinc reaction was found is about 2,500' to the northeast of the sphalerite occurrence in the core of the anticlinal dome exposed on the slope above the creek.

CONCLUSIONS

The exposed bedrock in the claim area has now been thoroughly prospected with disappointing results. No really significant mineralized zones were discovered.

However, the full potential of this ground has not yet been explored. Little or no outcrop exists in the zone where the geochemical soil anomalies occur, and the bedrock underlying these zones is inferred to be favourable host rock for zinc sulphide mineralization. The writer supports the recommendations made by Pearson and McHale (1974) for additional detailed mapping, soil sampling, and test-pitting in these areas.

Respectfully submitted,



M.G. Williams, Regional Geologist

Vancouver, B.C.
January 21, 1975

REFERENCES

McHale, K.B. and Pearson, B.D., Geological and Geochemical Report, McCusker Claim Groups I, II and III, Liard and Omineca Mining Divisions, B.C., January 20, 1974.

Pearson, B.D. and McHale, K.B., Geological and Geochemical Report, J.R. Mineral Claim Groups A and B, Mt. McCusker Area, Liard M.D., B.C., February 20, 1974.

Westoll, N.D.S. and Sullivan, J., Geological and Geochemical Report, Mount Bertha Area Claim Groups, Liard M.D., B.C., February 7, 1973.

APPENDIX I

ITEMIZED MANDAYS OF WORK

	<u>Mandays</u>	<u>Salary \$/day</u>	<u>Total</u>
Williams	1.5	75.00	\$112.50
Muller	1	67.75	67.75
Winslow	3	52.40	157.20
Hagglund	3	48.25	144.75
	—		—
TOTALS	8.5		\$482.20
	==		==

Work carried out between August 12 and September 11, 1974.

APPENDIX II

CONSOLIDATED DECLARATION OF COSTS

Personnel - salaries	\$ 482.20
Food and accommodation	215.22
Fixed wing support	62.66
Helicopter support	1,870.84
Travel	29.27
Report preparation	<u>500.00</u>
TOTAL	<u>\$3,160.19</u>

STATEMENT OF QUALIFICATIONS

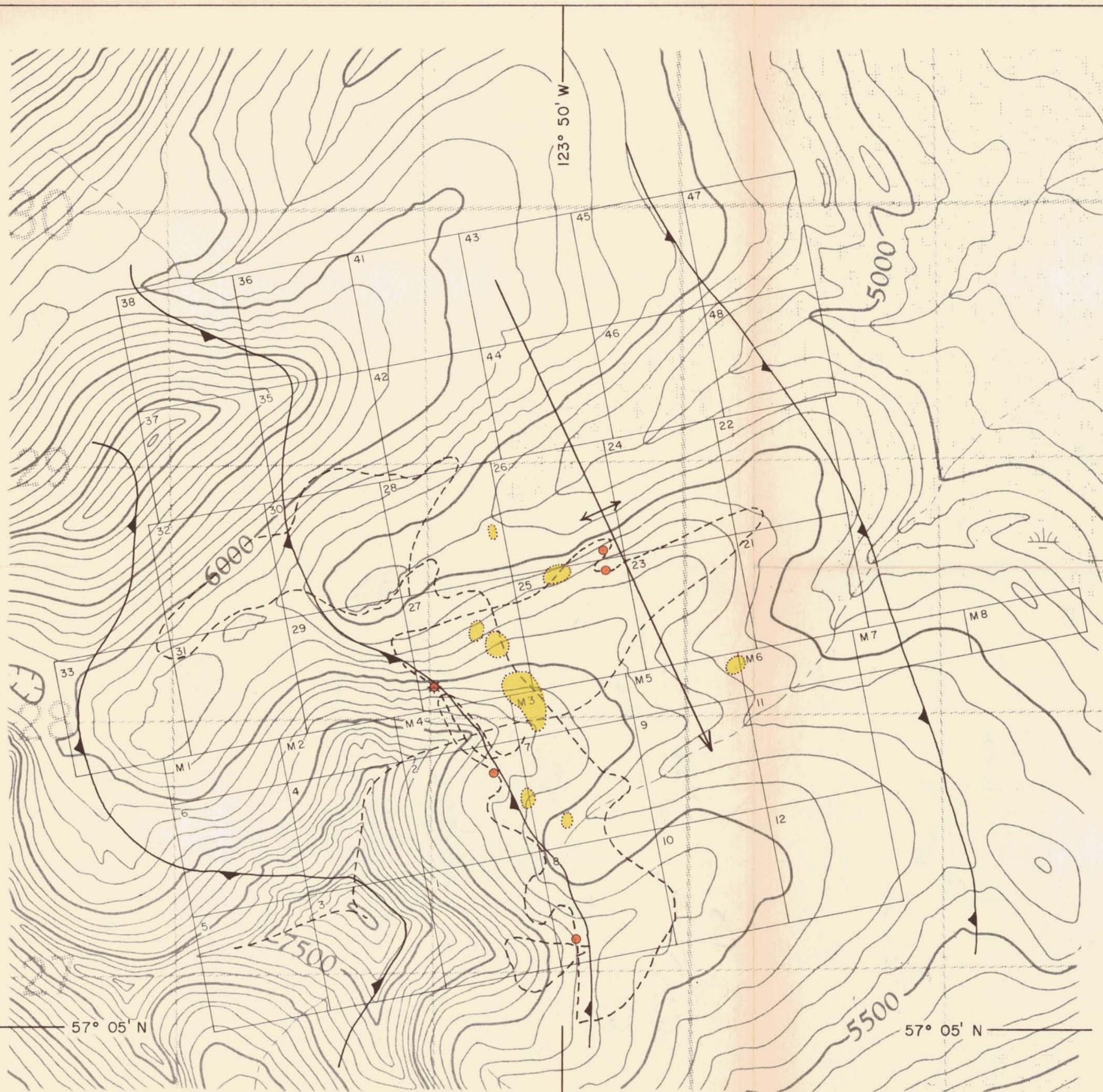
I, F. Michael G. Williams, of Vancouver, British Columbia, do hereby certify that:

- 1) I am a geologist residing at 1505-1905 Robson Street, Vancouver, B.C.
- 2) I am a graduate of the University of British Columbia (B.A.Sc. - Geological Engineering)
- 3) I hold the degree of Master of Science from McGill University, Montreal, P. Q. (Structural Geology, 1966)
- 4) I have been employed by British Newfoundland Exploration Limited since May 1970 as an exploration geologist with the responsibility of planning and carrying out comprehensive mineral exploration programs principally in the Province of Newfoundland and Labrador.
- 5) I am a member of the Geological Association of Canada and the Canadian Institute of Mining and Metallurgy.
- 6) I have applied for Registered Membership with the Association of Professional Engineers of the Province of British Columbia.
- 7) The work which is the subject of this report was carried out by crews under my supervision.



Michael G. Williams
Regional Geologist

BRITISH NEWFOUNDLAND EXPLORATION LIMITED
704-602 West Hastings St., Vancouver, B.C.



LEGEND

- Main Traverse Lines
- ☀ Sphalerite occurrence
- Colorimetric anomaly
- Zinc geochemical anomaly (1972)
Zn 250ppm
- ↘ Thrust fault (approximate)
- ↔ Anticlinal axis

JR Claims - no prefix
MARK Claims - prefix 'M'

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 5350 MAP #2



5350
MAP 2

British Newfoundland Exploration Limited

**Figure 2. PROSPECTING MAP
JR GROUP**

(Includes 1973 geological data and 1972 geochemical data)

DATE: JAN. 1975	SCALE: 1" = 1000'	DRAWN BY: M.G.W.
	MAP REF: 94 G/4W	TRACED BY: M.G.W.
	MAP No.: G74506-2	CHECKED BY: M.G.W.

To accompany prospecting report on the JR and MARK claims,
Liard Mining Division, by M.G. Williams, dated Jan. 21, 1975

Michael G. Williams