

GEOLOGICAL REPORT
SNOW GROUP - MUNCHO LAKE AREA
(Liard Mining Division, British Columbia)

for 94N/4E
Conwest Exploration Company Limited

by
James Brander and J. R. Woodcock
January 21 to October 18, 1972

North Vancouver, B. C.

3965

N.T.S. 94N/4

GEOLOGICAL REPORT

on the

SNOW 1, 2, 5, 6, 8, 15, 18, 30, 31 mineral claims
(Record Numbers 64276, 64277, 64280, 64283, 67207, 49461, 49473, 49474)

in the

MUNCHO LAKE AREA of the LIARD MINING DIVISION - BRITISH COLUMBIA

Latitude 59°04.6' North

Longitude 125°39' West

for

CONWEST EXPLORATION COMPANY LIMITED
10th Floor - 85 Richmond Street West
Toronto 1, Ontario

by

James Brander and J.R. Woodcock
J. R. Woodcock Consultants Ltd.

Department of	
Mines and Petroleum Resources	
ASSESSMENT REPORT	
NO. 3965	MAP

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CLAIM DATA

INTRODUCTION:

The fluorite deposit on the original Snow Claim Group was mapped, sampled, and reported upon by G. S. Zimmer for Conwest Exploration Company Limited in 1971. At the request of J. R. Woodcock, J. Brander remapped the showings by stadia control on July 22 and July 27, 1972. Brander was assisted by A. Audet and H. Meixner. Part of the original Snow Claim Group was restaked and prospected by N. Wychopen on July 22 and July 27, 1972.

LOCATION AND ACCESS:

The main showing is approximately five miles east of mile post #466 on the Alaska Highway. It is on a northeasterly flowing tributary of Sulphur Creek at elevation 3600 feet A.S.L., latitude 59°04.6' north and longitude 125°39' west. Access at present is by helicopter from the Alaska Highway. The topography is rugged with elevations ranging from 3500 feet to more than 7000 feet A.S.L.

CLAIMS AND OWNERSHIP

The map of Figure I shows the outline of the original Snow 9 to 48 mineral claims staked by Mr. K. J. Miller on September 6, 1970. It also shows the remaining valid claims of this original claim group and the valid new claims staked by Mr. Nick Wychopen on July 22 and July 27, 1972.

Because of some problems in the original staking, J. R. Woodcock on July 19, 1972, in a letter to Mr. Trevor Horsley reviewed the claim situation and recommended some abandonment and restaking. In order to protect the mineral occurrence while this recommendation was being processed, Woodcock staked the Mun 1 to 8 mineral claims and these were also officially abandoned at the same time as some of the original Snow claims.

Both Miller's claims and Wychopen's subsequent claims were named "Snow" and there may be confusion because of this. However all the claim data, including respective record numbers, is outlined in the appendix.

The claims are presently in the name of Conwest Exploration Company Limited.


REGIONAL GEOLOGY

The stratigraphic column for the Muncho Lake region is shown on page #1a. Rock types consist of an assemblage of sedimentary

STRATIGRAPHIC COLUMN

AGE	ROCK UNIT	LITHOLOGY	THICKNESS
Devonian to Mississippian	Besa River Shale	black shale	> 1000'
Middle Devonian	Nahani - Manitoe	fine-grained to microcrystalline limestone	700'
	Chinchaga - Arnica	dolomite	2100'
	-----disconformity----- Yellow Unit	sandy dolomite and limestone grading to sandstone, argillaceous limestone, intraformational breccias	
Lower Devonian	Muncho Formation	microcrystalline dolomite	1200'
	-----disconformity----- McConnell Formation	microcrystalline dolomite	
Middle Silurian	Nonda Formation	dark grey fossiliferous dolomite, basal quartz sandstone	969'
-----Disconformity-----			
Cambrian		red coloured clastics containing boulder conglomerate with gabbro boulders	0 to 5000'
-----angular unconformity-----			
Precambrian		thin bedded, hard, greenish shale interbedded with sandstone; cut by gabbro dikes.	> 500'

UPPER DEVONIAN - MISSISSIPPIAN

 Besa River Shale

MIDDLE DEVONIAN

 Nahanni & Stone Formations (limestone/dolomite)


LOWER DEVONIAN

 Muncho & Yellow Formations (sandstone)

LOWER DEVONIAN

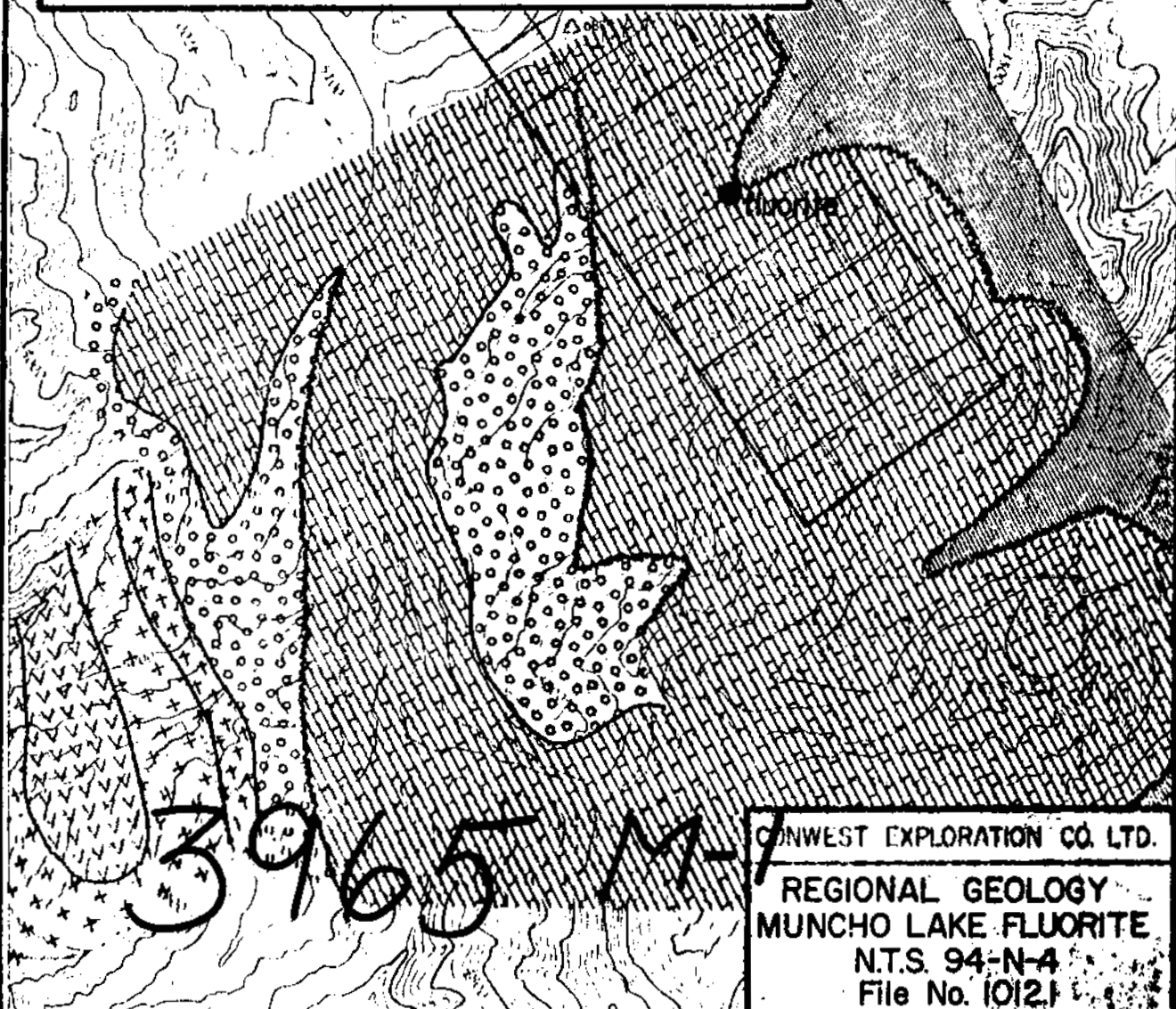
 McConnell Formation (dolomite)

SILURIAN

 Nonda Formation (dolomite/orthoquartzite)

PRECAMBRIAN

 Tuchodi Formation (quartzite/siltstone)



CONWEST EXPLORATION CO. LTD.
 REGIONAL GEOLOGY
 MUNCHO LAKE FLUORITE
 N.T.S. 94-N-4
 File No. 10121

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NO. 3965 MAP #1

formations ranging from Precambrian to Mississippian in age.

The regional trend is northwesterly. The formations have been folded into a series of anticlines and synclines with thrust faults developed parallel to their axial trends. Three thrust faults are shown on the accompanying map (Figure 2). Their planes of movement dip gently southwesterly and the formations are dragged northeasterly.

At the front of the eastern thrust, Middle Devonian Dunedin limestone overlies Upper Devonian to Mississippian Besa River shales. Fluorite mineralization is present in the limestones immediately above the shale-limestone contact indicating that the thrust plane has exercised some depositional control. why?

GEOLOGY AND MINERALIZATION OF SNOW PROSPECT:

The fluorite mineralization is exposed in two areas on near vertical cliffs to the south of the creek bed. It extends from 80 feet to 250 feet above the creek. In addition, Wychopen discovered large blocks of fluorite along the rivulet which enters the main creek 3000 feet east of the principal showing.

The smaller of the two cliff showings is exposed over a length of 200 feet and a thickness of 12 feet. It strikes north-south and dips to the west at 48 degrees. Sample No. Z 71-59 taken on the zone by Zimmer assayed 17.01% CaF_2 . This showing is not considered by the writer to be of commercial interest.

The larger of the two mineralized bodies is exposed in an arcuate band 300 feet long and over a maximum vertical thickness of 125 feet. The attitude of the body is difficult to ascertain, however the impression is gained that it conforms in strike and dip with the host rock limestones which strike northerly and dip westerly at about 25 degrees. Rock and overburden cover obscures the lateral extension of the zone to the east. Only by diamond drilling can the tonnage potential be determined. Fluorite mineralization within the zone is sporadic and ranges from 0.96% CaF_2 to 36.45% CaF_2 . The average grade of 20 samples taken by Zimmer over a length of 175 feet is 17.9% CaF_2 .

The actual contact of the Besa River shales and the limestones is covered by talus in the vicinity of the showings. Mineralization is present however to within about 10 feet of the shales at the northeast end of the principal showing.

The fluorite occurs as fracture filling and replacement of strongly fractured limestone. Although folding has locally given rise to variable dips, the limestone in general strikes northerly and dips at 25° to 30° to the west. It varies from thin bedded to massive and from light grey to almost black in colour.

Wychopen noted blocks of well mineralized material in the overburden and probably in place along the location line of his Snow 13 mineral claim.

CONCLUSIONS AND RECOMMENDATIONS

1. Fluorspar mineralization occurs as a replacement in limestone above the contact with underlying black shales. The limestone is of the Dunedin Formation and it has been thrust eastward over the younger Besa River shales. The extent of the fluorite mineralization along this contact is not known. However Wychopen found large blocks of fluorite-bearing rocks about 3000 feet to the northeast of the discovery showing. The intervening ground is covered by glacial till and outwash deposits.
2. The mineralization on the discovery showing has been sampled along the foot of a cliff and the average grade is about 18% CaF_2 . Wychopen reports that the large block of fluorite-bearing rock to the northeast appeared to be of better grade.
3. The key claims should be kept in good standing even though the mineralization is not economic under present conditions.


J. R. Woodcock

October 18, 1972

SNOW CLAIMS 1972

EXPENSES

Fees: J. Brander (senior geologist)	July 21, 22, 23, 27 Aug. 18($\frac{1}{2}$ day), 25	5 $\frac{1}{2}$ days @ \$100	\$ 550.00
H. Meixner (geologist)	July 21, 22, 23, 27	4 days @ \$85	340.00
A. Audet (surveyor and geol. engineer)	July 21, 22	2 days @ \$85	170.00
T. Drews (draftsman)	Aug. 31, Sept. 1	5 hrs. @ \$5.50/hr.	27.50
J. R. Woodcock	Sept. 27, Sept. 29, Oct. 5	1 day @ \$150	150.00
		<u>Total Fees</u>	<u>\$ 1,237.50</u>

Helicopter:

July 21	1:00 hour
July 22	3:30 "
July 23	1:40 "
July 27	3:00 "
	<u>9:10 hours @ \$140 = \$1,280.00</u>

Total Helicopter costs \$ 1,280.00

Accommodation in Field

18 man days (including helicopter pilot and engineer)

-- 18 man days @ \$12/day --	<u>Total cost of accommo- dation in field</u>	\$ 216.00
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Grand Total \$ 2,733.50

SNOW CLAIMS 1972

	<u>July 21</u>	<u>July 22</u>	<u>July 23</u>	<u>July 27</u>	<u>Aug. 18</u>	<u>Aug. 25</u>	<u>Aug. 31</u>	<u>Sept. 1</u>	<u>Sept. 27</u> <u>Sept. 29</u> <u>Oct. 5</u>	<u>Total</u>
<u>Fees:</u>										
J. Brander	\$100.00	\$100.00	\$100.00	\$100.00	\$ 50.00	\$100.00				\$ 550.00
H. Meixner	85.00	85.00	85.00	85.00						340.00
A. Andet	85.00	85.00								170.00
T. Drews							\$ 13.75	\$ 13.75		27.50
J.R. Woodcock									\$150.00	150.00
<u>Helicopter:</u>	\$140.00	\$490.00	\$230.00	\$420.00						\$1,280.00
<u>Accommodation in Field</u>	\$ 60.00	\$ 60.00	\$ 48.00	\$ 48.00						216.00
	<u>\$470.00</u>	<u>\$820.00</u>	<u>\$463.00</u>	<u>\$653.00</u>	<u>\$ 50.00</u>	<u>\$100.00</u>	<u>\$ 13.75</u>	<u>\$ 13.75</u>	<u>\$150.00</u>	<u>\$2,733.50</u>

MUNCHO LAKE FLUORITE

<u>NAME</u>	<u>TAG NO.</u>	<u>RECORD NO.</u>	<u>RECORD DATE</u>	<u>EXPIRED or ABANDONED</u>	<u>COMMENTS</u>
<u>K. G. MILLER</u>					
Snow 9 to 12	204609M to 204612M	49452 to 49455	Sept. 26, 1970	Sept. 26, 1971	Lapsed
Snow 13	204613M	49456	Sept. 26, 1970	July 20, 1972	Abandoned
Snow 14	204614M	49457	Sept. 26, 1970	Sept. 26, 1972	Relinquish
Snow 15	204615M	49458	Sept. 26, 1970	July 20, 1972	Abandoned
Snow 16	204616M	49459	Sept. 26, 1970	Sept. 26, 1972	Relinquish
Snow 17	204617M	49460	Sept. 26, 1970	July 20, 1971	Abandoned
Snow 18	204618M	49461	Sept. 26, 1970	Sept. 26, 1974	Work applied - Sept. 26/72
Snow 19	204619M	49462	Sept. 26, 1970	July 20, 1971	Abandoned
Snow 20 to 24	204620M to 204624M	49463 to 49467	Sept. 26, 1970	Sept. 26, 1972	Relinquish
Snow 25 to 28	204625M to 204628M	49468 to 49471	Sept. 26, 1970	Sept. 26, 1971	Lapsed
Snow 29	204629M	49472	Sept. 26, 1970	July 20, 1971	Abandoned
Snow 30	204630M	49473	Sept. 26, 1970	Sept. 26, 1974	Work applied - Sept. 26/72
Snow 31	204631M	49474	Sept. 26, 1970	Sept. 26, 1974	Work applied - Sept. 26/72
Snow 32	204632M	49475	Sept. 26, 1970	July 20, 1971	Abandoned
Snow 33	204633M	49476	Sept. 26, 1970	July 20, 1971	Abandoned
Snow 34	204634M	49477	Sept. 26, 1970	Sept. 26, 1972	Relinquish
Snow 35 to 38	204635M to 204638M	49478 to 49481	Sept. 26, 1970	Sept. 26, 1971	Lapsed
Snow 39	204639M	49482	Sept. 26, 1970	Sept. 26, 1972	Relinquish
Snow 40	204640M	49483	Sept. 26, 1970	July 20, 1971	Abandoned
Snow 41 to 44	204641M to 204644M	49484 to 49487	Sept. 26, 1970	Sept. 26, 1972	Relinquish
Snow 45 to 48	204645M to 204648M	49488 to 49491	Sept. 26, 1970	Sept. 26, 1971	Lapsed

MUNCHO LAKE FLUORITE

<u>NAME</u>	<u>TAG NO.</u>	<u>RECORD NO.</u>	<u>RECORD DATE</u>	<u>EXPIRED or ABANDONED</u>	<u>COMMENTS</u>
<u>NICK WYCHOPEN</u>					
Snow 1	296127M	64276	July 24, 1972	July 24, 1973	Relinquish
Snow 2	296128M	64277	July 24, 1972		
Snow 3	296129M	64278	July 24, 1972	July 24, 1973	Relinquish
Snow 4	296130M	64279	July 24, 1972		
Snow 5	296131M	64280	July 24, 1972		
Snow 6	296132M	64281	July 24, 1972		
Snow 7	296133M	64282	July 24, 1972	July 24, 1973	Relinquish
Snow 8	296134M	64283	July 24, 1972		
Snow 9, 10	296135M to 296136M to	64284 64285	July 24, 1972	July 24, 1973	Relinquish
Snow 11, 12	296137M to 296138M		July 24, 1972	Cancelled	Not accepted by Recorder.
Snow 13	296139M	67205	July 28, 1972		
Snow 14	296140M	67206	July 28, 1972		
Snow 15	296141M	67207	July 28, 1972		
Snow 16	296142M	67208	July 28, 1972		
Snow 17	296143M	67209	July 28, 1972		
Snow 18	296144M	67210	July 28, 1972		
<u>J. R. WOODCOCK</u>					
Mun 1 to 8	305670M to 305677M	62020 to 62027	June 16, 1972	July 20, 1972	Abandoned



- LEGEND**
- 3 UPPER DEVONIAN - Bone River Shale
 - 2 MIDDLE DEVONIAN - limestone
 - 1 FLUORITE mineralized zone
 - Bedding
 - Geological contact
 - Assumed contact
 - Shaft location
 - IFTI sample numbers

NOTE: Refer to map sheets 10027 for areas shown.

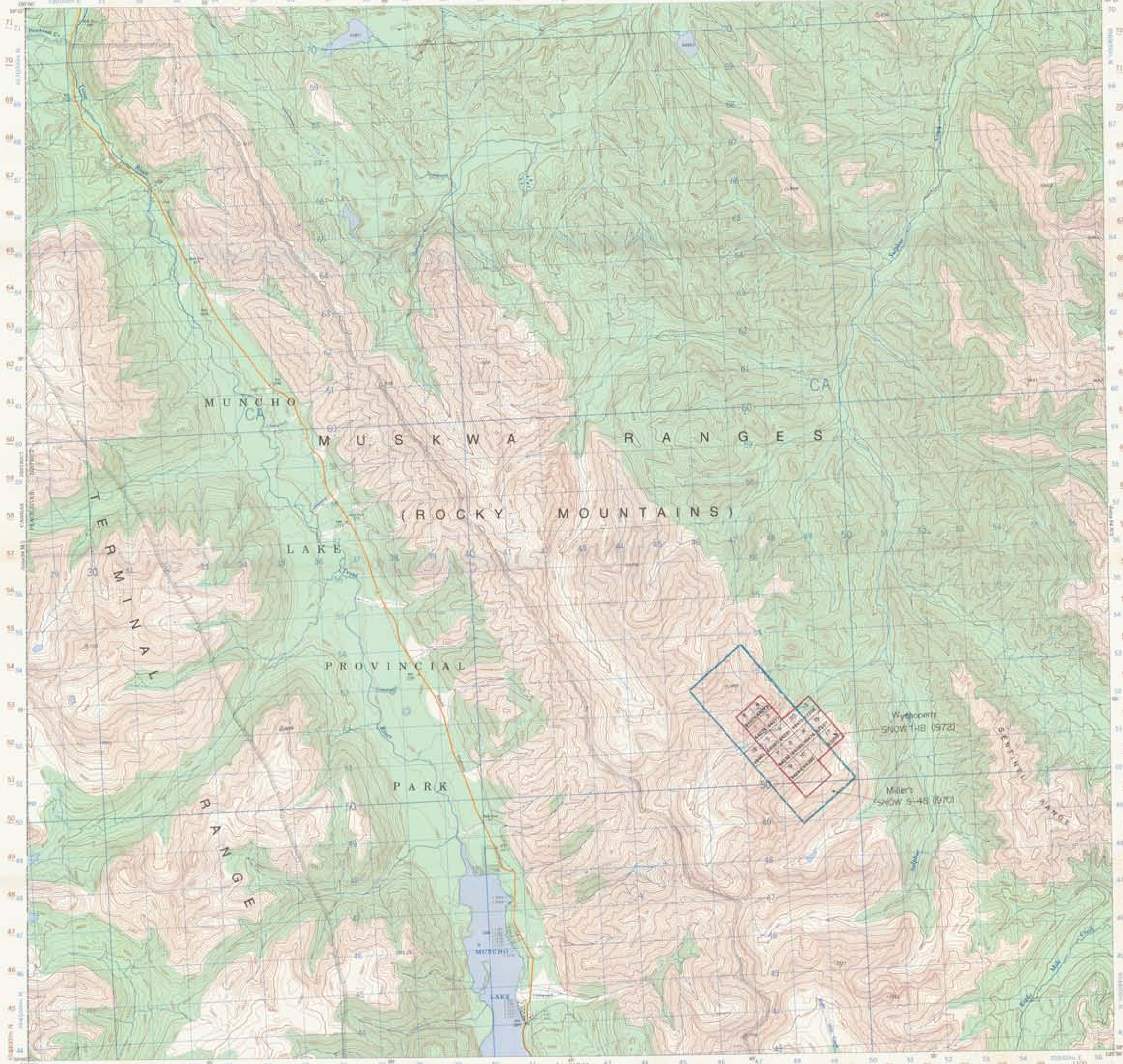
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ASSESSMENT REPORT
NO. 3965 MAP #3

3965
M-3

J. R. Woodcock

To accompany Geological Report on SNOW
1,2,5,6,8,15,18,30,31 Mineral Claims
(Record Numbers 64276, 64277, 64280,
64283, 67207, 49461, 49473, 49474)
in the Muscho Lake Area of the Liard
Mining Division, British Columbia,
by J. R. Woodcock and James Brander,
October 18, 1972.

LIARD FLUORSPAR MINES LTD		
SNOW FLUORITE PROSPECT		
GEOLOGY		
Prepared by: J. R. Woodcock, J. Brander, E. A. Gault		
Project No.	Page No. 3	July 1972



Refer to this map as: 94 N/4 EDITION 2 (REVISED 1972)

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ONE THOUSAND METRE
UNIVERSAL TRANSVERSE MERCATOR GRID
ZONE 10



M-2

3965

To accompany Geological Report on BROW
1, 2, 5, 6, 8, 15, 18, 30, 31 Mineral Claims
(Record Numbers 64276, 64277, 64280,
64283, 67877, 69662, 69673, 69674)
in the Muncho Lake Area of the Liard
Mining Division, British Columbia,
by J. H. Woodcock and James Brander,
October 15, 1972.

J. H. Woodcock