

1980 Prospecting Report

for the

LECKIE OPTION

Liard Mining Division

N.T.S. 104 P/5E

B.H. Whiting

December, 1980

Description of Claims

<u>Claim Name</u>	<u>No. of Units</u>	<u>Record No.</u>	<u>Date Recorded</u>
ARGOLD 1	20	1264(5)	5 May, 1980.
ARGOLD 2	20	821(6)	19 June, 1979.

Latitude: 59° 17'N

Longitude: 129° 36'W

Operator: Cassiar Resources Limited

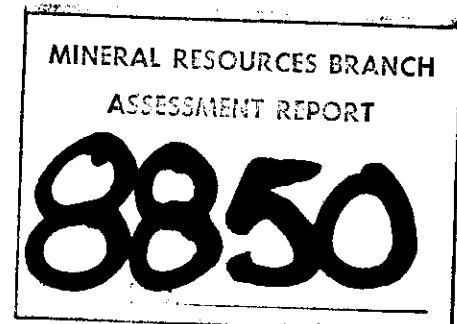


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1. INTRODUCTION

The Leckie Option consists of two claim blocks east of Cassiar, British Columbia. These were investigated for gold in light of their geologic setting and their close proximity to the Hanna Gold Mine and the Erickson Gold Mine. Extensive quartz veining occurs on the property but assay results proved to be very discouraging.

The 1980 programme conducted on the Leckie Option consisted of reopening and extending an access road (described in the physical work report - June 1980) and prospecting and sampling (described in this report). Geological mapping at a scale of 1:5,000 and more detailed sampling has been recommended.

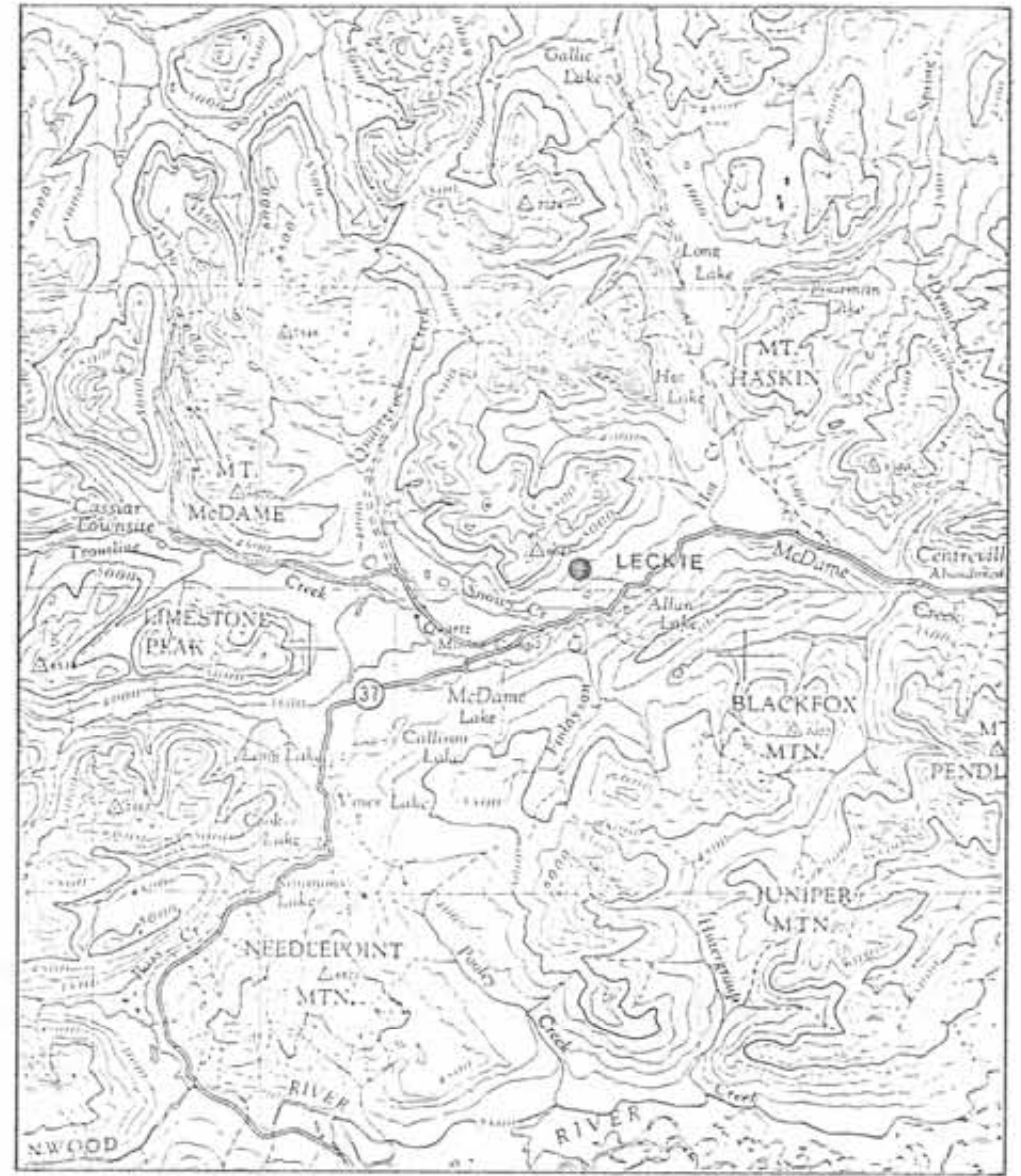
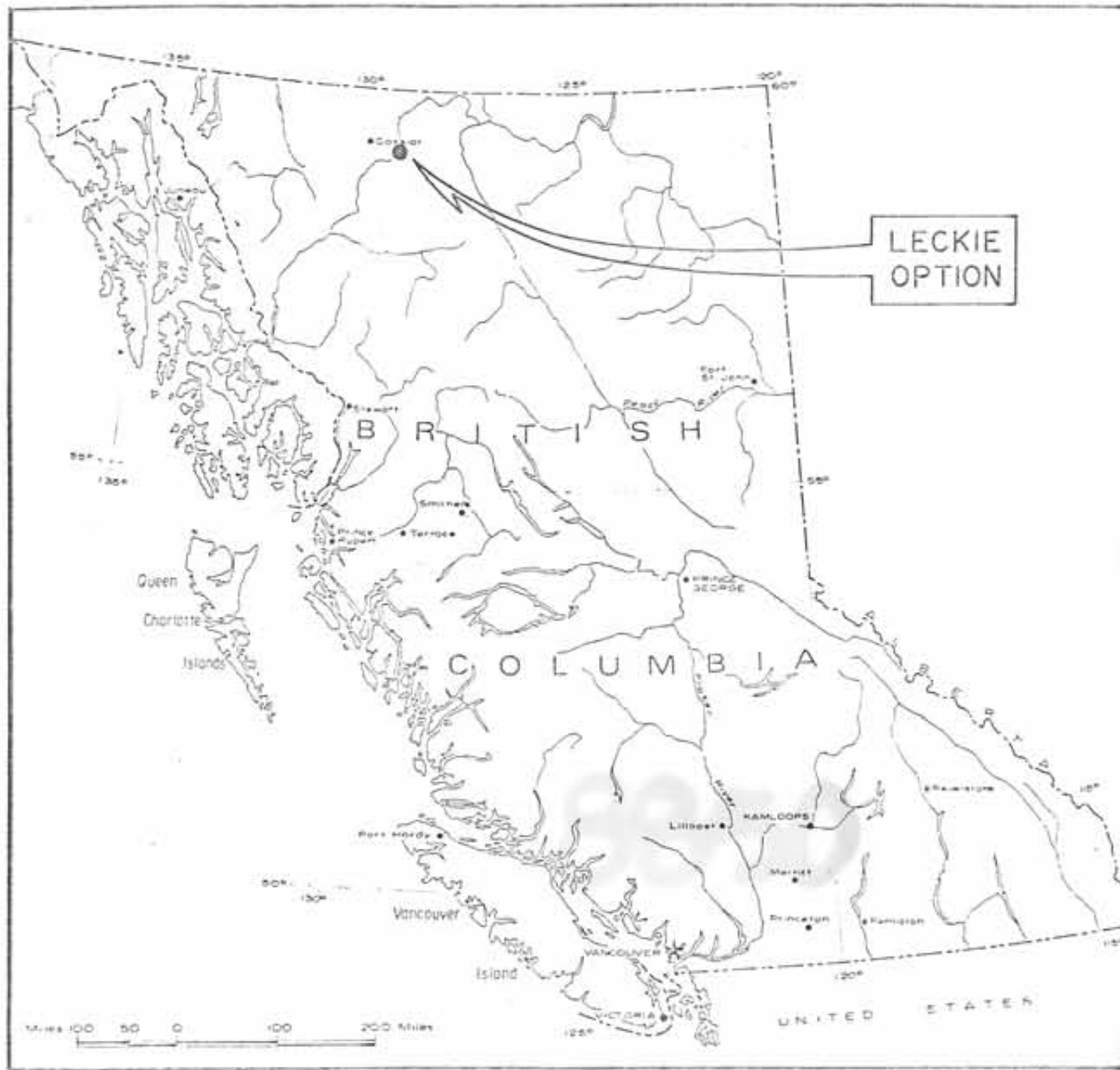
2. LOCATION AND ACCESS

The Leckie Option gold property lies 14 kilometres east of the town of Cassiar in north-central British Columbia. The Cassiar Junction, along the Stewart-Cassiar Highway (Hwy 37), is 700 metres south of the Argold 2 claim and an access road extends north from Snowy Creek into the property. The Argold 1 legal corner post is beside the Stewart-Cassiar Highway but no passable access roads enter this portion of the property. (See Figure No. 1).

Latitude: 59^o 17' N

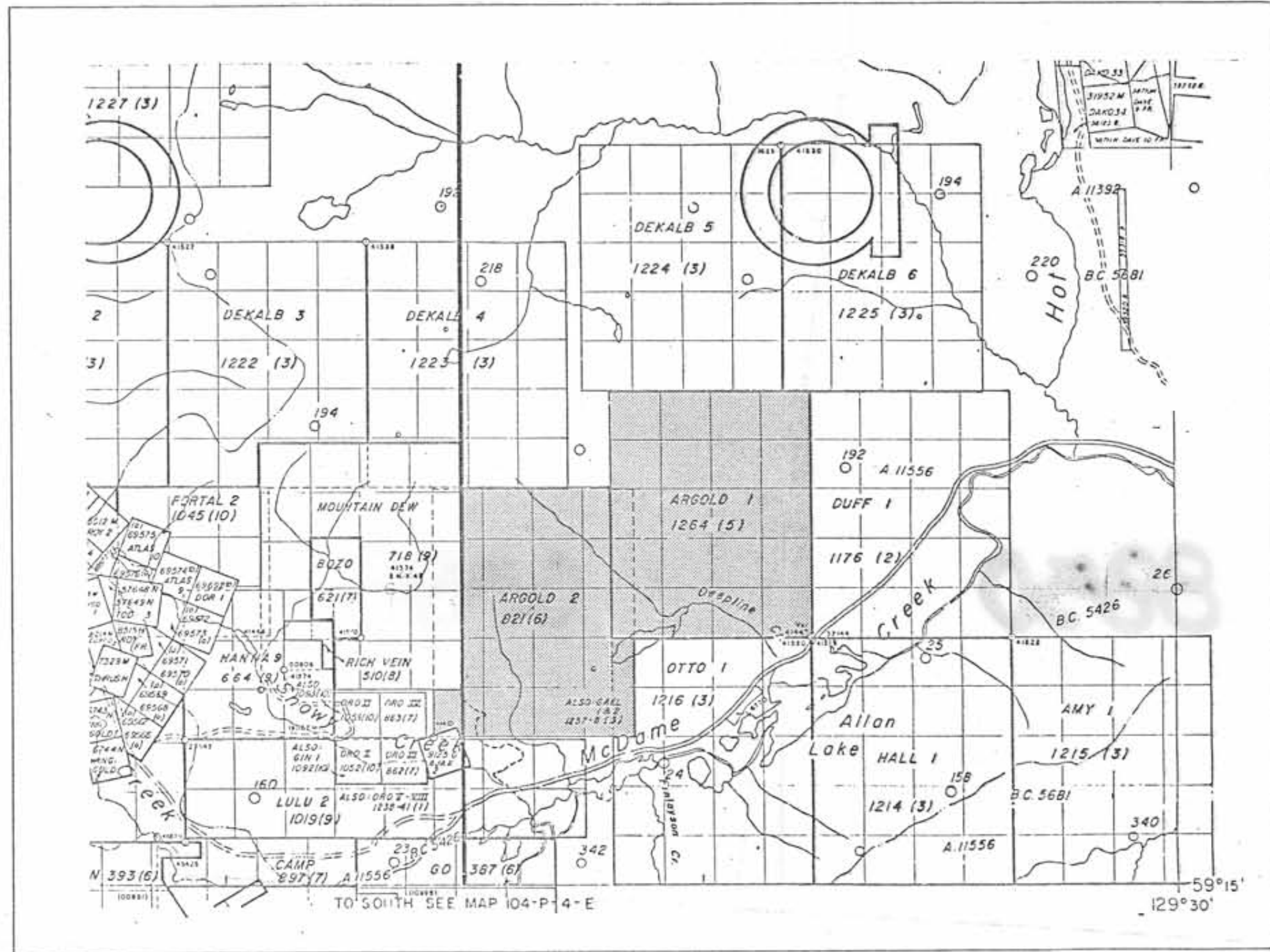
Longitude: 129^o 36' W

N.T.S. 104 P/5E

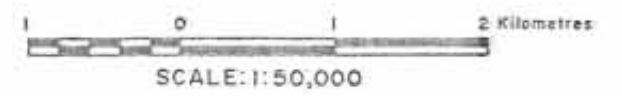


MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
8850
NO.

Cassiar Resources Limited	
LECKIE OPTION	
LOCATION MAP	
Drawn by : B.H.W./G.T.	Date: December 1980
N.T.S. 104 P/5 E	Figure No. 1



MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
8850
NO. _____



Cassiar Resources Limited	
LECKIE OPTION	
CLAIM MAP	
Drawn by: B.H.W./G.T.	Date: December 1980
N.T.S. 104 P/5 E.	Figure No. 2

8850

3. DESCRIPTION OF THE CLAIMS

<u>Claim Name</u>	<u>No. of Units</u>	<u>Record No.</u>	<u>Date Recorded</u>
Argold 1	20	1264(5)	5 May, 1980.
Argold 2	20	821(6)	19 June, 1979.

Note: 37.5 units in total due to Claim overlap in the area.
(See Figure No. 2).

4. HISTORY OF THE PROPERTY

The gold rush of the late 1800's passed through this area in search of placer gold. This placer search is still going on, with many placer claims overstaking the lower levels of the Argold mineral claims.

In 1963, Dr. H. Gabrielse of the Geological Survey of Canada prepared Memoir 319 covering the geology of the McDame Map area at a scale of 1: 253,440. This memoir shows the claims covering Sylvester Group Sediments and Volcanics.

A small pit can be found on the hillside of Argold 2 above treeline. The pit's dimensions are 2 metres across by 1 metre deep and it exposes barren white quartz. It is not known when this pit was blasted nor by whom.

The Argold 1 and 2 mineral claims were staked in June 1979 by Oliver Leckie of Cassiar, British Columbia. The Argold 1 claim was re-staked in May 1980.

In 1979 a semi-quantitative analysis was conducted on five float samples collected by O. Leckie. The results of this analysis are given in Appendix I. Significant arsenic (of possible use as a tracer element) values between 0.03 and 0.1% were obtained for two of the samples.

Cassiar Asbestos Corporation Limited of Vancouver, British Columbia (now under the name of Cassiar Resources Limited), optioned the property from Oliver Leckie on 21st May 1980.

5. WORK CONDUCTED IN 1980

The 1980 exploration program on the Leckie option consisted of re-opening 1150 metres of dirt access road, extending the road an additional 662 metres (see physical work report - June 1980), general prospecting and sampling.

27 samples of quartz veins and/or pods were taken and assayed for gold. Quartz sample descriptions are given in Appendix III.

7 silt samples were taken and assayed for silver, lead, zinc, copper, molybdenum, tungsten, arsenic and tin.

This work was conducted from 11 June to 21 June 1980, by B.H. Whiting with assistants T.J. Garde, R. Watson and C. Chisholm, under the direction of F. Hewett and D. Budinski.

6. GEOLOGY

6.1 Regional Geology

The Leckie Option lies along a major northwest-southeast structural feature known as the McDame Synclinorium, occupied by the Upper Devonian and Lower Mississippian Sylvester Group.

The Sylvester Group consists of various greenstone chert-quartz arenite, chert, argillite, slate, quartzite greywacke, limestone and conglomerate. The rocktypes have been subdivided in several areas for specific mining properties but a thorough subdivision of units has not been undertaken.

6.2 Geology of the Claim Group

Three main rock types were observed on the property. White bull quartz was found in all units. This quartz appeared completely barren.

Outcrop occurs on the knolls, stream cuts and upper elevations of the property while the lower levels are deeply buried beneath glacial debris. Some granitic erratics are over two metres across.

6.2.1 Greenstone

Possibly an altered andesite, the greenstone is a pale green, very finely crystalline rock found generally in massive outcrops and containing minor disseminated pyrite. This is the most common rock-type on the property.

6.2.2 Argillite

The argillite is dark grey to black, amorphous, well fractured and contains minor pyrite nodules which stain the fracture surfaces.

6.2.3 Hematite

A banded hematite unit can be seen on the western edge of the Argold 2 claim. This unit forms resistant outcrops and has jasper bands in some locations.

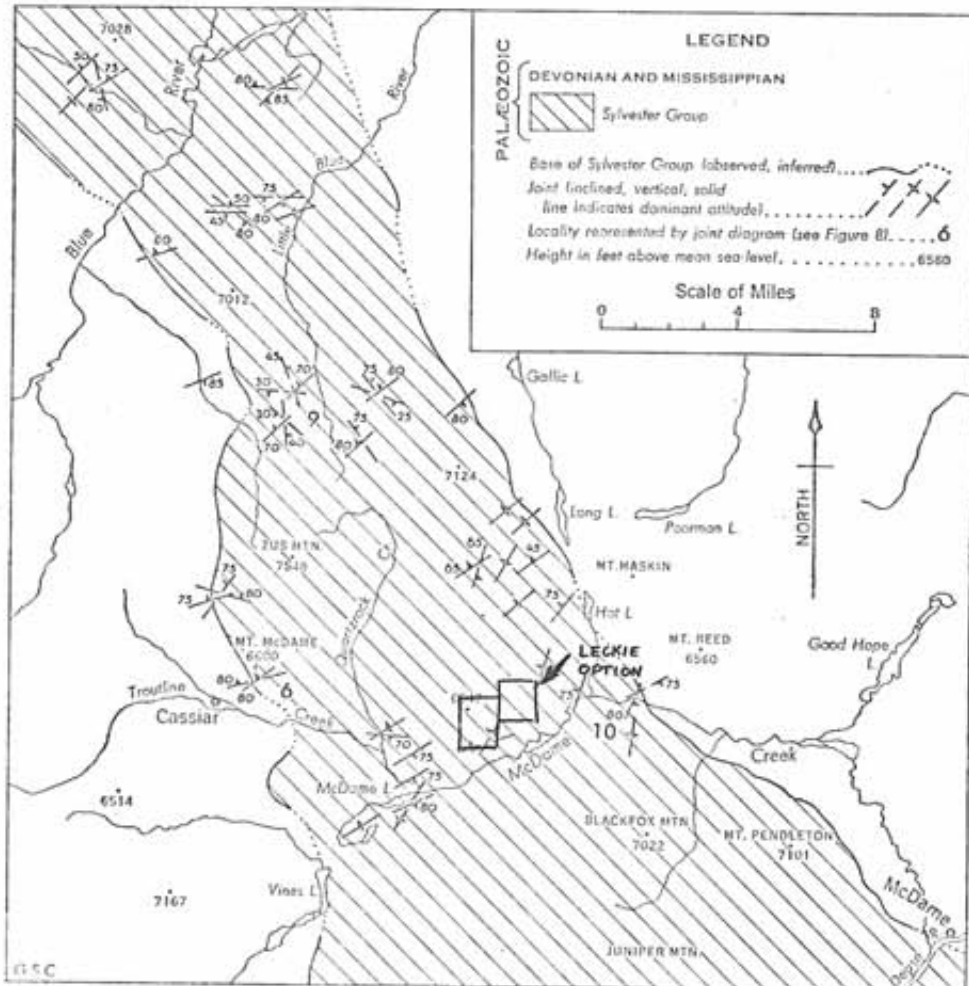


Figure No. 3 - REGIONAL GEOLOGY MAP

The Leckie Option lies in the Upper Devonian to Lower Mississippian Sylvester Group of the McDame Synclinorium. Map from G.S.C. Memoir 319, 1963.

6.3 Geochemistry

Results of the gold assays on the 27 quartz vein samples were completely negative. All samples were reported to contain less than 0.002 ounces per ton gold.

The 7 silt samples were tested for copper, lead, zinc, molybdenum, silver, tungsten, arsenic and tin. The most significant values, a 285 ppm copper and 1.2 ppm silver, came from a sample on the extreme northeast corner of the claims where the stream drains from the Dekalb 6 claim to the north. Geochemical results are considered to be negative.

Geochemical testing was performed by Bondar-Clegg and Co. Ltd. using a Hot Lefort Aqua Regia extraction process for Atomic Absorption analysis.

Range of Values (parts per million)

	<u>High</u>	<u>Low</u>	<u>Mean</u>	<u>No. Anomalous</u>
Copper	285	37	98	1
Lead	15	3	9	0
Zinc	108	41	78	0
Molybdenum	3	1	2	0
Silver	1.2	0.2	0.4	1
Tungsten	8	3	5	0
Arsenic	65	3	40	0
Tin	< 5	< 5	< 5	0

The regional stream sediment and water geochemical reconnaissance program conducted by the Geological Survey of Canada and the Department of Energy, Mines and Petroleum Resources of British Columbia took one stream sediment sample along Deepline Creek with the following results:

Sample No. 781882
(values in parts per million)

Zinc	56
Copper	38
Lead	3
Nickel	32
Cobalt	12
Silver	0.1
Manganese	700
Iron (%)	2.65
Molybdenum	1
Tungsten	2
Uranium	3.0

7. CONCLUSIONS AND RECOMMENDATIONS

In comparing the quartz veining on the Leckie Option to the quartz veining on the nearby United Hearne - Hanna gold property, also in Sylvester Group Volcanics, two basic differences were noted. The Hanna Mine exhibits quartz veining with a high concentration of pyrite in "Sandwich", "Apache" and "Horsetailed" veining patterns and a distinctive buff coloured alteration envelope in the greenstones (altered andesite). Both of these characteristics were not observed on the Leckie Option.

A reason for this property not being gold enriched may be the temperature of emplacement of the quartz veins. This area may be suitably distant from the source of solution that the gold and pyrite crystallized out in warmer conditions and this low temperature area (as indicated by the lack of alteration) possessed only silica rich solutions. Gold enrichment may still be a possibility at depth or at a lower elevation than the exposed outcrop. The Hanna gold mine is at a lower elevation than the observed quartz veining on the Leckie Option.

In spite of the early disappointing results from the 1980 program, it is hereby recommended that:

- a) geological mapping be conducted at a scale of 1:5,000.
- b) geochemical soil sampling be conducted over surface traces of quartz veins.
- c) the ground adjacent to the west of the Leckie Option (Berube's claims) be examined for comparisons. Visible gold has been attributed to the Berube property.

8. REFERENCES

Gabrielse, H.: Geology of the McDame Map Area, British Columbia; G.S.C. Memoir 319, 1963.

O'Grady, F. & Grant D.; United Hearne Hanna Gold Mine; personal communication, 1980.

Whiting, B.; Report on Physical Work, Leckie Option; Cassiar Asbestos Corporation Limited; June, 1980.
(Assessment Report)

Regional Stream Sediment and Water Geochemical Reconnaissance Data, British Columbia; Geological Survey of Canada - Open File 562; N.T.S. 104 P; 1978.

APPENDIX I

SEMI-QUANTITATIVE ANALYSIS

FOR 1979 GRAB SAMPLES

APPENDIX II

GEOCHEMICAL RESULTS



BONDAR-CLEGG & COMPANY LTD.

130 PEMBERTON AVE., NORTH VANCOUVER, B.C. V7P 2R5 • PHONE: 985-0681 • TELEX: 04-352667

Certificate of Analysis

TO Cassiar Asbestos Corp.
#2000 Guinness Tower
1055 West Hastings Street Vancouver, B.C.

A20 - 744
 July 16, 1980
 PROJECT: 93-07

I hereby certify that the following are the results of assays made by us upon the herein described ore samples.

MARKED	oz/ton	MARKED	oz/ton	MARKED	PERCENT	PERCENT
	Au		Au			
38257	<0.002	38278	<0.002			
38258	<0.002	38279	<0.002			
38259	<0.002	38280	<0.002			
38260	<0.002	38281	<0.002			
38261	<0.002	38282	<0.002			
38262	<0.002	38283	<0.002			
38263	<0.002	38284	<0.002			
38264	<0.002					
38265	<0.002					
38266	<0.002					
38267	<0.002					
38268	<0.002					
38269	<0.002					
38271	<0.002					
38272	<0.002					
38273	<0.002					
38274	<0.002					
38275	<0.002					
38276	<0.002					
38277	<0.002					

cc Mr. B. Whiting
 Mr. F. Hewett

NOTE:
 Rejects retained two weeks
 Pulps retained three months

BONDAR-CLEGG & COMPANY LTD.
 REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA

APPENDIX III

QUARTZ SAMPLE DESCRIPTIONS

QUARTZ DESCRIPTIONS

<u>Sample No.</u>	<u>Assay No.</u>	<u>Description</u>
L - 1	38257	Quartz float - rusty stained with specular hematite.
L - 2	38258	Float of Quartz in jasper
L - 4	38259	6 veins closely spaced 074 /73 N Average thickness 20 cm, bull quartz
L - 5	38260	Bull quartz vein in creek on strike with the small pit, 132 / vertical, 2.5 m thickness
L - 6	38261	Small pit 2m across, 1m deep into bull quartz, staining on fracture faces.

<u>Sample No.</u>	<u>Assay No.</u>	<u>Description</u>
L - 11	38262	Quartz vein 10cm thick, 060 / vertical, host rock greenstone.
L - 13	38263	Quartz vein along strike from L - 11, widens to 25 cm then horsetails.
L - 14 15 16	38264 65 66	3 quartz veins spaced 2 metres apart, thickness 40 cm, samples taken east to west 013 / 68 W
L - 17	38267	Quartz pod exposed on talus slope, 60 cm wide 2 m long. barren white.
L - 19	38268	Bull quartz vein, 10 cm width, 168 / 20 E
L - 24	38269	Large float boulder of bull quartz along bank of stream
L - 26	38271	Quartz vein in hematite, 15 cm thick, 148 / 56 NE
L - 27	38272	Quartz pod, 10 cm thick, 1.5 m long.
L - 28	38273	Quartz vein, 15 cm thick, 011 / 58 E
L - 29	38274	Quartz vein, 25 cm thick, 010 / 60 E

<u>Sample No</u>	<u>Assay No.</u>	<u>Description</u>
L - 30	38275	Quartz vein, 30 cm thick 3 m from L - 31, 158/66 NE
L - 31	38276	Quartz pod, 20 cm thick, 2 m long.
L - 32	38277	Quartz vein, 20 cm thick, 154/68 NE
L - 37	38278	Quartz vein, 50 cm thick, 080 / 72 N, thickness various.
L - 38	38279	Quartz vein, 30 cm, 40 m from L - 37, 080 / 70 N
L - 39	38280	Quartz pod, 2 m across, 5 m long. Bull quartz
L - 40	38281	Quartz vein, 135 / 42 SW, 1.5 m thick
L - 41	38282	Quartz vein intersects L - 40, 121 / 65 NE, 25 cm thick
L - 101	38283	Bull quartz vein, 1 m thick 045 / vertical
L - 102	38284	Bull quartz pod, 60 cm across by 1 m long.

APPENDIX IV

STATEMENT OF QUALIFICATIONS



**CASSIAR
RESOURCES
LIMITED**

December 1980

STATEMENT OF QUALIFICATIONS

I, Bernard Henry Whiting, with business and residential addresses in Vancouver, British Columbia, do hereby certify that:

1. I am a graduate of the University of British Columbia with a Bachelor of Science Degree in Geology, 1979.
2. I am a member of the Canadian Institute of Mining and Metallurgy and an associate of the Geological Association of Canada.
3. From 1975 to 1979, I was employed in mineral exploration as a geologist for temporary positions with Rio Tinto Canadian Exploration Limited, Welcome North Mines Limited and the Pacific Science Congress.
4. I am presently employed on a full-time basis, as an exploration geologist with Cassiar Resources Limited (previously named Cassiar Asbestos Corporation Limited).

Respectfully submitted,

Bernard H. Whiting, B.Sc.

Vancouver, Canada
BHW/jh
80-12-16



**CASSIAR
RESOURCES
LIMITED**

December 1980

STATEMENT OF QUALIFICATIONS

I, Fred G. Hewett, with business address in the city of Vancouver and residential address in the District of Coquitlam, in the Province of British Columbia, do hereby certify that:

1. I am a graduate of the University of British Columbia with a Bachelor of Science Degree in Geology, 1972.
2. I am a registered member of the Association of Professional Engineers of the Province of British Columbia.
3. I am a member of the Canadian Institute of Mining and Metallurgy and a fellow of the Geological Association of Canada.
4. I have practised various levels of my profession in Canada for approximately fifteen years.
5. I am presently employed by Cassiar Resources Limited and did personally supervise work described in this report.

Respectfully submitted,

Fred. G. Hewett, P.Eng.

FGH/jh
Vancouver, B.C.
80-12-16

APPENDIX V

STATEMENT OF COSTS

Statement of Costs

Leckie Option - Argold 1 & 2 claims

Work conducted on the Argold 1 and 2 claims from
11 June to 21 June 1980 (excluding physical work expenses
recorded with Physical Work Report - June 1980.)

a) Salaries and Wages:

B. Whiting

June 11-14, June 18-21 8 days @ 69.00/day	\$ 552.00
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R. Watson

June 19 1 day @ \$44.00/day	44.00
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C. Chisholm

June 11-14, 18-21 8 days @ \$44.00/day	352.00
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T. Garde

June 19 1 day @ \$58.00/day	58.00
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D. Budinski

June 18 & 19 2 days @ \$132.00/day	264.00
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F. Hewett

June 11-14, 18 & 19 6 days @ \$118.00/day	708.00
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Total Salaries and Wages	\$1,978.00
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b) Food and Accommodation:

20 mandays @ \$30.00/manday
(excludes F. Hewett who resided
in Cassiar) \$ 600.00

c) Transportation:

Vehicle rental and gasoline
June 11-14, June 18-21
8 days @ \$40.00/day \$ 240.00

CP Air - Vancouver to Watson Lake
B. Whiting 152.00

CP Air - Vancouver to Watson Lake
and Return
D. Budinski 305.00

Total Transportation \$ 697.50

d) Analyses:

27 quartz samples for gold assay
@ \$7.00/sample \$ 189.00

7 silt samples
Copper, lead, zinc, molybdenum
and silver @ \$4.65/sample 32.55

Tungsten @ \$3.75/sample 26.25

Arsenic @ \$2.90/sample 20.30

Tin @ \$3.50/sample 24.50

Sample preparation @ \$0.50/sample 3.50

Total Analyses \$ 296.10

e) Report and Maps Preparation:

B. Whiting
December 1 - 10, 1980
10 days @ \$72.00/day \$ 720.00

Misc. photocopying and map printing 50.00

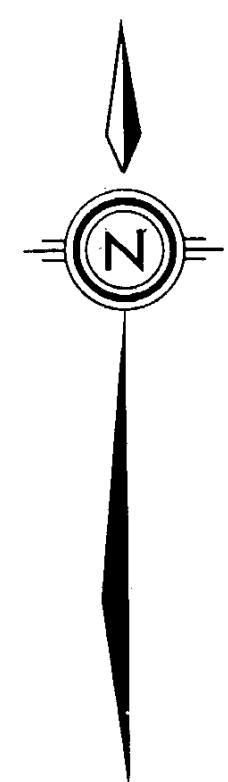
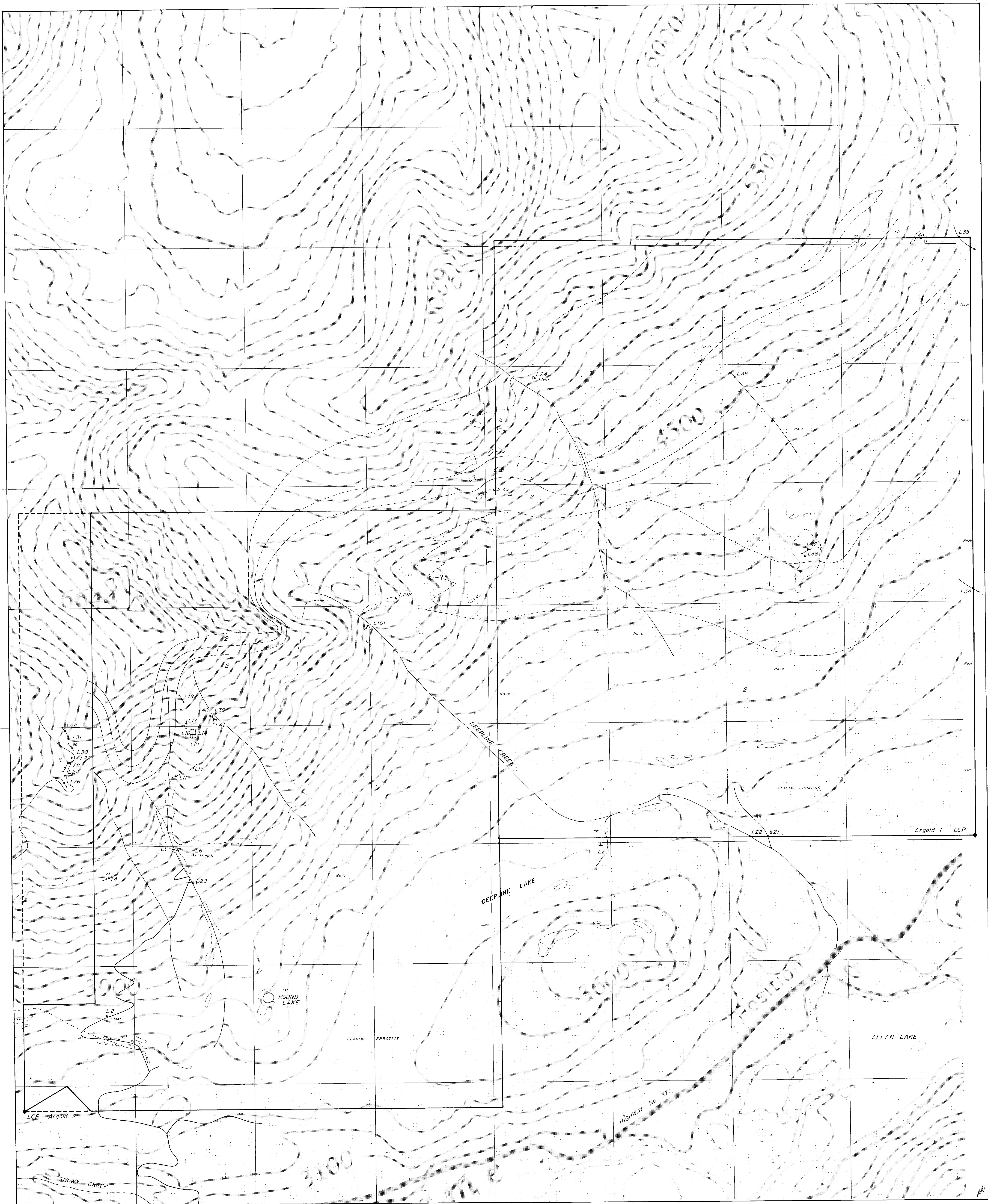
Preparation of topographic maps
at 1:5,000 scale for 1981 field
work - Exclusive Drafting Services
Limited
G. Templeman 6 days @ 128.00/day 768.00

Total Report and Maps
Preparation \$1,538.00

Summary of Totals:

a) Salaries and Wages \$1,978.00
b) Food and Accommodation 600.00
c) Transportation 697.50
d) Analyses 296.10
e) Report and Maps Preparation 1,538.00

Total Costs \$5,109.60

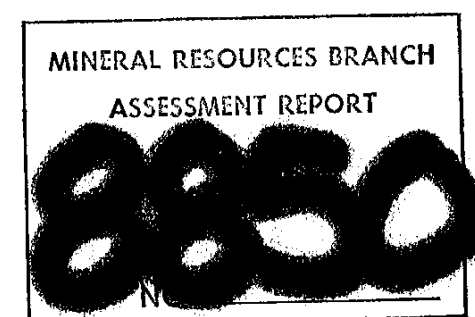
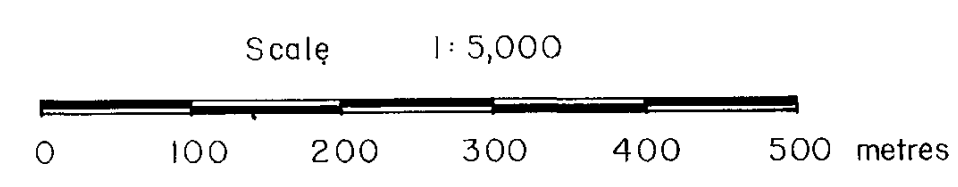


SILT SAMPLE RESULTS	parts per million							
Sample No.	Cu	Pb	Zn	Mo	Ag	W	As	Sn
L 20	128	13	103	2	0.2	3	32	L5
21	37	3	41	1	0.4	5	30	L5
22	46	8	72	1	0.3	8	45	L5
23	70	7	51	1	0.2	4	3	L5
34	44	7	71	2	0.3	6	60	L5
35	285	15	108	3	1.2	4	43	L5
36	74	11	97	2	0.4	3	65	L5

ALL 27 QUARTZ ASSAYS YIELDED LESS THAN 0.002 oz/ton Gold

LEGEND
Sylvester Group - Upper Devonian to Lower Mississippian

- 1 Argillite
- 2 Greenstone (chloritized andesite)
- 3 Hematite
- outcrop limits
- contact observed - inferred
- L20 sample location
- quartz vein
- swamp
- stream
- No/c no outcrop
- road



CASSIAR RESOURCES LIMITED	
LECKIE	OPTION
BASIC GEOLOGY & SAMPLE LOCATION MAP	
Drawn by: BHW	Date: December 1980
Drafted by: BHW	N.T.S. 104 P.75E
Approved by:	Figure No. 4