84-1123- 12980 EOLOGY · GEOPHYSICS 9/85

Suite 214-850 WEST HASTINGS STREET, VANCOUVER, B.C. TELEPHONE (604) 681-0191 V6C 1E1

GEOLOGICAL REPORT

on the

HOPE PROSPECT

(HOPE 2 to 9 CLAIMS)

Slocan Mining Division - British Columbia

Lat. 490 44'N.

GEOLOGICAL BRANCH
N.T.S. 82EVESESSMENT REPORT

12,980 CHAPLEAU RESOURCES LTD. 980

by

Donald G. Allen, P. Eng., (B. C.)

November 28, 1984

Vancouver, B. C.

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SUMMARY

Chapleau Resources Ltd. holds the Hope property, comprising 26 claim units, in the Slocan Mining camp of south central British Columbia. The property is situated six kilometres southwest of Slocan and 47 kilometres north-northeast of Castlegar and is accessible by road.

The Hope claims are underlain by porphyritic granodiorite of the Nelson batholith and two roof pendants of metasedimentary and metavolcanic rocks. Skarn-type zinclead-silver mineralization occurs in one of the roof pendants along its contact with granodiorite.

The Hope prospect is developed by 177 metres of underground workings in four adits and has a recorded past production of 525 tons grading 15% zinc, 4.7% lead and 3.8 ounces per ton silver. Recent sampling indicates the presence of a modest tonnage of readily mineable ore in the 3000 tonne range grading 15.6% zinc, 6.2% lead and 6.1 ounces per ton silver (a value of \$305 per tonne at current metal prices).

In 1984, Chapleau Resources conducted a program of prospecting, road planning and layout, and preliminary sampling.

This work indicated (1) that the favourable roof pendant is at least 200 to 300 metres in diameter and (2) lower grade

zinc-lead-silver mineralization also occurs disseminated along certain beds in metaquartzites elsewhere in the same

roof pendant.

A follow-up program of geological, geochemical and geophysical surveys, road construction and possibly diamond drilling and mining is proposed.

CONCLUSION

A modest tonnage (3000 ± tonnes) of high grade zinclead-silver ore is present on the Hope property. This
material is readily mineable by open pit methods once a
haulage road is constructed from the logging road at lower
elevations on the property to the workings. An attempt
should be made to mine this material and ship it to a custom
mill or possibly Cominco's smelter in Trail. Estimated gross
value using current metal prices is \$305 per tonne. Should
a market be found, then mining this material could at least
cover the cost of building an access road.

Lead-zinc-silver mineralization occurs elsewhere throughout the roof pendant, but because slopes are heavily forested, the extent of mineralization is not known. A program of geological, geochemical and geophysical surveys is warranted to evaluate the potential of the entire roof pendant.

An attempt should be made to locate the First Thought showing. A sample from this showing contained significant (gold and silver values (0.03 and 3.9 ounces per ton, respectively) as reported by O'Grady (1927).

RECOMMENDATION

A two-stage exploration program is recommended to evaluate the Hope prospect. Stage I is as follows:

- (a) a 4-wheel drive road should be constructed to the Hope prospect;
- (b) the extent of the roof pendant should be defined by geological mapping;
- (c) geochemical soil sampling over the pendant should be undertaken in the vicinity of the known mineralization;
- (d) geophysical surveys VLF electromagnetic and magnetic surveys should be undertaken in the vicinity of the known mineralization to outline the potential distribution of high grade and to locate any other possible high grade zones;
- (e) to facilitate the geochemical and geophysical surveys, a flagged grid should be established over the entire area of interest;
- (f) marketing studies should be made to determine whether or not some of the custom mills in the Slocan area or possibly Cominco's smelter in Trail will accept the Hope ore.

Should results of Stage I be positive, and a market found for the high grade ore, then a Stage II program consisting of the following should be undertaken:

(a) diamond drilling any geophysical targets in the vicinity

of the known workings;

- (b) the access road should be upgraded to a haulage road; and,
- (c) mining the high grade zone should be carried out.

Donald & allen

ESTIMATED COSTS OF RECOMMENDATION

Stage I Geological mapping, geochemical sampling, geophysical surveys, road construction.

Salaries

Geologist	1 man mo. @ \$6,000	\$ 6,000
3 assistant-labourers	3 man mos. @ \$4,000	12,000
Room and board	120 man days @ \$35	4,200
Geochemical Analyses and	Assays	4,000
Vehicle rental		1,000
Magnetometer - VLF-EM ren	tal	1,500
Bulldozer rental	200 hrs. @ \$80	16,000
Material and supplies		1,000
Government fees and bond		2,000
Report and maps		2,000
	Contingencies	\$49,700 5,300
		\$55,000

Stage II Costs for this stage have not been estimated. Follow-up work will depend on results of Stage I. Road upgrading, diamond drilling and possibly mining of the high grade zone will be considered.

INTRODUCTION

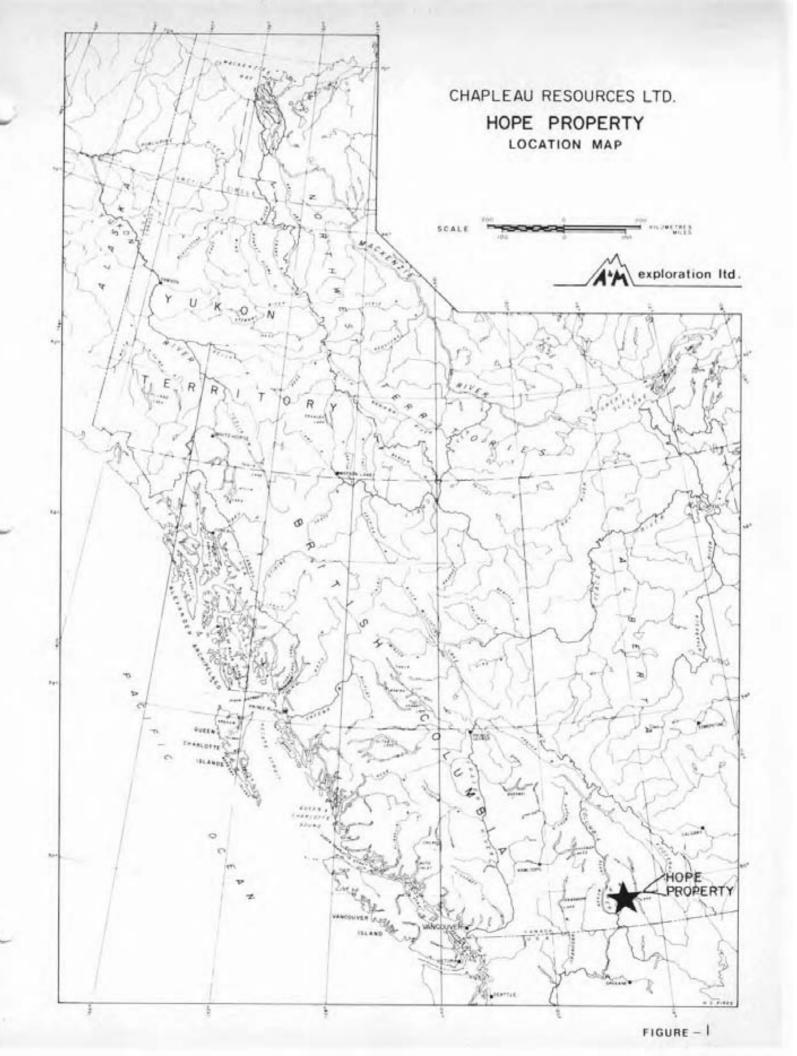
Chapleau Resources Ltd. holds the Hope group of claims, comprising 26 claim units. The claims are in the southern part of the Slocan mining camp. They cover a skarn-type zinc-lead-silver prospect in a roof pendant of metasedimentary rocks in the Nelson batholith. The property is developed by 177 metres of underground workings in four adits and a glory hole. Recorded past production from the property is 525 tons grading 15% zinc, 4.7% lead and 3.8 ounces per ton silver.

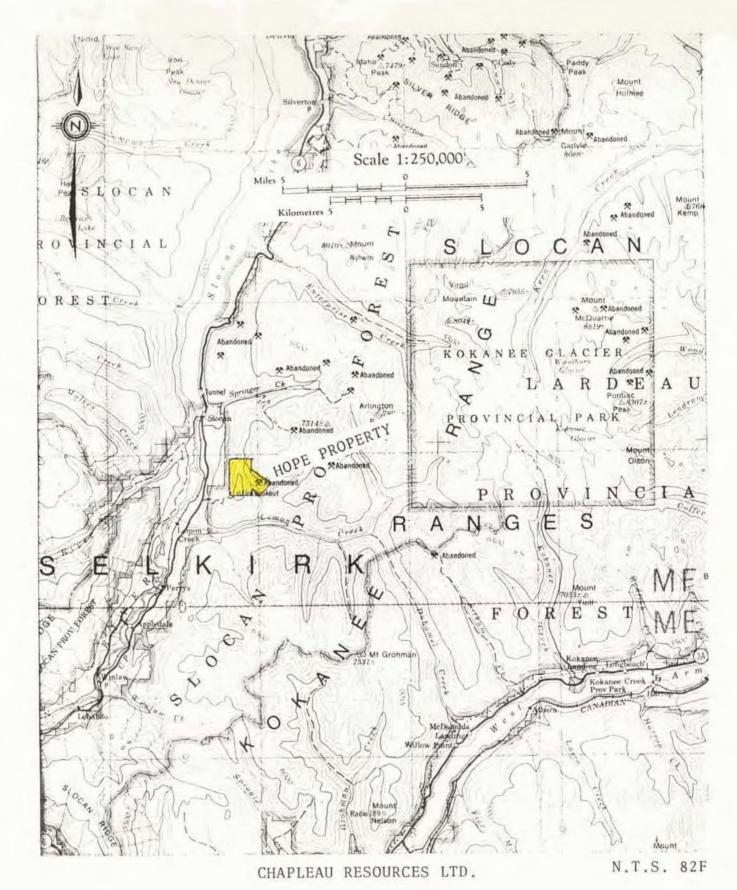
This report summarizes results of a two-day property examination carried out by the writer on September 3 and 4, 1984. The writer was assisted by C. Kennedy, M. Best, J. Moreau, and D. Martin of Chapleau Resources Ltd. A base map at 1:10,000 scale was prepared from maps supplied by Slocan Forest Products Ltd.

LOCATION, ACCESS, PHYSIOGRAPHY

The Hope property is situated six kilometres southwest of Slocan and 47 kilometres north northwest of
Castlegar, British Columbia (Figure 1). The property lies
on Cameronian Creek, a tributary of Chapleau Creek which in
turn flows into Lemon Creek and Slocan River (Figure 2).

Access is by Highway 6 from Nelson or Castlegar to Lemon
Creek and thence by good logging road to the junction of





ACCESS MAP

HOPE PROPERTY

Slocan Mining Division - British Columbia



Chapleau and Cameronian Creeks. A good trail leads up to the underground workings on the Hope prospect at an elevation of 1450 metres.

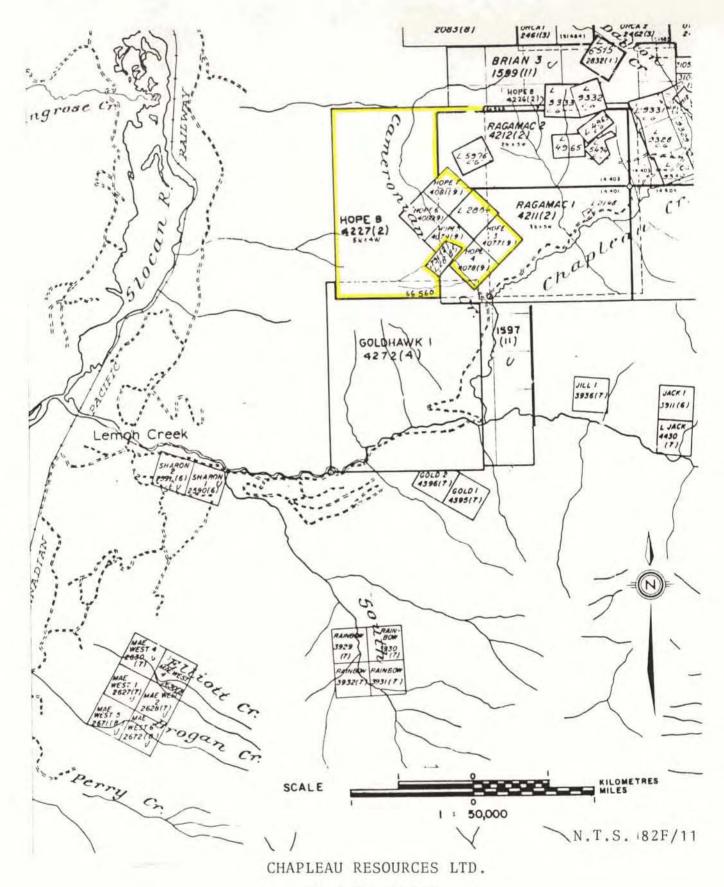
The property is in the Kokanee Mountain Range. Topography is moderately steep in the claim area and elevations range from 900 to 1700 metres. Slopes are covered with a virgin growth of Douglas fir, larch, white pine, and Jack pine with a light underbrush of alder, willow and huckleberry.

CLAIMS

The Hope property comprises 26 claim units (Figure 3) as follows:

Claim N	ame	Record Number	Type	Expiry	Date
Hope	2	Lot 2084	Crown Grant		
Hope	3	4077	2-post	September	19, 1985
Hope	4	4078	"	September	19, 1985
Hope	5	4079	**	September	19, 1985
Норе	6	4080	**	September	19, 1985
Норе	7	4081	"	September	19, 1985
Норе	9	4227	Modified Grid (20 Units)	February	15, 1985

The claims are held by Chapleau Resources Ltd.



CLAIM MAP

HOPE PROPERTY

Slocan Mining Division - British Columbia

exploration Itd

HISTORY

The history of the property as summarized by Little (1960) is as follows:

"The property was not productive during the period of early development, from 1898 to 1901. In 1927 it was acquired by Piedmont Mines, Limited, who extended the underground workings in an effort to delineate the deposits and they installed an aerial tramway and mill. In 1928 and the early part of 1929 nearly 500 tons of ore was mined and treated before the mine and mill were shut down. In 1948 and 1951, 25 and 12 tons of ore respectively were shipped by lessees. In the period 1928 to 1951 inclusive, 525 tons of ore was produced, yielding 156,477 pounds zinc, 50,216 pounds lead, and 1,984 ounces silver. The property was examined in July 1950, by A.B. Irwin of the Geological Survey."

The property was examined and sampled by Caldwell (1949) for the Consolidated Mining and Smelting Co. Reserve calculations by the company suggest a potential of about 143,00 tons grading 17.9% zinc, 7.9% lead and 17.4% zinc (Anonymous memo for Consolidated Mining and Smelting Ltd. dated 1966).

GEOLOGY

Regional Geology

The Hope property is in the Nelson map-area of Little (1960). Most of the area is underlain by granitic and related rocks of the Jurassic to Cretaceous Nelson batholith and its satellites. Rocks of the Shuswap Metamorphic Complex lie to the west (three kilometres on the west side of the Slocan River). Triassic and Jurassic sedimentary rocks of the Slocan and Milford Groups occur to the north and south of the Nelson batholith (forming an arcuate belt of rock comprising the Kootenay Arc), and also occur as scattered roof pendants throughout the batholith.

The Hope property is one of about 40 mineral deposits which form the south part of the Slocan Mining camp, and which generally lie east of Slocan City between Enterprise and Lemon Creeks. These deposits are mainly zinc-lead-silver deposits but some contain appreciable amounts of gold. Most are fissure veins which are hosted by Nelson plutonic rocks.

Property Geology

The Hope property is underlain mainly by granodiorite of the Nelson batholith. The most abundant phase is a coarse-grained granodiorite containing scattered orthoclase phenocrysts up to three centimetres long. Gneissic phases predominate in the southeastern part of the property.

Narrow pegmatite dikes are common in the granodiorite.

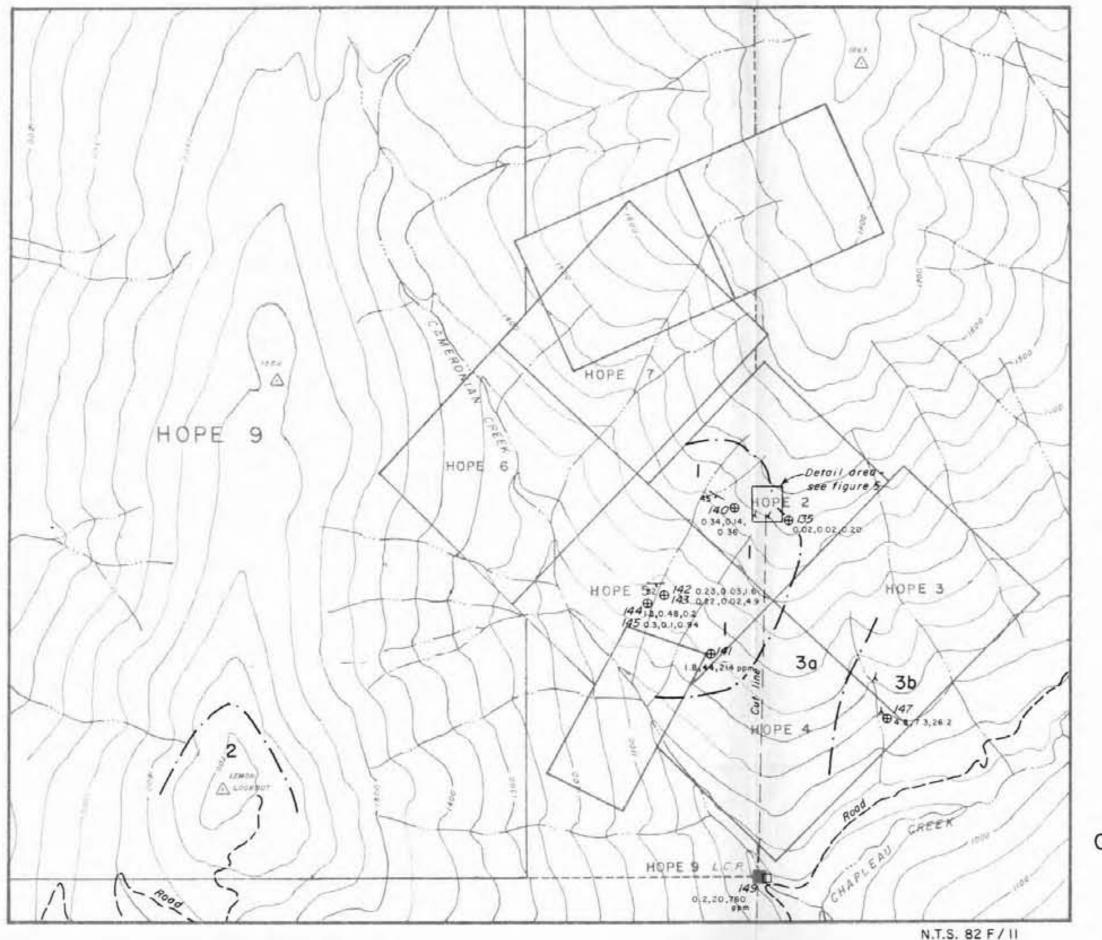
A roof pendant of siltstone and quartzite, presumably belonging to the Milfor Group, outcrops on the east side of Cameronian Creek (Figure 4). The skarn deposits in the Hope prospect were probably derived from contact metasomatism of limestone beds within the quartzites. The quartzite is black and argillaceous and commonly contains disseminated pyrrhotite and pyrite. The contact of the roof pendant with the granodiorite is marked by a sinuous fault that generally strikes north and dips 45 to 70 degrees to the west. The areal dimension of the roof pendant is not known, but preliminary mapping indicates that it is at least 500 metres in diameter.

A second roof pendant of the Rossland Formation volcanic rocks is indicated by Little (1960) to outcrop on the southern part of the ridge on the Hope 9 claim.

Development

Workings on the Hope prospect comprise several trenches, 177 metres of underground workings, and a glory hole about 10 metres in diameter from which production has amounted to about 500 tons. A camp near the workings, and an aerial tram, were constructed by Piedmont Mines 1928.

In addition, scattered trenches and two short adits 'occur on the Hope 3 to 5 claims.





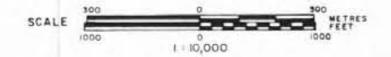
LEGEND

NELSON BATHOLITH

- 3 3a Porphyritic granodiorite 3b Gneissic granodiorite
- 2 Volcanic rocks
- SLOCAN GROUP
- Quartzite, argillacious quartzite.

SYMBOLS

- Rock sample site , sample number , oz/ton Ag ,% Pb ,% Zn except where noted in ppm.
 - ≺ Adit
 - > Bedding
 - Claim boundary
 - --- Geological contact



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HOPE PROSPECT

CLAIMS, GEOLOGY & SAMPLE SITES



MINERALIZATION

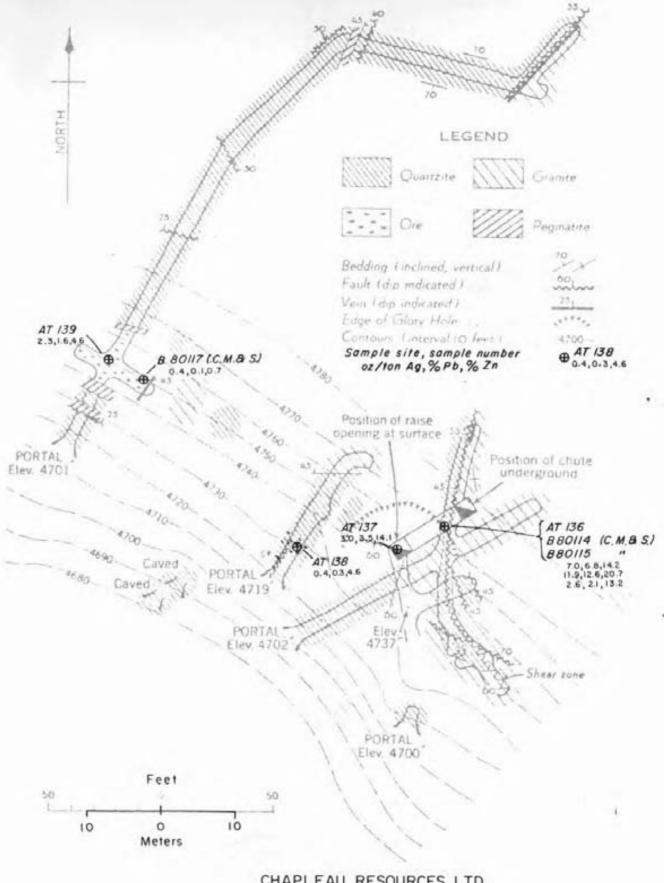
The main workings on the Hope prospect are on a skarn zone which presumably developed by metasomatism of lime-stone beds, in quartzite, near their contact with granodiorite. Mineralization consists of garnet, diopside and calcite, with disseminations, clots, and bands of pyrrhotite, sphalerite and galena.

The sulfides are massive in the glory hole area (Figure 5) and appear to form a lenticular mass 20 metres in diameter by 3 metres thick, suggesting a possible mass of about 3300 tonnes. This high grade mineralization has returned the following assays (Figure 5 and Appendix I):

5	Sample N	0.	Ag oz/ton	Pbs	2n8
B80114	(Caldw	e11)	11.9	12.6	20.7
B80114	(Caldw	e11)	2.6	2.1	13.2
AT 136	(This	study)	7.0	6.8	14.2
AT 137	"	"	3.0	3.5	14.1
		Average	6.1	6.2	15.6

At current prices (\$9.00 per ounce silver, \$0.59 per pound zinc and \$0.31 per pound lead) a value of \$305 per tonne (metric ton) is indicated. Because of a moderately steep slope, this material could be readily mined by open pit methods after construction of an access and haulage road.

Lower grade zinc-lead-silver mineralization occurs over widths of 2 to 2.5 metres in adits 1 and 3.



CHAPLEAU RESOURCES LTD.
HOPE PROSPECT

UNDERGROUND WORKINGS, GEOLOGY, & SAMPLE SITES

exploration Itd.

Modified ofter Little (1960)

Figure 5

Grades are as follows:

	5	Sample	No.	Ag oz/ton	Pb %	Zns
B8(0117	(Cald	well	0.4	0.1	2.7
AT	139	(This	study)	0.4	0.3	4.6
AT	139	"	"	2.3	1.6	4.6
			Average	1.0	0.7	4.0

At current metal prices, a value of \$66.60 per tonne is indicated and hence is currently sub-economic.

Sphalerite, galena and pyrite occur over a length of at least 50 metres and width of 2-3 metres about 500 metres southwest of the Hope prospect. Mineralization occurs as irregularly distributed seams and disseminations in quartzite. Five samples from this zone assayed 0.22 to 1.32 oz/ton silver, 0.1 to 0.48% lead, 0.2 to 4.88% zinc, and 0.001 oz/ton gold. Anomalous molybdenum and copper were noted in the two samples selected for geochemical analyses. This showing may or may not be the First Thought showing as described by O'Grady (1927) who reported an assay with significant gold and silver values over a width of 14 feet (0.03 oz/ton gold, 3.9 oz/ton silver, 2.3% lead and 3% zinc). Further prospecting is required to locate this zone.

A narrow shear zone occurs on the Hope 3 claim. This zone is 20 to 30 centimetres wide, trends east-west and dips steeply and locally contains galena and sphalerite.

It is developed by a short crosscut and drift. A grab

sample of selected material from the dump assayed 4.32 oz/ton silver, 7.29% lead and 26.2% zinc.

Donald & alle

TABLE I

ROCK SAMPLE DESCRIPTIONS

242 AT	135	Diopside-garnet skarn - chip sample across 2 metres in easternmost trench.
	136	Massive sphalerite, pyrrhotite, minor galena - chip sample across 4 metres from glory hole.
	137	As above across 2 metres.
	138	Skarn with disseminated clots sphalerite from Tunnel 3.
	139	Quartz-diopside-garnet skarn with abundant pyrrhotite and sphalerite - chip sample taken across 2.5 metres.
	140	Intensely pyritized siltstone and quart- zite from camp area.
	141	Quartzite with abundant disseminated pyrrhotite - from old pit.
	142	Quartzite with abundant pyrite and minor sphalerite - chip sample over 5 by 2 metres.
	143	Quartzite as above over 2 metres wide.
	144	Quartzite as above over 1 metre wide.
	145	Quartzite as above over 2 metres wide.
	147	Grab sample - sphalerite and galena from dump on Hope 3 claim.

REFERENCES

- Archibald, D.A., Glover, J.K., Price, R.A., Farrar, E., and Carmichael, D.M. (1983). Geochronology and Tecttonic Implications of Magmation and Metamorphism, Southern Kootenay Area and Neighboring Regions, Southeastern B.C. Can. Jour. Earth Sciences, Vol. 20, pp. 1891-1913.
- Caldwell, E.H. (1949). Piedmont Groups (Hope No. 2).
 Private Report for Consolidated Mining and
 Smelting Co.
- Langley, A.C. (1928). Piedmont in B.C. Department of Mines Ann. Rept. for 1928, p.p. 295-296.
- Little, H.W. (1960). Nelson Map-Area, West Half. Canada Geol. Survey Memoir 308.
- O'Grady, B.T. (1927). Hope No. 2 in B.C. Department of Mines Ann. Rept. for 1927, p. C277.

CERTIFICATE

- I, Donald G. Allen, certify that:
 - I am a Consulting Geological Engineer, of A & M Exploration Ltd., with offices at #214 - 850 West Hastings Street, Vancouver, British Columbia.
 - I am a graduate of the University of British Columbia with degrees in Geological Engineering (B.A.Sc., 1964; M.A.Sc., 1966).
 - I have practised my profession of exploration geologist since 1964 to present in British Columbia, the Yukon, Alaska and various parts of the Western United States.
 - I am a member in good standing of the Association of Professional Engineers of British Columbia.
 - This report is based on fieldwork carried out by the writer on September 3 and 4, 1984 and on information listed under References.
 - I hold no interest, nor do I expect to receive any, in the HOPE claims or in Chapleau Resources Ltd.
 - I consent to the use of this report in a Statement of Material Facts or in a Prospectus in connection with the raising of funds for the project covered by this report.

November 28, 1984 Vancouver, B. C. Donald G. Allen,

P. Eng.

APPENDIX I Analytical Results

ROSSBACHER LABORATORY LTD.

CERTIFICATE OF ANALYSIS

2225 S. SPRINGER AVENUE BURNABY, B.C. V5B 3N1 TEL: (604) 299 - 6910

TO : A&M EXPLORATION LTD.

214-850 W.HASTINGS STREET

VANCOUVER. B.C.

PROJECT No.: 84-242

CERTIFICATE No.: 84382,X - 1

INVOICE No.: 4439

DATE ANALYSED: SEPT. 20, 1984

FILE NAME: A&M382.X

7.	7.	oz/t	oz/t			PRE
 Zn	Pb_	Ag_	Au_	NAME	SAMPLE_N	FIX
0.20	0.02	0.02	0.001	135	242 AT	A
14.20	6.84	7.00	0.001	136	AT	A
14.10	3.48	3.00	0.001	137	AT	A
4.56	0.30	0.40	0.001	138	AT	A
4.60	1.56	2.28	0.001	139	AT	A
0.36	0.14	0.34	0.001	140	AT	A
4.88	0.02	0.22	0.001	143	AT	A
0.20	0.48	1.32	0.001	144	AT	A
0.94	0.10	0.34	0.001	145	AT	A
26.20	7.28	4.32	0.001	147	242 AT	A

CERTIFIED BY :

J. Honbards

ROSSBACHER LABORATORY LTD.

2225 S. SPRINGER AVENUE BURNABY, B.C. V5B 3N1 TEL: (604) 299 - 6910

CERTIFICATE OF ANALYSIS

TO: A&M EXPLORATION LTD. 214-850 W.HASTINGS STREET VANCOUVER.B.C.

PROJECT No.: 84-242

CERTIFICATE No.: 84382 - 1

INVOICE No.: 4440

DATE ANALYSED: SEPT.7.1984

FILE NAME: A&M382

RE		PPM	PPM	PPM	PPM	PPM	PPB	PPM	
IX SAMPLE	VAME	Mo	Cu	Ad	Zn	PЪ	Au	As	
L 242 AL	130	1	24	0.4	56	24	10	16	
L 242 AL	149	1	20	0.2	760	20	10	4	
A 242 AT	121	1	54	2.6	318	740	10	8	
A	122	1	10	0.4	98	40	10	20	
A	123	. 1	60	0.2	70	52	10	32	
A	124	1	74	0.4	104	244	10	60	
A	125	1	136	0.4	22	18	10	24	
A	126	1	136	0.2	18	14	10	20	
A	127	1	42	0.6	22	8	10	30	
A	128	1	54	0.6	12	10	10	12	
A	129	1	284	0.2	92	22	10	28	
A 242 AT	131	1	56	19.2	50	1610	720	86	
A	132	1	7.2	0.6	24	30	520	2	
A	133	1	6	0.2	14	6	10	10	
A	134	1	14	0.2	22	28	10	2	
4	141	46	162	1.8	214	44			
242 AT	142	52	270	7.8	16200	286			

CERTIFIED BY :

Joshach .

ROSSBACHER LABORATORY LTD.

CERTIFICATE OF ANALYSIS

2225 S. SPRINGER AVENUE BURNABY. B.C. V5B 3N1 TEL: (604) 299 - 6910

TO: A&M EXPLORATION LTD 214-850 W.HASTINGS STREET VANCOUVER.B.C.

CERTIFICATE No.: 84382 - 2 INVUICE No.: 4440 DATE ANALYSED: SEP1.7.1984

FILE NAME: A&M382

PROJECT No.: 84-242

PRE		PPM	PPM	PPM	PPM	PPH	PPB	PFH	
FIX	SAMPLE NAME	Mo	Cu	Ag	Zn	Pb	ALL	As	
Α	24' 41 141	46	162	1.8	214	44			
A	142	55	270	7.8	16200	286			
L	242 AL 149	1	20	0.2	760	20	10	4	

CERTIFIED BY :

J. Horsback

APPENDIX II
Affidavit of Expenses

AFFIDAVIT OF EXPENSES

This will certify that labour, geological mapping, and geochemical sampling were carried out on the Hope group of claims, Lemon Creek area, Slocan Mining Division, British Columbia, during the period September 20, 1983 to September 3, 1984, to the value of the following:

Labour and fieldwork carried out by C. Kennedy, D. Martin, J. Moreau, G. Elsen and M. Best, regarding road planning and layouts, and prospecting during the period September 20, 1983 to September 3, 1984.

T-4-11...

Total value (as outlined on the following page)	\$4,015.00
Mobilization and fieldwork (D. G. Allen)	
Engineering fees	
D. G. Allen 3.0 days @ \$400	1,200.00
Geochemical analyses and assay	268.76
Report Preparation and draughting	
Engineering fees	
D. G. Allen 2.0 days @ \$400	800.00
Maps, photocopying	54.50
Typing, draughting, compilation	
32 hours @ \$18.50/hour	592.00
	\$6,930.26

Donald G. Allen, P. Eng. (B. C.)

Don Allen

As requested, the following is a breakdown of the work preformed on the Hope properties in the Slocan Valley.

We will require a geologists report on this group of claims as part of our 1984 assessment work for the Ministry of Mines.

Please forward the final report to Vagn as soon as possible as well as a copy to Craig in Cranbrook.

September	20,	1983	2	mandays	1	vehicle	day
September	21,	1983	2	mandays	1	vehicle	day
September	22,	1983	2	mandays	1	vehicle	day

6 mandays at \$150.00 per day = Total \$900.00 3 vehicle days at \$55.00 per day = Total \$165.00

Work Preformed

- Negotiation with Slocan Forest Products regarding location of proposed access road. This road will be constructed in a location and on a grade that will provide access for both forest development as well as our needs to access the Hope properties.
- Study of air photos, contour maps and mapping of a map location for the proposed road.
- Ground layout and flagging of road

TOTAL COST =\$1,065.00

April 20,	1984	1 manday	1	vehicle	day	
July 13,	1984	2 mandays	1	vehicle	day	
July 14,	1984	2 mandays	1	vehicle	day	
July 15,	1984	2 mandays	1	vehicle	day	
August 4,	1984	1 manday	1	vehicle	day	1
August 5,	1984	1 manday	1	vehicle	day	

9 mandays at \$150.00 per day = Total \$1350.00 6 vehicle days at \$55.00 per day = Total \$330.00

Work Preformed

 General prospecting, tracing of sediments and mineralization on properties to the west and south of the Hope #2 Crown Grant.

TOTAL COST =\$1,680.00

September 2, 1984 3 mandays 2 vehicle days September 3, 1984 4 mandays 2 vehicle days

Work Preformed

- Two days spent with geologist on Hope properties

TOTAL COST =\$1,270.00

Note:

This report does not include your time or any of the assay costs you may have incurred.

TOTAL COST =\$4,015.00