518

CANEX AERIAL EXPLORATION LTD.

GEOLOGICAL AND GEOCHEMICAL REPORT

ON THE

PAL No. 1-12, 14-19, 21, 23 and 25 and 28-32 and BM 1 & 2

MINERAL CLAIMS

FOR COPPER RIDGE MINES LTD. (N.P.L.)

FRANCOIS LAKE AREA, 93 K/3 S.E.

OMINECA MINING DIVISION, BRITISH COLUMBIA

C.W. Ball, P. Eng.

R.E. Cribbs

C.E. Dunn

October 31, 1963

700 BURRARD BUILDING

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SUMMARY

Geological mapping indicates that the rock types exposed in the Pal Claims area are not favourable for molybdenum mineralization. Close grid geochemical sampling was carried out and the assay results indicate that the molybdenum content of the soil on the Pal claims is comparable to the normal amount carried in soils over unmineralized granite elsewhere in the Endako area.

AGREEMENT

The agreement dated "the 1st day of May A.D. 1963 between Canex Aerial Exploration Ltd. and Copper Ridge Mines Ltd. (N.P.L.)" required Canex to carry out exploration and development work on the following Mineral Claims in the Omineca Mining Division:

Name of Claim	Record No.	Expiry Date
Pal No. 1-12	16648 - 16659	Oct. 12, 1963
14-19	16660 - 16665	" 12, "
21,23 & 25	16666 - 16668	" 12, "
28-32	16669 - 16673	" 12, "
BM No. 1 & 2	16674 - 16675	" 12, 1963

EXPLORATION AND DEVELOPMENT

1. Access and Location

The area is readily accessible by the Glenannan road and a number of logging roads. The claims adjoin the Bridge Claims on the west and are close to the shore of Francois Lake. Elevations range from 2600 feet to 2800 feet above sea level.

2. Geology

Geological work was conducted on the Pal Mineral Claims on June 19 and July 22. However, on account of heavy glacial overburden our knowledge of the area is to a large degree dependent upon traverses on adjoining ground completed on June 14 and July 25. A geological map has been compiled on a scale of 1" = 1000'.

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3. Geochemical Sampling

Soil samples were taken at 100 feet intervals on due north lines 300 feet or 400 feet apart. Holes were dug at each location to a depth of at least six inches below the humus layer. A sample of approximately two ounces of soil was taken from several places in the bottom of each hole.

Sampling took place on October 2, 1963 through October 9, 1963.

4. Analysis

A total of 600 samples were analyzed for molybdenum at the Canex laboratory near Endako.

The minus 60 mesh fraction of the soil was analyzed colorimetrically using the thiocynate-stannous chloride method.

GEOLOGICAL FINDINGS

In a previous report on the Bingo Group of Mineral Claims dated September 5, 1963, reference was made to a belt of volcanics which trends about 335 degrees through the Bingo claims. It was stated that the nature of the contact was conjectural and it is possible that the belt may include intrusive andesite porphyry as well as andesite flows.

The enclosed geological map on a scale of 1000 feet to the inch will serve to delineate the main structural features, namely altitudes of joints, sheet jointing, slickensides, aplite dykes and foliation in the granite and volcanic rocks.

Three main textural types of granite are represented in the area - medium grained red porphyritic granite, coarse grained granite and alaskite. Aplite dykes are not particularly numerous but a few are shown on the geological map. One interesting feature is the influence of joints and foliation on the course of the Stellako River and the shore line of Francois Lake.

The following preliminary petrological notes are based on field observations:

Granite, medium grained: Rock is a cream coloured granite with phenocrysts of pink orthoclase 3/16 inch set in a finer matrix of quartz and felspars. The rock contains about 20% quartz and 3% biotite. A minor amount of secondary chlorite is developed from the biotite. White plagioclase is present. The biotite occurs partly as clusters.

Granite, coarse grained: Cream coloured rock with phenocrysts of cream orthoclase ¼ inch to ½ inch, plagioclase, 20% quartz, 4% biotite fresh (some of the biotite rims around the plagioclase). This rock is considerably coarser and quite distinct from the medium grained granite. Chlorite is occasionally prominent.

Alaskite: Cream coloured fine grained granitic rock with sugary texture. It contains about 20% quartz and 1% biotite.

Aplite: A cream coloured fine grained rock confined to thin hyp-abystal intrusions generally less than 6" which follow joints in the granite. Texture is generally micro-crystalline and when a little coarser, the rock often shows a grano-phyric structure.

Andesite: Light grey fine grained volcanic rock with phenocrysts of zones, plagioclase and fresh biotite. Plagioclase white, strongly kaolinized. The crystals range up to 1/8" x ½" and possess a crude orientation. Partly zoned, sub-hedral. The biotite phenocrysts are well formed tending to idiomorphic. Matrix is microcrystalline felsic. Flow-lined vesicles occur along what appear to be "flow-tops". The vesicular andesite is moderately to strongly magnetic.

The question arises as to whether the biotite andesite is extrusive (flow-rock) or an intrusive rock. The presence of flow lined vesicles and flow oriented plagioclase phenocrysts coupled with the crowding of vesicles

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at apparent flow-tops suggests that the rock may be a flow. On the other hand, the presence of such features as we normally regard as characteristic of flow-rocks may not necessarily be proof positive. Vesicles and a certain amount of flow banding can also be observed in intrusive rocks. Further evidence will be sought from future testing by trenching and diamond drilling.

The writer would be interested to know any views that Dr. Tipper of the G.S.C. may have regarding the above interpretations and Dr. Stewart Holland of the B.C. Department of Mines may also have ideas regarding the volcanic vs. intrusive origin. Personally, I am inclined to believe that both extrusive and intrusive phases are present. In all probability, we are dealing with a sill of biotite andesite which is dipping NNW at about 30°. This latter idea is based on observations by the writer on the rocky point at Station 71 overlooking the mouth of the Stellako River where the contact between the andesite rock and the coarse granite is exposed. The presence of faulting has also complicated the structural picture.

ASSAY RESULTS

The molybdenum content of the soil was found to be very low, averaging less than four parts per million.

In the extreme southeastern corner of the sampled area, the molybdenum content increases slightly to an average of about five ppm. Since glacial cover is very thin in the southeastern corner, the soil analyses should give a good indication of the amount of molybdenum in the underlying bedrock. The molybdenum content of this slightly anomalous soil is far less than the amount that would be expected over molybdenum mineralization of economic interest.

The molybdenum content of the soil on the Pal claims is similar to the molybdenum content of soils over unmineralized granite elsewhere

in the Endako area. This geochemical survey indicates that there is very little possibility of significant molybdenum mineralization occurring on the claims.

EVALUATION

Close grid geochemical sampling in conjunction with geological mapping has failed to find any portion of the Pal claims which may be considered favourable for molybdenum mineralization. The slightly anomalous soil in the south-east corner of the samples area is considered to overlie barren granite. There is little likelihood of significant mineralization occurring on the claims.

RECOMMENDATION

The area of the Pal mineral claims is not favourable for molybdenum mineralization. Geological structure is lacking and the type of granite exposed is for the most part too coarse and unaltered as to be considered a receptive host rock for molybdenum. It is therefore recommended that the option be dropped.

Clive W. Ball
CLIVE W. BALL

R.E. Cribbs
R.E. CRIBBS

C E Dunn
C.E. DUNN.

/jhw
Vancouver, B.C.
31 October, 1963.

DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA.
TO WIT:

In the Matter of

I, LAWRENCE ADIE

of 700 Burrard Building, Vancouver, 5. B.C.

in the Province of British Columbia, do solemnly declare that the following expenditures have been incurred by Canex Aerial Exploration Ltd. in carrying out geological and geochemical work on the Pal 1-12, Pal 14-19, Pal 21, 23 & 25, Pal 28-32 and B.M. 1 and 2.

1. Geological Mapping. June 14, 19 and July 22 & 25.			
C.W. Ball, Chief Geologist	4 days @ $50	$200.00	
E.A. Rychkun, Student Asst.	3 " @ $30	90.00	
Vehicle	4 " @ $10	40.00	$ 330.00
2. Geochemical Surveying			
Soil Sampling			
C.W. Bibby	7 days @ $30		
C.M. Davis	7 " $30		
H.S. Scott	7 " $30		
L. Thon	7 " $30		
	28 " @ $30	840.00	
Direct Supervision, R.E. Cribbs	7 " @ $50	350.00	
Vehicle Rental	8 " @ $30	240.00	
			$1430.00
Plus 50% overhead and general supervision			715.00
600 sample analysis at $1.00			600.00
			$3075.00

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City of Vancouver, in the Province of British Columbia, this 5th day of November 1963, A.D.

Lawrence Adie

John M. Mowatt

A Commissioner for taking Affidavits within British Columbia or
~~*A Notary Public in and for the Province of British Columbia.*~~

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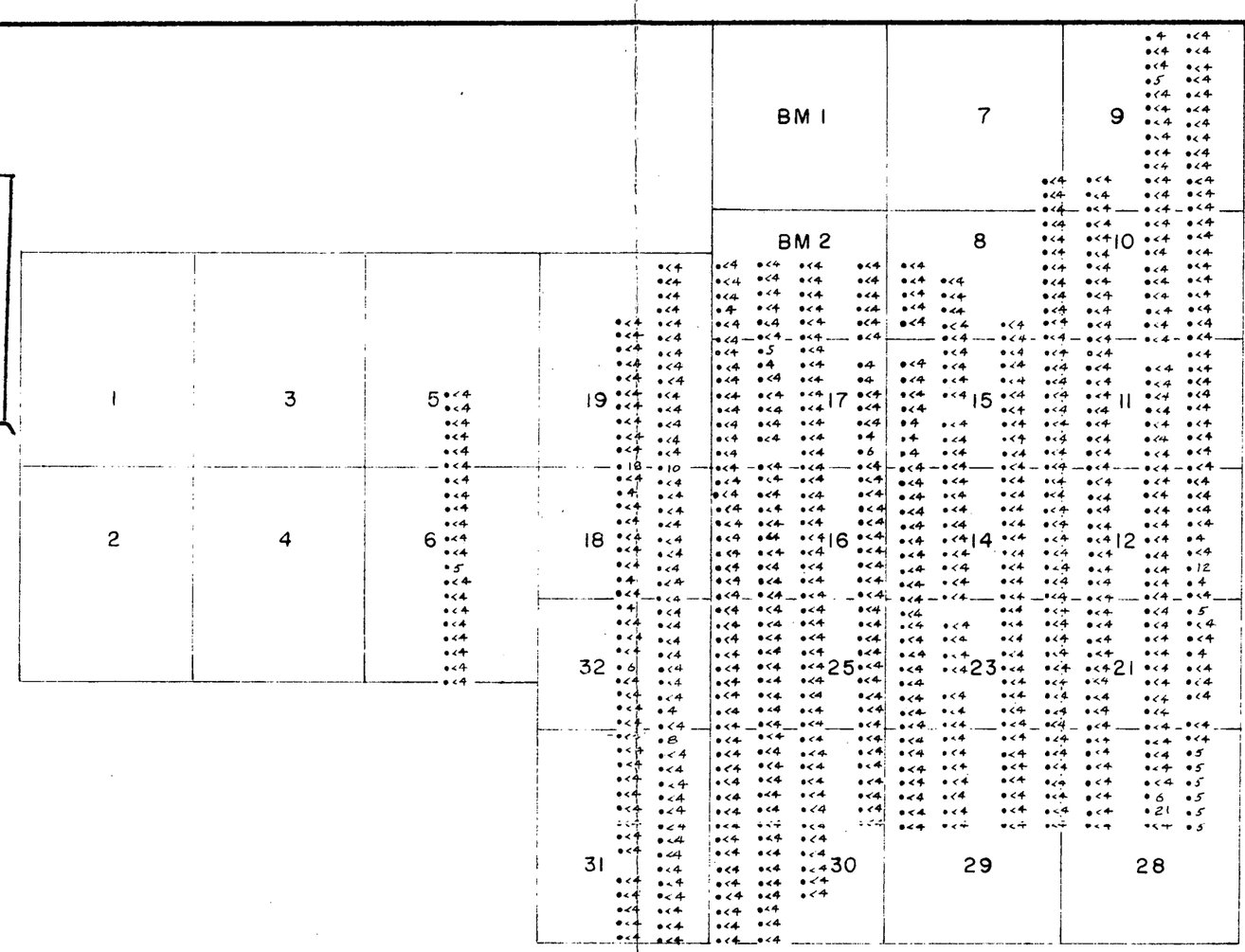
MAP NO. 3 Report 518

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 518 MAP 3



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LEGEND

•<4 PPM Mo

FRANCOIS LAKE

To accompany Geological and Geochemical Report on PAL No. 1-12, 14-19, 21, 23, 25, BM 1-2, & PAL No. 28-32 M.C.'s by C.W. BALL P. Eng and R.E. CRIBBS October 30, 1963

DRAWN R. CRIBBS	SCALE 1" = 1,000'	CANEX AERIAL EXP. LTD.	GEOCHEMICAL SURVEY
TRACED	DATE Oct. 22, 63	ENDAKO MINES LTD.	FILE NO.
APPROVED Richard E. Cribbs			

MAP No. 1 Report 518

1	3	5	19	BM1	7	9
				BM2	8	10
2	4	6	18	17	15	11
				16	14	12
			32	25	23	21
			31	30	29	28

N

FRANCOIS LAKE

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To accompany Geological and Geochemical Report on PAL No.1 12,14 19,21,23,25,28 30
and BM 1&2 M.C.'s by C.W. BALL P.Eng and R.E.CRIBBS October 30, 1963

DRAWN	SCALE 1"=1,000	CANEX AERIAL EXP. LTD.	
TRACED R.G. Ball	DATE Oct. 22/63	ENDAKO MINES LTD.	FILE NO.
APPROVED			

GRANITE INFERRED
VOLCANICS INFERRED
BINGO No 11-30 M.C.
Road
Road BM-1
Covered
BM-2
Pseudo-foliation
Aplite dyke
Coarse granite
6" Aplite dyke
Slickensides 325°/-90°
Slickensides and joints 090°/15°S
Steep dips
Medium textured grey granite
Sheet joints
Cabin
Cabins
Slickensides 315°/70°SW.
Contact between granite and andesite
Granite
Foliation 305°/80°SW.
Crude foliation
Coarse Granite
Alaskite
Aplite dykes (2) and pegmatite
joints only
Medium textured R.P.G.
STELLAKO RIVER
Road to Fraser Lake
FRANCOIS LAKE
2800
2700
2600
2500
2400
3000
2900
2100
2700

Legend:

6 Cover (soil, glacial drift)
5 Granite, medium-grained.
4 Granite, coarse-grained.
3 Alaskite
2 Aplite dykes
1 Biotite andesite
70° Strike & dip of joints, foliation, slickensides

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 518 MAP 2

To accompany geological and geochemical report on BM-1 & 2
Pat Nº 1-12, 14-19, 21, 23, 25 and Pat 28-32 by C.W. Ball P.Eng. & R.E. Cribbs
Clive W Ball P. Eng
Oct 30, 1963

DRAWN C.W. Ball	SCALE 1" = 1000'	CANEX AERIAL EXPLORATION LTD.	
TRACED	DATE Oct. 7, 1963	ENDAKO MINES LTD. (N.P.L.)	
APPROVED			FILE NO.