CANEX AERIAL EXPLORATION LTD.

DIVISION OF CANADIAN EXPLORATION LIMITED

700 BURRARD BUILDING

VANCOUVER 5, B. C. CANADA

3300

WORK REPORT FOR THE HED PROPERTY,

20 MILES WEST OF PENTICTON, B.C.,

 $49^{\circ} 120^{\circ} \text{ S.E.}$ 82 E / 12 W , 92 H / 9E

BY CANEX AERIAL EXPLORATION LTD.

P. G. Beaudoin B.A.Sc., P. Eng.

July, August, September and October, 1971

November 8, 1971

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 3399 MAP

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INTRODUCTION

The following report describes an exploration program conducted on the Hed property, located approximately 20 miles west of Penticton, B.C. in the Osoyoos Mining Division.

The original property, consisting of 47 claims belonging to Anaconda American Brass Ltd. was optioned by Canex Aerial Exploration Ltd. by Anaconda in August, 1971. Soil sampling by Anaconda had indicated interesting values in copper and molybdenum in the area.

Canex Aerial staked an additional 59 contiguous claims and fractional claims and carried out an exploration program of road building, soil sampling and geophysical surveys.

LOCATION & ACCESS

The property is located in southern British Columbia, approximately 20 miles west of Penticton, B.C. and immediately to the southwest of Isintok Lake $(49^{\circ}33'\text{N}; 120^{\circ}00'\text{W})$.

Access is by 20 miles of dirt road from Summerland, B.C.

The claims are at an average elevation of 5,800 feet with fairly gentle slopes lightly covered with jack pine.

Overburden is believed fairly thin but is notable for its boulder content, some of which are several feet in diameter. The paucity of soil surrounding the boulder litter has created contact problems for the induced polarization surveys.

Claim Name	<u>Record Number</u>	Record Number Expiry Date	
Original Anaconda			
Hed 1-6	25887-25892	Dec. 3, 1972	
7-10	25893-25896	Dec. 3, 1971	
17	25903	Dec. 3, 1972	
18	25904	Dec. 3, 1971	
19	25905	Dec. 3, 1972	
20	25906	Dec. 3, 1971	
21	25907	Dec. 3, 1972	
22-26	25908-25912	Dec. 3, 1971	
33	25919	Dec. 3, 1971	
35	25921	Dec. 3, 1971	
37	25923	Dec. 3, 1971	
39	25925	Dec. 3, 1971	
40	25926	Dec. 3, 1971	
49-53	26960-26964	Aug. 31, 1973	
54,55	26965,26966	Aug. 31, 1972	
56-60	27612-27616	Jan. 28, 1972	
64-73	27617-27626	Jan. 28, 1972	
Canex			
Hed 74-87	28355-28368	Aug. 3, 1972	
88-124	28449-28479	Aug. 26, 1972	
125,126	28625,28626	Sept.14, 1972	
131-134	28480-28483	Aug. 26, 1972	
142,144-146	28627,28628-28630	Sept.14, 1972	
149-162	28484-28497	Aug. 26, 1972	
177-184	28498-28505	Aug. 26, 1972	
Chum Fraction	28660	Oct. 14, 1971	
Tot Fraction	28661	Oct. 14, 1971	

GEOLOGY & MINERALIZATION

At least three different types of plutonic rocks were found on the claim area, all basically granodiorites. The most prominent rock is a biotite granodiorite and it is in this particular rock that the mineralization was found. In the southern portions of the group a hornblende granodiorite is more prominent but with no evident mineralization. Biotite granodiorite porphyry was found in many places over the entire property. This rock contained orthoclase phenocrysts up to 5 cm. in long dimension.

The mineralization that was found consisted of chalcopyrite in disseminations in the biotite granodiorite. No molybdenite was evident. The grade of the mineralization is very low, in the order of 0.05 to 0.10% Cu. Little iron stain is evident in the rocks around the showings and little to no leaching and/or weathering can be seen in any of the outcrops.

STRUCTURE

Only major structures can be delineated at this time and these being only lineaments from air photo of the area. It must be noted, however, that from the soil sampling a NNW trending structure appears to control mineralization. This structure is cut by a prominent NE trending structure which is outlined by Isintok Lake and a NE trending linear swamp on the property.

WORK REPORT

During the months July to October inclusive, Canex Aerial Exploration Ltd. conducted programs of line cutting, soil sampling, induced polarization and magnetometer work on the Hed claims. All work was carried out by Canex personnel. The work was conducted in two phases.

Phase I

A tent camp was established near the mid-west edge of the claims and was dependent entirely on helicopter support. From this camp a 6,000 foot base line was put in with chain and compass. This north-south base line was noted as the 200 east base line and was extended to 310N from the original Anaconda base line at 250 north. Six 8,600 foot cross-lines were flagged in at 800 foot intervals, these lines extending from 184 east to 272 east. Five 3,000 foot lines were put in extending five Anaconda lines from 242 east to 272 east. All the above mentioned lines were soil sampled at 200 foot stations on the lines. Three of the east-west lines 218N, 226N and 234N and the base line were gone over with a Jalander magnetometer and a McPhar induced polarization unit. Fourteen claims were staked on the east edge of the property, followed by the staking of 59 more claims surrounding the north and east edges of the property.

Phase II

A semipermanent tent camp was established in the north-east corner of the claims followed by the construction of an access road to those areas on the property found anomalous by the previous soil sampling. From this camp the base line was extended from 310N to 370N. Four 10,000 foot cross-lines were put in from 170E to 302E. Four additional east-west lines were established from 170E to 250E. All previously mentioned lines in Phase I were extended out to 302E. All new lines and extensions were soil sampled.

An induced polarization survey was tried over the area outlined by geochemistry but proved unsuccessful due to electrode contact problems.

Six new claims were staked to provide right of access for the road construction. Two fractions were also staked.

FIELD OPERATION - INDUCED POLARIZATION

In the field procedure, measurements on the surface were made in a way that allows the effects of lateral changes in the properties of the ground to be separated from the effects of vertical changes in the properties of the ground. Current was applied to the ground at two points (X), feet apart. The potentials were measured at two other points, (X) feet apart, on line with the current electrodes. The distance between the nearest current and potential electrodes was an integral number (N) times the electrode spacing (X).

The measurements were made along surveyed lines, with a constant distance (NX) between the nearest current and potential electrode measurements were taken with values of N = 1, 2 and 3 and X = 300.

In plotting the results, the values of the apparent resistivity, percent frequency effect and the apparent metal factor measured for each set of electrode positions were plotted at the intersection of grid lines, the centerpoint of the potential electrodes. The resistivity values were plotted above the line and percent frequency effect and metal factors below. The lateral displacement of a given value is determined by the location along the survey line of the centerpoint between the current and potential electrodes. The distance of the value from the line is determined by the distance (NX) between the current and potential electrodes when the measurement was made. The separation between sender and receiver electrodes is only one factor which determines the depth to which the ground is being sampled in any particular measurement. The plotted results were contoured using a logarithmic contour interval of 1, 1.5, 2, 3, 5, 7.5, and 10.

The survey was carried out on 6.08 miles of cut line. The lines were parallel at 800 foot intervals with stations marked every 200 feet. The equipment used was McPhar frequency effect (Model P654 and P660) employing frequencies of 0.31 and 5.0 cycles per second.

PRESENTATION OF RESULTS

The results of the survey are shown on the included section plots as previously described in the preceding section. All lines were run using an electrode spacing of 300 feet and dipole separation of N=1, 2 and 3.

DISCUSSION OF RESULTS

A total of 6.08 miles of line were run on the Hed claims. The background percent frequency effect on the property averages 1.0 to 1.5 P.F.E. Spurious anomalies exist over limited areas in the range of 2.0 to 2.5 P.F.E. and correlate well with the soil sample anomalies. More I.P. work overmuch larger areas is necessary to sufficiently delineate any mineralized zones.

FIELD OPERATION - GEOCHEMISTRY

The field operation of soil sampling was initiated with the establishment in two phases of a north-south base line, 12,000 feet long. Lines trending east-west were put in with chain and compass and with stations every 200 feet. Samples of the soil, that is the first subhumus layer, the A horizon, were taken at every station. All samples were shipped to Placer Labs in Vancouver for analysis for copper and molybdenum, plus lead, zinc, silver and in some cases gold.

ASSAY METHOD - GEOCHEMISTRY

The soil samples were dried in a hot air dryer at about 120°F. Portions of the -80 mesh fraction were sieved for Au and Ag analysis: the fraction for Au digested with concentrated HBr and then the Au extracted with MIBK and analysed with a Perkins Elmer 403 Atomic Adsorption spectrophotometer, using a wave length of 2428 Angstroms. The fraction for Ag was digested with concentrated HNO3, and then the Ag extracted with TOTP and analysed with the AA using a wave length of 3281 Angstroms. The procedure used for Cu, Mo, Pb and Zn was to digest the -80 mesh fraction in a Perchloric-nitric solution and analyse for the metals using the following wave lengths.

Angstroms	47	32	l .	C
Angstroms	33	31)	M
Angstroms	33	28))	P
Angstroms	39	21		Z

RESULTS

The analyses for copper and molybdenum in the soils indicate anomalous zones for both metals. With an average background value for copper of 20-25 ppm. the anomalies range in the order of 200-300 ppm. with local highs up to 2,000 ppm. Similarly the values for molybdenum, with a background of 2-3 ppm., range in the order of 8-10 ppm. with local highs reaching 45-50 ppm. Lead, zinc and silver values are remarkably flat throughout the whole property, showing little variation over and adjacent to the anomalous copper and molybdenum zones.

INTERPRETATION - SOIL SAMPLING

The soils on the Hed property were sandy silts and were similar in composition to the rocks found in outcrops in the area. Soil depths above bedrock ranged from a few inches to 5-6 feet except in swampy areas where depth to bedrock is unknown. The soils were estimated to be 75 to 100% residual and as such fairly accurately define mineralized zones in the underlying granodiorites.

The copper anomalies are threefold, the largest being roughly 4,000 feet by 1,600 feet, located slightly southeast of the center of the property on Hed claims 52, 53 and 54. The second anomaly, of similar dimensions, is located to the northwest of the first, in the northwest quadrant of the claim group. It is centered on Hed claims 66, 67 and 89. The third anomaly, with dimensions of 2,400 feet by 800 feet lies to the west of the first. This anomaly is centered on Hed 20. The molybdenum anomalies are similar in size and location. These anomalous zones correlate remarkably well and indicate a coincident occurrence of copper and molybdenum. The anomalies trend in a north north-westerly direction along a rather ill defined photo-lineament indicating possible structural control to the mineralization.

ROAD WORK

During September and October 1971 a road was constructed on the property to give better access to the anomalous areas. In all, 5 miles of road has been built involving 165 hours of D7 cat time.

MAGNETOMETER

The magnetometer survey was conducted by a Canex Aerial Exploration geophysicist using a Jalander Magnetometer Model 4665, with a sensitivity of \pm 10 gammas. The results of the magnetometer survey show weak northwesterly magnetic trends but due to the low magnetic relief it is felt that a mag survey would not sufficiently enhance the geological picture of the area.

RECOMMENDATIONS

- Ten line miles of I.P. should be run on the major soil sample anomaly to test its geophysical validity.
- 2. Pending the results of the I.P. survey percussion drilling should be used to test the anomaly.

P. Beaudoin, P. Eng.



PFRSONNEL: Wages

Geologist, P. Beaudoin,	July 15-Oct. 30,	3 months @ \$800/month	\$ 2,400.00
			250.00
Geologist, J. Hylands,	Sept.27-Oct. 1,	1/4 month @ \$1000/month	
Geologist, I. Borovic,	Sept.27-Oct. 1,	1/4 month @ \$1000/month	250.00
Asst. Geologist, B. Good,	Sept.27-Oct. 30,	1 month @ \$650/month	650.00
Geophysicist, P. Kowalczyk,	Sept.19-Sept.29,	1/2 month @ \$800/month	400.00
Geophysicist, R. Cannon,	Aug. 22-Aug. 27,	1/4 month @ \$1000/month	250.00
Geophysicist, J. Thornton,	Aug. 22-Aug. 27,	1/4 month @ \$800/month	200.00
Field Supervisor, D. Huston,	July 15-0ct. 30,	3 months @ \$800/month	2,400.00
Cook, K. Kanashiro,	Sept.15-Oct. 30,	1 1/2 months @ \$600/month	900.00
Field Assistant, J. Garnett,	Sept. 3-Oct. 30,	2 months @ \$550/month	1,100.00
Field Assistant, L. Welch,	Oct. 13-Oct. 30,	1/2 month @ \$550/month	275.00
Part Time Help:			
L. Bradish	July 25-Aug. 10,	1/2 month @ \$500/month	250.00
R. Ney	July 25-Aug. 10,	1/2 month @ \$350/month	175.00
R. Grycan	Aug. 31-Sept. 4,	1/4 month @ \$550/month	137.50
A. Clendenan	Aug. 31-Sept. 7,	1/4 month @ \$500/month	125.00
J. Stephens	Sept. 9-Sept.17,	1/4 month @ \$550/month	137.50
			\$9,900,00
			93,3001.00

Camp Costs	
300 man days @ \$8/man day	\$2,400.00
Compensation, Administration, Supervision	
300 man days @ \$5/man day	<u>1,500.00</u>
	\$ <u>3,900.00</u>
CAMP EXPENDITURES	
Phase I	
a) Moving in equipment, supplies and personnel	
plus two supply runs with Be-1 G3B	
5 1/2 hours @ \$145/hr	\$ 797.50
b) Transportation:	
3 trucks, 1,800 accumulated miles @ 7¢/mile	126.00
c) I.P. Survey, 4 days rental @ \$200/day	800.00
<u>Phase II</u>	
a) Construction of hase camp, plywood, waterpipe,	etc 400.00
b) Moving old camp to new location with Hiller 12	
1:45 hrs. @ \$160/hr	280.00
c) Road building: D7 cat	
165 hrs. @ \$20/hr	3,300.00
d) Soils analyses for Cu, Mo, Ag, Pb, Zn, Au	
 Drying and sieving \$.20/sample 	
2) Assaying cost/sample Mo	
Cu	
Pb	
Zn	
Au	

Phase II - continued

2) 376	samples;	Mo,	Cu,	Ag.	••••	• • • •			1,015.20
161	samples;	Mo,	Cu,	Pb,	Zn,	Ag	••••	• • • •	595.70
477	samples;	Mo,	Cu,	Pb,	Zn,	Ag,	Au	• • • •	2,718.90
	samples;								
			원활성화			Tota	1	9	34.354.00

e) Transportation:

3 trucks, 4,500 accumulated miles @ 7¢/mile...... 315.00

> Total Expenditure \$24,172.50

Vancouver, B.C. November 8, 1971

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Sub-mining Recorder

ASSESSMENT SUMMARY

Costs

Soil Sampling: including line cutting, sample taking

and assaying and camp costs;

90.06/1000 line feet

Road Building:

\$ 132.00/1000 feet

I.P. Survey:

rental additional help including camp

costs:

58.94/1000 feet

Red Group:

Soil Sampling on 62,300 feet of line; \$ 5,610.50

Road Building on 1,400 feet of line;

\$ 5,794.50

Green Group:

Soil Sampling on 77,200 feet of line; \$ 6,952.38

Road Building on 21,200 feet of line; 2,800.00

\$ 9,752.38

Orange Group:

Soil Sampling on 21,000 feet of line; \$ 1,891.18

Road Building on 2,400 feet of line;

316.00

I.P. Survey on 36,000 feet of line;

2,122.77

\$ 4,329.95

Blue Group:

Soil Sampling on 47,700 feet of line; $\frac{4,295.67}{}$

Total

P. Beaudoin, P. Eng.



CERTIFICATION

I, Peter G. Beaudoin, of Vancouver, B.C. hereby certify that:

- 1. I am a graduate from the University of British Columbia in 1968.
- I have been practising my profession for the past three years.
- 3. I am a member of the Association of Professional Engineers of the Province of British Columbia.

Vancouver, B.C. November 8, 1971

PB/mz

P. Beaudoin, P. Eng.

























