MAP No. 105-D-3	PROSPECTUS ASSESSMENT REPORT N. M. E. A. P. CONFIDENTIAL OPEN FILE	[ ] [ ] [ ] [X]	TYPE OF WORK: Whitehorse MD Geol.

REPORT FILED UNDER	Con-Am Resources Ltd. DOCUMENT NO. 061492
DATE PERFORMED	August 2, 3, 1974 DATE FILED: April 30, 1976
LOCATION - LAT.	60°12'N AREA: Carbon Hill, Yukon
LONG.	135°13'W
CLAIM NO.	POP 1-14 Y75415-28
VALUE $	
WORK DONE BY	F. Holcapek (Agilis Engineering Ltd.)
WORK DONE FOR	Con - Am Res. L.
REMARKS	Antimony mineralization is controlled by shear zones cutting argillites. Probable and possible ore reserves of approx. 140,000 tons, in a shear zone averaging 5 feet in width, grade 4% Sb.

061492

REPORT ON THE
POP 1-14 MINERAL CLAIMS
WHITEHORSE MINING DISTRICT, YUKON,
FOR
CON - AM RESOURCES LTD.

Vancouver, B.C.
April, 1976

F. Holcapek, P. Eng.

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TABLE OF CONTENTS

REPORT ON THE
POP 1-14 MINERAL CLAIMS
WHEATON RIVER DISTRICT,
WHITEHORSE MINING DISTRICT, YUKON,
FOR
CON AM RESOURCES LTD.

1-00 SUMMARY

The Pop 1-14 mineral claims have been staked to cover the Carbon Hill Antimony property developed by Yukon Antimony Corporation during 1964 to 1967.

The property is located on Carbon Hill, Wheaton River District, approximately 45 miles from Whitehorse, Yukon.

Yukon Antimony Corp. drove 3 adits and completed an extensive diamond drill program on the property.

The program outlined probable and possible ore reserves of approximately 140,000 tons in a shear zone averaging 5 feet in width, grading about 4% Sb.

A mill test completed showed that a concentrate containing 60.7% Sb at a 92.8% recovery can be obtained.

The main economic mineral on the property is stibnite associated with pyrite and quartz carrying low silver values.

The mineralization occurs along a strong, N65^{o}E trending, shear zone which has been explored over a strike length of about 1,150 feet.

The shear zone cuts argillites which have been intruded by pre- and post-mineralization dykes.

The writer visited the property during August 1974, and this report is based on a property examination and on a literature study.

2-00 CONCLUSIONS

1. The antimony mineralization explored on the Pop 1-14 mineral claims are controlled by shear zones cutting argillites.

2. Post and pre mineralization dykes cut the mineralized zone.

3. Past work outlined possible and probable ore reserves of 140,000 tons grading about 4% Sb.

4. A mill test completed in 1964 showed that a concentrate grading 60.7% Sb at a 92.8% recovery can be obtained.

5. The shear zone is open on both ends and there exists a definite potential of increasing the outlined ore reserves.

6. The increase in the price of antimony from about 40¢ to about $1.40 per lb. definitely enhanced the merit of the property.

3-00 RECOMMENDATIONS

Phase I:

1. Establish grid for ground control 200 ft. x 200 ft.

2. Check previous geological mapping 1 inch = 200 ft.

3. Electromagnetic survey to trace known mineralized zones and to locate possible buried ore bearing zones.

4. Geochemical survey to check conductive zones indicated by E.M. for potential mineralization.

5. Cleaning and re-sampling of surface showings.

Phase II:

1. Repair the road from Amie Lake to the property. Several bridges will have to be rebuilt.

2. Clean the road to No. 1 adit and open adits.

3. Re-sample adits.

4. Evaluation of sample results.

5. Diamond drilling allow 2,000 ft. to test the extensions.

4-00 COST ESTIMATE

Phase I:

A minimum of $20,000.00 will be needed to complete Phase I.

Phase II:

Since it is not known how badly caved the adits are, it is impossible to give a good cost estimate.

A minimum of $100,000.00 should be budgeted to complete the above program.

Total Phase I & Phase II $125,000.00

Respectfully submitted,

F. Holcapek, P. Eng.

Vancouver, B.C.
April, 1976

5-00 INTRODUCTION

On request of Mr. E. Bergvincent, CON - AM Resources Ltd. the writer completed a study of the economic potential of the Pop 1-14 mineral claims, located on Carbon Hill, Wheaton River District, Whitehorse Mining Division, Yukon Territory.

The purpose of this report is to state the findings and recommend further action to be taken.

The writer visited the property during August 1974.

5-10 PROPERTY

The Pop group of mineral claims is located 40 miles SSW of Whitehorse in the Wheaton River District, Yukon, and consists of the following mineral claims:

Claims	Record Nos.
Pop 1-14	Y75415 - 28

5-20 ACCESS

Access is by 25 miles of gravel road, via the Amie Lake road, SW of Carcross, 12 miles from the Alaska Highway.

Several of the bridges across Wheaton River have been washed out and need rebuilding.

The old airstrip in the Wheaton River Valley at Becker-Cochrane Creek is in bad repair and not serviceable at this time.

The claim group lies at an elevation of 5,300 feet on the northeast side of Carbon Hill.

5-30 TOPOGRAPHY AND CLIMATE

The topography of the area is mountainous. Elevations range from 3,000 feet above sea level in the valley of the Wheaton River to 6,000 feet at the higher peaks. The mountains are steep but in general well rounded with only occassional cliffs.

The claim group lies above timber line. Grass and low bushes are the predominant vegetation. Water and timber is plentiful along the Wheaton River Valley.

The climate of the district is typical for the higher elevations in the southern Yukon.

Summers are mild with frequent rain showers and long periods of day light during June and July. Winter prevails for 7 months, with snow cover from late October til late May. Temperatures can dip to -50°F.

Rivers are normally frozen from late October to mid May.

6-00 HISTORY

Antimony and Silver deposits, located on Carbon Hill and Chieftan Hill, were first discovered in 1883.

The deposits were rediscovered in 1906 and actively explored to about 1915.

Prior to 1965 a 95 foot adit was driven along a shear zone at the 5,300 foot elevation. The geological division of the Whitepass and Yukon Route has unpublished reports referring to sampling carried out by A. Aho and Conwest Mines Ltd.

In 1964, Yukon Antimony Corporation Ltd. (NPL), acquired the property and started development. From 1964 to 1967 development work consisted of geological mapping, trenching, diamond drilling and the driving of 3 adits to follow the mineralized zone.

In 1974 the property was re-staked by E. Bergvincent.

7-00 GEOLOGY

The geology has been mapped by Cairnes of the Geological Survey of Canada in 1916. He states: "throughout the Wheaton District geology is intricate and has been complicated by the great diversity in age and character of the various formations that have been subjected to a number of intense volcanic invasions".

The Wheaton River District lies along the eastern limits of the Coast Range and the area is thought to be underlain by granitic rocks of the Coast Range Batholith of Cretaceous Age.

Intrusives, volcanics and sediments ranging from Pre-cambrian to recent in age have been found in the area.

The Carbon Hill mineralization is normally associated with shear zone cutting argillites and related rocks.

Two ages of dykes, the first andesitic - Skukum group dykes - pre shearing in age, the second quartz rhyolite, younger than the shearing, have been found in vicinity of the mineralization associated with shearing.

8-00 ECONOMIC GEOLOGY

8-10 GENERAL

During the property visit it was found that all trenches were sloughed and the underground workings inaccessible because of caving.

All information has been compiled from reports by Dr. A.P. Fawley, P. Eng., R.G. Hawley and M.P. Stadnyk. The main economic mineral on the property is stibnite associated with minor galena and low silver values, located along a shear zone. Underground workings show that the shear zone has an attitude varying from N50°W, 75°NW to 85°NW.

Stibnite occurs as an irregular vein with quartz as the main gangue or associated with a soft black, pyrite gouge. The mineralized zone varies from a few inches to a maximum of 23 feet with an average width of about 5 ft.

Numerous post ore dykes and faults cut the shear zone and complicate the geological setting.

8-20 ORE RESERVES

Underground workings referred to as #1 to #3 adit have followed the mineralized shear and a plan with assay data

and sample location has been attached, further a detailed list of samples as reported by M.P. Stadnyk is appended.

To obtain an estimate of the ore reserves, more detailed information will have to be available, hence the basic figures and calculations as reported by M.P. Stadnyk in his "Geological Report, Carbon Hill Antimony Deposit, Yukon Territory" dated October 1966 are used.

8-21 ORE RESERVE AFTER M.P. STADNYK

PROBABLE ORE RESERVES

Block	Grade	Length	Width	Depth	Short tons
No. 1 Adit (T.9-T.10 area)	2.89%	100.0'	4.78'	150.0'	7,170.0
Becker-Cochran Adit*	4.49	40.0'	6.00'	140.0'	3,360.0
No. 1 Pit **	5.10	110.0'	12.00'	50.0'	6,600.0
No. 2 Pit	4.19	40.0'	7.00'	50.0'	1,400.0
No. 2 Adit	1.53	60.0'	4.40'	50.0'	1,320.0
No. 3 Adit-					
NE Drift	1.25	70.0'	3.84'	50.0'	1,344.0
NW Drift	0.54	50.0'	4.92'	50.0'	1,230.0
NW (continuation)	5.00	35.0'	3.50'	50.0'	613.0
				TOTAL	23,037.0

Average width 6.37'; Grade 3.59% antimony.

POSSIBLE ORE RESERVES

Block	Length	Width	Depth	Short tons
No. 1 Adit	160.0'	5.0'	150.0'	12,000.0
Becker-Cochran Adit	90.0'	5.0'	200.0'	9,000.0
No. 1 Pit	180.0'	8.0'	150.0'	21,600.0
No. 2 Pit	100.0'	7.0'	50.0'	3,500.0
No. 2 Adit	120.0'	4.5'	100.0'	5,400.0
No. 3 Adit-NE Drift	125.0'	4.0'	150.0'	7,500.0
-NW Drift	100.0'	4.0'	150.0'	6,000.0
				65,000.0

Average width 5.73' at 3.0% antimony.

NOTE

1. Ore reserve tonnage factor taken at 10 cubic feet per ton.
2. The 'elbow' of the No. 3 NW drift (grid reference- 49, 885N, 21, 110E) has not been included in these calculations because of the extremely erratic nature of mineralization. The elbow could be the "tail-end" of the No. 1 Pit zone at depth.
3. Since the deposit is in a shear zone, the walls in most cases are incompetent and dilution of ore will change the above grades when mined.

8-23 ORE RESERVES BY MR. HAWLEY

Mr. R.G. Hawley, in his report of November, 1965, states that the average grade of the vein material over a 5 ft. average width is 5.1% antimony. A total strike length of 1,150 ft. of the vein has been proven with the vein open at

either end. Assuming the crosscutting, barren dykes account for 150 ft. of the proven length, the vein accounts for a 1,000 foot length.

Assuming a factor of 10 cubic feet per ton this gives an average of 500 tons per vertical foot.

The vein has been intersected in the top pit approximately 350 ft. vertical above the adit. Allowance for the hillslope will reduce the vertical distance to an average of 200 ft.

500 ton/vertical foot X 200 ft. = 100,000 tons.

If a depth, of half the proven vein length, or 500 ft. is assumed then probable tonnage:

500 ft. X 500 ton/vertical foot = 250,000 tons.

Total - 350,000 tons probable and possible ore at 5% Sb.

8-30 DISCUSSION

A comparison between the two probable and possible reserves shows that the latter figure is about 4 times higher and the average grade differs by about 1.5% Sb.

The 1,000 ft. strike length used by Mr. Hawley includes the length exposed in No. 1 and No. 2 adit and can be considered too long for preliminary reserve estimates since the distribution of mineralization and of the cross cutting dykes is unpredictable.

An inferred strike length of 700 ft. is more realistic.

The difference in grade reported is inherent in the difference between channel and chip sampling and spacing of samples. Both, Mr. Stadnyk and Mr. Hawley, have been associated with the writer in the past and are reliable. Mr. Stadnyk has a tendency to be more conservative in his sampling.

The actual grade will be more likely about 4% Sb.

A total estimate using 10 cubic feet per ton is:

$$\frac{700 \text{ ft.} \times 5 \text{ ft.}}{10 \text{ ft}^3/\text{ton}} = 350 \text{ ton/vertical foot.}$$

Assuming 200 ft. vertical above the adit and say 200 feet below the adit, a 400 ft. vertical extent then:

400 ft. X 350 ton/ft. = 140,000 tons.

Total proven and probable tonnage is:
140,000 tons of about 4% Sb.

8-40 MILL TEST

In 1964, 730 lbs. of ore from the lower pit was shipped to the Mineral Processing Division, Dept. of Mines and Technical Surveys.

The chemical analysis of the head sample was as follows:

Au	Ag	Sb	As	Pb	Cu	Ni	S	Zn	Fe	Insoluble
.01	.03	11.21%	.12%	.024%	.004%	.12%	5.64%	.27%	.81%	73.7%

By single stage floatation a concentrate containing 60.7% Sb was obtained with a recovery of 92.8%.

Analysis of the concentrate was as follows:

Sb	S	As	Pb	Cu	Ni
60.7%	23.2%	.12%	.21%	.015%	.002%

By two stage floation the grade of the concentrate was increased to 64.2% but the recovery was lowered to 87.2%. This was due to the high antimony content of the middling products.

The price of antimony during 1966 when Yukon Antimony was developing the property was in the order of 40¢ per pound and increased since to about $1.40 per pound.

Respectfully submitted,

F. Holcapek, P. Eng.

Vancouver, B.C.
April, 1976

YUKON TERRITORY

CON-AM RESOURCES
POP CLAIMS
WHEATON RIVER DISTRICT
WHITEHORSE M.D.

PROPERTY LOCATION MAP

SCALE IN MILES
0 50 100

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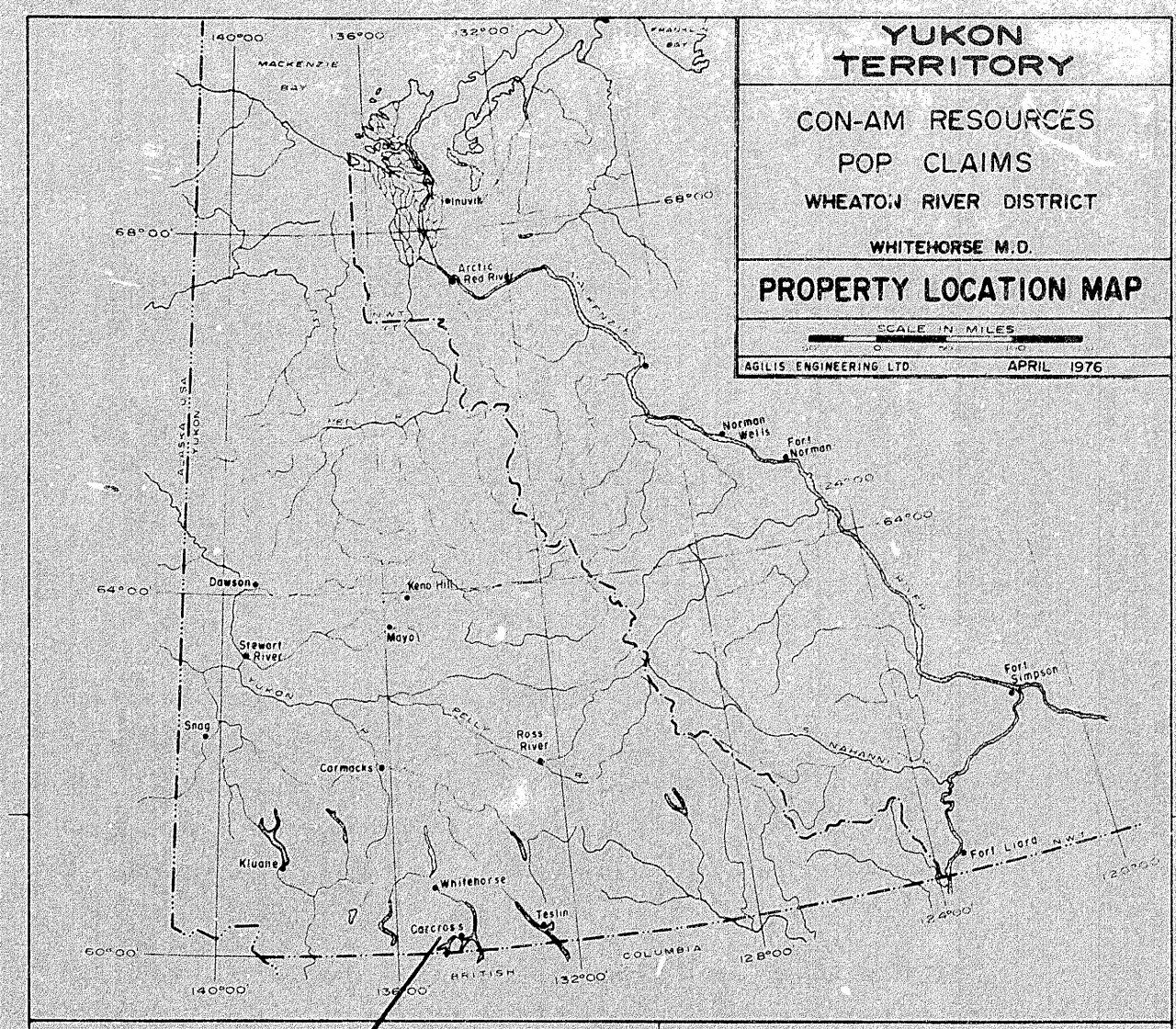

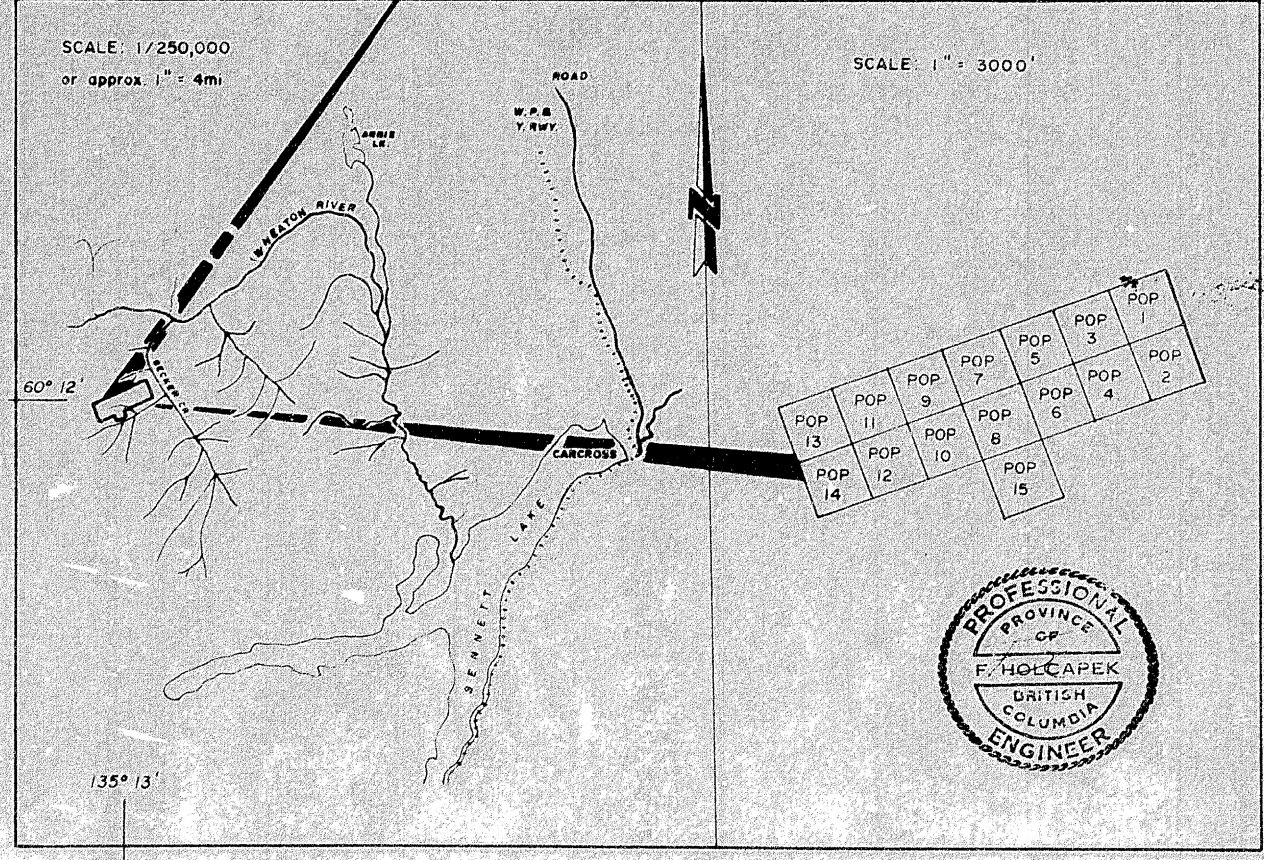

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