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PROGRESS REPORT #

PROPERTY FILE
104A GENERAL-07

on the

1978 Ongoing Exploration Program of the
Big Missouri - Unicorn Project

owned by

TOURNIGAN MINING EXPLORATIONS LTD.

Report by

D.R. Cochrane, P. Eng.

September, 1978.

Delta, B.C.



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Introduction

The Big Missouri-Unicorn property of Tournigan Mining Explorations Ltd. is centered some 25 kilometers due north of the town of Stewart, in the Skeena Mining Division of west-central British Columbia. The property was first located in 1904, and during the period 1938-1942 the Big Missouri mine achieved production and was operated by the Consolidated Mining and Smelting Company. It produced 58,384 ounces of gold from 847,615 short tons mined.

Tournigan Mining Explorations Ltd. first acquired 10 mineral claims in the area in 1974 and by way of an aggressive property acquisition program increased the claims total to 51 crown granted and reverted crown granted claims in 1976, and to a total of just over 85 claims at present.



In December, 1977, Dr. W.G. Smitheringale completed a report on the Big Missouri property and recommended a two year program with an estimated exploration expenditure totaling \$722,000.

During the field season of 1978, the exploration work proposed by Dr. Smitheringale has been proceeding, and this short report describes the progress of same. The author is an independent consulting geological engineer and has been periodically engaged on the project since 1974, the most recent visit being the period of September 23 to 28, 1978.

These notes on progress are a supplement to the December 30, (1977) report by Dr. Smitheringale. Background information (to which the reader is referred) is contained in earlier reports tabled in Appendix II at the back of this note.



1978 Exploration Progress is described under two
broad categories,

Part A Surface Work

Part B Underground Work



PART A SURFACE EXPLORATION WORK

In consideration of the rather limited field season period in the Stewart Area, a good deal of preparatory work was conducted in the spring of 1978. This work included the rather time consuming but important task of collecting maps, reports and field notes on all available previous exploration, development and mining work conducted in the area, and the preparation of a 1:5000 (metric) base map (with 10 meter contour intervals) from 1972 air photography of the region, (with expanded scale-1:1000 coverage of key areas). This work was completed by McElhanney Surveying and Engineering of Vancouver, B.C. In addition, tenders were let for specialized work, supplies ordered and personnel engaged for the project. The 1978 exploration program commenced in mid June and has continued uninterrupted to the present. The following notes briefly describe progress in various phases of the exploration work.



A-1 Access Road Rehabilitation and Construction

On June 18, 1978 White Mine Development mobilized a D-6 Cat to the property and work commenced immediately on The Big Missouri access road. Road work consisted of about 8km of road rehabilitation from the Silbak turnoff to Joker Flats, and this work included the slashing of several rock cuts, hauling fill, and the construction of a new bridge across Silver Creek. A 0.3km road was completed to the Groundhog Tunnel, 0.2km of road to the Unicorn Tunnel, and some improvements were made on the Unicorn to Martha Ellen Zone road.

A-2 Camp/Core Storage/Sample Preparation Facilities

The field camp is located at the north end of Hog Lake on Joker Flats. A 6 meter wide by 26 meter long pre-fabricated building was purchased in Stewart, dismantled,



transported to Joker Flats and erected. It is fully wired has hot and cold water and heat, and serves as a bunk house, cookery, and dry. In addition seven (7) new tent frames were erected including five (5) bunk tents, a first aid tent and an office tent. All tents are heated and have electric lights.

The power house at Hog Lake was "swamped" out and core storage, core logging and sample preparation facilities installed. There is sufficient core storage for approximately 1400 meters, a diamond saw, a small "lab" jaw crusher, Jones splitter, and a core logging area with fluorescent lights. The remainder of the old power house is used for storage.



A-3 Ground Control

A metric mine grid was established on the property in 1976, and the center is 1000 (meters) north; 1000 (meters) east; a semi-permanent survey station located on the JAIN mining claim (Lot 3209). All latitudes and departures are relative to this hub.

A transit-stadia traverse was run to the "Dago" (E Pluribus claim) area, and flagged, chain and compass cross lines were established at 100 meter intervals over the Dago area. A north trending base line (1600 east) was cut from Hog Lake to 1350 North, and the Dago grid totals 3.8 line kilometers of line and 0.75 line kilometers of base line.

The portals of all the underground workings were tied in with transit-stadia, and underground workings and



surface trenches located by standard chain and compass
surveys.



A-4 Geochemical Soil Sampling Program

A geochemical soil sampling program was completed over the Dago grid, and upper "B" horizon samples were collected at 25 meter intervals along the east-west cross lines spaced 100 meters apart. Approximately 160 soil samples were collected and are to be analyzed at a commercial laboratory in Vancouver, B.C.



A-5 Surface Trenching

Surface trenching and "freshening" old trenches was conducted by Atlas Copco Cobra drills and powder. It included work in five (5) zones namely:

1. The Province West
2. The Showem Zone
3. The Dago Zone
4. The Laura or S-1 Gold Zone
5. The Terminus Zone

The following table lists pertinent surface trenching information.



<u>ZONE</u>	<u>CLAIM</u>	<u>TOTAL TRENCHES</u>	<u>APPROX. CUBIC FEET DRILLED AND BLASTED</u>
Province West	Province	50	390
	E Pluribus	3	12
Dago	"	11	--
Laura (S-1)	Showem	4	15
Terminus	Terminus	15	--



A-6 Surface Sampling

Approximately 150 grab samples were collected from surface in order to re-check previous sampling work and for orientation purposes. In addition, a systematic bulk sampling program was completed on the freshened and new trenches described in the previous section. The procedure was as follows:

After drilling and blasting, approximately 50 pounds of muck was collected from a portion of a trench, measured, tagged, described and bagged. The samples were then crushed at the power house, split and re-bagged. All samples were sent to Chemex Labs in Vancouver, B.C. for analysis for gold (Au), silver (Ag), lead (Pb) and zinc (Zn.)



The following lists bulk muck samples collected,
crushed, split, and assayed this year.

1.	Province West	51 samples
2.	Showem	15 samples
3.	Dago	15 samples
4.	Laura	17 samples
5.	Terminus	10 samples



A-7 Diamond Drilling

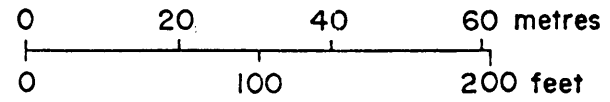
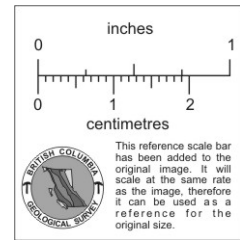
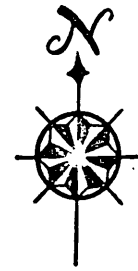
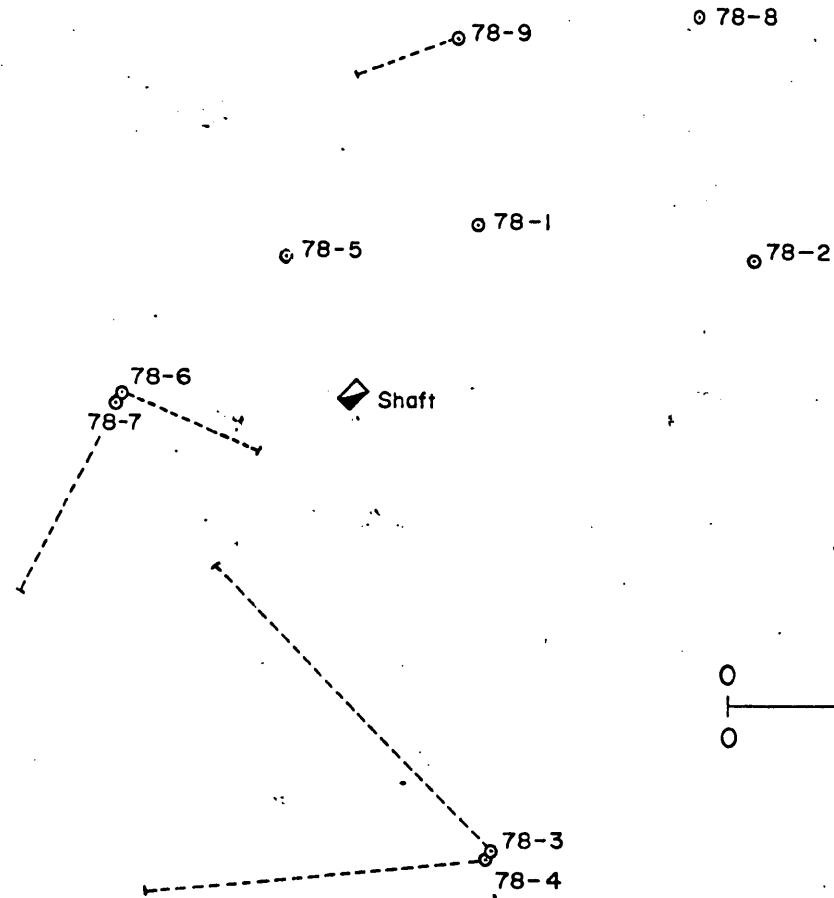
In the Spring of 1978 a drill contract was let to Connors Drilling (a division of Bow Valley Industries) for a minimum of 2000 feet (610m) of surface N.Q. wire - line diamond drilling. To date a total of nine (9) drill holes have been completed on the Dago Zone. The following lists pertinent diamond drill information.



Hole No.	Approx. Elevation*	Latitude (N)	Departure (w)	Bearing	Inclination	Depth (m)
78-1	922			--	- 90°	79.3
78-2	926.5			--	- 90°	57.3
78-3	923.6			325°	- 57°	96.6
78-4	923.6	SEE ENCLOSED MAP		260°	- 63°	93.9
78-5	923.4			--	- 90°	35.4
78-6	922.9			115°	- 90°	29.9
78-7	922.9			210°	- 35°	35.4
78-8	926.5			--	- 90°	32.9
78-9	923.2			254°	- 71°	<u>41.5</u>
Total to date						518.3

*Note: Approximate and relative to the Dago shaft, arbitrary elevation of 922 meters above sea level.

BIG MISSOURI DRILL HOLE LOCATIONS 1978 No.1 - 9



A-8 Geological Work

Geological mapping and logging core is being conducted by Dr. W.G. Smtheringale. Some Reconnaissance type geological work and rough core logging is being done by the author.

Detailed mapping at a scale of 1:500 is being conducted on the Dago Zone, and the author has inspected the Province West, Rambler, Martha Ellen, S-1 and Dago zones. Dr. Smitheringale is currently logging core in detail and plans a comprehensive underground mapping program at a (metric) scale of 1:125.



PART B UNDERGROUND WORK

The underground work to date has included the mucking and retimbering of five (5) portals, and one shaft, and mucking out an additional portal. This work was contracted to White Mine Development Ltd. The portals retimbered include the Groundhog, Showem, Snow, Mann, Province 2800 level, and Unicorn, the Pipeline Tunnel was mucked out and the Dago Shaft retimbered and the 60 foot and 100 foot stations rehabilitated.

In preparation for geological mapping, some 500 meters of underground workings have been washed with a high pressure water system. Several hundred meters of ditches have been cleaned and the Mann internal shaft covered and connecting raise between the Snow and Showem underground workings has been refurbished. A program of underground panel sampling was completed in the following manner:



A one meter square panel was chalked in and tied into underground stations, and a 0.1 meter grid was superimposed on the 1 x 1 panel; samplers used hammers and carbide-moils and chipped small pieces from the intersection of the 0.1 meter grid, collected the chips on a sample apron, bag, tag and sketched in the sample. The underground panel samples are shipped to Chemex Labs in Vancouver for assay. A total of 90 samples were taken in this manner.



PART C RESULTS, BUDGET AND RECOMMENDATIONS

The results of the 1978 exploration program have been most encouraging to date. Details of the results will be tabled in a later progress report, however the highlights are as follows:

Province East Zone: best surface bulk sample;
0.185 oz gold; 1.50 oz silver and
1% combined lead and zinc

Showem Zone: best surface bulk sample; 0.324 oz
gold and 3.96 ounces of silver

Dago Zone: surface sampling; 0.234 ounces of gold;
123 ounces of silver per ton;

Best underground panel sample (Mann Adit); 1.128 ounces of gold;
and 4.9 ounces of silver.

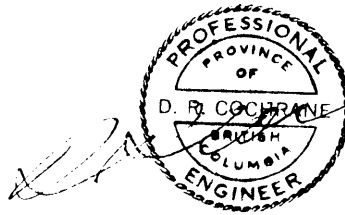
Surface drilling; DDH 78-3 from 147.3 to 153.7 (feet) 0.974
ounces of gold and 15.21 ounces of
silver per ton.



Additional and continued exploration work on
The Big Missouri-Unicorn Property is strongly recommended.

Tournigan Mining Explorations Ltd. has advised the
author that total 1978 exploration expenditures to date
are \$300,864.00.

Respectfully submitted



D.R. Cochrane, P. Eng.



APPENDIX I

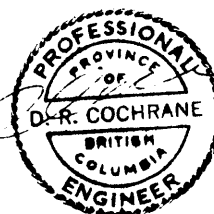
Certificate:

I, Donald Robert Cochrane, of the Municipality of Delta, British Columbia, do hereby certify that:

1. I am a consulting geological engineer with an office at 4882 Delta Street, Delta, B. C.
2. I am a graduate of the University of Toronto (1962) with a degree in Applied Geology (B.A.Sc.) and a graduate of Queen's University (1964) with a degree in Economic Geology (M.Sc.Eng.)
3. I have practiced my profession continuously since graduation and while being employed by such companies as Noranda Exploration Co. Ltd., Quebec Cartier Mines and Meridian Exploration Syndicate. During the last six years I have consulted on an independent basis.
4. I have no interest, either direct or indirect in the properties or securities of Tournigan Mining Explorations Ltd., nor do I expect to acquire any such interest.
5. That I have personally examined portions of the Big Missouri Property and that this report is based on that examination and on references listed in Appendix II (bibliography).
6. I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia, and also a member of the A.P.E. in the Province of Ontario, Saskatchewan and the Yukon Territories.

Sept. 1978
Delta, B. C.

(signed) D. R. Cochrane, P. Eng.



APPENDIX II

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