

MAR 19700008: BOCQUENE LAKE

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ECONOMIC MINERALS

FILE REPORT No.

U-AF-094(2)

U-AF-071(2)

DESCRIPTION OF PROGRAM AND SUMMARY OF COSTS
FOR EXPLORATION WORK ON PERMITS 113 AND 138

The exploration program decided upon for the 1970 season entailed the implementation of reconnaissance prospecting in pre-selected target areas along with some more detailed prospecting of previously outlined anomalies. In addition, it was decided to carry out a very limited program of trenching in one of the major anomalous zones. The decision was made not to carry out an airborne scintillometer survey at this time due to the fact that a large portion of the property is covered with overburden and that these overburden filled areas appear to be the zones of mineralization. About five square miles of virgin territory was prospected by the field crew.

The 1970 exploration program, carried out between July 1, 1970 and September 15, 1970, consisted of the following:

- a) Preparation of geological data and analysis of previous results.
- b) Establishment of field camps and execution of field exploration.
- c) Documentation of field observations and analysis of data.
- d) Analysis of grab samples
- e) Re-establishment of field camp and execution of trenching program.

- f) Documentation and analysis of results.
- g) Compilation of data, interpretation of results and preparation of reports.

The complete program was carried out under the supervision of a mining engineer with the field crew consisting of three experienced men. The field crew spent a total of thirty days on the two permits.

The equipment used for the field program consisted of:

- 1) One SRAT - SPP2 scintillometer
- 2) Two W.I.T. Scintillometers
- 3) One portable drill

COST BREAKDOWN FOR PERMIT 113

Preparation of maps and interpretation of existing information	750.00
Camp for field crew	300.00
Transportation	700.00
Wages	1000.00
Instrumentation (rental)	500.00
Compilation of data and reports	1500.00
Overhead	350.00
Total	<u>\$5100.00</u>

The three anomalous areas outlined in 1969 were not extended although numerous scattered radioactive readings were noted in old and new areas. It is believed that the major shear zones which are extensively covered with overburden should be the major targets for future exploration.

Part of the program carried out on permit 138 carried over onto permit 113 on the Disappointment Lake end of the property. Consequently a portion of the expenditure on permit 138 can be applied against permit 113.

COST BREAKDOWN FOR PERMIT 138

Preparation of maps, interpretation of existing reports, airphotos, and other geological data	1000.00
Camp for field crew (first phase)	400.00
Camp for field crew (second phase)	200.00
Transportation for field crew (first phase)	800.00
Transportation for field crew (second phase)	600.00
Wages (both phases)	1250.00
Instrumentation (rental both phases)_	650.00
Equipment (rental--second phase)	100.00
Compilation of data and reports	2000.00
Engineering backup	1000.00
Overhead	450.00
Total:	<u>\$8450.00</u>

The program outlined above on Permit 138 consisted of a first phase which entailed surface exploration and some grab sampling and a second phase which involved some shallow trenching in a major anomalous zone.

Zone 1, the major anomalous zone was outlined over a length of 6000 feet (discontinuous because of overburden). One area of Zone 1 which was explored to 4 or 5 foot depth revealed highly sheared structure and contained uranium, pyrite, hematite and possibly other mineralization.

Another very interesting radioactive zone was discovered south of Disappointment Lake and offset to the west from zone 1. This zone was highly metamorphosed and bore certain similarities to Zone 1 rock types.

Numerous new scattered radioactive anomalies were also located.

NOTES ON PACCA HOLDINGS LTD. 1970 EXPLORATION PROGRAM

BOCQUENE LAKE SECTION OF PROPERTY -- refer to Area Map 4 and related notes in prior report.

The exploration program on this area of the property consisted of reconnaissance surveying using scintillometers. The field crew traversed into different pre-selected areas of the property noting radioactive anomalies and rock types.

No large scale well-delineated zones of high radioactivity were outlined, and no zones of gross metamorphism were encountered by the field crew. However, gneissic pink granite, red altered granite, quartz veins and highly fractured granite were noted over large areas of the property. Radioactive fractures with readings to 3500 cps were observed and marked and background radioactivity to 300 cps was noted in numerous areas.

The structural features of this area of the property are characterized by massive granite ridges rolling off into very large overburden filled linear depressions. The swamp filled depression which delineates the shear zone of the Disappointment - Bocquene fault structure is some miles in width at this end of the property and very little outcrop is apparent in the swamp. It does, however, appear that the background radiation and radioactive fractures tend to be most interesting at the edges of the major swamp filled depressions.

The anomalous readings noted and marked during the program were:

500 cps	900 cps	700 cps
600 cps	850 cps	600 cps
600 cps	700 cps	500 cps
500 cps	600 cps	500 cps
700 cps	500 cps	3500 cps
600 cps	700 cps	

Numerous 500 cps readings were observed but not marked or noted. Similarly the large areas of 100 to 300 cps background were not marked although noted in the field records.

DISAPPOINTMENT LAKE SECTION OF PROPERTY -- refer to Area Map # 1

and related notes in prior report

The exploration program on this area of the property consisted of reconnaissance prospecting using scintillometers. The field crew traversed into different areas south of Disappointment Lake and southwest of the west end of the lake (west of area shown on map #1).

Structurally, the area south of Disappointment Lake is quite interesting with the grain of the country towards the east end of the lake running NW. Ridges of highly metamorphosed granite and bands of basic metasedimentary rocks were located in a position shifted some $\frac{1}{4}$ to $\frac{1}{2}$ mile to the west of where a linear extension of zone 1 (N of the lake) would be. Extensive quartz veins were observed in the granite gneiss and bands of what appeared to be chlorite schist were observed in areas. Extensive radioactivity was found in these areas of highly metamorphosed rock. The radioactivity in all cases was associated with fractures and alterations in granite and with contact areas of the granite and basic metasediments.

The radioactive anomalies recorded along a couple thousand

feet of the zone of granite gneiss -- basic metasediments -- schist were as follows:

700 cps	600 cps	600 cps
1000 cps	500 cps	500 cps
500 cps	750 cps	900 cps
750 cps	800 cps	800 cps
4000 cps	1200 cps	500 cps
4500 cps	1600 cps	700 cps
800 cps	1600 cps	700 cps
800 cps	2500 cps	500 cps
3000 cps	4000 cps	600 cps
900 cps	1000 cps	500 cps
500 cps	1500 cps	750 cps
100 cps	900 cps	4500 cps
1200 cps		

Numerous radioactive readings were not recorded and no effort was made to prospect overburdened areas. Large areas of 100 to 250 cps background were encountered.

Other radioactive anomalies recorded and noted from areas toward the W. end of the south side of Lake Disappointment were as follows:

600 cps	1200 cps
600 cps	500 cps
600 cps	1100 cps
900 cps	750 cps
1200 cps	600 cps
600 cps	750 cps
1200 cps	1500 cps
600 cps	

REFER TO AREA MAP #3 AND RELATED NOTES IN PRIOR REPORT

The exploration program in this area consisted of a reconnaissance survey using scintillometers. The limited traversing that was done was west of the large N - S linear depression. Although no major radioactive anomalies were located, the background radiation was often in the range of 100 cps to 200 cps going to 200 cps to 300 cps in numerous places.

The granite was generally gneissic being altered to brick red in places with characteristic radioactive brick red altered swirls being noted on occasion. Extensive quartz veins were noted in the northern part of this area which lies between two large N - S linear depressions. The quartz veins were variable in width ranging from a few inches to twelve feet and were generally continuous, running from one overburdened area to another.

The radioactive anomalies recorded and marked in this area were as follows:

1500 cps
750 cps
600 cps
600 cps
2000 cps

This area of the property is interesting structurally as it is located between N - S trending linear depressions of considerable size which should tie into the Disappointment Lake fault system about one-half mile south of where the reconnaissance survey was begun. Again, much of the area is covered with overburden especially the areas where suspected major shear zones should exist.

REFER TO AREA MAP #2 and RELATED NOTES IN PRIOR REPORT

Since this area had been more thoroughly prospected than other parts of the property and since the zone (Zone 1) lies along a reasonably well delineated structural feature (fold) the exploration program in this area consisted of a more detailed approach. The new anomalies noted and marked in this area were as follows:

2200 cps	900 cps
2000 cps	600 cps
600 cps	900 cps
6000 cps	1000 cps
1500 cps	500 cps
1200 cps	10000 cps
4000 cps	4000 cps
2000 cps	600 cps

Most of the anomalies below 1000 were not marked or noted if they were in an area where previous anomalies had been marked.

Two small trenches were blasted in order to better assess the probable structure of the zone. Again, the problems of large amounts of overburden in the structurally interesting areas and gross weathering of the highly metamorphosed shear zone areas limited the information that could be gleaned from the program. However, it was definitely established that Zone 1 is a uranium bearing mineralized shear zone containing hematite, magnetite and pyrite, with some lead, zinc, copper, and titanium and with traces of gold and silver present.

Assays of the somewhat leached samples gave values to

.365% U_3O_8 .

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T. Eng

President