

**LEGISLATIVE ASSEMBLY OF THE
NORTHWEST TERRITORIES
6TH COUNCIL, 41ST SESSION**

TABLED DOCUMENT NO. 28-41

TABLED ON JANUARY 30, 1970

JANUARY 22ND, 1970

THE NORTHERN MINER

Uranium discovery Baffin Island made by Borealis Exploration

Borealis Exploration has discovered uranium occurrences in the Cape Dorset area of southern Baffin Island, James L. Buckley, president, reports.

Borealis is an Arctic-oriented company that enjoys strong financial backing and management. It has just wound up its second season's program in the Arctic. Its 1970 program, which will, if anything, be accelerated, will likely call for expenditures in excess of \$300,000.

"We firmly believe that the Canadian Arctic will develop more quickly than most people think," Norman H. Ursel, the company's consulting mining engineer, remarked to *The Northern Miner* recently. "We have taken a serious approach to this, we have put together a nice bundle and are now at the stage of sorting out and getting on with the job," he added. Activities have centered on Baffin Island, Melville Peninsula and the Hood River area about 150 miles southeast of Coppermine and 300 miles north of Yellowknife.

Work on Baffin Island was conducted through the Kalbluna Syndicate in which Borealis holds a 55% interest. Nine prospecting permit areas and 324 claims aggregating 1,238,415 acres were investigated for uranium occurrences in the Cape Dorset, Frobisher Bay and Amadjuak Lake areas of southern Baffin Island.

Lengthy uranium zone

A significant discovery was made in the Cape Dorset area where a zone at least 1,800 ft. long and from 80-280 ft. wide returned encouraging values in U_3O_8 . Twenty-five samples selected from the surface of this zone averaged 1.18 lbs. per ton U_3O_8 and 0.54 lb. per ton ThO_2 (thorium). The highest grade sample assayed 8.50 lbs. per ton U_3O_8 and 1.3 lbs. per ton ThO_2 , according to a report by Norman H. Ursel Associates Ltd.

Also found in the Cape Dorset region were small pegmatites carrying high values in U_3O_8 , but at this time considered to be uneconomic because of size. Several large areas of radioactive granite were also found in Cape Dorset. For one of these, measuring about 2,000 ft. in length and 1,000 ft. in width, a grade of 0.48 lb. per ton U_3O_8 was indicated. Thorium is not present. It is planned to sample this in detail during the 1970 season.

Preliminary metallurgical test work on the first deposit indicates that bulk sampling will be required in 1970 to fully evaluate the problem of separation. These tests, conducted on a composite of the 25 samples, also showed the presence of

molybdenum as an associate mineral in the amount of 0.5 lb. per ton.

Uranium occurrences of economic interest were not found in the Frobisher Bay area and the Amadjuak Lake area.

New iron discoveries

Continuing exploration on Melville Peninsula resulted in the discovery of two new iron deposits in the west sector and a new section of possible economic interest in the east sector. On the basis of the work completed in 1968 total potential tonnage was reported as one billion tons in the west sector, assuming the vertical continuity to be at least twice the exposed depth of 800 ft. On this same basis and with the benefit of detailed work completed this year the total possible reserve is 2.9 billion tons in six deposits each amenable to large scale open pit mining.

In the east sector allowing depth continuity to 1,000 ft. and with added information derived from more detailed mapping the total possible reserve is 1.1 billion tons up from 0.5 billion tons in 1968. Thus total possible reserves of 4 billion tons have been delineated on the Melville Peninsula to date having an indicated grade equal or superior to that of the deposits now being worked in Labrador and Northern Quebec.

Bulk samples from the west sector and east sector have been sent to Germany for tests by European steel interests. Metallurgical test work is also in progress at the Ontario Research Foundation with favorable results to date.

Base metal indications

In addition to the iron deposits several base metal prospects were discovered on Melville Peninsula near the west sector iron deposits. Data is presently being compiled and evaluated.

In the Hood River area airborne magnetic, electromagnetic and radiometric surveys were completed during the past season. The results co-related with ground work completed in 1968 indicate good possibility for base metal discoveries.