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REPORT
ON
HUSSELBY URANIUM
SHOWING

=====
ATLIN, B. C.

MINING DIVISION
Jas. J. McDougall
Geologist

ENGINEER

MEMORANDUM

NOVEMBER 12, 1953

HUSSELY URANIUM, ATLIN, B.C.

3 Samples sent to Toronto by J. J. MacDougall:-

- | | |
|------------------------------------|----------------|
| 1. Composite Chip Sample | 0.03% U_3O_8 |
| 2. Moderately Radioactive Material | 0.11% U_3O_8 |
| 3. Weathered Surface Specimen | 0.09% U_3O_8 |

Beta-Gamma ratios show radioactivity is caused by Uranium not Thorium.

A.S.

Alex. Smith.

HUSSELBY URANIUM SHOWING

ATLIN, B. C.

LOCATION AND ACCESSIBILITY:

The deposit is located eight to ten miles northwest of Atlin, and is reached by a one mile trail leading westerly from a small bay on the west side of Atlin Lake (see Map 1 enclosed). Large lake boats, such as those available at Atlin, make the trip in about two hours.

Air charter service is operated out of Atlin by Herman Petersen.

The most direct access to the property is had by crossing Atlin Lake from an easily accessible point close to the Atlin-Alaska Highway Road.

PHYSICAL FEATURES:

North of Atlin, and including the Husseyby showings, the west side of the lake for several miles inland is almost a replica of the north shore of Lake Huron or Lake Superior. Outcrop is very scarce inland, but red stained cliffs about 50 feet high border the lake, on both sides, over much of its length.

Relief along the western strip is possibly no more than 300 feet.

The area is quite heavily timbered and small logging operations are being carried on within several miles of the deposit. The trees, which are mostly spruce and poplar, are no more than 100 feet in height, and would probably average about 75 feet.

Sloughs and small lakes are common.

HISTORY OF THE DEPOSIT:

Mr. Husselby, a trapper-pro prospector, and long-time resident of Atlin, made the original discovery of the radioactive rocks last year. He had previously taken samples of the odd looking rock in question and stored them in his cabin. Last year he obtained a geiger counter and during a sick spell, which kept him from trapping, checked the rocks close at hand, including those in his cabin. Smitheringale was contacted this spring and, after seeing that the immediate ground was adequately staked, optioned the property. Then began a "Yukon-type" wildcat staking spree, and most of the ground on both sides of the lake as far south as Atlin was staked. Smitheringale did some prospecting and sampling of the area. Conwest dropped the option this summer, despite the fact that Smitheringale was (and still is) very interested in the deposit.

As the deposit is so easily accessible, many geologists and engineers paid it a visit this summer, but nothing further was done in the way of optioning and no interesting discoveries were made outside of several on the Husselby Group. Mr. Holland, of the B.C. Dept. of Mines, is at present writing a report, after spending a week on the property. (Copy of his letter of Oct. 28th is enclosed).

Mr. Asselstine, going on the opinion expressed by most visiting geologists that the surface may be leached, made a deal with Husselby, involving a 20%(?) interest, and obtained an X-ray drill. This was being transported in at the time of this examination. Asselstine planned two holes, each of

which he believed would give him about 100 feet of depth under the most radioactive showings. He is to forward splits of core obtained to our office.

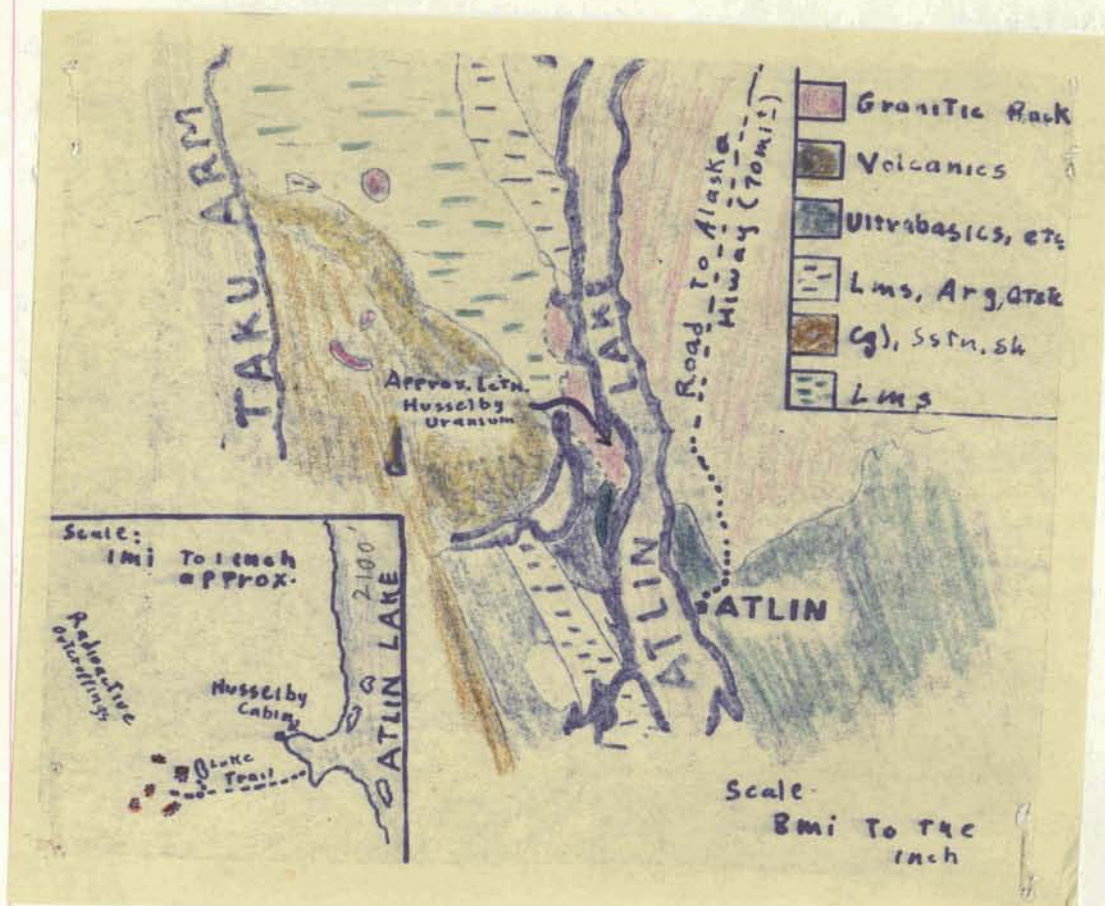
Mr. Husselby appeared quite disgusted with his fortunes on the deposit, and claimed he had received no payment from anyone as yet, despite the fact that he had guided numerous parties over the property this summer, and had to totally neglect his trapping, etc. He appeared easy to deal with.

Mr. Husselby had blasted into several outcrops of radioactive rock (see photo), but no other work had been undertaken.

GENERAL GEOLOGY:

Regional geology of the area is shown on Map #1. The radioactive rocks were apparently not differentiated from the enclosing granitic rocks in the area under question. Unpublished, up-to-date information re regional geology can probably be obtained from G. S. C. officers, Jimmy Aiken and Bob Christie, both of whom can be contacted through Ottawa.

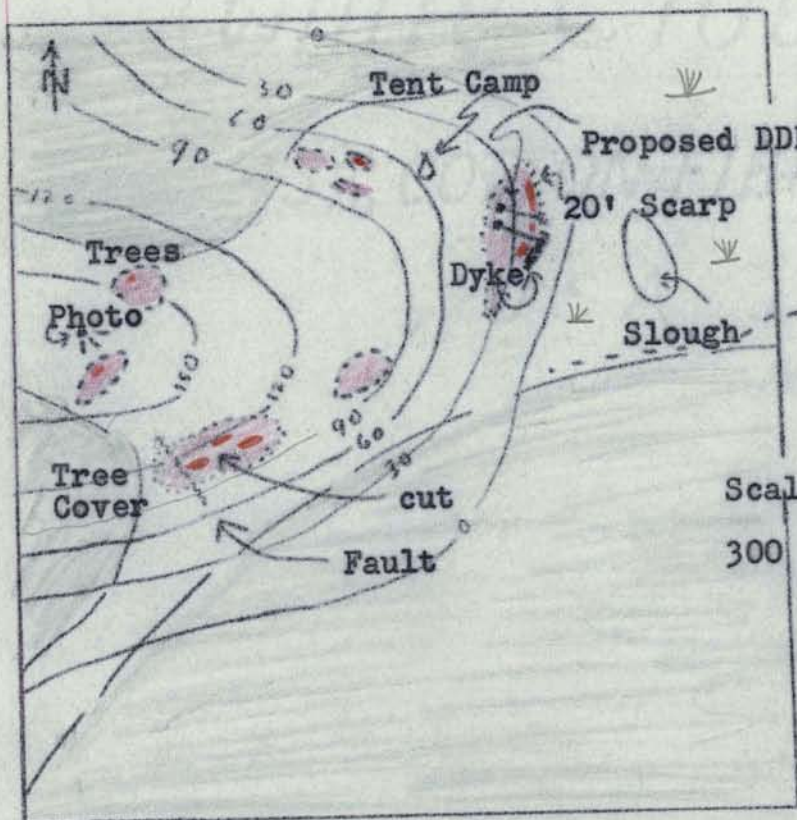
(See tracing Page -4-



LOCAL GEOLOGY:

Very little is known of the geology of the deposit, due to the lack of outcrop. Granite crops out a short distance to the north and east, but the exact location is not known. Except for granitic float, only radioactive rock was observed during this rapid examination. (Basic (pyroxenite?) dykes cut the rock in places and several prominent faults were noticed. (see sketch on page -5-).

Husselby Cabin



Scale approx.
300 feet to one inch.

Sketch of Husselby Uranium Showings, Atlin, B. C.

- Hematitic Radioactive Rock
- Trees & other cover
- Form Lines
- Scarp
- High Count Areas

Form line and values approximate
only

MINERAL DEPOSIT:

The radioactive rocks crop out on a gentle north-easterly facing slope of a small rise, about one mile west of the lake. A good trail has been cut into the property for the purpose of taking in a diamond drill.

The radioactive rocks are the only ones in place in the immediate locality. Large boulders of granitic float near the base of the hill may indicate proximity to granite. This view was expressed by Gunning, who believes the deposit "is underlain at no great depth by granite.

Hematitic alteration of all the rocks is very noticeable, and carbonatization is extreme.

Megascopically amphibole asbestos, tremolite-actinolite, calcite, and fine grained amphibole or pyroxene constitute most of the rock. This has been called an amphibolite by the Department of Mines, who believe it to be a "metamorphosed volcanic agglomerate." Dr. Gunning expressed the opinion that it was a "metamorphosed basic rock." Pieces of rock known to have come from the area would almost certainly be called a volcanic breccia. Radioactive Hematitic-stained fragments are enclosed by fine grained volcanic matrix. Without detailed work one could not be sure that these were not fragments taken up by basic dykes noted elsewhere.

The rock is extremely tough, despite the large amount of asbestos in most of it, particularly in the most westerly outcrops.

High count areas seem to be centered around supposed fault or fault-line scarps. This may be due to the more rapid physical erosion in these exposed areas, with less chance for chemical leaching of the radioactive elements, or may be due to mineralization related to the faulting. However, almost any rock in the area is radioactive to a certain extent. Depending on type of counter used, several times background may be obtained on most outcrops. Scintillometers are reported to "go crazy" anywhere on the deposit.

The radioactive minerals are as yet unknown as they appear to be very fine grained and are dispersed through the amphibolite. Samples of gouge from a fault zone were panned, and chocolate brown radioactive crystals, resembling uraninite, were seen. Thorium is known to be present in amount possibly equal to that of uranium. Most of the rock reacts positively to uranium bead fluorescent tests.


As mentioned above, work is now being done on the mineralogy of the deposit, and this will be forwarded when available.

CONCLUSIONS:

If the drill hole tests are favorable, and work is to be done on the property, an airborne scintillometer survey would be strongly recommended. It is unfortunate that a test flight by Lundberg's(?) Canalaska scintillometer equipped Anson could not have been made over this and adjacent drift covered property while the aircraft was travelling be-

tween Edmonton and Burwash. The area is ideally suited physically for such a survey, in which a height of 150 feet should be maintained.

Vancouver, B. C.
November 5th, 1953


James J. McDougall,
Geologist.

Office of the Chief
Mineralogical Branch.

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THE GOVERNMENT OF
THE PROVINCE OF BRITISH COLUMBIA

DEPARTMENT OF MINES
Victoria

28th October, 1953

Mr. James J. McDougall,
St. Eugene Mining Corporation Ltd. N.P.L.,
901-626 West Pender Street,
Vancouver, B. C.

Dear Sir:

This will acknowledge your letter of Oct. 23rd, regarding the Husselbee uranium occurrence.

The radioactive mineral is as yet unidentified. It occurs in an amphibolite which has developed from the metamorphism of a volcanic agglomerate having a considerable amount of limestone in the interstitial material. Intrusive granite lies close by, to the east and north.

Our analytical work is not complete but we know that both uranium and thorium are present, and also that the radioactive minerals are not in equilibrium. This means that all radiometric assays will be too low. The results of our wet assays for uranium and thorium are not available.

Yours truly,

Stuart S. Holland
Geologist

SSH/bl