Head of Serpentine Ck.

No Maps or Photos

REPORT

ON

VERITY

URANIUM PROSPECT

NORTH THOMPSON RIVER
B. C.

MINING DIVISION

Alex Smith
Geologist

~~MINING ENGINEER~~

83-M

Approx. position of Verity Showing

French's
House

Old Spur

Looking South from Mile 109

Albreda sub. C.N.R.

VERITY URANIUM-COLUMBIUM PROSPECT

NORTH THOMPSON RIVER, B. C.

1. Memo to A. J. Anderson, J.M.Cunningham-Dunlop, A. S. Dadson and T. Lindsley, dated May 30th, 1952.

2. Option Letter May 23rd, 1952, from O.E.French.

3. Letter to O, E. French, May 30th, 1952.

4. Report on Verity Prospect.

5. Government Lab Reports.

6. Photos - in front.

7. Claim Map.

8. Sections, Scale 1" = 100'.

9. Geologic Map Verity Showings, Scale 1" = 100'. - in front.

Vancouver, B. C.
May 30th, 1952

MEMO TO: A. J. Anderson
J. M. Cunningham-Dunlop,
A. S. Dadson
T. Lindsley

Re: Verity Columbium Uranium Prospect

This deposit on the C.N.R. North Thompson River, has possibilities of a very large tonnage operation. The U_3O_8 values of our samples, as given by a local assayer, are very low, but we believe these should be checked, so duplicate pulps have been sent to Dr. Dadson.

The indications are that the uranium mineralization occurs in the upper 200 feet of a dolomite horizon, some 400 feet thick. If this is correct, then there is the possibility of very cheaply open-pitting some 8,000,000 to 10,000,000 tons of ore of a "hoped for" grade of $3. (combined U_3O_8 and Cb_2O_5). This from the 1,000 length prospected, with both ends open and another similar body 9 claims lengths E on strike. The values are in the columbium-tantalium-uranium mineral pyrochlore, which contains about 10.3% U_3O_8.

If the organization is interested in testing this property, then our option which expires Friday, June 6th, 1952, should be protected by a down payment of $2,000.00 - or a short extension can most likely be obtained by writing or wiring Mr. French indicating our interest.

Metallurgical tests will be needed to determine what recoveries in columbium and uranium could be made by leaching a concentrate of the mineral. Pits would have to be deepened to obtain fresh ore for these tests. Tonnage and grade could be proven readily by vertical drill holes on a regular grid pattern.

AS/EPG.

Alex Smith

Alex Smith

Copies of Report & Maps sent to -

A. J. Anderson (Mr. Anderson's is only copy having
A. S. Dadson photos of upper showing)
T. Lindsley

C
O
P
Y

Blue River, B. C.
May 23rd, 1952

Alexander Smith,
St. Eugene Mining Corp.
901-626 W. Pender St.
Vancouver, B. C.

Dear Sir:

We, the undersigned, being owners of 21 mineral claims known as the Verity, Counter & Paradise Groups, situate on the east side of the North Thompson River, in the vicinity of Mile 110, Albreda Sub. Division, C.N.Railway,B.C. hereby give unto you and your principals of the Ventures organization the exclusive option for two weeks from this date to purchase a 95% interest in these claims for a total purchase price of $100,000. payable as follows:

$2,000. two weeks from date

5,000. July 15th, 1952
5,000. Nov. 15th, 1952
5,000. Mar. 15th, 1953
3,000. July 15th, 1953

5,000. January 15th, 1954 and semi-annually thereafter $5,000. until the total cash purchase price of One Hundred Thousand dollars has been paid.

This option is to be properly drawn up and executed with the usual clauses for the protection of both parties by June 30th, 1952.

Yours truly,

O. E. French

E. E. French

J. B. French

Accepted

May 23rd, 1952

Alexr. Smith

May 30th, 1952

Mr. O. E. French,
Blue River, B. C.

Dear Mr. French:

Have completed report and maps on your property today, and have forwarded copies to head office for their decision. I had the samples assayed locally, and the results are all very low. The highest was .04% U_3O_8, and the average about .015% U_3O_8.

Have sent duplicate pulps of our samples to Toronto for check assaying. They may not be able to get this completed before our two week option expires. Could you then give us an additional ten days option on your property.

In spite of the very low grade, I personally believe it may be of interest to the Company because of the possibility of large tonnages available. I hope our check assays are a little higher.

With best wishes,

Yours sincerely,

A. S.

Alex Smith

AS/EPG.

VERITY URANIUM-COLUMBIUM PROSPECT

NORTH THOMPSON RIVER, B. C.

INTRODUCTION:

This property is situated on the east side of the North Thompson River at Mile 109, C. N. Railway, Albreda sub-division, between Pyramid and Lempriere Stations. It consists of 21 claims, known as the Verity, Counter and Paradise Groups. These extend easterly from the railroad for 12 claim lengths. The lower, or Verity, claims are on a timbered side hill covered with heavy hemlock, spruce and cedar, very similar to Coast conditions. The upper, or Paradise Group, is in alpine country above timber line, and extends to elevations of over 6,000 feet.

The writer examined only the Verity showings. The upper claims are still buried in snow and will be until July. The accompanying photographs, taken by the prospectors, give an indication of the size of the deposit on the Paradise claims.

The uranium mineralization was discovered in 1951 by the owners, Mr. French and family, while test-pitting on a vermiculite showing. The side hill on the Verity claims shows only a few outcrops, and they are mostly resistant bands of gneiss. The overburden, however, is not very deep, probably less than 10'.

PRICE:

Total purchase price is $100,000., for a 95% interest. The owners wish an initial cash payment of

$2,000.00 within two weeks (see accompanying option letter).

GEOLOGIC SETTING:

The uranium mineralization occurs in a dolomite rock. The radioactive mineral is pyrochlore; an analysis of pure pyrochlore grains showed 10.3% U_3O_8 content, with columbite and tantalium. The mineral occurs in two forms - first, as a glistening dark octahedral grains, somewhat like magnetite, and second, as platy form somewhat like specular hematite. The grains are sometimes surrounded by narrow pink halos. The dolomite contains hornblende magnetite in isolated crystals, sometimes up to an inch or two across: Also forsterite (olivine), colourless apatite, and light pink zircons. In the Verity prospect the hornblende is of two types. In the northern portion it is a dark green clean-cut hornblende associated with biotite and vermiculite. In the southern portion it is light green in colour, perhaps due to alteration, and is disseminated in the coarser grained dolomite. In general, the appearance of this dolomite is very similar to porphyry, and in the early stages it was mistaken for porphyry.

The dolomite is underlain and overlain by banded thin-bedded felspar, hornblende, biotite gneiss of sedimentary origin. Occasionally the gneiss contains garnets.

The dolomite and gneiss are cut by later pegmatites, the larger bodies of which appear to be sill-like. Narrower cross-cutting pegmatites do not appear to be very continuous or numerous. No uranium-columbite minerals have

been found in these pegmatites.

The origin of the dolomite is not proven. The simplest explanation is that it is a metamorphosed carbonate bed. No limestones horizons are known in the immediate vicinity of the deposit, but on the other side of the river, there is limestone within three or four miles. If the dolomite is a sedimentary horizon, then the tonnage possibilities of the prospect are tremendous. The owners have made an intelligent study of the mineralization and structure of the deposits, and at present are inclined to believe that the dolomite was intruded in the same manner as the pegmatites but at an earlier date (perhaps there are similar instances in the Grenville Province).

The tested area of dolomite on the Verity is about 600 feet wide and about 2,000 feet long. From the pictures and description of the outcrop on the Paradise claims it appears to be of comparable size. The French's have staked their claims in an east-wise direction connecting these two showings. On the intervening Counter claims there are outcrops of pegmatite.

If the dolomite is of sedimentary origin, and is conformable with the gneiss, then a trace of it should extend northeastward up the hill.

The dolomite in places shows a sheared or banded structure which may indicate that it developed as a replacement of certain horizons in the gneiss, but whatever its origin, the work done to date by French has indicated

that the tonnage of radioactive dolomite is great.

WORKINGS AND SAMPLING:

The owners have done considerable work sinking prospect pits on the Verity deposit. These pits get down into crumbly granular dolomite at a depth of 1 to 5 feet. There is no place in the Verity area where the dolomite actually outcrops. Above the crumbled dolomite the overburden is fine talus working down the side hill from the overlying gneiss. This talus is not radioactive, and in general masks the effect of the underlying mineralization. The granulated dolomite extends from the bed rock surface to depths of 3 to 12 feet. Below that the rock becomes compact and, as mentioned above, have a granitoid appearance very much resembling porphyry. Most of the cuts do not extend down into this fresh or massive rock. Our samples then were taken mainly in this sandy dolomite. In this the minerals, including the pyrochlore, appear to be fairly fresh, so it was thought that the values obtained in this friable rock would be fairly representative of the underlying material.

Geiger counter readings were taken in the various pits and checked against the local background away from the pit. The pit was then sampled and an attempt made to obtain a representative sample for the exposed material in the pit. Geiger counter readings showed close correlation between the two types of mineralization associated with the dolomite. In the northern part of the area tested, counts were higher than the background but less than 2 ½ times the

background. Here the dolomite contains the dark type of hornblende and much vermiculite and biotite.

In the southern part of the dolomite zone counts were often greater than three times the background and up to 8 or 10 times the background. Here the dolomite contains a light green hornblende plus the other minerals.

Just what role, if any, was played by pegmatites in the emplacement of the uranium-columbite mineralization, is not clear. Good counts can be obtained both close to and away from the small pegmatite dykes in the dolomite zone. The pegmatites themselves do not give any count or show any mineralization. However, the mineralization might have been associated with solutions immediately preceding the introduction of the pegmatites.

ASSAYING:

W. G. Thomson, local assayer, has had the samples assayed radiometrically by Professor Howard at the University of B. C. The results obtained are shown on the accompanying 100 scale map. They are all very low. They do not show assay values proportionate to our counter readings. In the northern vermiculite rich portion of the dolomite, where geiger readings are only slightly above normal, the average U_3O_8 content is .01%. Proportionately the southern portion where counts are 5 times normal, should show a U_3O_8 content of .05%. The assays, however, do not indicate this - values being only about twice what they are in the northern portion. The highest value obtained, .04%, is from the only cut well down into massive rock.

There is possibility that the southern portion of the dolomite will average at least .02% U_3O_8. At the maximum price of $7.25 per lb U_3O_8 content, this might give a recovered value of about $2.50 a ton.

Regarding the columbium content of the ore, the picked sample assayed by the B. C. Department of Mines carried .2% U_3O_8, 1.3% Cb_2O_5 and 0.4% Ta_2O_5. If the uranium, columbium and tantalium content of the dolomite are entirely within the pyrochlore, and if this mineral is fairly uniform in composition throughout the deposit, then the expected average of .02% U_3O_8 would contain .14% Cb_2O_5, which might be a very valuable addition.

There are other by-products which might be profitably separated on milling the dolomite. The vermiculite in places near the northern edge of the dolomite, comprises up to 40% of the rock over widths of 10 or more feet. Zircons up to 1/2" long, but fractured internally, are quite common. In addition, there are minor amounts of beryl and tin.

Duplicate pulps prepared from our samples have been forwarded to Dr. Dadson for further testing. Perhaps they should be assayed for columbium as well as for uranium.

EVALUATION:

The presence of radioactive material over such a large area warrants careful investigation. There is the possibility of very large low grade, uranium deposit, comparable in tonnage possibilities to the Porphyry Coppers.

Even if the low assay values obtained are confirmed by check assays, the deposit may merit considerable testing by diamond drilling, etc.

It is doubtful whether a gravity concentrate made from the dolomite would be of high enough grade to be acceptable to the government, (the pure pyrochlore grains assay only 10.3% U_3O_8). Tests would have to be made to see what recoveries could be made by leaching processes.

The better grade of mineralization is found in the upper 100-300 feet of the 300-700' thick (?) dolomite horizon. The property is ideally situated for very low cost operation. A large tonnage of dolomite could be readily mined by open-pitting with some form of chutes or trackway conveying the ore to a treatment plant on the railway at the base of the hill. The Trans-Mountain Oil Pipe Line is at present being constructed down the North Thompson, across the river from the property.

The total price asked for the property is reasonable. Cash terms should be adjusted because of the very low grade of the showings and the expenditure required for preliminary drilling and metallurgical work.

Alex Smith

Vancouver, B. C.

May 30th, 1952

Alex Smith, Geologist

RADIOACTIVITY LAB. OTTAWA:

September 11th, 1951.	Precise Beta Determination U_3O_8 Content - 0.1% to 1% + Pyrochlore grains determined to contain 10.3% U_3O_8 content.
November 2nd, 1951	Beta Activity - 0.26% Gamma " - 0.26% Indicates activity due mainly to Uranium and not thorium.

B. C. DEPARTMENT OF MINES:

Lab. No. 7357 Sample August 28th, 1951	Magnesian limestone with actinolite some pyrite and columbite (= pyrochlore). U_3O_8 by chemical analysis 0.13%.
Letter December 15th	Columbite plus tantalium plus uranium content might be economical.
January 25th, 1952 Lab. #7838 Sample	U_3O_8 content - 0.20% ± 0.05% (Ta_2O_5 + Cb_2O_5) = 1.70% ± 0.10% About 0.4% Ta_2O_5 + 1.3% Cb_2O_5 Rare Earths less than 0.2%