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TARGET PROJECT #117

FIRST QUARTER REPORT

JANUARY - MARCH 1979

J.C. Stephen Explorations Ltd., 1124 West 15th Street, North Vancouver, B.C. April 1979



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SUMMARY

Relatively little work has been done on behalf of Target Project during the period. Attention has centred principally on an effort to farm out the NIT, BIN, GREER, and LAKE properties on a joint venture basis. Discussions at various levels were entered into with B.P. Minerals, Pacific Petroleum, Shell, E & B Exploration and Union Oil.

B.P. Minerals examined the data and discussed the area. Their geochemist S.J. Hoffman, had done thesis work in the region on a helicopter supported lake bottom sampling program for Rio Tinto. Uranium contents were not analysed and, although he still has custody of the samples, B.P. has not seen fit to do the uranium analysis.

John Lund at E. & B. discussed the project over the phone. Both E. & B. and Shell worked in the region using the Blizzard property of Norcen's as a model. Anomalous values had been obtained in lake bottom sampling. Very extensive staking was carried out. E. & B. and Shell were drilling HQ holes through basalt caps looking for semi consolidated gravels as hosts for uranium. The best intersection was by Shell and was in the order of one inch running 1 - 2 lbs U_3O_8 .

Lund was somewhat intrigued when I told him we had significant silt values and were not following the Blizzard type model. They have not decided what their policy in the area is to be this season and did not want to follow up on the data at the moment.

Shell evinced no interest.

Pacific Petroleum were relatively keen to see the data and consider the program. They are doing considerable exploration in the Penticton region drilling deep holes with down the hole hammer drills around the White Lake Basin. Further negotiation was stopped at Dome's suggestion.

Tim Godfrey at Union Oil was interested in the region. They had discussed it as being favourable and when I approached him he seemed optimistic and promised a quick appraisal of the data.

The project has been mentioned to some other companies such as Placer but no serious discussion ensued.

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SWAB GROUP

- 3 -

Scintillometer readings taken at soil sample stations on SWAB DETAIL GRID were plotted for comparison with geochemical and magnetometer results. The scintillometer map is provided with this report for comparison with maps included in the Annual Report Target Project 1978.

There are no particularly high readings and the pattern does not follow the geochem results closely. High scintillometer readings are in areas of alaskite outcrop, abundant alaskite float and, possibly, in wet areas of the geochem anomaly.

Air photos were examined by a geologist with experience in surficial geology. Her report was of a preliminary nature and a copy was provided January 31. A copy is included in this report as Appendix I for reference.

Selected samples on lines across the main soil anomaly were analysed for fluorine and thorium. Figures 1 and 2 compare uranium and fluorine results. There appears to be a direct and positive correlation between these two elements but the fluorine values are not particularly high. The mean of 54 fluorine determinations in soil is 284 ppm while the mean of 14 fluorine determinations in core is 982. The highest uranium value in core, 23 ppm, had a corresponding fluorine value of only 180 ppm. This is a negative correlation in contrast to the results in soils.





FIGURE 2

TARGET PROJECT #117 PROFILES OF URANIUM - - - - and FLUORINE

PPM IN SOIL SAMPLES, DETAIL GRID

SWAB GROUP

Thorium determinations were done on 54 soils from SWAB. Of these 18 were reported as <10 ppm and the high was 70 ppm. Determinations are in multiples of 10 which indicates to me less precise analysis than is common for uranium. The high Thorium determination corresponds to a uranium value of 120 ppm, the next highest,50 ppm Th, corresponds to 32 ppm U. Two values of 40 ppm correspond to 48 and 62 ppm U. Ten values of 30 ppm Th. correspond to U values ranging from 0.5 to 20 ppm U.

The Th./U. ratio of these higher values is in the order of 1:1 which is low in comparison with Th./U. ratio of 4 reported in the Grants region for ore and waste and ratios of about 4 for granitic rocks (p 27 Economic Geology, Series No 16, Canadian Deposits of Uranium and Thorium).

This would indicate, to me, remobilization of the uranium, either through leaching (from alaskite?) and redeposition in the soil, or transport from some mineralized source which may be itself remobilized uranium.

A letter from Dome dated March 26, 1979 enclosed lab results on several soil samples from SWAB which had returned high uranium values. The values by fluorimetric analysis confirmed original values but it had so far been impossible to identify the form of uranium present.

Assessment work has been filed to hold the SWAB 1 and 3 claims until August 1980 and the SWAB 2 and 4 claims until August 1982. A balance of \$13,035.00 has been placed in the P.A.C. account for possible use to assist in filing work on other properties.

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GREER GROUP

Six rocks from GREER were analysed for Th. The two high values of 40 ppm Th. correspond to 0.5 and 1.5 ppm U. One value of 20 ppm Th. corresponds to 2.5 ppm U and one value of 10 ppm Th corresponds to 3.0 ppm U. No definite ratio is indicated but Th values are considerable above those for U. (3:1 to 80:1)

GENERAL

To illustrate possible uranium bearing structures, in light of our present knowledge of the geology and geochemistry, Figures 3 - 8 are included with this report. Basically each model requires remobilization of uranium and deposition, either in organic rich pre-Tertiary channels, or in fracture zones where chemical barriers might occur at unconformities, contrasting rock type contacts, or intersection of fracture zones. These are, of course, highly speculative.

It is of interest that John Lund stated they had encountered gneissic rocks, similar to Shuswap Complex, in areas indicated as Topley intrusive on the published four mile scale geology map. Rocks of this type might provide a reasonable source rock for derivation of uranium.



SECTION

TERTIARY 1 CRETACEOUS OR UPPER JURASSIC VOLCANICS ✓ GRANITIC INTRUSIVES AND 5 × JURASSIC OR OLDER ~ VOLCANICS

URANIUM DERIVED FROM LEACHING OF GRANITES

ORIGINAL MODEL NO. 1

FIGURE 3.



TERTIARY ACID VOLCANICS AND SEDIMENTS OR OLDER VOLCANICS AND SEDIMENTS CRETACEQUS DEPOSITS IN OLD CHANNELS WITH HIGH ORGANIC CONTENT 1 URANIUM DERIVED FROM LEACHING OF OVERLYING BURIED ACID INTRUSIVE ACID VOLCANICS.

ORIGINAL MODEL NO. 2

FIGURE 4.

- 11 -TERTIARY VOLCANICS OVERLIE TOPLEY INTRUSIVES URANIUM GEOCHEM OCCURS IN CREEKS ON EAST WEST FAULT OR JOINT SYSTEMS april Hoy

URANIUM MAY OCCUR ON (1) UNCONFORMITY

(2) ALONG FRACTURE SYSTEMS

AND MAY BE DERIVED FROM (1) LEACHING FROM ACID VOLCANICS
(2) REMOBILIZATION FROM GRANITES



NIT GROUP MODEL

FIGURE 5.

NORTH EAST AND NORTH-NORTH_EAST STRIKING FAULTS DISRUPT TERTIARY RHYOLITE AND TUFF CAPPED BY BASALT 5 URANIUM GEOCHEM OBTAINED IN CREEKS FOLLOWING THESE TREND

URANIUM POSSIBLY DERIVED FROM (1) LEACHING OF ACID VOLCANICS
(2) BURIED ACID INTRUSIVE



URANIUM COULD BE (1) DERIVED FROM GRANITES AND DEPOSITED IN TERTIARY CHANNELS,

- (2) LEACHED FROM ACID VOLCANICS AND DEPOSITED IN CARBONACEOUS SEDIMENTS OR FRACTURE ZONES,
- (3) REMOBILIZED ALONG FAULT ZONES

GREER GROUP MODEL

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URANIUM GEOCHEM IN NORTHEAST AND EAST FLOWING CREEKS POSSIBLY DERIVED FROM FRACTURE CONTROLLED MINERALIZATION.

URANIUM (AND Mo) BROUGHT IN BY ALASKITE OR BY LATE STAGE TOPLEY INTRUSIVES AND CONCENTRATED WITH HEMATITE AND CHLORITE IN FRACTURE ZONES.

SWAB GROUP MODEL

FIGURE 8.

BUDGET

A Financial Report for the January - March period follows.

A request for funds for work during the early part of the summer is forwarded with this report. Fieldwork is expected to commence about May 20. A few specific targets possibly favourable for gold and for tungsten are to be examined early in the season.

> Respectfully submitted, J.C. Stephen Explorations Ltd.,

Jtc. Stephen

TARGET PROJECT # 117

FINANCIAL REPORT

JANUARY - MARCH 1979

MAPS, PHOTOS, PUBLICATIONS ETC.	\$2.50
ASSESSMENT RECORDING	410.00
GEOCHEMISTRY	390.32
BLUEPRINTING, DRAFTING & SUPPLIES	154.67
EQUIPMENT RENTAL & REPAIR	200.48
PUBLIC RELATIONS & SYMPOSIUMS	10.70
TELEPHONE, POSTAGE	64.94
EXPRESS, CARTAGE	16.50
J.C. STEPHEN EXPLORATIONS LTD. SERVICES	921.12
INTEREST AND BANK CHARGES	2.00
TOTAL EXPENDITURES	\$2,173.23
TOTAL CONTRIBUTIONS	5,000.00
BALANCE PER BANK MARCH 31, 1979	\$2,826.77

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APPENDIX I

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TARGET PROJECT # 117 Nechako Area, B.C. January 21, 1979

As preface to what follows, my statements are deliberately general as it is very difficult to make definite inferences as to the nature and source of the surficial materials in the project area without stereoscopic aerial photographic coverage.

In general there appears to be a thick mantle of moderately pervious to impervious unconsolidated material, probably till and associated drift deposits, in areas of subdued topography. The hills in the map-area have only a veneer of this material present; often there is only local colluvium and bedrock outcrops on the steeper portions. Near the eastern margin of the project area there is what appears to be a small esker complex where a stagnant ice block may have temporarily forced meltwater to follow a subglacial course.

The project area is characterized by striking linear features: drumlins, drumlinoid ridges and glacial grooves, that suggest ice movement was in an easterly to northeasterly direction and was independent of the underlying bedrock topography. The source of the drift material is vague. Direct glacial deposits (till) probably originated somewhere to the southwest of where it presently sits. As the topography is subdued, the material may have been transported great distances or it may have been shaped almost in situ. One consideration that should be borne in mind is that any amount of this material may be reworked older deposits. Tipper (1963) alludes very briefly to the possibility of an earlier ice movement very different from this latest movement. If this is correct, locating a possible bedrock source for the materials in the project area would be very chancy indeed.

Suggestions for further work in the area:

- 1. Air photograph interpretation with stereoscopic coverage
- 2. Ground survey to include
 - (a) Comparison of litholigies of erratics, if any, with closest known sources.
 - (b) Comparison of indicator lithologies, if any, from regularly sampled intervals, with closest known sources.
 - (c) Frequency distribution analyses of lithologies that might suggest possible source areas.

Marilynn Rode

