

# DOMEXPLORATION (CANADA) LIMITED

SUITE 702 — 360 BAY STREET,

TORONTO 1, ONT.

PHONE  
363-8417

CABLE ADDRESS  
DOMEXPLOR

August 1, 1968

Mr. C. S. Dunkley,  
Vice-President,  
Dome Petroleum Limited,  
706 - 7th Avenue South West,  
CALGARY 2, Canada.

Dear Charlie:

Re: Studer Option  
105-B-16, Yukon

Enclosed herewith is my report on the Watson Lake Asbestos Claims (Studer Option) in which I recommend that Dome Petroleum Limited drops the option and does not stake the copper showings adjacent to the claims. According to the letter of agreement, Dome is to make a copy of this preliminary report available promptly to Messrs. B. E. and H. P. Studer. I believe that it would be desirable to obtain from the Vendors a letter acknowledging receipt of the notice of relinquishment of the option and receipt of the report.

Yours very truly,



K. D. Watson.

KDW/mm  
encl.

## Preliminary Report

### STUDER OPTION

(105-B-16, Yukon Territory)

The property is in Yukon Territory (approximately 61° N, 130° W), 80 miles northwest of Watson Lake. I arrived at Basil Studer's camp by helicopter at 3 p.m. on July 22 and departed at 6 p.m. on July 24. During this time, I examined the showings of asbestos, copper, and iron sulphide discovered by Messrs. Basil Studer and Michael Johnny who had been prospecting on and near the claims since June 29.

### Geology

The claims are underlain mainly by irregular, southward-dipping sheets of ultramafic rocks and septa of metasedimentary rocks. The ultramafic bodies are composed predominantly of brown-weathering, blocky-jointed, greenish-black, massive serpentinite and steatitized peridotite in which extremely fine-grained serpentine, talc, and magnetite are readily apparent megascopically. The metasedimentary rocks include mainly micaceous quartzites, muscovite - and biotite-rich schists, and dark gray slates and phyllites. The ultramafic sheets are intruded by small irregular bodies of variable-textured gabbro pegmatite and include small masses rich in randomly-oriented, fine-grained, green amphibole.

### Asbestos

In the summer of 1967, asbestos was found on the talus slopes below the steep north-facing arête between the cirques by Francis Magun while he was hunting caribou. Some samples taken by Magun were shown to Basil Studer at Watson Lake and he visited the locality at the beginning of September, 1967. On May 4, 1968, 12 claims were staked by Messrs. B. E. and H. P. Studer and on May 23, an additional 20 claims were staked.

The approximate position of the asbestos showings is marked on the accompanying claim map. They are found along the steep north-facing cliffs, generally near the contact between serpentinitized and steatitized peridotite and metasedimentary rocks. A typical showing, such as that sketched in section in the accompanying diagram, occurs in a blunt irregular lens of light green to white, fine - to -medium-grained rock composed essentially of

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randomly-oriented amphibole prisms. The lens, which measures 20 to 30 feet in each dimension, is cut by a few curved shear surfaces along which slip-fibre amphibole asbestos is present. The fibre, which commonly is 1 to 2 inches long, and occasionally up to 6 inches long, is light green and harsh. Where weathered, however, the slip-fibre masses become "opened" or partially "opened" to form softer fibres of white colour. In places, "opened" fibre has accumulated in small hollows in the talus and scree to form clods of matted white fibres. Lenses of similar size containing slip-fibre amphibole asbestos occur about 30 feet east, 130 feet east, and 100 feet west of the one shown in the sketch and a few other lenses were noted elsewhere on the cliffs. An individual lens contains in the order of 1,000 to 2,000 tons of rock and the quantity of asbestos is, of course, only a very small fraction of this amount. The asbestos is of poor quality and the inadequacy of the quantity available is evident when it is noted that the asbestos mine at Cassiar in north-eastern British Columbia has been producing 85,000 to 92,000 tons of high quality chrysotile fibre per year during the past three years and that the new mine at Clinton Creek near Dawson, Yukon, will produce initially 60,000 tons of high quality chrysotile fibre per year.

#### Aeromagnetic Anomaly

A positive aeromagnetic anomaly of approximately 1,000 gammas is shown near  $61^{\circ}\text{N}$ ,  $130^{\circ}\text{W}$ , in the northeast corner of the Eckman Creek sheet, Yukon Territory (105-B-16) published in 1962 by the G.S.C. The approximate location of this magnetic high is shown on the accompanying claim map.

Chrysotile asbestos - a strong, flexible, silky, fibrous variety of serpentine generally occurring as cross-fibre veinlets - is the kind of asbestos mined at all Canadian producers, viz., Advocate, Newfoundland; Eastern Townships, Quebec; Munro Township and vicinity, Ontario; Cassiar, B.C.; and Clinton Creek, Yukon. Chrysotile veining results from intense serpentinization of ultramafic rocks and intense serpentinization is accompanied by the formation of abundant secondary magnetite. This follows from the fact that the iron present in olivine  $(\text{Mg, Fe})_2\text{SiO}_4$  and orthopyroxene  $(\text{Mg, Fe})\text{SiO}_3$  of the unaltered peridotite does not enter the serpentine  $(\text{OH})_4\text{Mg}_3\text{Si}_2\text{O}_5$ , but appears as magnetite  $\text{Fe}_3\text{O}_4$  instead. Therefore, magnetic anomalies on ultramafic intrusives mark favourable targets for search for chrysotile asbestos deposits.

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The ultramafic rocks at the site of the magnetic anomaly on this property may perhaps contain a little more dark green waxy serpentinite than the ultramafic rocks elsewhere on the claims and presumably therefore, a little more secondary magnetite. Unfortunately, although the ultramafic rocks are very well exposed, no chrysotile asbestos whatsoever was seen by the writer or by Messrs. Studer and Johnny in the vicinity of the magnetic anomaly nor at any other place on or near the claims.

### Pyrrhotite

Gabbro pegmatite crops out at the locality on claim J7 shown on the accompanying map and occurs abundantly in the mantle of frost-riven angular fragments nearby. A patch in this mantle, about 25 feet in diameter, displays rusty angular fragments of medium - to coarse pyroxene-rich gabbro containing 3 to 5 percent of disseminated pyrrhotite, which causes distinct local deviation of the compass. A selected sample consisting of several well-mineralized fragments collected from this locality were analyzed by Technical Service Laboratories, Toronto, with the following results: Nickel - trace; Copper - 0.02%.

Patches of similar size consisting of rusty angular fragments occur at several other places in the widespread felsenmeer on the claims. These are composed of metasedimentary rocks containing finely-disseminated pyrrhotite and, like the occurrence in the gabbro pegmatite, are not of economic importance.

### Copper

Small amounts of copper were found by Messrs. Studer and Johnny at three places in serpentinitized and steatitized peridotite east of the claim group (see accompanying map).

One showing consists of films of chrysocolla distributed intermittently along a flat rolling joint for a length of about 20 feet. Very locally, the joint contains short lenses or nodules of chalcocite up to 1/4 inch in thickness.

About 2,000 feet south of this occurrence sheared serpentinitized peridotite contains two patches of chrysocolla, 2 to 3 inches in diameter and 1/8 inch thick and, about 10 feet farther south, a third patch of chrysocolla in fractures,

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approximately one foot in diameter. A third showing on the cliffs approximately 2,000 feet to the northwest is reported by Mr. B. Studer to consist of similar patches of chrysocolla stain.

These copper showings, while evidence of the careful prospecting done by Messrs. Studer and Johnny, are not of economic interest.

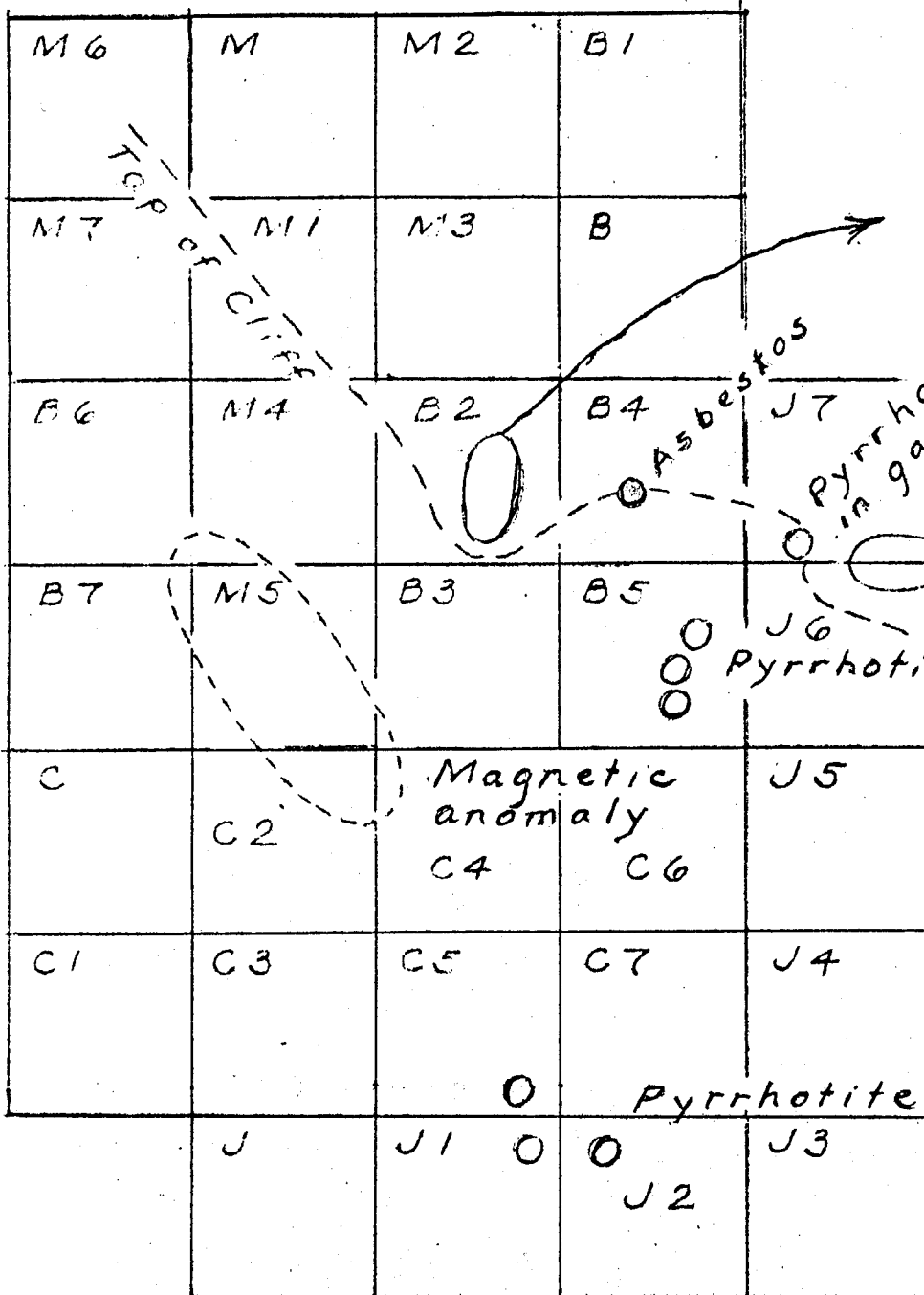
Recommendation

In view of my observations summarized above, I recommend that Dome Petroleum relinquish its option on the Studer asbestos claims. I recommend further that the company does not stake the copper showings adjacent to the claim group.

KDW/mm  
July 31, 1968

*K D Watson*

K. D. Watson



STUDER OPTION  
 1" ~ 1500'

KDW  
 7/31/68

SW

20'

NE

Micaceous  
quartzite

Amphibole  
rock.

-- Harsh slip-  
fibre asbestos  
1" - 2" long

Talus

Occasional clods  
of matted white  
soft "opened"  
fibre

Serpentinized  
peridotite

KPW  
7/31/68