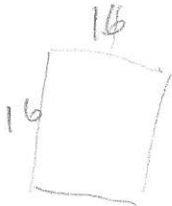


# J. R. Woodcock Consultants Ltd.

1521 PEMBERTON AVENUE, NORTH VANCOUVER, B.C., CANADA V7P 2S3 TEL: 604-988-2171

February 3, 1976



16  
16  
96  
16  
256

3500 - 4000

for 40 d.

Mr. Wally Bruce,  
Dome Exploration (Canada) Ltd.,  
Suite 600 - 365 Bay Street,  
Toronto, Ontario,  
M5H 2V9

I said 75,000

60  
20  
80x50

7000

60 class

Dear Wally:

Re: Selkirk Project

I am enclosing a geological map covering part of the area of interest. On this map there are several formations or sequences of rock that are of importance in our discussions and these have been coloured as follows:

1. The Horsethief Creek Group on the north (coloured in brown) is of a Proterozoic Age and does contain phyllitic units which could be confused with units within the Lardeau Group. The mineral occurrences that are shown on the map within this unit are mainly gold-bearing veins. The Horsethief Creek Group includes some limestone units which are coloured in dark blue or are in black (if very thin). It is quite possible that in places these could be difficult to distinguish between the limestones of the Badshot Formation.
2. The Hamill Group (yellows and oranges on the map) is supposed to overlie the Horsethief Creek Group. However it appears to be pinching northward in an area of folding (north of Goldstream River).
3. The Badshot Formation is coloured in light blue or is in black if too small to be coloured. It is the Lower Cambrian limestone unit often associated with lead-zinc deposits in southern British Columbia. The Badshot Formation does include some phyllite and some quartzite and so could easily be confused with some of the units in the Lardeau Group. The map shows a band of Badshot-rich strata, approximately four miles wide, lying southwest of the Hamill Group. These beds strike northwesterly along Downie Creek and into the vicinity of Downie Peak. Except for narrow lenses mapped within the pluton south of Goldstream River, the carbonate

I authorized \$8000. status regional 75000

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PROJECT <sup>2</sup> Selkirk			
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beds have been eliminated by the intrusion. Further to the northwest, a band of limestone rock occurs along the east side of the Columbia River and this has also been mapped as Badshot Formation. One would suspect that these are all on the same trend; however this cannot be certain.

4. Seven separate plutons intrude this sequence of rocks east of the Columbia River on map sheet 82 M - E  $\frac{1}{2}$ .

The problem in structural geology occurs along the Goldstream River where the Lardeau Group changes sharply along strike to the Horsethief Creek Group. Several explanations can be considered for this discontinuity.

1. A fault along Goldstream River is a possibility. However this is unlikely since the Hamill Group of rocks to the east is not offset.
2. The possibility of a pronounced unconformity between the Hamill Group and the underlying Horsethief Creek Group is unlikely as it appears from most reports that there is very little evidence of truncation of the Horsethief Creek Group in the southern parts of British Columbia.
3. The possibility of the Horsethief Creek Group and the Lardeau Group being equivalent with a facies change in this area is not likely as they appear to be distinctive units in other parts of British Columbia.
4. The most likely explanation is that the units on either the north or south side of Goldstream River have been miss-mapped. I am in favour of the interpretation that the Lardeau Group extends north of Goldstream River. This is based on a very brief study of the map and the distributions of the formations thereon. I can get very little information from G.S.C. geologists or the literature that would have any bearing on the problem.
5. The fact that the Hamill Group appears to be pinching northward and is somewhat squeezed by a northeasterly trending crossfold may have some bearing on the problem.

The Noranda sulfide deposit lies on the claim group just south of Goldstream River and near the contact of a pluton. This strata has been mapped as the Lardeau Group and at present there is no good reason to suggest any change in nomenclature. It is interesting to note that J. O. Wheeler, in his report for the Big Bend map area, mentions the copper showings on the Montgomery claim group (No. 11 on the map) lying on the southwest ridge of Downie Peak. "These deposits occur within a contact metamorphic assemblage of northeast-dipping marble and metasediments of the Lardeau Group which have been intruded by a cluster of quartz monzonite stocks. The mineralized zone lies not far beneath marble beds and above mica, chlorite, and andalusite schists, quartzites,

and calc-silicate rocks. Deposits consist of lenticular, bedded replacements of rocks that were originally calcareous sandstone, by pyrrhotite, some pyrite and chalcopyrite, and little sphalerite. Gangue minerals are quartz and silicified wall-rocks, with some garnet, epidote, and actinolite. No sulfides occur in pure marble. One mineralized zone has been followed by open-cuts along the strike for several thousand feet and over a vertical range of more than one thousand feet. Sulfides are present in zones one foot to fifteen feet in width. Chalcopyrite is most abundant in the siliceous country rocks on the hanging wall side of the main mineralized zone and locally in siliceous rock within the mineralized zone. A second bedded mineralized zone occurs a few hundred feet higher in the succession to the northeast."

It is interesting to note that the Montgomery claim group is on general regional strike with the Noranda deposit and that this general strike would carry on northwestward through the valley of Goldstream River and the vicinity of Hill Creek. However, as shown on the accompanying claim and topographical map, much of the ground lies in hydro power reserves.

The latest maps available in Vancouver show that the Montgomery prospect (most recently covered by the KJ claims) has lapsed and that the prospect has not been restaked by Noranda.

The Standard claim group (No. 12) is described on page 33 of Wheeler's report. It is also a copper prospect which contains pyrite, pyrrhotite, chalcopyrite, and a little sphalerite and it is associated with greenstone bands. The claim maps show that the ground surrounding these prior claims has been staked by Noranda.

The enclosed geological map shows six claim groups (outlined in green) that were staked in 1975. All of these excepting the TRI claim (west of the Noranda Goldstream River deposit) were staked for Noranda. Three of these claim groups (north and south of Downie Creek) do not appear to cover old showings and were probably staked to cover geochemical anomalies. The O'Reilly group, just west of the O'Reilly Creek, was recorded on October 16; the other two claim groups south of Downie Creek were also recorded in October; and the claims around the Standard prospect were recorded in November.

Thus it appears that Noranda had some regional geochemical results and acted on these late in the season. One would therefore suspect that Noranda would have sampled the creeks on strike to the northwest of their deposit (e.g. Hiram, Hill, Old Camp, Nicholls Creeks). However there is a small piece of ground between Goldstream River and Goldstream Creek which could not be satisfactorily explored by stream geochemistry. I have marked this on the topographical map as "available ground", and I have

outlined a block of 20 units which would cover most of this piece of ground above the 2200 foot contour of the hydro reserve. From the descriptions in Wheeler's report, the prospect on Downie Peak sounds quite interesting and it is difficult to understand why this was not staked by Noranda. If any ground acquisition is to be done in the area these are two targets that I would recommend.

As far as airborne EM and Mag is concerned, there appears to be no equipment in Western Canada and any equipment would have to be sent out from Toronto. I understand that the Dingen equipment is probably one of the better types; however mobilization cost for this equipment may be higher than for other types such as those supplied by Lockwood Surveys or Scintrex. Mr. Alexander of Lockwood told me that the mobilization costs for their equipment would be in the order of \$4,000.00. One thing that one must also consider is the fact that there is considerable graphite in horizons of these phyllitic formations.

The other alternative is doing ground EM work on widely spaced lines. This could probably be done cheaper on snowshoes over top of the underbrush than could be done in the summer. Probably the best equipment would be the Crone Shootback instrument.

It has been rather a rush to get this data out to you so that there will probably be numerous other things that I will think of tomorrow. However, it would probably be best to discuss the program by telephone after you have been able to digest this data.

Yours very truly,

*Marilyn Brooks*  
*per J. R. Woodcock*

J. R. Woodcock

10 stake available.

JRW:mb  
Encls.

MEMO TO: File

DATE: February 6th, 1976

FROM: G.S.W. Bruce

SUBJECT: Shuswap Project - Proposed  
Selkirk Project; Dick Woodcock  
Proposals.

On February 6th, 1976, I spoke to Dick Woodcock:

- (1) I suggested that we immediately attempt to stake ground on either side of the reported Noranda discovery on Goldstream River at about  $51^{\circ} 35' N$ , approximate; longitude  $118^{\circ} 30' W$ , approximate. We agreed that an appropriate amount of staking, which might cost a total of \$8,000, might involve about twenty claims directly east of the Noranda showing, between it and the Columbia River and also perhaps 60 claims south-east of the Noranda discovery, starting from the known occurrence on Downie Peak and extending along the favourable horizon (?) from Mount Downie towards the east boundary of the Noranda block. Dick reported that he would get this staking started just as soon as possible and that this staking would be carried out instead of the airborne E.M. test which we had discussed.
- (2) As to our total participation in the Selkirk Project, described above, and the work in the Shuswap Dome area, we said that we could go firm for \$75,000 worth of work (provided a suitable programme could be outlined) to cover the Selkirk and the Shuswap work. The suggested \$8,000 work of staking mentioned above would be in addition to the \$75,000 figure.
- (3) The immediate staking is necessary in order that we will have a foothold in the Noranda discovery area so that we will be able to carry out a meaningful programme here.

GSWB/db

c.c. Selkirk Project File

*W Bruce*

GSWB	LBH	DRS	EAP
PROJECT <i>Shuswap</i>			
FIBERS - 1976 <b>LE</b>			
<input type="checkbox"/> PROPERTY	<input type="checkbox"/> MILLING		
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<input type="checkbox"/> OTHER			

MEMO TO: File

DATE: January 30th, 1976

FROM: G.S.W. Bruce

SUBJECT: Proposed Shuswap Exploration, 1976

GSWB	LBH	DRS	EAP
PROJECT			
FEB 2 - 1976			
<input type="checkbox"/> PROPERTY	<input type="checkbox"/> BILLING		
<input type="checkbox"/> L. CUTTING	<input type="checkbox"/> LEGAL		
<input type="checkbox"/> TECHNICAL	<input type="checkbox"/> MISC.		
<input type="checkbox"/> OTHER			

Dick Woodcock has outlined three areas in the Revelstoke area upon which he recommends exploration of \$50,000 each for the coming year. He wants Dome to have first choice and we can take one, two, or all three of these ventures if we so desire.

Very briefly, he is proposing the following:

- (1) Further geological work on the Shuswap gneiss dome, particularly in the vicinity of the Cottonbelt showing and the Ruddock Creek showings.
- (2) Geochemical exploration in the dense forest on the flanks of the Thor-Odin gneiss dome, generally south of latitude  $51^{\circ}$  north. Work on the Thor-Odin dome would be undertaken to find similar zinc-lead pyrrhotite calc-silicate strata-bound sulphide deposits in areas of heavy forest cover which Woodcock doesn't feel have yet been thoroughly explored.
- (3) Work on the east side of the Columbia River at approximately  $51^{\circ} 30' N$ , longitude  $118^{\circ} 30' W$ , along Goldstream River.

Rumours that we have been hearing fairly consistently are that Noranda has a 7 million ton deposit grading 2% Cu, with zinc values, in schists of the Lardeau series.

#### ASSESSMENT OF PROPOSALS

From Dome's point of view, I think the best of the three bets would be to launch an immediate programme, of some kind, in the Goldstream River area near the Noranda occurrence. Possible approach is outlined below, under "Possible Approach." My second choice would be further work within the same area as our last year's programme, i.e. in the Shuswap complex between Cottonbelt

*Spoke to Woodcock today  
and he likes these ideas.*

and Ruddock Creek. I think, however, that there is little likelihood of finding anything in this area by doing geological mapping. Therefore, despite the limited usefulness of geochemistry in this area, I feel we would be better advised to design a programme to reconnoitre the whole fringe areas of the entire gneiss dome in the hopes of ~~finding areas of the entire gneiss dome in the hopes of~~ finding thicker, good grade zinc-lead pyrrhotite deposits.

I have very little knowledge of the Thor-Odin dome, but feel that it could always be done later if either ~~or each~~ of the other two projects gave encouragement.

#### POSSIBLE APPROACH

It is tentatively suggested that I talk to Dick Woodcock to sound him out on doing approximately \$50,000 (+) worth of work, approximately evenly divided between the Noranda area and the Shuswap gneiss dome:

1. Immediate consideration could be given to attempting to find out if the Noranda find is conductive and to find out if it would be possible to do some test A.E.M. over it with the possibility, if successful, of covering, say, a 50 square mile area around the Noranda find by A.E.M. before the snow has gone and competitive field work starts. If this is not possible, then perhaps a compilation of all known data in the area might suggest some geochemical or staking approach that could be taken to give us a favourable land position before exploration gets started seriously in the Spring.
2. On the Shuswap gneiss dome, between Cotton-belt and Ruddock, I think we should consider a combination of total stream geochem coverage in order to find totally new zones of the type we are looking for. If these types of zones are conductive, then we may use some form of light-weight E.M. to follow up geochemical indications. I feel that this approach would give us a better chance of finding an ore deposit than geologic mapping around known occurrences owned by others. At any rate, I will try this approach on Dick Woodcock.

## Dick Woodcock re Shuswap.

- ① Without committing, I intend to recommend a programme costing 50,000 - 75,000, providing Woodcock is agreeable, consisting of 50% effort on Noranda area & 50% on Shuswap Dome.

### (a) Noranda area:

- (i) see if we can get contractor, right now, to fly a few receiver lines; if method seems feasible fly 50 sq miles & stake edvs.
- (ii) if (i) impracticable then compile all known data then decide on a priority method - staking, early geochem or whatever.

### (b) Cottonbelt ~ Ruddock Dome

- (i) instead of local mapping suggest overall geochem approach looking for entirely new situations
- (ii) light wt sm might make good follow up tool.



# Shuswap

20 Jan 76

## - Alternatives

(a) Shuswap and extend N, paying attention to W. Flank.

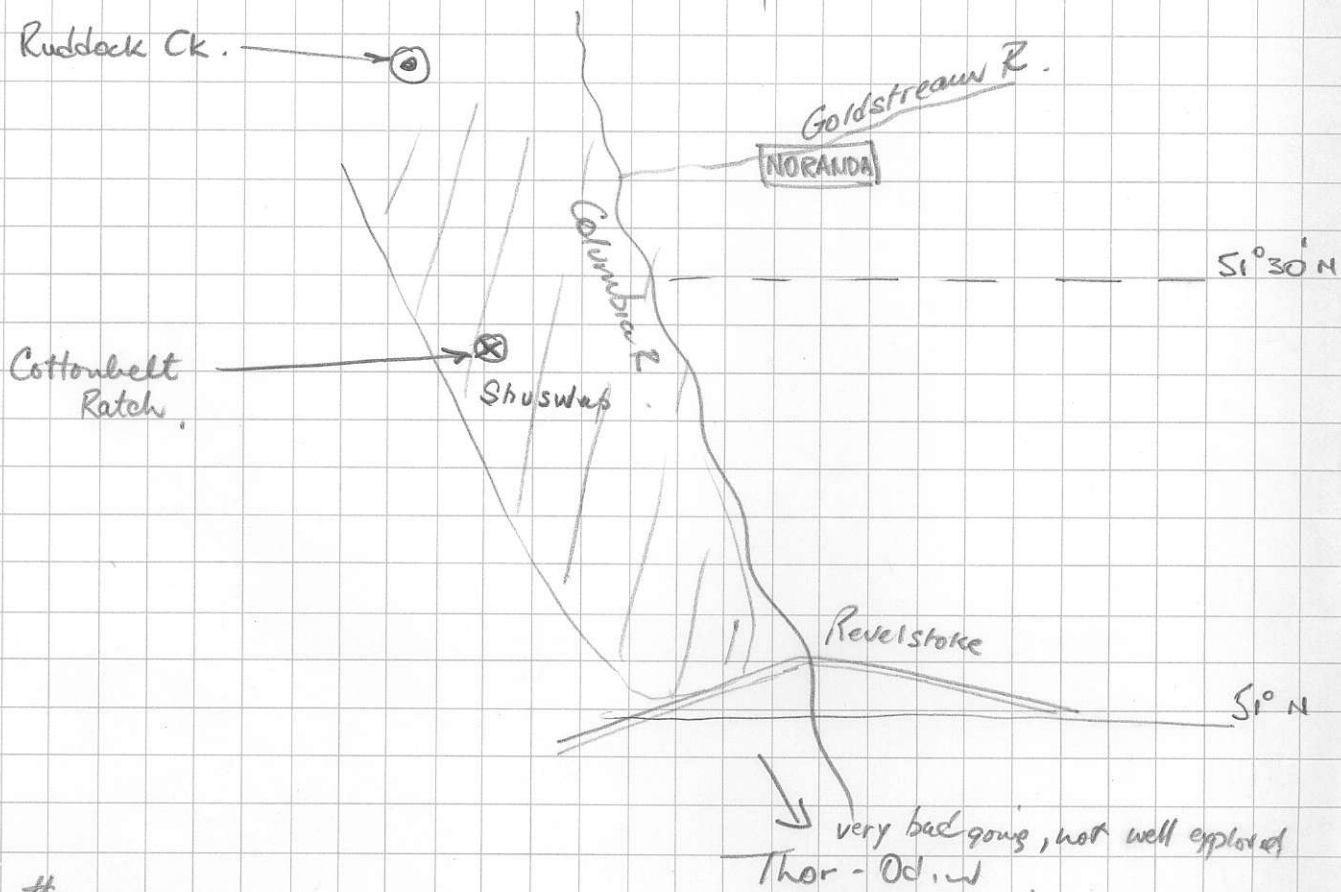
JRW recommends mapping

- (a) Ruddock to see if extends to West
- (b) map Ratch #1 plus ground to N, Vegas Nevada.

Ratch claim's were staked on head of Cottonbelt where there is 3' width of Pb-Zn in massive sulphides in Calc-silicates.

on Ruddock deposit 5-15' thick where there is no structural complexity.

Noranda zone (Goldstream) 82M  
rumoured 7M tons + 2% Cu  
118°  
+ 30'

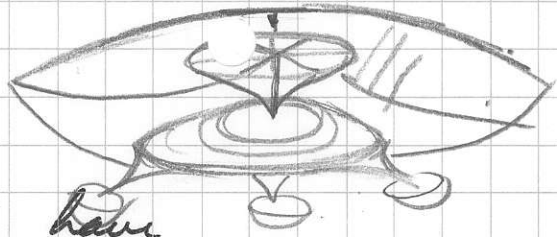


#100,000 to explore Shuswap + Noranda area.

\$50,000 Thor Odin

#150,000 = 3 months

Shuswap.



- ① Noranda rumoured to have  
got 8% Cu/30' in talc schists  
and volcanic sediments of the Lardeau  
group - massive sulphides with  
Cu + Zn + Pb + minor Py.

94/72

# J. R. Woodcock Consultants Ltd.

1521 PEMBERTON AVENUE NORTH VANCOUVER, B.C., CANADA TELEPHONE: 604-988-2171

May 14, 1975

Mr. G. S. W. Bruce  
Dome Exploration (Canada) Limited  
600 - 365 Bay Street  
Toronto, Ontario  
M5H 2V4

Dear Wally:

Re: Zinc exploration within the  
Shuswap Complex

Most companies searching for zinc in western Canada are working in the Paleozoic carbonates of the Rocky Mountains, and the large McKenzie Mountain fold belt. Although these deposits can be quite profitable even in remote areas (Pine Point), generally the individual deposits do not have the size and continuity of the more sedimentary massive sulphide types such as the Sullivan ore body and the Vangorda Creek deposits.

The stratiform zinc deposits which occur within the Shuswap metamorphic complex, more closely resemble the Sullivan-type ore body in that they do occur with iron sulphides and are continuous for thousands of feet. I believe that now is the time to start a preliminary program of study, orientation field work, and exploration for these deposits.

In support of this proposal I am submitting three publications:

- (a) "Some aspects of structural evolution and regional setting in part of the Shuswap Metamorphic Complex", by J. E. Reesor, 1970. This is not intended for detailed study by a busy exploration manager. However the map on page 74 gives the geographical distribution of the three main gneiss domes, the Valhalla, the Thor-Odin, and Frenchman's Cap.
- (b) The Jordan River area, Bulletin No. 57 by James T. Fyles, 1970. This is the most important of the publications and pages 41 to 45 are most pertinent. I have underlined or marked the statements that I find very encouraging.
- (c) Page 38 of the 1974 Annual Review of Mining Engineering gives some indications of the dispersions that can be expected in some of these stratiform lead-zinc deposits.

Fyles, in his report, has stated that it is difficult to trace the mineralized horizons and he has suggested that there may be several of them. Considerable work is now being done on the Metamorphic Shuswap Complex in British Columbia, by government geologists. Several G.S.C. geologists are studying the gneiss domes and their surrounding metamorphic terrain. In addition there are some detailed studies going

KOW

Shuswap tech... 2

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on in the Kootenay Arc in order to define the stratigraphy in detail with a view to trying to trace the Lower Cambrian strata northwestward into the metamorphic terrains. Also, the provincial government is assigning one geologist to study the mineralized silicate horizons such as those mentioned by Fyles. Thus there will be considerable new information readily available from these government geologists this coming winter and over the next few years.

The political problems are still with us. However I hope and expect the socialist regime to be replaced in the next provincial election. The political situation has prevented the high degree of exploration that should be presently in progress in an area so favourable for zinc. It has also had the effect of eliminating mineral claims which had been held relatively inactive by companies and individuals.

I would like to start a small exploration program lasting two to three weeks in August, in the area of metamorphic rocks lying northwest of Revelstoke (Frenchman's Cap dome). Some of this area has fairly rugged topography and therefore fairly good rock exposures. Information gained in this area could be used to work further to the south in areas of more abundant vegetation and overburden. Initial work would include examination of one or more of the three main deposits associated with Frenchman's Cap, collecting rock specimens and samples for studies and geochemical analyses. The objective would be to find some relatively monomineralic formations (silica or carbonate) in this metamorphic terrain, which could be used to trace the mineralized horizon; to find geochemical elements that could be used to follow out the horizon on strike; and to check the stream geochemistry, both the water and the silts. In conjunction with this orientation work, there would be some prospecting and mapping and stream geochemistry to try and find something of interest in the preliminary work. However, the main objective is to get data which by itself or in conjunction with the government data will yield targets or diagnostic criteria to find targets for exploration. In addition to checking for these stratiform zinc deposits, any silts would be checked for uranium as this is an area of soda and potassium-rich metamorphic rocks with molybdenum prospects and reported uranium occurrences within pegmatitic rocks.

The crew for this would have to include myself, one or two assistants or junior geologists, and a prospector. Helicopter support would be needed for the field work, but this could be accomplished by extending a two-month contract that I already have for a G-3. No details have been worked out on the exact cost because the exact program is hard to define and will change as the orientation studies proceed and knowledge is gained. A tentative suggestion is \$15,000 to \$20,000 (maximum) for the field work and the subsequent work in the office.

late Aug?  
W also

Mr. G. S. W. Bruce  
Dome Exploration (Canada) Limited

page 3

May 14/75

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Please give this suggestion some thought and let me know if you have any interest in pursuing it. I consider the suggested costs reasonable to lay the groundwork for what could become a major exploration project when our political situation improves.

Yours very truly,

*J. R. Woodcock*  
J. R. Woodcock

JRW:mb  
Encls.

P. S. I checked a little further into my suggestion of exploration work on Vancouver Island as I mentioned to you on your last visit to Vancouver. It would be necessary for me to get further information and possibly even make another field visit to some of the spots that I considered, before recommending an exploration program.

GSWB	LBH	AM	AMcA
PROJECT _____			
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<input type="checkbox"/> TECHNICAL	<input type="checkbox"/> MISC.		
<input type="checkbox"/> OTHER _____			