

July 22, 1971.

MEMO TO: File
FROM: G. J. Quinn
SUBJECT: DENNISON - FLUORSPAR

cc: K. C. Hendrick
J. Gibson

Re: spar 82M
823816

Jim Gibson from Exploration asked for some spar prices for an evaluation study he was doing on potential spar out of the Dennison, British Columbia property.

I suggested two delivery points from Kamloops, Japan and Chicago. Carl Hibbeln's approximate costs to Japan totalled \$16.31 from the mine. This was made up of \$1.65/ton trucking costs to Kamloops plus \$4.60/ton raiiling to Vancouver. Vancouver handling costs would be about \$2.00/ton. Estimated ocean freight on a 10,000 ton parcel from Vancouver to Japan would approximate \$9.00/Long ton or \$8.06/Short ton.

Total costs from Kamloops to Chicago would be higher because of the U.S. duty and high rail costs. Missouri Pacific Railroad had quoted me a combination rate of \$35.61 on a trial lot of spar from Brownsville to Regina. Carl Hibbeln used this factor plus another rail estimate to come up with an approximate Kamloops to Chicago rail cost of about \$25.00/Short ton. Total cost would then be \$32.50/Short ton.

Jim Gibson confirmed the spar would be about 90% CaF₂. Our current price for this grade is \$58.25/Short ton f.o.b. Tampico. Deducting \$15.00 in freight and taxes before subsidy, the return at the mine would be about \$43.00. With subsidy, it would be about \$47.00. The approximate delivered price to Chicago ex B.C. would be about \$76.00 US/St.

Because the fluoride zone is so small, Jim Gibson's initial estimates indicate it to be one of very low profitability.

6/23
WLB ✓
JEV ✓
FILE
AR
BE 4/1

MEMO TO: File

February 1, 1972

FROM: J.A. Gibson

SUBJECT: Birch Island Fluorspar Property
Rexspar - Denison

A meeting was held at the Denison Mines office at 10 A.M., Monday, January 31, 1972, at the request of Noel O'Brien of Denison. Purpose of the meeting was to hear new ideas for finding additional ore on the property. Present were Noel O'Brien, R.L. Evans & Tom Avison for Denison and W.L. Brown, J.E. Kraft and J.A. Gibson for Noranda Exploration. No additional fluorspar target areas of interest were indicated. N.B.

It was generally agreed that at least double the present reserves would be necessary to permit a viable operation at Birch Island. Denison has methodically investigated all existing targets in the favourable trachyte area. I.P. and soil anomalies were all drill tested with no encouraging results. None of the other rock formations on the property are considered favourable for fluorspar mineralization. I.P. was used because of the high percentage of pyrite in the main fluorite zone. However, no I.P. was present over the main zone. The trachyte strikes northeast off the property but apparently the ground in this direction was held by Denison at one time and dropped after being thoroughly investigated.

Why not I.P.?
Only two areas were mentioned as possibilities for further investigation. One is a large untested area northeast of the main zone and probably underlain by 50'-100' of overburden. No anomalies were picked up here. Tom Avison proposed soil testing of the zone above bedrock by auger drilling. This would be costly. Another alternative, obviously more costly is wildcat diamond drilling in this area. A second untested area is in the vicinity of Hole 249 where a 16 foot intersection averaging about 40% CaF₂ was cut at 218 ft. vertically. It is unlikely

that this zone could be expanded to double the present tonnage. It occurs on the footwall of the main zone and could join up with one of the original small U_3O_8 zones (5% CaF_2).

Tom Avison is in the process of preparing a compilation of all past work on the property and this will be available to us shortly. However, it does not appear now that we would be further interested in the Birch Island Property.

JAGibson/hc

KERR ADDISON MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

82M ✓
Broun ✓
Folder ✓
J.H.S. ✓
P.M.K. ✓
G.M.H. ✓
R.D.S.
P.C.B.
L.D.B.
M.D.R.
J.H.T.
E.C.J.

To..... W. M. Sirola From..... G. M. Hogg

Subject..... Consolidated Rexspar, Kamloops Area, B.C. Date..... May 9, 1972

Yesterday I visited the offices of Denison Mines and talked to Noel O'Brien and Bruce Arnott about the Birch Island Properties of Consolidated Rexspar Minerals and Chemicals Ltd.

Briefly, Denison, who control Rexspar, have had a study completed by Bruce Arnott, a consultant, and he suggests that rather than the various deposits being isolated occurrences, they are surface exposures of two flat-lying multi-mineral zones containing fluorite, uranium, molybdenum, rare earths and celestite in varying quantities. Tonnage possibilities are considerably enhanced using this concept.

Apparently drilling (of which plenty has been done) is largely of a shallow nature, and oddly enough the various exposures have been treated as either a uranium show or a fluorite show, etc. Thus uranium zones have not been assayed for fluorite and vice versa. There is nevertheless evidence that considerable fluorite is present in the uranium zones for instance.

Noranda has had a recent look at this data, though they apparently were not aware of Bruce Arnott's interpretation. In considering the property on the merits of "known reserves and grades" a rather extensive feasibility study was done and the result was negative. Denison in their own study on the same basis are somewhat more enthusiastic but admit that the profit margin is poor.

However, you will appreciate the fact that if we are in effect looking at a much larger tonnage of zoned multiminerall material which can be mined open-cast on a selective basis depending on markets, a viable operation may be possible. This remark relates of course only to the explored area, and some potential for extension of known zones and discovery of new zones does exist.

Denison has spent something of the order of \$600,000 on the property, and we would have to spend something similar to get a controlling interest and management of the situation. We could however, set it up so that a critical test could be made for something in the order of \$25,000 to \$30,000, and proceed onward if results warranted.

You are probably familiar with the general setup, and in particular may have some definite views as to the possibility of flat-lying mineralized zones existing in the trachytes. Would they be mineralized faults, or possibly syngenetic zones within a fine grained intrusive sill?

Anyway, I would very much appreciate your views on the matter Bill, and I have enclosed a copy of Arnott's report for your consideration. I think that the economic aspects of the property as known have been fairly well covered by Noranda, and we need not concern ourselves with this aspect for now. The matter of prime importance to us is simply if Bruce Arnott's theory justifies a test.

GMH:lfr
Encl.

G. M. Hogg
G. M. Hogg

CONSOLIDATED REXSPAR
MINERALS & CHEMICALS LIMITED

MAY - 9 1972

20TH FLOOR
4 KING STREET WEST
TORONTO 105, ONTARIO
(416) 363-4991

Brown
82M

May 8, 1972.

J.H.S.	
F.M.K.	✓
G.M.H.	✓
R.D.S.	
B.C.B.	
L.B.B.	
M.D.R.	
J.H.F.	

(E.C.)

Mr. G. M. Hogg,
Kerr Addison Mines Limited,
44 King Street,
Suite 1600,
Toronto, Ontario.

Dear Glen:

For reference I attach a list of reports and plans on the fluorspar deposit of Consolidated Rexspar at Birch Island, B.C. which are passed to you for review:

Consolidated Rexspar - Report on Deposit
May 1971 - Volume I

Sections and Plans - Volume II

Lakefield Research of Canada - CaF₂ Recovery
- Volume IV

Project Rexspar - 400 TPD Plant Cost - A. H. Ross &
Associates, 1970

Potential Improvement in Economics of Rexspar
- A. H. Ross & Associates.

Review of Geological Data - B. M. Arnott, 1972.

Please be assured that we will be glad to supply on request any additional information that you may wish from our records and files, such as drill logs, plans and sections of the old deposits and metallurgical reports. Also our geologist and metallurgical consultant will be available for discussion and for clarifications.

Bruce Arnott's recent review of the deposits which shows the possible relationship between the uranium and fluorspar deposits is a new development which we hope will open up new potential for fluorspar.

With kind regards,

Yours very truly,

CONSOLIDATED REXSPAR
MINERALS & CHEMICALS LIMITED,

Noel O'Brien

NO'B:dw

c.c. Dr. Kavanagh

Noel O'Brien.

Bruce Arnott's interpretation suggests a substantial tonnage of multimineral ore may be available in the vicinity of known prospects. Noranda recently completed a study of the property and found that be unprofitable - they were not aware of Arnott's work however (I am getting this data from Jim Gibson). I am sending a copy of Arnott's report to Bill Siola for his comments.

Just. May 9/72.

KERR ADDISON MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

*Prova folder
82 M.*

To..... P. M. Kavanagh From..... G. M. Hogg

Subject..... Consolidated Rexspar, Birch Lake Property, Date..... May 30, 1972
Kamloops Area, B.C.

V.J.H.S.	✓
P.M.K.	✓
G.M.H.	
R.D.S.	
B.C.B.	
I.D.B.	
M.D.R.	
J.H.F.	

(E.C.I.)

We have completed a review of the Consolidated Rexspar property in the Kamloops area of B.C.

As you are aware, on my visit to the Consolidated Denison offices on May 8th, Noel O'Brien and Bruce Arnott went over the general picture with me. Briefly, in addition to the extensive work done on the property, Denison has had mill testing done, feasibility studies prepared, and had two recent reviews completed of exploration potential remaining on the property. Noranda Exploration incidentally assessed the property during the summer of 1971, and turned it down. Noel O'Brien's main contention was that although feasibility studies, etc. gave some encouragement, and that the multi-mineral recovery approach (for which data is unfortunately lacking) showed some promise, studies and reviews for the most part consisted of re-working of old data, and worse, old ideas. He is well aware of the tonnage limitations on the various "ore deposits" defined - which was the reason for the Noranda refusal - and suggested that we look the data over to determine if a fresh approach might be developed. Along this line of thought, he recommended that we consider the ideas proposed recently by B. Arnott which, if correct, could substantially increase available tonnages of fluorite ores available in the main prospect area.

For purposes of our study we have looked over Arnott's compilation the Rexspar Feasibility Study, geochemical, geophysical, and geological data, and have received copies of the results of the Noranda Exploration study. W. M. Sirola has been in contact with Denison's Vancouver office, and has been given full co-operation. He is visiting the property to-day (May 30, 1972).

As noted in W. Sirola's memo of May 19th, he does not believe Arnott's suggestion of the presence of two horizontal fluorspar zones in the main prospect area to be entirely valid. Rather the apparent twinning of zones is likely due to repetition of a single horizon due to low angle thrust faulting. This view is more in keeping with the known nature of the mineralized zones, and the implication is that although some additional tonnage could likely be developed, it would not reach substantial proportions. Thus the test drilling of this area would not be of top priority in assessing the property, and an exploration arrangement with Rexspar would not be warranted on this possibility alone.

W. Sirola points out however that soil samples from the northeastern trachyte area in particular were not tested for fluorite. These may still be available at the Bondar Clegg Lab. in Vancouver, and a re-assaying procedure would not be expensive and would be well worth while. It might also be noted that a considerable portion of the trachyte area in the northeastern part of the property was not sampled geochemically at all, and this would be a worth while undertaking. Basically this work of course would constitute a grassroots exploration programme in the northeast extension area.

KERR ADDISON MINES LIMITED

Page 2

(FOR INTER-OFFICE USE ONLY)

To.....P. M. Kavanagh.....From.....G. M. Hogg.....

Subject.....Consolidated Rexspar, Birch Lake Property,.....Date.....May 30, 1972.....
Kamloops Area, B.C.

An interesting characteristic of the Rexspar deposits related to zoning of mineralization has been mentioned by both W. M. Sirola and B. Arnott. It is suggested that in a given mineralized section of a tuff horizon in the trachyte a center of replacement would be characterized by fluorspar or fluorspar-molybdenite mineralization. This may grade out laterally to a pyrite-fluorspar-uranium zone, and thence to a pyrite-mica zone. The pyrite-mica material may be quite widespread in the trachyte, representing a low grade of hydrothermal alteration of the tuffaceous horizon within the trachyte. The induced potential survey data (McPhar, 1969) substantiates this theory in the main prospect area. The fluorspar zone is characterized by high resistivity, and it is ringed by I.P. anomalies indicating the presence of a more conductive medium (i.e. the pyrite-fluorspar-uranium assemblage). It is probable that the pyrite-mica assemblage would also give a good I.P. response depending on the pyrite content, and would thus be indistinguishable from the pyrite-fluorspar-uranium material.

If this is the case, then drilling on the high I.P. anomalies would actually have been centered on peripheral alteration zones, and the high resistivity areas remain to be tested. Insofar as four quite distinct areas of high resistivity are noted to the north of the main prospect area, the potential for the occurrence of additional fluorspar zones in these locations appears good. These areas are conveniently located along truck roads, so there would be no access problems in testing them. Geological and geochemical data are inconclusive as to assessing these areas. (See memo to W. M. Sirola of May 30, 1972).

An inspection of the various metallurgical data suggests that a poly-mineral extraction is possible. However, uranium and molybdenum markets are poor at present, and any operation would have to exist on the proceeds of fluorspar production for some time. Celestite and barite are present in some quantity, but recovery on a profitable basis is doubtful. Tests show that a 78% recovery at 95% CaF₂ grade is possible (a very good metallurgical grade product). Noranda Exploration calculations show that a good profitability picture exists at a production rate of between 1500 and 2000 tpd. A check with Noranda Sales incidentally indicated that excellent market conditions for all grades of fluorspar are likely to exist for some time.

A test programme involving 4 400 foot holes (@ \$10.00/ft. = \$16,000.00), and geochemical survey and testing amounting to approximately \$9,000.00 is therefore thought to be fully justified. With this total \$25,000 guaranteed expenditure, it is recommended that an offer to option the Consolidated Rexspar property on the terms outlined in the attached appendix be made. It may be noted that Consolidated Denison expenditures on the property have amounted to approximately \$650,000 according to Noel O'Brien.

GMH:lfr
Encls.


G. M. Hogg

SUGGESTED TERMS FOR OPTION
OF CONSOLIDATED REXSPAR PROPERTY,
KAMLOOPS AREA, B.C.

1. Kerr Addison will guarantee the expenditure of \$25,000 in testing the Rexspar property during a 12 month period from date of agreement.
2. Kerr Addison will have had to expend a total of \$75,000 in exploration of the property by the end of the first 12 month period to extend the agreement into a second year.
3. As of the beginning of the second year, if expenditure requirements are met, Kerr Addison would commit to the expenditure of \$125,000 in exploration and development of the property during the second 12 month period.
4. As of the beginning of the third year, if expenditure requirements have been met, Kerr Addison will have the right to commit to the expenditure of \$300,000 during the third 12 month period of option.
5. At the end of the third year, or sooner if required expenditures have been made, Kerr Addison will have the right to form a new company capitalized at 3 million shares to develop and mine the property. Of the first 750,000 shares vendors' issue, Consolidated Rexspar will receive 300,000 shares (40% of issue) and Kerr Addison 450,000 shares (60% of issue). Thereafter financing will be carried out by issue of shares at the discretion of the board of directors, it being the right of Rexspar to subscribe to 40% of any issue, and Kerr to subscribe to 60% of any issue subject to the following. If either party refuses to purchase all or any part of their share of any given issue, it will be the right of the other to purchase the remainder. Thereafter that party not fully participating will be able to purchase only that percentage of any future issue that was purchased in the preceding issue.
6. If through mutual agreement of the parties involved an alternate method of financing to production is desired (i.e. a joint venture), then it is understood that it may be implemented.
7. It is understood that the purpose of the agreement is to develop a mining operation on the property as expeditiously as possible.

KERR ADDISON MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

J.S.
P.M.
M.M.
T.S.
S.B.
L.S.
M.S.
E.O.

To..... W. M. Sirola From..... G. M. Hogg

Subject..... Consolidated Rexspar Date..... May 30, 1972

As I mentioned last Friday on the telephone Bill, the McPhar I.P. report on the Rexspar property notes the fact that the fluorspar zone is outlined by high resistivity readings. A check showed that four additional definite high resistivity zones in the same range lie to the north of the fluorspar prospect along the road system, and two lesser zones occur - one further to the north and one to the east. The easternmost zone parallels Clay Creek and lies just to the east of it. Another high resistivity area occurs west of Foghorn Creek, but in an area geologically dissimilar to the main prospect area.

I checked with Dave Fountain of McPhar on the matter, and he offers no explanation. Also I might add that Denison did no follow-up on this aspect, and no drilling was done on any of these zones.

The peculiarities of the high resistivity areas can be listed as follows:

1. They are not co-incident with, but occur alongside I.P. anomalies. This is not surprising geophysically, but has significant implications if the idea of zoning of mineralized areas is considered. It also appears that each resistivity high is ringed by I.P. anomalies.
2. The range of the high resistivity is above 1500 ohm feet/ 2π , and for the most part in excess of 2000 units. This level is not too common in the area and occurs only in the Fluorspar prospect area and in the zones mentioned. There are, for instance, plenty of strong I.P. responses in the map area, but for the most part resistivity variations peripheral to these responses are not unusually high.
3. The trough-like configuration of the high resistivity response over the Fluorspar prospect is duplicated in the other high resistivity areas. This characteristic is well exhibited in the strong zones located on lines 18N to 27N. This suggests a rather flat configuration for the source.

Geologically the area in which these high resistivity responses are noted is for the most part underlain by quartz sericite schist. Schistosity dips at about 10° - 20° north, and of course the topography also slopes to the north towards the North Thompson River. Perhaps then, the schist cover over the trachyte is not very thick, and a high resistivity area lying within the trachyte could well be resolved by resistivity survey. Mapping suggests the presence of an anticlinal axis extending northward from the Fluorspar zone, although this may be largely a topographic effect. If it exists however, such a structure could well control fluorspar mineralization, and a series of lenses might extend northward along this axis.

Geochemically the areas in question are not particularly active, although some weak molybdenum anomalies do occur to the north of the north Fluorspar zone. Some bog manganese, limonite stain, and fluorspar-bearing float are present in the area.

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(FOR INTER-OFFICE USE ONLY)

To.....W. M. Sirola.....From.....G. M. Hogg.....

Subject.....Consolidated Rexspar.....Date.....May 30, 1972.....

In the east section of the Rexspar property you noted that geochemical surveys were carried only to about 50E. The existing grid extends about another 5000 feet east (on 11 lines). This area should be covered geochemically, preferably for CaF₂ content, and would involve about 10 miles of sampling at 200 foot centers. I might note that in this area, although I.P. anomalies are present, no zones of high resistivity are apparent.

I feel that a test programme involving drilling of four high resistivity zones, geochemical coverage of the east property area, and some re-testing of old geochemical samples and possibly some core, would be fully justified. Cost estimates for this work would be as follows:

1. Drilling - 4 400 foot holes @ \$10.00/ft.	=	\$16,000
2. Geochemical Sampling - 10 miles @ \$100.00/mile	=	1,000
3. Analysis of Soil Samples and Core	=	5,000
4. Transportation, Accommodation, Supervision	=	<u>3,000</u>
	TOTAL =	<u>\$25,000</u>

I agree that drill testing for repetition of the Fluorite zone as suggested by Arnott should be deferred as it is not likely that a substantial increase in tonnage would result.

Under the circumstances, we could effect a reasonable test of the property then for an expenditure of approximately \$25,000.00. The proposal to Denison would consist of this guarantee, with provision for eventual expenditure of \$500,000 for a 60% interest in the property.

I have forwarded to-day relevant data concerning the I.P. etc., via Air Freight. I would appreciate your comments as soon as possible since I would like to contact Noel O'Brien on Thursday, June 1, on the matter.

GMH:lfr

G. M. Hogg

KERR ADDISON MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

To.....P. M. Kavanagh.....From.....G. M. Hogg.....

Subject...Consolidated Rexspar, Birch Lake Property,.....Date.....May 30, 1972.....
Kamloops Area, B.C.

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As noted in W. Sirola's memo of May 19th, he does not believe Arnott's suggestion of the presence of two horizontal fluorspar zones in the main prospect area to be entirely valid. Rather the apparent twinning of zones is likely due to repetition of a single horizon due to low angle thrust faulting. This view is more in keeping with the known nature of the mineralized zones, and the implication is that although some additional tennage could likely be developed, it would not reach substantial proportions. Thus the test drilling of this area would not be of top priority in assessing the property, and an exploration arrangement with Rexspar would not be warranted on this possibility alone.

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A test programme involving 4 400 foot holes (@ \$10.00/ft. = \$16,000.00), and geochemical survey and testing amounting to approximately \$9,000.00 is therefore thought to be fully justified. With this total \$25,000 guaranteed expenditure, it is recommended that an offer to option the Consolidated Rexspar property on the terms outlined in the attached appendix be made. It may be noted that Consolidated Denison expenditures on the property have amounted to approximately \$650,000 according to Noel O'Brien.

GMH:lfr
Encls.
G. M. Hogg

KERR ADDISON MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

JUN - 5 1972

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✓
✓
L.H.S.
P.M.K.
G.M.H.
R.D.S.
B.C.B.
I.D.B.
M.A.H.
I.M.F.

To..... Mr. Glen Hogg From..... W.M. Sirola

Subject..... Rexspar Mines Limited Date..... June 2, 1972

We have reviewed all of the data you sent from Toronto, together with information and maps received from Denison Mines in Vancouver. In addition, Paul Pisani and I visited the Denison field office in Birch Island, B.C. and went over some of the critical drill core stored near their office.

We are not certain as to why some of the areas north of the fluorite zone show high resistivity values but this may be due to a combination of thin overburden and numerous quartzite layers. The high resistivity over the fluorite zone itself may result from the fact that the width of the outcrop shown on the geological map is approximately 800 ft and electrode grounding might have been very poor. Since most of the high resistivity to the north of the known mineralization occurs in the schist unit, we are unable to recommend drilling in this area. We realize, however, that you have formed a certain attachment to this phenomenon and we certainly think it should be your prerogative to plan one drill hole on a high resistivity zone. All of the geological evidence suggests that the area to the northeast of the known mineralization is favourable to some extent. Whether or not it is equally favourable remains to be seen. It is difficult to predict, for example, whether the seemingly necessary rock preparation has taken place in the northeast area, but, at any rate, we do have a combination of trachyte, molybdenum soil samples and IP anomalies and at least one northeast trending fault zone. Since the IP anomalies have been drilled to some extent and were found to be caused by heavy pyrite, it would appear sensible to investigate the high molybdenum areas which have not been drilled. We refer specifically to line 6 North and 9 North at 3900 East and 800 East where the molybdenum anomalies are surrounded by a 40 PPM contour.

I think 2 holes would be necessary
ds.

There seems to have been some interest in the F zone west of the BD zone, and this was occasioned largely by the location of uranium bearing float in that area. Attempts to drill for the source were ineffectual because of extremely fractured trachyte and the potential remains largely unknown. There is a molybdenum high centered about 700 ft southeast of the F zone and perhaps this could be investigated by rotary drilling from the existing road.

Because none of the soil samples in the northeast zone was assayed for fluorite content, we think that this should be done on those lines underlain by trachyte. In addition, since Noranda has a sizable copper deposit at Harper Creek on the claims adjoining Rexspar on the southeast and since the copper on the Noranda ground occurs in the schist unit, it would seem prudent to assay all of the lines from 6 S to 150 S for copper-molybdenite. We would exclude those portions of the lines underlain by trachyte. Again, because the Noranda copper mineralization contains magnetite and because the pyrite mica zones are prone to contain magnetite, we would cover the schist area by ground magnetics.

KERR ADDISON MINES LIMITED

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To _____ From _____

Subject _____ Date _____

Page 2

Cost Estimates

a) diamond drilling

four 400 ft drill hole (two on each molybdenum anomaly)
for a total of 16,000 ft @ \$ 10.00 per ft = \$ 16,000.00

b) geochemical and magnetometer survey

total cost including analyses, wages, vehicle rental,
accommodation and food = \$ 5,380.00

TOTAL \$ 21,380.00
=====

By adding one 400 ft drill hole on a resistivity high be selected by Mr. Glen Hogg, the total cost would approximate \$ 25,000.00.

We would, of course, prefer to defer drilling until our geochemical and magnetic data are available, but this could be a subject of negotiation.

WMS/bw

It will be noted that this proposal is similar to, but not quite the same as put forward in my memo of June 5/72. However, it is obvious - and this is the main consideration at this stage - that a \$2,500 programme would be fully justified on the Rexspar property.

Bill
W.M. Sirola

Met. Jun 9/72.

KERR ADDISON MINES LIMITED

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Branda Felder
82 M.

<input checked="" type="checkbox"/>	J.H.S.
<input checked="" type="checkbox"/>	P.M.K.
<input type="checkbox"/>	G.M.H.
<input type="checkbox"/>	R.D.S.
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<input type="checkbox"/>	I.D.B.
<input type="checkbox"/>	M.D.R.
<input type="checkbox"/>	I.H.F.
<input checked="" type="checkbox"/>	<i>ECJ</i>

To.....P. M. Kavanagh.....From.....G. M. Hogg

Subject.....Consolidated Rexspar Study - W. M. Sirola.....Date.....June 5, 1972

Bill Sirola will be forwarding a more comprehensive memorandum shortly on the results of his study of the Consolidated Rexspar Birch Island property in B.C. My memo will outline his views (transmitted to me by telephone) and describe the programme we would be prepared to undertake on the property this summer.

1. Bill notes that some quartzite bands were intersected in hole 69-7 as shown on the accompanying section. He consequently feels that chances are the trachyte lies on top of the quartz sericite schist, and that the high resistivity areas noted on the plan do not likely represent fluorite mineralization. For my part, I feel that the area is geophysically too complex to be written off, and that there is merit to the view that mineralized trachyte may underlie the schist in the area at a very shallow depth.

We agree that two 400 foot holes would test the two most southerly high resistivity areas, and would constitute a satisfactory assessment of the possibilities of resistivity anomalies as indicators of fluorite mineralization.

2. It is felt that good possibilities for additional fluorite mineralization exist immediately to the north and east of the known fluorite zone in an area underlain by trachyte. Two untested molybdenum soil anomalies with low associated I.P. response lie on line 9E at 900E and 3900E. These should be tested by two 400 foot holes. (Note: Molybdenite occurs with fluorite in significant quantities).
3. The northeastern area of the property has been tested to only a limited extent by Rexspar. No soil sampling for instance has been done east of 5500E. Trachyte extends for at least another 5,000 feet eastward, and pyrite-mica alteration is known to occur in the untested area. This area should be covered by soil sampling, and the samples tested for fluorite. About 10 miles of soil sampling will be required (250 - 300 samples).
4. Soil samples from the area extending east from the base line to 5500E underlain by trachyte are probably available from Bondar Clegg in Vancouver and should be tested for fluorite content (approximately 300 samples are involved). If the samples are not available, the area should be re-sampled.
5. If accessible, an effort should be made to chip sample the workings in the A Zone and B-D Zone. These are uranium-fluorite zones, but no dependable data is available on the fluorspar content of the ore. It may also be possible to analyze some of the core from previous drilling on these zones. It does not appear likely that such material will be high enough in grade to be classified as fluorspar ore, but oddly enough, this remains an unknown factor and it does contain substantial fluorspar.

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To..... P. M. Kavanagh.....From..... G. M. Hogg.....

Subject..... Consolidated Rexspar Study - W. M. Sirola.....Date..... June 5, 1972.....

6. Bill also notes that the F Zone area to the west of the main fluorite showing has not been well tested. Molybdenum soil anomalies occur just to the south of the zone, and Rexspar drilling in the vicinity gave such low core recovery that no assessment is possible. This area will have to be re-examined closely, and possibly some soil sampling will be required. Uranium values of 3 to 4 lbs./ton are reported in the F Zone.
7. Magnetite has been noted in the pyrite-mica alteration zones, and yet no magnetic surveying has been done on the property. This characteristic may allow discrimination between pyrite-mica and pyrite-fluorspar-uranium zones as defined by I.P. survey results. The possibility will be thoroughly tested, and complete magnetic coverage may be recommended.
8. Another interesting possibility raised by Bill is the occurrence of copper mineralization in quartz sericite schist near the boundaries of a trachyte-like rock as located by Noranda in the vicinity of the Birch Island property. Some thought will be given to the testing for this type of occurrence on the Rexspar ground, but it would not be of immediate concern.
9. Drilling in the vicinity of the Fluorite zone as outlined in W. Sirola's memo of May 19th to test a theory proposed by B. Arnott would not be undertaken at this stage.
10. The basic test work, including the drilling of 4 holes can be accomplished for an approximate total of \$25,000 during the coming summer. Note however, that we would not undertake drilling until later in the summer since field work results could result in some revision to the programme.

GMH:lfr

G. M. Hogg

KERR ADDISON MINES LIMITED

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To..... Mr. J. H. Stovel..... From..... G. M. Hogg.....

Subject..... Consolidated Rexspar Option..... Date..... June 15, 1973.....

I have reviewed the work completed during 1972 by Denison Mines Ltd. on the Consolidated Rexspar Birch Island property in B.C. and feel that good potential remains for the location of additional fluorspar on the property as well as, indirectly, good potential for the location of additional low grade uranium ore. They did cover one possibility we were considering adequately, and consequently we would have to lower our initial expenditure commitment somewhat (say to \$20,000). Otherwise our original expenditure schedule would appear justified, and the timing acceptable.

The programme envisaged would consist mainly of drilling high resistivity areas which appear very similar in geophysical character to the main fluorspar zone. The uranium deposits are peripheral. Geologically there is some question as to the validity of this concept, and W. M. Sirola does not agree that it has merit (see attached memorandum). However, the anomalies exist and the possibility of acquiring a viable mining proposition for a very small outlay is quite real.

In discussing the matter with Noel O'Brien last week, he indicated that Rexspar would like to see a small return from production if such developed. This could easily be arranged by specifying payback to Kerr from 80% of the cash flow with the balance being distributed pro rata.

For our part we should request a modification on timing for production attainment (two years from production decision was originally suggested) to assure enough time for the B.C. tax and royalty situation to stabilize. This of course would be desirable for all parties involved.

Our actual programme would involve the following expenditures:

Test Drilling: 5 holes (1,500' @ \$10.50/ft.)	\$15,750
Soil Sampling (detail):	3,000
Analysis:	3,000
Supervision:	<u>1,250</u>
TOTAL	<u>\$23,000</u>

I recommend that we submit a proposal to Rexspar on this basis.

GMH:lfr


G. M. Hogg

KERR ADDISON MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

JUN 11 1973

To G. M. Hogg From W. M. Sirola
CONSOLIDATED REXSPAR MINERALS AND CHEMICALS LTD.
Subject BIRCH ISLAND, B.C. Date June 8, 1973
DENISON MINES 1972 EXPLORATION

J.H.S.
P.M.K.
G.M.H.
R.D.S.
B.C.B.
I.D.B.
M.D.R.
J.H.F.

We have reviewed the work done by Denison Mines last summer and have summarized that work as follows :

Geochemical Survey

This work consisted of collecting and analysing 186 soil samples from the north-eastern part of the property and the assaying of 184 samples collected in 1969. The 1972 samples were analysed for F and Mo and the 1969 samples which had been previously analysed for Mo content were analysed for F.

A 3,000 x 500 - 1,000-foot fluorite anomaly was located in the northeastern part of the property but this anomaly is significantly weaker than the anomaly overlying the main fluorite zone. The weaker anomaly could have been caused by deeper overburden, but four drill holes drilled on or near the fluorite anomaly did not show significant fluorite values.

It is not too surprising that drilling results were not encouraging in the light of background and threshold fluorite values. The background is 600 - 800 ppm and the threshold is 1,400 ppm. Since only a limited number of values are in excess of 1,400 ppm fluorite, there are very few truly anomalous samples and on re-contouring the Denison map we found that the core of the anomaly has been tested by drill holes 69-11 and 69-13. I am, therefore, not optimistic about the fluorite potential of the northeastern part of the property. Since the trachyte unit underlies the area tested and does not occur south of this area, the prospects to the south would be poor indeed.

Diamond Drilling

In an effort to confirm Bruce Arnott's interpretation of an extension of the fluorite zone down dip, and to further delineate the fluorite located in former drill hole 249 (44 feet of 22.65% CAF₂), seven diamond drill holes totalling 2,373 feet were drilled from a truck mounted machine. This work indicated that the fluorite band previously intersected in ddh 249 is lenticular and tapers off in all directions, and there is no continuous horizon extending from the 'A' zone to the 'BD' zone.

'A' Zone Adit Sampling

A total of 370 feet of adit length was sampled in 10 sections and analysed for CAF₂ and U₃₀₈. The CAF₂ results ranged between 3.74% and 18.58% for an overall average of 8.12% CAF₂. The Denison report does not give the average uranium content but in looking at the accompanying assay map the values are very low indeed (0.02 to 0.18). The average may be in the order of 0.07% U₃₀₈. There does not appear to be any correlation whatsoever between CAF₂ and U₃₀₈ values.

KERR ADDISON MINES LIMITED

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To _____ From _____
Subject BIRCH ISLAND, B.C. Date June 8, 1973
DENISON MINES 1972 EXPLORATION

'BD' Zone Adit Sampling


Only three samples were taken from this adit due to limited access and these contained low CAF₂ values. Pisani feels, however, that the fluorite content of this zone is similar to the 'A' zone.

Conclusions

We have to think of the work done by Denison last year as having tested most of what we ourselves would have done and in consequence we are unable to recommend further work on the Rexspar property. Even if some additional fluorite values could be located by further work, it does not seem to us that such additional mineralization (if found), would materially change the picture.

Ken Sanders has requested that we return the enclosed reports at such time as we have finished with them.

WMS/ah


W. M. Sirola

Encl.

- 1) Geochemical Report on the PA Group,
Birch Island, B.C.
- 2) Report on Exploration Programme 1972.

1972 Proposal

June 16, 1972.

REVISED PROPOSAL BY KERR ADDISON RE CONSOLIDATED REXSPAR

At a meeting in Kerr Addison's offices, June 16, 1972, after discussion Paul Kavanagh proposed a revised approach to participation in the exploration and development of the fluorspar deposits of Consolidated Rexspar. An outline of the revised proposal is as follows:

1. Kerr Addison to spend \$75,000 on exploration at Rexspar prior to December 31, 1972, of which \$25,000 is firm. This assumes that it will be possible to begin exploration work early in July even though a formal agreement had not been assented to at that time by Rexspar shareholders.
2. If Kerr Addison elects to continue after Step-1 they would commit, on January 1, 1973, to expend additional monies during 1973. The cumulative amount by December 31, 1973 would be \$200,000.
3. By January 1, 1974 Kerr Addison may elect to increase expenditures so that the cumulative total by December 31, 1974 will be \$500,000.
4. Kerr Addison must make production decision or opt out by January 1, 1975. Any monies in excess of \$500,000 spent on Rexspar properties would be returnable to Kerr Addison with bank interest plus 1%.
5. On attainment of production capacity Kerr Addison would then have earned a 70% interest in the property and Rexspar would then have a 30% carried interest. Kerr Addison would require that there be an economic force majeure clause that could apply after a production decision is made (in the event that market conditions prevent economical exploitation of the deposit temporarily).
6. Kerr Addison will earn a management fee in the period between the production decision and the attainment of production capacity. The management fee would be 10% of monies expended during this period.

NO'B:dw

Distribution:

K. L. Perry
E. L. Evans
N. O'Brien.

*5 holes x 300' = 1500
@ 10.50*