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Province of **Series** British Columbia

Ministry of Energy, Mines and Petroleum Resources

To: Hon. Don Phillips, Minister of Economic Development, BUILDINGS.

MEMORANDUM

Date: August 2, 1979 Our File: Wild - EPM

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# Re: BOWRON RIVER COALFIELD

In response to a recent request by the Hon. Jim Hewitt I attach two maps and a set of notes on this coalfield. Although these deposits are being strongly promoted, particularly by Norco, they are in an early stage of exploration and extensive testing, marketing and feasibility work is required before production can be contemplated.

Currently ownership of the coalfield is shown as follows:

Zulu Explorations Ltd. (NPL) 7 licences (Victoria based private company)

Norco Resources Ltd. 9 licences (Vancouver based public company Morris Menzies and John Wilson principles).

Development of the coalfield depends on underground mining in a difficult mining situation and to be successful these two owners will have to work together.

James Hylic

James T. Fyles Sr. Assistant Deputy Minister

JTF:sgn Attachments

cc: Hon. James J. Hewitt

# BOWRON RIVER

U.G.

Active Exploration

History - First recorded in 1871

- Initial exploration prior to 1914
- Dormant 1914-1946
- From 1946 numerous small companies carried out exploration underground entries from 2 adits and at least 42 holes were drilled
- 1971 the current lease holders, Northern Coal Mines Ltd., optioned the property to Bethlehem Copper Corp. which drilled 5 D.D.H. totalling 2272m

Recent Exploration:

1977 - 25 D.D.H. totalling 5,700m

Deposit - Thermal and for blending (met.)

- Type: High volatile B bituminous

- Age: Tertiary

- Size: seams (3) 1.5-9m (Lower) continuous 0.3-3m (Middle)continuous <24m (Upper) discontinuous Total combined: 2m-12m in lower 80m of strata

Geology - N.W. striking graben of Tertiary sediments 2.5km wide, length unknown, in Slide Mountain Group.

Coal - Cal. val. @ 8.5% moisture (28,000 J/Kg) (13,000 BTU)

- Moist. 8.5%
- Ash 9% (clean coal) 37% (run of mine)
- V.M. 26%
- F.C. 51.12%
- FSJ 2

- S 0.9% (clean coal) 1.32% (run of mine)

Resin cont. 8%

serves:

Proven reserves

Indicated resources

Inferred resources (Unexplored resources) 5,940,000 M.T. 55,000,000 M.T. 100-<del>250</del>,000,000 M.T.



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March 28, 1979

#### Registered Mail

Zulu Explorations Ltd. (NPL) 758 Matheson Place Victoria, B.C. V9A 6E5

Dear Sirs:

### Re: Coal Licence Nos. 4458-4464

Enclosed please find the original copies of documents for the above mentioned coal licences duly executed by the Honourable the Minister of Energy, Mines and Petroleum Resources.

The issuance date of the licences is February 19, 1979.

Also enclosed is British Columbia Mining Receipt No. 130447E in the amount of \$4,550.00 covering application fees and annual rental for the first term.

A refund of excess fees in the amount of \$30.00 will be arranged.

yours very truly,

A.R. Corner Administrator for Coal Ministry of Energy, Mines and Petroleum Resources

Enclosures PH/df

OFFICE OF THE MINISTER Ministry of Energy, Mines and Solaum Recourses REDEIVED FEB 14 COM VICTORIA, D.C. RIFER TO .... For Report [] Deef: Cuply [] Detucs [] Comments Remusical 🗍 For Your Information 🕗 For Hacessary Astion СОРУ ТО FILE ORIGINAL FILE COPY [] Dr.J.Files-Department of Energy, Mines and Petroleum Resources Parliament Buildings Victoria, B.C.

Dear Sir:

Thank you for your discussions on the issue of Bowron Coalded a coal licences to Zula Exploration Ltd. (telephone calls of February 21 and 22, 1979).

124 Leila Place

February 12, 1979

Victoria, B.C.

V9B 2J3

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...J.P.

A.S.

M.R.

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DATE

For confirmation and record I understand that the Ministry of Energy, Mines and Petroleum Resources is now delaying Zulu's coal licence to introduce again the possibility of an agreement between Zulu and Norco in the development of the Bowron coal field.

Zulu's efforts to obtain such an agreement (originating in 1973 and continued to 1978 in compliance with the advice of the Ministry), have been thwarted and confused by Norco. The Ministry is aware of Zulu's efforts and difficulties in this matter and the costs and impedance to the company's exploration. There are facts and good reasons to consider that such agreement is not necessary or advisable for the most efficient utilization of the resource of the Bowron coal field.

In further confirmation of our discussion I understand:

 That it will be Norco's sole initiative and responsibility to start negotiations for such an agreement and that Mr. Menzies will contact me to arrange a meeting and that you have made such arrangement clear to Mr.Menzies and Norco.

2 That if Mr.Menzies or accredited representative of Norco do not originate a meeting with Zulu by February 17, 1979, then I shall so inform you.

That if by reason of Norco default the possibilities of a meeting do not obtain by February 17, 1979, then the Ministry of Energy, Mines and Petroleum Resources will proceed to issue the Bowron coal licences to Zulu Explorations directly and without special conditions of an agreement with Norco.

3.

The Directors of Zulu have open views to cooperative development of the Bowron coal field and will be interested to receive Norco's proposals. However in view of their past, related experience they are concerned that Norco's approach be expedient, direct and realistic.

Yours truly,

Benna Laka

BL:dh

Bernard Lake Director, Zulu Explorations Ltd.

cc: Minister of Energy, Mines & Petroleum Resources R.N.Samson, Crease & Co.

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	Department of Energy, Mines
	and Petroleum Resources
	Parliament Buildings
	Victoria, B.C.

124 Leila Place STER M. & P. Victoria, B.C. V9B 2J3 February 12, 1979 TO DATE INITIAL .....P. A.S. M.R. FILE .

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Bernard Lake Director, Zulu Explorations Ltd.

cc: Minister of Energy, Mines & Petroleum Resources R.N.Samson, Crease & Co.

C 1003

Mr. E. R. Macgregor Assistant Deputy Minister September 25, 1978

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# Re: NORCO/ZULU Coal Licence Conflict, Bowron Basin

I have discussed this matter with the Minister and he has agreed to my recommendation that we proceed with the applications for coal licences in the Bowron River coalfield.

Please ask each applicant to confirm their interest in the locations originally identified and give them the normal period to respond as was done after the moratorium was lifted.

As before, applications will be considered on a priority basis.

James T. Fyles DEPUTY MINISTER

JTF/1j

DEMORANDUM FROM Dr. J. A. Garnett Senior Geologist Dr. J. T. Fyles Deputy Minister

THE DEPARTMENT OF

DATE 22 August 1978

# Re: NORCO/ZULU coal licence conflict, Bowron Basin

The attached map and legend outline the current situation. Mr. A. Corner indicates that the complicated continuous applications of varying licence areas by both companies makes it difficult to determine exactly what ground each company is interested in at present. He emphasizes that re-application by both parties would be necessary if a decision is made to issue licences in this area.

## Recommendation

- (1) After clarification by re-application, issue the six disputed licences to ZULU on the basis of the established "first come, first served" principle. This would also solve the mineral claims - coal licence conflict to a large extent. NORCO has territorial precedence over the 20 mineral claims that overlap their currently held licences, and a clear priority can be placed on coal over uranium, if conflict arises there.
- (2) If still desired by the principals, issue all undisputed licences to the primary applicants.
- (3) The new Coal Act work commitments should force action on the part of both explorers, and this will shortly result in one of the following situations.
  - (a) joint exploration leading to a possible development proposal to government.
  - (b) independent exploration leading to independent development proposals to government.
  - (c) licence forfeitures due to a combination of lack of funds, interest or encouragement on the part of one or both companies.

Since government has final control over any potential development, the issuing of licences on the basis recommended does not relinquish our resource management prerogatives. In fact, a 'no decision until company agreement' stance inhibits the necessary initial exploration to determine more fully the extent and viability of the coal in this basin.

JAG:nhc encl:	ASSISTANT DEPUTY MINISTER MINERAL RESTURCES J. A. Garnett Senior Geologist REC'D SEP 1978 1380	-
	REFERRED TO THE SECURENMENT OF THE PROVINCE OF BRITISH COLUMBIA	

MEMORANDUM FROM Dr. J. A. Garnett
Senior Geologist
TO Dr. J. T. Fyles
Deputy Minister

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DATE 22 August 1978

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Phoned Jewitt. Supt Broken Office J. Sept 6/12 - OK to unive J.

J. A. Garnett Senior Geologist

JAG:nhc encl:

Province of British Columbia Ministry of Mines and Petroleum Resources

Date: Aug. 11/78

MEMORANDUM

To: Dr. A. Sutherland Brown

This long-standing conflict between Norco (Morris Menzies) and Zulu (Garoway) has prevented me from recommending the issuance of any coal licences in the Bowron River Coal Field.

Please have someone review the existing reports on the coal field to determine whether the two companies could operate side-by-side. I have always assumed that it is unlikely that one coal mine in that field would be viable and certainly not two. However, it may be that exploration could be continued under the two companies and the problems could be resolved later. Also, does Norco have a significant controlling interest in the coal field by virtue of the 3 licences held by them? How much significant work has been done, and by whom?

Probably we should discuss this request before too much work is done.

James T. Fyles Deputy Minister MINISTRY OF MINES AND PETROLEUM RESOURCES

SEP 7 1978

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JTF/lj Attach.

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DEPT. OF MINES AND PETROLEUM RESOURCES Rec'd AUG 1 4 1978

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also, A. Corner-

ASSISTANT DEPUTY IN MISTER MINERAL PESSOURCES REC'D 527 '78

( JORCO RESOURCES L( ). 2050 Granville Square, 200 Granville Street, Vancouver, B.C. V6C 1S4 Telephone: 682-2744

July 19, 1978

Mr. A. J. Garraway Zulu Explorations Ltd. Apt. 306, 476 Lampson St. Victoria, B. C.

Dear Mr. Garraway:

# Re: Bowron River Coal Licences and the Conflicting Mineral Claims

Further to our letter dated December 8, 1976, and the subsequent discussions in our offices held on May 16, 1978, with you and Mr. Simms in attendance on behalf of Zulu Explorations, and Mr. Wilson and myself representing Norco Resources Ltd., I must reaffirm the position held by Norco regarding Zulu's application for coal licences contiguous with those presently held by Norco.

We cannot subscribe to your view that Zulu is entitled to the licences for which you have applied for the following reasons:

- 1. In early 1974, at a meeting with Mr. McMynn, then Deputy Minister, Mr. Trenholme and I, both officers and directors of Norco, asked if we should then reapply for the licences formerly held by Norco. We were advised that this would be an unnecessary expense and that we would be notified when to reapply for licences dropped. As you are aware, this action of reducing the number of coal licences to the minimum was forced on us by a heavy debt carry-over from Northern Coal Mines Ltd. Apparently the Department of Mines later received Zulu's application for these coal licences.
- 2. The Ministry of Mines and Petroleum Resources has long held the view that discrete coal deposits must not be split up and granted to more than one applicant, because to do so would inevitably destroy the economics of any mining operation.

#### Mr. A. J. Garraway

- 3. You stated at our meeting of May 16, 1978, that the mineral claims had been staked to further Zulu's claim on the underlying coal measures. Also, you made it clear to all present that you had little faith in any potentially economic uranium deposits in the basin. We share your view.
- Norco has spent, or caused to be spent, some 2.6 million dollars on the Bowron coal property, one-half of which was spent on work under my own management or direction.
- 5. One thousand shareholders of Norco must not be denied a just return on their investment, which from the beginning has been directed toward the development of the whole Bowron coal basin. The large majority of Norco's shareholders were, of course, early investors in Northern Coal Mines Ltd.

I find this letter to be a difficult task, because I wish you well. I have, however, considered your application for the contiguous coal licences and the conflicting mineral claims in the light of Norco's future and the shareholders' interests, and have concluded that the Norco development would be affected adversely if your application were granted. In the best interests of the Norco shareholders, many of whom were brought to the company through your own efforts, I ask you to drop your application for the contiguous coal licences.

Yours very truly,

M. M. Menzies

MMM/klw

c.c. The Honourable James Chabot Minister of Mines & Petroleum Resources

> Dr. J. Fyles Deputy Minister of Mines & Petroleum Resources

ZULU EXPLORATIONS LTD. (NPL,

		Zulu Explorations Ltd. (NPL), c/o A.J. Garraway,			
		306 - 476 Lampson	<u>street</u> , 1816		
·		Phone 382-8666.	19 DEPUTY MINISTER M. & P. R.		
:		August 1, 1978.	REC'D NIG 2 '78 F		
Dr. J. Fyles,			REFERRED TO DATE INITIAL		
Deputy Minister of	Mines		A.D.M.		
and Petroleum Re			A.D.P.		
Parliament Building		A.S.			
Victoria, B.C.			M.R.		
Dear Dr. Fyles:					
	Re: Letter from dated July	n Norco Resources L 19, 1978.	FILE		

This letter was mailed to me on July 25, 1978. We expected this letter to cover the discussions at the meeting held on May 16, 1978, as promised by Mr. Menzies. Only paragraph 3 refers to the meeting. Otherwise, the letter appears to blame me for Norco's troubles and proceeds to explain why Norco feels they should be granted coal licences rather than Zulu.

This letter tends to put me on the defensive and forces me to answer in greater detail than should be necessary. The paragraphs will be answered in their order.

1. Regardless of what Mr. Menzies claims Mr. McMynn advised him, when Northern Coal Mines abandoned all their mineral claims and all coal licences except three, they forfeited all rights and interest to this area and could not expect any special privileges in this matter.

The small amount of money required at that time, 1971-1973, to maintain the licences in good standing indicates that Mr. Menzies' statement is a rather foolish excuse, especially when Mr. Menzies, on behalf of Northern Coal, invested some \$15,000.00 in a wildcat drilling scheme in Texas.

Mr. Menzies cannot blame Zulu or Mr. McMynn for his decision to abandon the mineral claims and coal licences, and he must have been aware of the consequences of this action.

Zulu Explorations Ltd. applied for coal licences as follows:

March	1973	November 1975
November	1973	March 1976
November	1974	•

2. We reject Mr. Menzies' statement regarding the fragmentation of coal deposits. It is my understanding that on all coal deposits presently being explored, including Sukunka and the North-East coalfields, more than one company has been granted coal licences.

Norco has no grounds for complaints!

Norco alone was responsible for the abandonment of their coal licences.

Zulu's mineral claims, excluding the claims covering Norco's three coal licences, cover 75 percent of the area of the Bowron Coalfield and contain at least 90 percent of the recoverable coal. For this reason, and the fact that Norco is not interested in reaching an agreement with Zulu, the Directors of Zulu believe Zulu is entitled to coal licences covering the area of its claims.

3. Paragraph 3, in our opinion, is a distortion of the truth.

At the meeting of May 16, 1978, I explained that when Northern Coal Mines abandoned its mineral claims and coal licences they forfeited all rights and interest in that area, and I had staked claims because I was convinced that the radioactive shale seams would eventually become commercially valuable. My action prevented others staking claims over this area, and at that time I believed that when we incorporated a company we would obtain priority in our applications for coal licences covering the area of our mineral claims.

As President and Mine Manager of Northern Coal Mines I had always maintained the Company's mineral claims in good standing, not only for their possible future value, but in order to prevent outside interests staking mineral claims over Northern Coal Mines' coal licences.

4. Mr. Menzies claims to have spent 1.3 million dollars on work under his own management and direction.

This must mean that during the time I was President and Mine Manager of Northern Coal Mines Ltd. I was responsible for the spending of 1.3 million dollars on work carried out under my management. During that time I maintained Northern Coal Mines' property, mineral claims and coal licences, in good standing, carried out an extensive and successful diamond drilling program, sunk two slopes and carried out considerable underground work.

In contrast to the above, a short time after I resigned in order that Mr. Menzies could become President of Northern Coal Mines Ltd., Mr. Menzies, against the advice of Coal Mining Experts (Hughes, Haslam, Bonar, 1971) flooded the Main Slope and underground workings, sold all the equipment for a pittance of less than \$10,000.00, abandoned all the mineral claims and all the coal licences except three, and finally abandoned the camp. (Was the foregoing action of the Norco management in the best interests of the Norco shareholders ?

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Except for maintaining the three coal licences in good standing, no funds were expended on work on Norco's three coal licences until 1976.

Norco's work was carried out during the two summers of 1976 and 1977.

In 1976, Norco attempted and failed to de-water the Main Slope and underground workings.

In 1977, Norco drilled 14 holes on an area where Northern Coal Mines had drilled 14 holes in 1966 and 1967.

The findings of the work carried out by Norco only confirmed the findings of the drilling and underground work carried out by Northern Coal Mines in 1966 and 1967, and was therefore a waste of time and money.

5. A large number of early investors in Northern Coal Mines Ltd., including myself, purchased shares at 45¢ per share. When Mr. Menzies rolled back the shares on a basis of 10 Northern Coal shares for 1 Norco share we all lost 90 percent of our investment. Norco shares must trade at \$4.50 per share in order for us to regain our investment!

Zulu shareholders hold a considerable investment in Zulu's property.

I can assure Mr. Menzies that my only concern is for the shareholders of Zulu, and I am determined to make every effort to obtain a fair and just return for their investment.

Of course Norco will be adversely affected should Zulu be granted the coal licences, but Mr. Menzies must consider the fact that Zulu would also be adversely affected if Norco is granted the coal licences.

Norco alone must accept the blame for the abandonment of their mineral claims and coal licences. Norco has no valid grounds to expect they should be granted coal licences on the area covered by Zulu's mineral claims.

Only the 27 mineral claims covering Norco's three coal licences may be considered as conflicting mineral claims.

There is no division of title to the area covered by the balance of Zulu's mineral claims (Zulu's property) and Norco Resources Ltd. have no coal nor mineral rights to this area.

In addition to the Uranium, Germanium and all minerals contained in the radioactive shales, Zulu also claims the rights to the Uranium, Germanium and all metallic ores associated with the coal or coal seams situated under the area covered by Zulu's mineral claims.

If, as he claims, Mr. Menzies is genuinely concerned with the interests of the Norco shareholders, then in my opinion, his only

solution is to work out a suitable agreement with Zulu.

Of course, a reasonable, equitable agreement between Zulu and Norco would result in a considerable increase in the trading price and value of Norco shares.

To date, all efforts by Zulu to meet and discuss proposals towards an agreement between Zulu and Norco have been rejected by Norco.

Zulu arranged the meeting on May 16, 1978, expecting to discuss proposals towards an agreement between the two companies. Instead we were bombarded by false accusations regarding the staking of Zulu's mineral claims, the potential value of the radioactive shales and objections to my interpretation of Norco's so-called "productive work" and then informed that Norco was not interested in reaching an agreement with Zulu.

The Directors of Zulu agree that it would be a waste of time, and foolish, to contact Norco again; however, the way will remain open for discussions between Zulu and Norco, but only if Norco first contacts Zulu and requests a meeting to discuss proposals which could lead to an agreement for the mutual benefit of the shareholders of both Zulu and Norco.

The Directors of Zulu are determined to resist any attempts to develop a coal mine on Zulu's property, unless a reasonable agreement is first reached with Zulu that would ensure a fair return for the investment of Zulu's shareholders.

As for withdrawing our applications for coal licences, the Directors of Zulu rightfully expect to be granted the necessary coal licences on Zulu's property in order that a mine may be developed for the production of coal and/or minerals.

Finally, Mr. Menzies' letter fails to state, as promised at the meeting, that Norco was not interested in reaching an agreement with Zulu.

Yours truly,

A.J. Carraway, President and Project Manager.

c.c. The Honourable James Chabot, Minister of Mines and Petroleum Resources.

Mr. Morris M. Menzies, President, Norco Resources Ltd.



#### Dr. A. Sutherland Brown

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Aug. 11/78

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JTF/lj Attach.

# ZULU EXPLORATIONS LTD. (NPL)

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		Zulu Explo c/o A.J. 6 306 - 476 Victoria, Phone 382-	arraway,	Charles L	1	816 A. & P. R.
		August 1,		REC'D		
Dr. J. Fyles, Deputy Minister of H and Petroleum Res Parliament Buildings Victoria, B.C.	sources,			REFERRED TO A.D.M. A.D.P. A.S. M.R.	DATE	INITIAL
Dear Dr. Fyles:	Re: Letter from dated July 1	Norco Reso 19, 1978.	urces Lt	<b>Fite</b>		

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5. A large number of early investors in Northern Coal Mines Ltd., including myself, purchased shares at 45¢ per share. When Mr. Menzies rolled back the shares on a basis of 10 Northern Coal shares for 1 Norco share we all lost 90 percent of our investment. Norco shares must trade at \$4.50 per share in order for us to regain our investment!

Zulu shareholders hold a considerable investment in Zulu's property.

I can assure Mr. Menzies that my only concern is for the shareholders of Zulu, and I am determined to make every effort to obtain a fair and just return for their investment.

Of course Norco will be adversely affected should Zulu be granted the coal licences, but Mr. Menzies must consider the fact that Zulu would also be adversely affected if Norco is granted the coal licences.

Norco alone must accept the blame for the abandonment of their mineral claims and coal licences. Norco has no valid grounds to expect they should be granted coal licences on the area covered by Zulu's mineral claims.

Only the 27 mineral claims covering Norco's three coal licences may be considered as conflicting mineral claims.

There is no division of title to the area covered by the balance of Zulu's mineral claims (Zulu's property) and Norco Resources Ltd. have no coal nor mineral rights to this area.

In addition to the Uranium, Germanium and all minerals contained in the radioactive shales, Zulu also claims the rights to the Uranium, Germanium and all metallic ores associated with the coal or coal seams situated under the area covered by Zulu's mineral claims.

If, as he claims, Mr. Menzies is genuinely concerned with the interests of the Norco shareholders, then in my opinion, his only

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solution is to work out a suitable agreement with Zulu.

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Of course, a reasonable, equitable agreement between Zulu and Norco would result in a considerable increase in the trading price and value of Norco shares.

To date, all efforts by Zulu to meet and discuss proposals towards an agreement between Zulu and Norco have been rejected by Norco.

Zulu arranged the meeting on May 16, 1978, expecting to discuss proposals towards an agreement between the two companies. Instead we were bombarded by false accusations regarding the staking of Zulu's mineral claims, the potential value of the radioactive shales and objections to my interpretation of Norco's so-called "productive work" and then informed that Norco was not interested in reaching an agreement with Zulu.

The Directors of Zulu agree that it would be a waste of time, and foolish, to contact Norco again; however, the way will remain open for discussions between Zulu and Norco, but only if Norco first contacts Zulu and requests a meeting to discuss proposals which could lead to an agreement for the mutual benefit of the shareholders of both Zulu and Norco.

The Directors of Zulu are determined to resist any attempts to develop a coal mine on Zulu's property, unless a reasonable agreement is first reached with Zulu that would ensure a fair return for the investment of Zulu's shareholders.

As for withdrawing our applications for coal licences, the Directors of Zulu rightfully expect to be granted the necessary coal licences on Zulu's property in order that a mine may be developed for the production of coal and/or minerals.

Finally, Mr. Menzies' letter fails to state, as promised at the meeting, that Norco was not interested in reaching an agreement with Zulu.

Yours truly,

Towaway

A.J. Garraway, President and Project Manager.

c.c. The Honourable James Chabot, Minister of Mines and Petroleum Resources.

> Mr. Morris M. Menzies, President, Norco Resources Ltd.

2050 Granville Square, 200 Granville Street, Vancouver, B.C. V6C 1S4 Telephone: 682-2744

NORCO RESOURCES LTD.

July 19, 1978

Mr. A. J. Garraway Zulu Explorations Ltd. Apt. 306, 476 Lampson St. Victoria, B. C.

Dear Mr. Garraway:

## Re: Bowron River Coal Licences and the Conflicting Mineral Claims

Further to our letter dated December 8, 1976, and the subsequent discussions in our offices held on May 16, 1978, with you and Mr. Simms in attendance on behalf of Zulu Explorations, and Mr. Wilson and myself representing Norco Resources Ltd., I must reaffirm the position held by Norco regarding Zulu's application for coal licences contiguous with those presently held by Norco.

We cannot subscribe to your view that Zulu is entitled to the licences for which you have applied for the following reasons:

- 1. In early 1974, at a meeting with Mr. McMynn, then Deputy Minister, Mr. Trenholme and I, both officers and directors of Norco, asked if we should then reapply for the licences formerly held by Norco. We were advised that this would be an unnecessary expense and that we would be notified when to reapply for licences dropped. As you are aware, this action of reducing the number of coal licences to the minimum was forced on us by a heavy debt carry-over from Northern Coal Mines Ltd. Apparently the Department of Mines later received Zulu's application for these coal licences.
- 2. The Ministry of Mines and Petroleum Resources has long held the view that discrete coal deposits must not be split up and granted to more than one applicant, because to do so would inevitably destroy the economics of any mining operation.

### Mr. A. J. Garraway

- 3. You stated at our meeting of May 16, 1978, that the mineral claims had been staked to further Zulu's claim on the underlying coal measures. Also, you made it clear to all present that you had little faith in any potentially economic uranium deposits in the basin. We share your view.
- 4. Norco has spent, or caused to be spent, some 2.6 million dollars on the Bowron coal property, one-half of which was spent on work under my own management or direction.
- 5. One thousand shareholders of Norco must not be denied a just return on their investment, which from the beginning has been directed toward the development of the whole Bowron coal basin. The large majority of Norco's shareholders were, of course, early investors in Northern Coal Mines Ltd.

I find this letter to be a difficult task, because I wish you well. I have, however, considered your application for the contiguous coal licences and the conflicting mineral claims in the light of Norco's future and the shareholders' interests, and have concluded that the Norco development would be affected adversely if your application were granted. In the best interests of the Norco shareholders, many of whom were brought to the company through your own efforts, I ask you to drop your application for the contiguous coal licences.

Yours very M. M. Menzié

MMM/klw

c.c. The Honourable James Chabot Minister of Mines & Petroleum Resources

Dr. J. Fyles

Deputy Minister of Mines & Petroleum Resources

# NORCO RESOURCES LTD.

2050 Granville Square, 200 Granville Street, Vancouver, B.C. V6C 1S4 Telephone: 682-2744



The enclosed copy of John Kerr's report to Norco on our work at the Bowron River coal deposit is to keep you informed on our progress. The report discusses our concept in initiating the work and summarizes the data to hole number 10. Today we are on hole number 15 with continuing good success. An additional 15,000 feet will be drilled this fall and subsequently an underground development program will commence.

Our exploration program has progressed to where we now have confidence that coal (and resin) can be produced from the Bowron River coal field. Wright Engineers Ltd. have been engaged to produce a conceptual study, leading to a feasibility report, by late November. We will be providing you with this report as well as updated "Kerr" reports as our drilling progresses.

Morris Menzies and I will be visiting you, if you will be available next month, for the purpose of discussing Norco's application for additional coal licences.

Sincerely.

- wilson

H. John Wilson Secretary

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HJW/klw Enclosure

# NORCO RESOURCES LTD.

2050 Granville Square, 200 Granville Street, Vancouver, B.C. V6C 1S4

Telephone: 682-2744

MINISTER'S OFFICE RECEIVED AUG 3 1 1977 PARLIAMENT BUILDINGS VICTORIA, B.C.

The Honorable James Chabot Minister of Mines Parliament Buildings Victoria, B. C. **DEPUTY MINISTER OF MINES** & PETROLEUM RESOURCES

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Dear Jim:

We have enclosed a report on the Bowron River coal deposit by John Kerr, P. Eng., to keep you informed on the progress of Norco's continuing development of this project. A copy is being sent to Jim Files as well.

Kerr's report discusses our concept in undertaking the development programme now underway and it includes recent drilling information and interpretation of data to the tenth drill hole. At this writing we are drilling the 15th hole with continuing good success. An additional 15,000 feet of drilling is planned for this fall and subsequent to this work a large underground programme will be undertaken.

Norco will continue to seek the residual coal licences to cover the total area of the Bowron River coal deposit. Norco has engaged Wright Engineers Ltd. of Vancouver to complete a comprehensive conceptual report leading to a feasibility study to determine the economic viability of our licenced area in particular and the total field in general. The study is to research the most efficient end use of our coal and resin products. We expect the Wright Engineers conceptual report to be complete near the end of November. We will present this report to you and when you have had time to consider its contents Morris Menzies and I would like to meet again with you for the purpose of achieving for Norco more coal licences than the three we presently hold.

HJW/klw Enclosure ( Male John Marker ( Male John Human Low Cool deposit.

Sincerely,

H. John Wilson Secretary and Director

September 20th 1977

Mr. H. John Wilson, Secretary and Director, Norco Resources Ltd., 2050 Granville Square, 200 Granville Street, VANCOUVER, B.C. V6C 1S4

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Dear Mr. Wilson:

Thank you for your letter of August 29th and the copy of the interim report of the drilling programme on the Bowron River coal deposits.

By now my Deputy Minister has received a Prospectus from your company indicating that further development is planned for the coalfield and we are looking forward to the Stage I report and any new developments that take place.

As you are aware, new policy with respect to the issuance of new coal licences is still being formulated and it is too soon to know if, and in what way, more licences can be issued to you.

Yours sincerely,

JAMES R. CHABOT Minister

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# DEPARTMENT OF MINES AND PETPOLE

Date:



#### INSTRUCTIONS

For your approval.
For your information.
For necessary action.
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□ Prepare reply for my signature.

□ Prepare draft of reply.

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□ For signature.

Wish to discuss.

**REMARKS**:

EGEIVE .HIN 1 3 1977 D'PARTMENT OF MINES & PETROLEUM RESOURCES

The Annual General Meeting of the shareholders of Zulu Explorations Ltd., (N.P.L.) was held on the above date at 7:30 p.m. in the Masonic Hall (downstairs), 679 Goldstream Ave., Victoria, B.C., with Mr. Ross Simms as Chairman.

Attendance: There were 27 shareholders present.

Proxy forms received by mail and represented at the meeting, all in favour of management with one proxy for Item 4, Ross Simms withold, proxys totalled: 1,167,700 shares.

Reading of the Minutes: of the last Annual Meeting of May 28th, 1976. M/S/C, Florrie Stade and Cyril Price, that the minutes be adopted as read.

Transaction of business: as per notice sent to shareholders:

- Item 1 M/S/C, Price and Futcher, that we approve the Annual Report of the Directors to the shareholders and the audited financial Statement to November 30th, 19%6.
- Item 2 M/S/C, Price and Futcher, that we appoint the firm of Peat, Marwick, Mitchell & Co., Chartered Accountants, as Auditors for the ensuing year.
- Item 3 M/S/C, Price and Futcher, to authorize the Directors to fix the remuneration to be paid to the Auditors.
- Item 4 M/S/C, Futcher and Raymond Simms, to elect the following Directors: Alfred J. Garraway, Cyril A. Price, John Grzyb, Bernard Lake and Ross Simms.
- Item 5 M/S/C, Price and Futcher, that we accept the resolution to issue 90,400 shares at 25¢ per share to Directors and Shareholders for moneys in the amount of \$22,600.00, advanced by them to the Company.

Mr. Garraway then gave a very comprehensive history of Zulu, also mentioning that the Securities Commission has suggested that Zulu and Norco (Northern Coal Mine) patch up their differences. Mr. Garraway has tried to have a meeting with Mr. Menzies of Norco, but so far Mr. Menzies has eluded him.

Zulu requires the coal linceses covering the mineral claims. The Management is considering the possibility of contacting the Department of Economic Development.

Mr. Futcher, on behalf of the shareholders, expressed thanks to the Directors for their hard work.

Mr. Carraway answered many questions.

M/S/C, Gary Dale and Futcher, that we adjourn. 9:00 p.m.

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Ross I. Simms, Chairman

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Alfred J. Garraway, President

Florice Stade

(Mrs.) Florrie Stade, Secretary

DEPUTY MINISTER OF MINISTER OF

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At the completion of Company business a question and discussion period was held.

Several shareholders requested information regarding the issuing of share certificates. In answer, Mr. Garraway explained that the <u>First</u> <u>Shareholders List</u> covering subscriptions from 117 shareholders during the period from Incorporation of the Company on December 12th, 1972, until July 31st, 1974, totalled 2,059,875 shares. Certificates for these shares, in the name of each shareholder, are being held in trust, either in escrow or under the Pool Agreement, by the National Trust Company.

The <u>Second Shareholders List</u>, covering Advances from shareholders from August 1st, 1974 to April 30th, 1976, for 282,100 shares was approved by the shareholders at the Annual Meeting held on May 28th, 1976. Mr. Samson, the Company's Solicitor intends as soon as possible to request approval of the Securities Commission of British Columbia to have these Advances cancelled by the issuing of the 282,100 shares at 25 cents per share. Also, to request approval of the Securities Commission to issue 60,000 shares at 25 cents per share to Mr. Keyes, the owner of the diamond drill, to reduce the Company's indebtedness to Air Power Limited. All these shares will be held in trust by the National Trust Company.

When approval has been granted by the Securities Commission the Share Capital of the Company will be as follows:

From Incorporation December 1972 to July 31st, 1974 2,059,875 share	s
August 1st, 1974 to April 30th, 1976 282,100 share	s
May 1st, 1976 to April 30th, 1977	s
To Mr. Keyes	<u>ss</u>
2,492,375 share	s

Balance of 507,625 shares.

Several shareholders requested information regarding Norco Resources Ltd., and any negotiations between Zulu and Norco.

In answer, Mr. Garraway informed the Meeting that correspondence between Zulu and the Department of Mines, and between Zulu and Norco, was available at the Meeting to be examined by any interested shareholders.
Mr. Garraway informed the Meeting that in September 1976, on the advice of the Department of Mines, Zulu attempted to initiate negotiations with Norco Resources towards some form of co-operative agreement between the two companies that would eliminate any division of coal titles and open the way to the development of a large mine on the Bowron Coalfield. To date all attempts to negotiate with Norco Resources has failed.

Copies of all correspondence between the two companies were forwarded to the Honourable James Chabot, Minister of Mines, Dr. James T. Fyles, Deputy Minister of Mines, and Mr. A.R.C. James, Senior Inspector of Mines.

On several occasions, in Reports and letters to the Department of Mines, the Management of Zulu has stated that in their opinion Norco had insufficient <u>recoverable coal</u> under their three coal licences to initiate a coal mining operation. Also that diamond drilling had indicated that there was a potential tonnage of recoverable coal under the large valley plain on the east side of the river under Zulu's Property, probably sufficient for the development of a mine that would provide direct employment for some 500 to 600 men, with some 3,000 men in the supporting services.

Two shareholders asked Mr. Garraway if he cared to express an opinion on the intentions of Norco in relation to Norco's drilling of four holes on their three coal licences.

Mr. Garraway suggested that in his opinion the News Releases, and the results of the drill holes, mailed by Mr. Menzies to Norco shareholders would be reflected in an increased price of Norco's shares on the Stock Market.

Mr. Garraway stated that the two drill holes reported in the News Release to Norco shareholders dated May 11th, 1977, are located in an area where ten drill holes were put down by Northern Coal Mines under Mr. Garraway's supervision. These two drill holes could not be more than 500 feet from any two of the 10 drill holes previously drilled and therefore it would be almost impossible for these holes not to intersect the coal seams in place. The results of these two drill holes could only confirm the results of the previous drill holes, <u>but would not add one ton of coal</u> to the reserves calculated on the results of the 10 drill holes.

The two drill holes presently being drilled by Norco are located where they will provide the same results as the first two drill holes.

#### Page Three

Mr. Garraway also stated that in his opinion—and must be the opinion of any Engineer having the results of the drilling of the previous ten drill holes—the drilling of these four drill holes by Norco served no useful purpose, proved no additional coal reserves, and was therefore a waste of money, except that when reported in Norco's News Releases the results may increase the price of Norco's shares.

Mr. Garraway stated that in his opinion the coal under the area of Norco's four drill holes would never be recovered because owing to the danger of subsidence and possible flooding of the mine, a large Pillar must remain in place under this area.

Answering a question regarding the Uranium and Germanium and the possibility of a major company becoming involved in the exploration, Mr. Garraway stated that drilling alone could not prove the true percentage or value of the Uranium and Germanium in the shale seams, any more than drilling could prove the true percentage or value of the Resins in the coal.

Only by means of underground exploration of the shale seams in order to obtain large bulk samples from the area where it could be expected that the seams would be mined is it possible to determine the true value of these, or other minerals, in the shale seams.

Mr. Garraway also stated that no senior partner, nor major company, could be expected to provide the funds for the underground exploration of the shale seams unless Zulu was first granted the necessary coal licences and the right to develop a mine on Zulu's Property.

Mr. Garraway said he could not understand why Norco Resources with three coal licences covering only 25 percent of the coalfield, and in his opinion containing less than 10 million tons of recoverable coal, should prevent Zulu with a Property covering 75 percent of the coalfield, and in his opinion having a potential of between 100 and 200 million tons of recoverable coal, from developing a coal mine that could employ between 500 and 600 men.

Asked by what means shareholders could provide funds to assist the Company, Mr. Garraway stated that from May 1st, 1976, to May 24th, 1977, the Directors and <u>15 shareholders</u> had advanced the Company a total of \$26,233.39 of which \$14,000.00 was paid in lieu of assessment work, rental, and Government fees. Without these advances Zulu would have lost 68 of its 150 mineral claims. Had all the shareholders been aware of Zulu's financial obligations in this regard I am sure that the majority would have been more than willing to participate in advancing funds to maintain the Property in good standing. The Directors cannot sell Zulu shares, and cannot ask shareholders to advance funds to the Company. Shareholders may volunteer to <u>advance</u> funds in order to protect their equity in the Company, expecting that any advances may be cancelled by the issuing of Zulu shares at 25 cents per share, <u>subject</u> to the approval of Zulu shareholders and the Securities Commission of British Columbia. The advances by the Directors and 15 shareholders during the past year were provided under this understanding and has been approved by the Zulu shareholders.

Questioned about the next assessment payment, Mr. Garraway explained that payment in lieu of assessment work and rental on 58 claims in the amount of \$12,760.00 must be made on or before August 10th, 1977, in order to maintain these claims in good standing for another year. Also, additional funds are required to cover administration of the Company.

The Directors and the 15 shareholders are convinced that it is vitally important to maintain the Company and its Property in good standing, and expect that the majority of Zulu shareholders would wish to volunteer their assistance in this effort.

Mr. Garraway suggested that owing to the importance of the questions asked at the Meeting, the minutes of the Meeting should include a report on the discussion period, and that copies should be mailed to all Zulu shareholders.

May 20th 1977

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Mr. Lyle Kahl, M.L.A. (Esquimalt), Legislative Assembly, BUILDINGS

Dear Mr. Kahl:

Further to my letter of May 16th and in reply to the enquiry of Mr. B. Lake regarding Zulu Explorations and the Bowron River Coalfield, I can supply the following information.

No new coal licences have been issued to Zulu Explorations for two reasons:

(1) There has been a general moratorium on the issue of new coal licences pending a review of the Coal Act and the procedures for issuing licences. It is expected that this review will be concluded in a few months time. If new procedures are implemented, however, it may be another year before they are operational and new licences can be issued.

(2) The long-standing dispute between Norco and Zulu, referred to by Mr. Lake, in which both companies have applied for coal rights over the same area, make it impossible for me to issue licences to either company. The Bowron River Coalfield is too small and too poorly known to be developed by two disputing operators. It is for this reason that we have requested the companies to get together and submit a joint application and programme for development.

It is unfortunate that Zulu has attracted investors on the basis of their right to develop coal in the Bowron River Caalfield. The Superintendent of Brokers several years ago required the company not to include coal development in any prospectus until such time as the company actually held

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## Mr. Lyle Kahl

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May 20th 1977

rights to coal licences. Investors should have been aware of the capability of the company in this area before putting up money.

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Yours sincerely,

JAMES R. CHABOT Minister

## DEPARTMENT OF MINES AN PETROLEUM PESOURCES

Date: 2000 11-7/ From Dat To: AT Jala

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□ For your comments. □ For signature.

Prepare reply for my signature.

□ For your information. □ Prepare draft of reply.

Return to me.

Wish to discuss.

**REMARKS:** PAR YOU PLSE REPLY TO TITIS REDUST FOR WED AS SOSNAS PossiBLE.

Province British Columbia Ministry of Mines and Petroleum Resources Parliament Buildings Victoria British Columbia V8V 1X4

OFFICE OF THE MINISTER

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Mr. Lyle Kahl, M.L.A., (Esquimalt) Parliament Buildings, VICTORIA, B. C.

Dear Mr. Kahl:

Thank you for your letter of May 10, 1977, in which you enclosed a copy of letter from your constituent, Mr. B. Lake, who expresses concern with the Zulu Exploration activities in the Bowron River region.

I have sent a copy of Mr. Lake's letter to officials of my Ministry. As soon as I have further information in this regard, it will be made available to you for conveyance to your constituent.

Yours sincerely,

James R. Chabot, MINISTER.

cc: Dr. J. T. Fyles Deputy Minister

11 - · · 121 Dila Pl. 9H Victoria, B.C. V9B, J3 apr. 29, 1977. nh. Lyle Kall, M.L. A. Parliament Blogs, Victoria, B C. Dear Mr. Kall: In response to our telephone conversation two dap ago, I am requested Jula Explorations total a company holding mineral liences near Ruise George, but with coal also on the property. I, and scores of others in this constituency, have advanced money for the exploration of these claims. Close to a the of a milion dollars has so far been spiri dilling and maintaining the property. Every bole drilled intersector load, to coal licences have been applied for several limit but with no success. For three years the N.D. P. government placed a moratorium on the issue I such lienses. In the regime of Arcial Credit. the coal report was awanted which fridly come in last remmer. Subsequently Jula submitted a detailed report on its property to the Department of Wines, but was

reformed eventually that it was willkely that coal licenses would be issued anders a cooperative agreement was amonged with Norco, a company tolding three coal licence, in the same area. I understand that copies of the consequent correspondince with themine plungies, president of Norce, are in government hands, showing that Nores is not intersted and won't even talk with Julu. alkat is required on the Jule property is development drilling of at least four holes with big drills in order to prove up the extension of the coal second and mineral assays If successful, these holes would prove from 100 to roo million tons g coal. The cost would be about \$350,000 which is beyond the scope I us local residents at this time. The are companies intrested in financing this dielling, but although such a sum is really not significant in their ownell financial picture, they will not expend money unless they are quaranteed that they may proceed to production if the holes are successful. This is why coal licinses are so important to us. Would you arrange a meting with

C C requisite government, as opposed to departmental, representatives to that I may be informed authoritatively the reasons why such learner and not be obtained? It would kiep of such a meting could be held prior to Julie annual meeting in late May. your servery,

Benards. take.

ZULU EXPLORATIONS LTD. (N.P.L.) 800 - 1070 Douglas Street, Victoria, B. C.

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Dr. James T. Fyles Allo (Monoral) Deputy Minister of Mines and Petroleum Resources Parliament Buildings Victoria, B.C.

Dear Dr. Fyles:

Re: Review of progress in the Applications of Coal Licences on the Bowron River Coalfield

Zulu Explorations Ltd. (N.P.L.) was formed to develop the Bowron propects for uranium, germanium, coal and resins.

The Company holds 150 Mineral Claims over the Bowron Coalfield.

Zulu Explorations Ltd. applied for Coal Licences on the Bowron Coalfield in March, 1973, and the application has been renewed at several following intervals.

Meanwhile Zulu has waited on the policy and decision of the Government to the issuing of Coal Licences on the Bowron prospects.

In the last contact with the Government we have the advice of the Department of Mines and Petroleum Resources, "the greatest drawback to the development of this coalfield is the conflicting interests of Zulu and Norco. I doubt that the Government will issue any new licences in that area until a cooperative agreement has been worked out by these two companies" as stated in the letter from Dr. Fyles of September 30, 1976.

Zulu, for the second time, approached Norco (formerly Northern Coal Mines Ltd.), to discuss ways and means towards a form of cooperative agreement between the companies, by which the division of coal titles could be avoided. Copies of the correspondence with Norco

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from November 2nd, 1976, to January 5, 1977, was transmitted to the Department of Mines and Petroleum Resources.

- 2 -

In his last reply Mr. Menzies, President of Norco, rejected any form of cooperative agreement between Norco and Zulu.

Furthermore, he has been determined to deny possibilities of negotiations - by inference and innuendo by untoward and defamatory attacks on the conduct of myself, President of Zulu.

It seems clear that Norco has frustrated Zulu's efforts to obtain a co-operative agreement on the Bowron properties.

The question is - what is there for Zulu to do?

In my view, a division of coal titles to the Bowron prospects as noted in the letter of Dr. Fyles of September 30, 1976, is more apparent than real, for the following reasons:

- The recoverable reserves of coal under Norco's three coal licences (Nos. 148, 162 and 163) are between 5 and 10 million tons, and they are of secondary importance and not sufficient to initiate a coal mining operation.
- The economic feasibility of the Bowron Coalfield depends on the ground <u>east</u> and <u>south</u> of the Norco coal licences.
- 3. The potential of the Bowron prospect depends on the combined values of coal, resins, germanium and uranium, and their value should be investigated in a comprehensive scheme.

Zulu, the directors and shareholders, are concerned to know what the Company's position and future is in regard to the coal licences.

Yours truly,

A.J. Garraway

A. J. Garraway President

AJG:jk

c.c. The Honourable James Chabot, Minister of Mines c.c. Mr. A. R. C. James, Senior Inspector of Mines

#### September 30, 1976

Mr. A. J. Garraway, President and Project Manager, Zulu Explorations Ltd (NPL), 725 Suffolk Street, Victoria, B. C.

Dear Mr. Garraway:

Thank you for your letter of September 15 and accompanying report on the mineral claims held by Zulu Explorations and the application for coal licences in Bowron River coalfield.

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As indicated in our discussion last week, the greatest drawback to the development of this coalfield is the conflicting interests of Zulu and Norco. I doubt that the Government will issue any new licences in that area until a co-operative agreement has been worked out by these two companies.

Yours very truly,

James T. Fyles, Deputy Minister.

JTF:DB

Blind copy: Hon. T. M. Waterland

March 31st 1977

File: 210 (Bowron River)

Mr. A. J. Garraway, President, Zulu Explorations Ltd., 800 - 1070 Douglas Street, VICTORIA, B.C.

Dear Mr. Garraway:

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This will acknowledge receipt of your letter of March 21st.

The situation with respect to issuing coal licences in the Bowron River coalfield has not changed since I wrote you on September 30th 1976. I will let you know about any changes in Government policy which will affect your application for licences in that area.

Yours very truly,

JAMES T. FYLES Deputy Minister

JTF:bg

Blind copies to: A.R.C. James A. R. Corner (via E.R.Macgregor)



Re: Bowron River Coalfield Coal and Minerals

Our letter of December 6, 1976, invited proposals of Norco, by which Zulu could acquire Norco's three coal licences and the division of title to the Bowron Coalfield could be avoided.

Doubtless you are aware that Zulu has applied for coal licences on the Bowron Coalfield we emphasize this to make sure of your understanding. Also we stress that Zulu places little or only minor economic value, or other advantages on the coal reserves of Norco's licences, they are not necessary or even contributory to Zulu's enterprises, except in regard to the matter of bringing the total mineral resources of the Bowron Coalfield under a form of unified or co-operative development.

We interpret your reply of December 8th, 1976, "there will be no compromise on the Bowron Coal potential" as rejecting any co-operative agreement to develop the Bowron prospects. It would appear to be your decision to end the matter here. However, we will leave the door open for you to initiate any proposals which could lead to a fair and workable agreement between Norco and Zulu on the Bowron coal and mineral prospects. Mr. Norris M. Menzies, President Norco Resources Ltd. January 5th, 1977 Page 2

Zulu has no plans to drill the radioactive shales under Norco's three coal licences at the present time or in the near future, for technical reasons. In addition, there is Norco's refusal to open negotiations on the Bowron prospects. Zulu intends to conduct its affairs accordingly.

If you wish to reconsider Norco's position, we would be interested in holding discussions with you.

On behalf of Zulu Explorations Ltd. (N.P.L.)

Garrowing

A. J. GARRAWAY PRESIDENT

AJG:jk

c.c. The Honourable James Chabot Minister of Mines

> Dr. James T. Fyles Deputy Minister of Mines



Dear Mr. Garraway:

#### Re: Bowron Mineral Properties Your\_letter dated Dec. 6/76

As you know full well, 971 shareholders of Northern Coal Mines Ltd. supported you loyally over several years at great personal cost. Many of these people were then retired or approaching retirement and a regrettable number of them are now deceased.

The Norco management has a deep and unshakeable commitment to their shareholders, particularly the very old and the infirm. After many years of fading hope, and very real suffering for some, their reward is now within sight. I am pledged to see that they will not grow older or more infirm without a just return on an investment made in good faith so long ago.

You have misread me and my intent. There will be no compromise on the Bowron Coal potential but I stand ready, at a very small cost to the Zulu shareholders, to systematically drill off the radioactive shales which lie below the coal measures. All core recovered below the coal measures would be delivered to you or your representative at the drill site at only an incremental cost and not on a pro-rated basis. Thus Zulu's radioactive shales could be explored systematically at depth on a grid basis at a cost of less than 15 percent of any program undertaken directly by them.

Mr. Wilson is available at short notice to negotiate with you on the above basis but any agreement must be ratified by Norco's Board of Directors. C

I wish you personally and all the shareholders of Zulu Explorations Ltd. (N.P.L.) a Merry Christmas and a happy and successful New Year.

Yours very truly,

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Matinzi-

M. M. Menzies President

MMM/klw

The Honourable James Chabot C.C. Minister of Mines & Petroleum Resources

> Dr. James T. Fyles 🗸 Deputy Minister of Mines & Petroleum Resources

DEPUTY MINISTER OF MINES & PETROLEUM RESOURCES REC'D **LATTWAL** DATE REFERRED TO ACCTS A. D. M. A. D. P. M. R. E. & P. A. D. Mr. Morris M. Menzies, President Norco Resources Ltd. 71114 850 West Hastings Street

Zulu Explorations Ltd. (N.P.L.) 725 Suffolk Street Victoria, British Columbia Phone 382-8666 December 6, 1976

Dear Mrs. Menzies:

Vancouver, B.C.

Re: Bowron River Coalfield Coal and Minerals

Thank you for your letter of November 29, 1976, and your agreement to discuss the Bowron coal and mineral properties.

We will proceed on the understanding that Mr. John Wilson, Director and Secretary of Norco Resources Ltd., will represent Norco with the authority accredited by statement of your letter.

As you are aware from our former meeting of November 22nd, 1973, it is Zulu's intention to develop a producing mine on the Bowron property. This development may, or may not, depend on any agreement between Zulu and Norco.

The management and directors of Zulu are prepared to consider any reasonable and equitable proposal from Norco, whereby it would be possible for Zulu to acquire the three coal licences held by Norco, and whereby division of the coal titles to the Bowron Coalfield could be eliminated.

If Norco are willing to indicate their intent, or otherwise their views on the subject of discussions here proposed by Zulu, we can save much time. We will be glad to have Norco's initial response to the basis of the proposed discussions. We would appreciate your reply by letter. If suitable we can then proceed directly to comprehensive discussions.

For meetings, we can suggest schedules from December 9th, which can be arranged by telephone.

Yours truly,

CC

On behalf of Zulu Explorations Ltd. (N.P.L.)

A. J. Garraway President

- c.c. Mr. John Wilson Director and Secretary Norco Resources Ltd.
- c.c. The Honourable James Chabot Minister of Mines
- c.c. Dr. James T. Fyles Deputy Minister of Mines

NORCO RESOURCES LTD.

## 711, 850 W. Hastings St. Vancouver, B.C., V6C 1E2 Phone 688-6231

November 29, 1976

Mr. A.J. Garraway President Zulu Explorations Ltd. (NPL) 725 Suffolk Street Victoria, B.C.

Dear Mr. Garraway:

I am pleased to acknowledge your letter of November 23 and have considered its import.

As I will be away from my office a good deal of time over the next two months, I must ask Mr. John Wilson, Director and Secretary of Norco Resources Ltd., to make himself available for discussions with you.

You may contact him by letter at the Company's offices or phone him if you prefer.

Yours very truly

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c.c. The Honourable James Chabot Minister of Mines

> Dr. James T. Fyles V Deputy Minister of Mines

Eulu Explorations Ltd (NPL) 725 Suffolk Street, Victoria, British Columbia

Phone 382 - 8666

November 23rd 1976

 Mr. Morris M. Menzies, President, Norco Resources Ltd.,
 711 - 850 West Hastings Street, Vancouver, B.C.

Dear Mr. Menzies,

### Bowron River Coalfield: Coal and Minerals

I write to follow up my letter to you of November 2nd, in which I had proposed discussions on behalf of Zulu and Norco to exchange views to possible agreements on developing coal and minerals in the Bowron coalfield.

We have not received any reply or form of acknowledgement to Date.

The reasons for Zulu's approach are obvious, in view of the ground shared by Norco's three coal licences and Zulu's mineral claims, and in view of Zulu's standing and current application for coal licences on the Bowron coalfield.

I would regard it as a kind consideration and condescension if you are interested to reply to our proposals of November 2nd, and would look forward to opening discussions with Norco as soon as possible.

> Yours Truly, On behlf of Zulu Explorations Ltd. (NPL)

& PETROLEUM RESOURCES

A.J. Garraway, President

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c.c. The Honourable James Chabot Minister of Mines

> Dr. James T. Fyles Deputy Minister of Mines

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ZULU EXPLORATIONS LTD (NPL) 725 Suffolk Street VICTORIA, British Columbia

& PETROLEUM RESOURCES

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A. D.

D. P.

Phone 382 - 8666

November 2nd, 1976

Mr. Morris M. Menzies, President Norco Resources Ltd. 711 - 850 West Hastings Street VANCOUVER, B.C.

Dear Mr. Menzies:

BOWRON RIVER COALFIELD COAL AND MINERALS

A study of the Report of the Coal Task Force, and the fact that coal is becoming increasingly important as a source of energy, strongly indicates that any coal deposit capable of supporting a profitable mine should be developed as soon as possible.

The management and Directors of Zulu are convinced that the coal and mineral resources of the Bowron River Coalfield should be developed.

On November 22nd, 1973, at your office in Vancouver, Zulu unsuccessfully attempted to acquire the interest of Northern Coal (Norco) in the Bowron Coalfield.

We must assume at this date, that Norco is equally concerned that development of the Bowron Coalfield should proceed without unnecessary delay.

Both our companies are involved in this coalfield, and Zulu believes it may be to the interest of both companies to discuss once again the development of coal and minerals in the Bowron Coalfield.

We look forward to holding discussions with Norco, and would appreciate receiving an reply to this letter as soon as possible.

Yours truly,

On behalf of ZULU EXPLORATIONS LTD (NPL)

anaway GARRAWAY A. J.

President

cc The Honourable James Chabot, Minister of Mines

 Dr. James T. Fyles, Deputy Minister of Mines

11/1/76 John Wilson J Norco JTF ERM Bowron Piner Tony James Dare Pearson Alf Comer - Dewater main workings & obtain 10 for testing @ Emith - John Haslam retained to take Change of works Man Hope - tember of , we slump of consequence Dogleg - 250' down, wasser slump - could not get down to wit depte 225' - Lock Sample @ 120' below surface. 14 - Sample - 2 Tretained, 12 to EmitR Sampled is put thue EM+R plant for cleaning - will have fullaralysed clean product, meddlig + tacking in about 2 whs. - est. 13000 BTU/16 } have not determined cohing properties V - fair strong of amber on clear cral (no of Anour) (est up to 4 %) -previole (very smillsambiles) - previoles work by Battelle - mp. 4/50°C - ansoluble man - wort ander stant 1107 11 " " water - Athent Alle - appens to be about 44 % of "Course" reserve and etc. Horsalle - lower mp - mene Mar varmest, etc. (more interested in the sember) - Willhave at least 6t of clean coal - middlig JCCD - approched Menzies in late July 76 (Adashi was leader) re: themal coul. - looked over basin but ploges not dewatered at that there. - upari coul field (Kikkaido) -> sinder to Brown field ( coul gary, siene soco'degth vitere) - month, heard, is custing for future coul needs for energy.

- Must now drill probable + inferred townages fast. @ Somillion tom - Start or environmental studies (at least #300,000) -> hope to raise 600,000 - ability to raise faits for dulling new easter contact of coal measure - main produ fin easter sile - would leave a heavy piller along that side 148 ) 162 Junences 163 J Steep digon SW side (up to 40°) and flatters as more NE. 41 hales duilled but few of value. Would like to reaquire ald lecences (natall balment) - 11012 - Co reorganized - prepared to pay tay (from pravious ys) - surveyor of - debt of Commutate care of . - Sport to apply former Mill propen. - produ from Western side of river (Polaris steel has segnated for domestic markets (smaller) (a sample) - man prode for astern side, -> for export Seem thickness 8-11ft (6-8-11) - may be lenticular. - three main seams. Reduce coal to about 8mxD (78) to release amber. Seel cost for themase resconder (?) J (Club 55-60 Meddleys 20 Teilings 20 Resins -7 at least two types (amber & Congo) but seems to be a continuous gradation of quality funneticture.

148 Junences carretty held by Norco. 163 163 449 417. 459 455 456 12 new luceries requested. 453 1644 454 1645 1646 1641 + one unschweged - some area already requested for coal livines = meneril clains also an part of properties - Hanoway. (Zulu Explorition -> gunnich for ) - her privilegelistic - Surface rights - pengres sap no porfluit a face - mend rights - pengres sap no porfluit a face -> Emiles from licences to Hway -150,000 tpy cod/min -> 300,000 tpy - upto 300,000 tpy (bagged coal) Polonis -Jour retailers JTF: suggeds that worden to move, the two parties - (Menzies + Garroway) get togette & verolve them differences -> Come with a complete package -> The dept. may be now favourally diposed to lecence issue

For your information.
For necessary action.
Return to me.
Send me copy of reply.
Return to file.
For your comments.
For signature.
Wish to discuss.

**REMARKS:** 

ZULU EXPLORATIONS LTD. (NPL) 725 Suffolk Street VICTORIA, British Columbia DEPUTY MINISTER OF MIN

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A. D. M.

1. D. P. 1. R.

E. & P.

October 29th, 1976

Phone:

Dr. J. Fyles Deputy Minister of Mines and Petroleum Resources Parliament Buildings Victoria, British Columbia

Dear Dr. Fyles:

Please accept this letter as a rather late A. D. acknowledgement of your letter of September 30, 1976, which I received on October 11th last, on my return 210 from checking the diamond drill on Zulu's Bowron Property.

Since my return I have had several meetings with the Directors of Zulu for the purpose of discussing your letter.

They cannot understand the reference to the conflicting interests of the two companies, or why it should be necessary to work out a co-operative agreement between the two companies before the Government would issue any new coal licences on the Bowron coalfield.

Through its mineral claims Zulu holds and controls at least 75 percent of the area of the Bowron River Coalfield with a potential tonnage of recoverable coal sufficient for the development of a large producting coal mine. Norco holds no interest in this area.

Norco holds three coal licences covering 25 percent of the area of the coalfield, but in our view containing insufficient recoverable coal to warrant the development of a profitable coal mine.

In 1971, Northern Coal (Norco) chose to abandon all their mineral claims, and all their coal licences Dr. J. Fyles Deputy Minister of Mines and Petroleum Resources October 29th, 1976 Page 2

except three, and thereby forfeited all rights and interest in the area now held by Zulu's mineral claims and applications for coal licences.

On November 22nd, 1973, accompanied by a Director and two Shareholders of Zulu, I had a meeting with Mr. Morris M. Menzies and Mr. L. Trenholme of Northern Coal Mines in their office in Vancouver. Mr. Price, Mr.Strang, Mr. MacIsaac and myself represented a group of Zulu shareholders holding over a million Zulu shares, and at that time held in excess of two million shares in Northern Coal Mines. We were unsuccessful in our attempts to acquire the interests of Norco Coal in the coalfield. Had we succeeded it would have been of benefit to the shareholders of Northern Coal, and would have provided for all exploration and development being carried out by Zulu Explorations Ltd.

Since that meeting the way has always been open for Norco to approach Zulu for the purpose of holding discussions which could have benefitted both companies.

We must assume that the management of Norco is also aware of the information contained in your letter to Zulu, but to date Zulu has not received any inquiry from Norco regarding any possible agreement between our two companies.

At this date, the three coal licences held by Norco, and the small potential tonnage of recoverable coal contained under these licences, are of little or no value to Zulu in the development of a mine on Zulu's property, or in increasing the value of our Company, or the value of our shares.

The Directors of Zulu have expressed concern that your letter may be understood that the issue of coal licences to Zulu on the Bowron coalfield are conditional on an agreement with Norco.

We would look forward to reaching an agreement with Norco in developing the Bowron coalfield and the mineral resources. This stems from our long-held view that the coal and mineral rights should best be worked together. Dr. J. Fyles Deputy Minister of Mines and Petroleum Resources October 29th, 1976 Page 3

We expect to initiate discussions towards such an agreement in the very near future.

Yours truly,

On behalf of ZULU EXPLORATIONS LTD. (NPL)

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A. J. GÁRRAWAY President and Project Manager

c.c. The Honourable James Chabot Minister of Mines

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September 30, 1976

Mr. A. J. Garraway, President and Project Manager, Zulu Explorations Ltd (NPL), 725 Suffolk Street, Victoria, B. C.

Dear Mr. Garraway:

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Thank you for your letter of September 15 and accompanying report on the mineral claims held by Zulu Explorations and the application for coal licences in Bowron River coalfield.

As indicated in our discussion last week, the greatest drawback to the development of this coalfield is the conflicting interests of Zulu and Norco. I doubt that the Government will issue any new licences in that area until a co-operative agreement has been worked out by these two companies.

Yours very truly,

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James T. Fyles, Deputy Minister.

JTF:DB

Blind copy: Hon. T. M. Waterland

ZULU EXPLORATIONS LTD (NPL) 725 Suffolk Street Victoria, British Columbia

DEPUTY MINISTER OF MINIS

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. D. M.

M. R.

Phone: 382-8666

September 15, 1976

Deputy Minister of Mines and Petroleum Resources Parliament Buildings VICTORIA, British Columbia

Dear Dr. Fyles:

# ZULU EXPLORATIONS LTD (NPL)

## BOWRON RIVER PROPERTY

The following is submitted on behalf of the shareholders of Zulu Explorations Ltd (NPL) and outlines the managements opinions based upon the enclosed Report on Zulu's Property which covers the major part of the Bowron Coalfield, and a request for the necessary coal licences and/or permits to enable Zulu to carry out the explorations and development of a producing coal mine on the area covered by Zulu's mineral claims.

Although at this date Zulu's Bowron Property consists of 150 mineral claims, applications for coal licences covering the area of the mineral claims was first submitted in March 1973 and again in November 1973. Also in November 1974 and November 1975. A renewal of the applications was made in March 1976.

Failure to obtain the necessary coal licences has resulted in Zulu being unable to proceed with the Development Drilling and Underground Exploration, and a loss of some three years in the development of a producing mine.

The Report of the Coal Task Force indicates the urgency of increasing coal production in the Province, and we believe the location of Zulu's Property, and other factors as set out in the enclosed Report, warrants the granting of the necessary coal licences and permits to Zulu so that the exploration and development of a large producing mine could be started as soon as possible.

The production costs per ton of coal from underground, or deep mining, is usually higher than from surface, or open pit mining. Therefore, it may be of utmost importance that a mine on Zulu's Bowron Property is developed as soon as possible in order to take advantage of the high price of coal.

### PAGE TWO

Zulu's Bowron Property is unique in that there is a potential for the development and production of a large annual tonnage of coal, but also has the potential for the production of Uranium and Germanium found in the shale seams situated below the Basal coal seam, and the recovery of the Resins, minerals, and metallic ores associated with the coal.

The management and shareholders of Zulu are all well aware of the somewhat unique position of the Company with respect to its 150 mineral claims innofar as it has been necessary to first pass through coul seams in order to explore the underlying minerals. Although the Company is the registered owner of all its mineral claims, it does not hold any coal licences and to date has not been able to obtain such licences. The Company is continuing its efforts to obtain coal licences covering that portion of its mineral claims which it feels are also prospective for coal, and the Company is optimistic that it will be able to obtain coal licences in that if production of coal and metals is attainable it would appear that any mining to exclude one or other as a consequence of the division of coal and mineral titles would lead to considerable difficulties in mining practice, increased costs and other factors which would not make separate production feasible.

The management and shareholders of Zulu are convinced that as the owners of its mineral claims the Compnay has the right to all minerals, including the minerals and metallic ores associated with the coal, and therefore, should be granted the necessary coal licences covering the area of the Company's mineral claims and thus eliminate the division of coal and mineral titles.

Neither Zulu Explorations Ltd., nor any major company, would be prepared to undertake, or finance, the Development Drilling and Underground Exploration of the Uranium/Germanium bearing shales, unless Zulu is first granted the necessary coal licences and the right to develop a producing coal mine on the area covered by Zulu's mineral claims.

Since September 1971, the shareholders of Zulu Explorations Ltd., have expended in excess of \$300,000.00 for the staking of the mineral claims, a scintillometer survey, diamond drilling programmes, and to maintain the mineral claims in good standing.

The management of the Company has every reason to believe that when Zulu is granted the necessary coal licences financial arrangements will be completed to carry out the Development Drilling on the east side of the Bowron River, followed by the Underground Exploration of the coal seams, and the Uranium/Germanium bearing shale seams.

#### PAGE THREE

During the bast 12 months, Engineers representing several oil companies have visited Zulu's Bowron Property and all were interested in the possibilities of the production of Coal and Uranium.

Zulu has forwarded all relevant data to one interested major oil company and they are waiting for the granting of coal licences to Zulu Explorations Ltd., covering the area of Zulu's mineral claims.

The management and shareholders of Zulu are anxious to complete arrangements for the Development Drilling and Underground Exploration which we believe will be followed by the development of a large mine for the production of coal, or minerals, or both. A producing mine would provide employment underground for at least 400 miners, and a large number of men on surface, in the Cleaning Plant, and possibly in the recovery of the Resins from the coal.

Zulu's unique position in that, in addition to the minerals in the shales, the Company holds the right to all minerals and metallic ores associated with the coal, and because of the impracticability of any division of the coal and mineral titles, or the possible granting of coal licences to a second company which could probably result in the prevention of any development of the property, it appears to the management of Zulu that the only solution to the exploration and development of the minerals, is the granting by the Government of the necessary coal licences to our Company so that the proposed development of the property may be carried out without further delay.

The development of a producing mine on Zulu's Bowron Property would require no Government expense for the building of roads or a branch railroad, except that transportation of the coal by B.C.R. would require a branch line of some 40 miles from the mine site to Red Rock south of Prince George.

At this time when job creation is of vital importance, the development of a producing mine on Zulu's Bowron Property would provide employment for a large number of men, and revenue for the Province with out Government expense.

It has been estimated that the underground exploration could be completed within 12 months. Construction of the Preparation Plant employing Dry or Air Cleaning of the coal, storage facilities, and other surface installations would require approximately 12 months. Therefore, it is possible that the mine could be in production within 2 years. Finally, to repeat one of the most important factors contained in the enclosed Report--drilling alone cannot prove the true value of either the shale seams or coal seams. This can only be determined by obtaining large bulk samples from the area underground where it is expected the seams will be developed into production. The economic feasibility of mining one, or more than one of the coal seams, or of mining either the shale seams, or the coal seams, without production from one preventing the extraction of others, can only be determined by underground explorations.

For these reasons we are convinced that the development drilling and underground exploration **should** be carried out by Zulu Explorations Ltd., and would probably require the participation of a major company.

The management and shareholders of Zulu believe that the granting of the necessary licences and/or permits would result in the finalizing of arrangements to carry out the development drilling and underground exploration of the area covered by Zulu's mineral claims without any further delay.

Zulu is most anxious to avoid any further unnecessary and costly delay in the exploration and development of its Bowron Property, and respectfully requests that this matter is given your careful consideration as soon as possible.

Yours truly,

On behalf of Zulu Explorations Ltd (NPL)

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A.J. Garraway

A. J. GARRAWAY President and Project Manager

cc: The Honourable Tom Waterland Minister of Mines

Mr. A.R.C. James, Senior Inspector of Mines

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# Norco Resources tests B.C. coal deposit

VANCOUVER – Norco Resources (formerly Northern Coal Mines) intends to use \$35,000 of a \$100,000 underwriting to begin development of three coal licences. 35 miles east of Prince George, B.C.

The licences total three square miles. Application has been made for adjoining licences. A 1971 drilling program indicated reserves of 58,565,000 tons and inferred reserves were placed at 22,845,000 tons of good quality thermal bituminous coal on the Norco property and adjacent ground, according to the consulting geologist.

Coal near present workings contains quantities of amber resin which has a market value of about 80c per lb., the consultant said.

Testing of physical properties and marketability of the resin is recommended, as well as de-watering and re-timbering of flooded workings.

Working capital deficiency at -May 3, 1976, was \$65,310,-----

Northern Miner July 22/76
# CREASE & COMPANY

Barristers and Solicitors

ARTHUR D. CREASE, O.C. ( d. 1967 ) D. MARSHALL GORDON, Q.C. D. J LAWSON, O.C. J. C. SCOTT-HARSTON, Q.C. JOHN C. COWAN, O.C. R. B. HUTCHISON R. N. SAMSON R. LOU-POY J. D. PATTERSON ALLAN R.WATSON PETER W. KLASSEN JACK ANGUS R. T. TAYLOR

PLEASE REPLY ATTENTION OF R.N. Samson FILE NO.

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TELEPHONE 388-5421 AREA CODE 604 TELEX 044-8387 CABLES: CREASCO

MAILING ADDRESS: P.O. Box 997 VICTORIA, B. C. CANADA VOW 258

SUITE 800 1070 DOUGLAS STREET VICTORIA, B.C.

## November 4th, 1975

Dr. J. T. Fyles Associate Deputy Minister Mineral Resources Branch Department of Mines and Petroleum Resources Douglas Building Victoria, B.C.

Dear Dr. Fyles:

#### Zulu ExplorationsLtd. (N.P.L.) Re:

We are enclosing for your information various material relating to Zulu Explorations Ltd. (N.P.L.) and its mineral claims in the Bowron River area.

We act for the company and in that regard we are presently clearing a Rights Issue through the Securities Commission whereby the existing shareholders of the company will be given the opportunity of purchasing additional shares, thereby providing funds to pay off the company's current liabilities and provide some operating capital for the completion of the drilling of the hole presently under way and hopefully some additional drilling program.

The company previously applied for coal licences covering some of the same area involved in its mineral claims, but was unsuccessful in its request. As a result of the drilling done by the company on its mineral claims, coal seams are of necessity penetrated in order to evaluate the underlying shales. In that regard, based on the technical reports prepared by Messrs. Hughes and Haslam, substantial coal reserves have been established which Dr. J. T. Fyles November 4th, 1975 Page 2

warrant development and further exploration. It would further appear that the minerals and the coal should be explored and developed simultaneously as it may be impossible and it would certainly seem impractical to attempt to do otherwise. In discussing the proposed Rights Issue of the company with Mr. James of the Securities Commission, he shared this view.

Zulu Explorations Ltd. (N.P.L.) wishes to apply once again for coal licences. Before doing so, however, we would hope that a meeting might be arranged between those persons in the Department of Mines and Petroleum Resources having jurisdiction over the matter of coal licences and representatives of Zulu Explorations Ltd. for discussion purposes prior to any formal application for the licences being made.

Yours truly,

CREASE & COMPANY

Per R. N. Samson

RNS:jk Enclosures c.c. Mr. Hart Horn ZULU EXPLORATIONS LTD (NPL) BOWRON RIVER PROPERTY 150 MINERAL CLAIMS

March 14th, 1975

The following information was contained in Reports presented to Zulu shareholders at the Extraordinary General Meeting of Shareholders held on March 12th, 1975. This meeting was held to consider, and vote on a Resolution to proceed with a Rights Offering to provide funds in order to meet existing liabilities, and carry out the drilling programme proposed by Dr. Hughes and Mr. Haslam in their Report.

31 Forms of Proxy were received representing 1,093,975 shares.

Total number of shares in favour of the Resolution 1658, 615.

In their Report, Dr. Hughes and Mr. Haslam, recommended the drilling of two holes to be put down <u>below</u> the base of the coal measures, this is, into the lower radioactive zone as indicated in the Z7 and Z9 drill holes.

We expect the drill hole in the <u>Southeast</u> area will confirm the findings of the other drill holes in this area, and provide additional information on the lower radioactive zone.

The drill hole in the <u>Northwest</u> area is required to prove that the radioactive shale seams found in the Z5 and Z6 drill holes extends to this area. Also, to prove that the lower radioactive zone found in the Z7 and Z9 drill holes extends to this area.

We also anticipate that this drill hole will confirm the "bearing of the line of strike" where the altitude of the shale and coal seams flatten to 15 degrees, and therefore indicate that these seams under the greater part of the valley are comparatively flat.

#### ASSESSMENT

These two drill holes should provide sufficient assessment work to maintain 70 mineral claims in good standing for <u>at least</u> two years. This assessment work must be completed and recorded on August 14th, and November 14th, 1975, or Zulu will be in danger of having to forfeit these claims, and therefore lose control of this property.

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We expect the Z9 drill hole, completed in September 1974, and must be recorded on, or before April 24th, 1975, will provide sufficient assessment work on 40 claims for two years.

#### NORTHERN COAL MINES

On November 22nd, 1973, accompanied by Mr. Price, A. D. MacIsaac and Harvey Strang, we met with Mr. M. M. Menzies, the President, and Mr. Larry Trenholme, the Engineer for Northern Coal, and attempted to work out an agreement. Mr. MacIsaac, Mr. Strang and I hold a considerable number of shares in Northern Coal. It is interesting to note, that 13 of the Original members of Zulu hold and control in excess of 2 million shares of Northern Coal Mines.

Except for payment of rental on the coal licences, Northern Coal has not expended one cent on their property since July 1971.

Northern Coal may, or may not, be aware of other important factors relating to any possible development of the coal seams under their licences.

#### MAJOR FAULT

When the old Ventilation Slope was being developed by Northern Coal, Mr. R. B. Bonar, who was at that time the Deptuy Chief Inspector of Mines, discovered a fault running diagonally across the cross-cut and Slope, and having a bearing of a few degrees west of north. At that time, mainly because drilling was being carried out along the western margin of the coal basin, and on the west side of the fault, the true extent of this fault was unknown.

Zulu's Z6 drill hole, and two holes drilled by Bethlehem Copper, indicate that this fault continues in a northerly direction across the valley. The horizon of the coal seams and radioactive shales on the east side of the fault is approximately 450 feet lower than the horizon of the same seams on the west side of the fault. SEE fi6.2 JANUARY 1975

#### BOWRON RIVER

This large river meanders, with large bends, in a northwesterly direction, across Northern Coal's coal licences. In order to prevent subsidence of the river, an extremely large pillar must remain below the river. The coal on the west side of the river is steeply pitching and would be difficult and costly to mine.

Therefore, taking the Major Fault and the Pillar into consideration, the only coal Northern Coal could produce would be under the east half of Lot 9593,

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and on the east side of the fault. From this area only 8 million tons could be produced from one 10 foot seam of coal, or approximately 16 million tons it it was possible to mine two 10 foot seams of coal.

# ZULU'S DRILLING

Zulu's drilling prgramme was designed to explore the radioactive shale seams on the east side of the Major Fault. This area is partly covered by Lots 4844, 4845, 4846, 4868, 4869, 9594, 9590 and the Lot adjoining and south of Lot 9590 (Figure 4). Production would come from the east side of the River, leaving an undisturbed pillar under the river.

#### DEVELOPMENT DRILLING

Should the two proposed drill holes prove successful, then it is possible that this large area could be proved by the drilling of 5 or 6 holes along the inferred northeast limit of the coalfield (Figure 2). This drilling is estimated to cost in excess of \$200,000.00 and would require major financing. This drilling would be carried out by a reputable drilling company, and under the direct supervision of Dr. Hughes and Mr. Haslam. Should these drill holes prove successful, they would not only indicate a large potential tonnage of radioactive shales, but a correspondingly large tonnage of coal.

## UNDERGROUND EXPLORATION

Drilling alone cannot prove conclusively the true value of either the shale seams, or the coal seams. This can only be determined by obtaining large bulk samples from underground, and taken from the area where it is expected the seams will be developed into production. The difference that may be expected between the results obtained from the drill core, and those obtained from bulk samples, are plainly shown in samples assayed for Resin from the same seam of coal at the Bowron River Property.

A large number of drill core samples were assayed for Refined Resin, and returned values of from 1.73% to 2.92% Resin. AVERACE 2.23% RESIN

Dr. J. Black in his Report of August 12th, 1965, provides the results of bulk samples taken whilst a slope was being driven down in the 12 foot seam of coal. The Slope between 50 feet and 250 feet was bulk sampled by taking one car of coal from each round advanced. This carload was dumped on a sampling platform. When nine carloads were accumulated, they were coned and quartered down to sample size.

The Resin content was as follows:

	First 50 feet .	•			•				•	•	3.69%
	Second 50 feet.									•	3.56%
	Third 50 feet .		÷								3.85%
	Fourth 50 feet.	•		•							3.59%
The	average Resin con	nte	en	t v	va	s :	3.(	575	%.		

Five channel samples taken at the face at the beginning, and at each 50 foot interval, assayed for Resin as follows:

4.55%, 2.99%, 3.70%, 3.38%, and 4.30% for an average of 3.78%.

Therefore the air-dried coal contained about 3.8% Resin.

From the foregoing it is obvious that drilling alone cannot determine the Uranium and Germanium content of the shale seams. In fact, extremely large bulk samples, probably in the hundreds of tons, will be required to properly evaluate the shale seams. The economic feasibility of mining either the shale seams, or the coal seams, without production from one preventing the extraction of the other, or the possibility of mining both the shale and coal seams at the same time, can only be determined by underground exploration.

For these reasons we are convinced that the underground exploration, development, and production of either the shale or coal seams, or both, should be carried out by Zulu.

With Dr. Hughes, Consulting Geologist, and Mr. Haslam, Consulting Coal Mining Engineer, as Consultants, Zulu has the most experienced and qualified expertise, not only to supervise the development drilling and underground exploration, but to develope a mine into production, from either the shale or coal seams, or both.

In the meantime, with the unaniumous support of the shareholders, the Company must proceed as soon as possible with a rights issue to the shareholders, subject to the approval of the Securities Commission, in order to raise funds to meet its existing liabilities, and to drill the two holes proposed by Dr. Hughes and Mr. Haslam in their Report.

These drill holes are necessary to obtain additional information, and to provide assessment work to protect the property.

A. J. GARRAWAY President & Project Manager



#### ZULU EXPLORATIONS LTD (NPL)

#### BOWRON RIVER COALFIELD

September, 1975

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Zulu Explorations Ltd (NPL) is a Reporting Company incorporated on December 12th, 1972, with the Registered Office at #8 - 1070 Douglas Street, Victoria, British Columbia.

The Company is the registered owner of 150 mineral claims covering 10 square miles of the Bowron River Coalfield, approximately 40 miles southeast of Prince George, British Columbia.

The Property is situated some 30 miles from the Canadian National Railway, and 500 miles from Prince Rupert. It is also some 40 miles from Red Rock on the British Columbia Railway, and 500 miles from Vancouver. The Gas Pipe Line is some 40 miles west of the property.

The mineral claims cover Uranium/Germanium bearing carbonaceous shale seams situated below the basal coal seam.

During 1973 and 1974, Zulu carried out a diamond drilling programme to investigate these shale seams, and the programme is being continued by the drilling of three holes in 1975. The first of these holes is presently being drilled and is designated as the P(a) drill hole.

Although, our intentions were to explore the Uranium/Germanium bearing shale seams, we were fully aware that all drill holes would first intersect any coal seams, and therefore should establish reserves of coal.

On three separate occasions Zulu applied for the Coal Licences covering the same area as the mineral claims. The first application was made in March 1973, and the last in November 1974, but to date has been unable to obtain these Coal Licences.

The drilling programme is being carried out on the southwest margin of the coal basin, and on the west side of the river. The strike of the seams has been established at  $845^{\circ}E$  for a distance of  $3\frac{1}{2}$  miles. Drilling to date has indicated that the shale and coal seams along the southwest subcrop dip at about 45 degrees to the northeast, and then decrease to 10 degrees or less under the greater part of the valley plain on the east side of the river.

The location of the hole presently being drilled, P(a), on the LAD 90 mineral claim, is farther out into the valley plain, to the northeast, than any of the drill holes drilled by Zulu Explorations Ltd to date.

In this area we expect the attitude of the strata to be comparatively flat and the drill hole should intercept the coal seams at a depth of irom 1,200 to 1,500 feet. This should be the average depth of the coal seams under the valley plain on the east side of the river.

This depth is suitable for the Longwall Method of mining, and the thickness and nature of the strata indicates there would be no surface subsidence when a coal seam is extracted.

The area where the coal seams are expected to be comparatively flat extends from the river to the northeast and no mining would be carried out under the river.

#### DEVELOPMENT DRILLING

It is possible that the potential of this large area, 8 to 10 square miles, could be indicated by the drilling of 7 to 9 drill holes on the east side of the river. Should these drill holes prove successful, they would not only indicate a large potential tonnage of radioactive shales, but should indicate a potential of some 80 to 100 million tons of recoverable coal from <u>one 10 foot coal seam</u>. It may be possible to mine more than one coal seam.

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#### UNDERGROUND EXPLORATION

Drilling alone cannot prove conclusively the true value of either the shale seams, or the coal seams. This can only be determined by obtaining large bulk samples from underground, and taken from the area where it is expected the seams will be developed into production. The economic feasibility of mining more than one coal seam, or of mining either the shale seams, or the coal seam, without production from one preventing the extraction of the other, can only be determined by underground exploration. Also, it may be possible to mine the shale seams, and the coal seams, at the same time.

Having Dr. J.E. Hughes, Consulting Geologist, and Mr. H.S. Haslam, P.Eng., Consulting Coal Mining Engineer, as the Engineering Consultants, Zulu has the experienced expertise, not only to supervise the development drilling and underground exploration, but to develop a mine into production, from either the shale seams, or the coal seams, or both.

For these reasons we are convinced that the underground exploration, development, and production of either, or both, the shale seams, or coal seams, should be carried out by Zulu Explorations Ltd.

Mr. Haslam has recommended that two Slopes should be driven down simultaneously to the base of the Uranium bearing shales and to the area where the strata is comparatively flat. Crosscuts to be driven between the Slopes at regular intervals to provide adequate ventilation. A Dosco Roadway Cutter Loader to be used in <u>each</u> Slope to eliminate drilling and blasting. The Slopes to be supported by means of steel arches or roof bolts. A suitable belt conveyor would be installed in the main, or intake Slope, to carry the spoil from both Dosco machines to the tipple. In the Return Slope a conveyor would be required between crosscuts to carry spoil from the Dosco machine to the main belt conveyor in the Main Slope.

The rate of advance in <u>each</u> Slope is expected to average at least 300 feet each week of five days.

When the Slopes intersect the coal seams, roadways would be turned off and driven in each seam to obtain large bulk samples and determine the possibility of developing a producing coal mine from one or more of the coal seams, before advancing the Slopes down to the shale seams.

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These two Slopes would be large enough for the production of either One or Two Million tons of coal annually, depending upon the size of the belt conveyor installed in the Main Slope.

# COALS

The coals are of good quality, dense, hard, bright and resistant to weathering (Hughes & Haslam, January 1975). The Middle Seam has an average of 13,500 B.T.U.'s and 0.8% Sulphur.

#### WASHABILITY TESTS

Washability Tests on large bulk samples showed recoveries of 85%, with Ash from 4 - 7%. Channel samples cut across the coal face have shown Ash content of from 2.8% to 4% before washing.

#### AIR CLEANING

"Numerous tests have indicated that the Ash content can be reduced without the use of the Sink & Float method of cleaning. The coals contain no Boney material and are therefore amenable to Air Cleaning. This would result in a less expensive Cleaning Plant being required and would eliminate the danger of water pollution.

### FREE SWELLING INDEX

The coals are coking with free swelling indices of 1 to 3. Numberous coke buttons of 4 to 6 have been produced from coal samples containing no visible resin.

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#### RESINS

The coals contain considerable amounts of High Temperature Hydrocarbon Fossil Resins. There are two types, and the coals contain approximately 4% of each. When the coal is crushed to minus  $\frac{1}{2}$  inch and passed over a  $\frac{1}{4}$  inch screen, almost all of the resin passes through the  $\frac{1}{4}$  inch screen with the fines. (Hughes & Haslam, January 1975).

#### COAL SEAMS

The seams are comparatively clean and contain no bands of Boney material. Elliptical shaped bands of shale are found scattered throughout the seams, but the percentage of rejects is low.

The lower, or basal coal seam is eight feet, whilst the Middle Seam has a thickness of eleven feet.

No Methane has been detected to date.

### EXPLORATION OF SHALES

When the exploration of the coal seams is completed, the Slopes will be advanced downwards through the Uranium bearing shale seams. Roadways would be turned off and driven in the shale seams to obtain bulk samples.

Only when these roadways have been driven in the shale seams will it be possible to determine if production from one or more of the shale seams would prevent production from the coal seams; or that production from the coal seams would prevent extraction of the shales.

It is obvious that only when the roadways have been driven in both the coal seams, and the shale seams, will it be possible to determine which of the seams, coal or shale, or both, it would be economically feasible to mine.

In the event that both the coal and shale seams could be mined at the same time, a Third Production Slope would be required for the transportation of the shales to the surface Preparation Plant, and to provide ventilation for mining the shales.

Diamond drilling to date indicates that the Bowron River Coalfield may contain a very large quantity of Low Ash Coking coal suitable for Blending with High Ash coking coals. Also the coal is ideal for use as feedstock for a Liquefaction or Gasification Plant.

All that remains to prove the economic feasibility of ceveloping a producing coal mine is the development drilling on the east side of the river, and the underground exploration of the coal and shale seams.

From the foregoing, it is logical to expect that the drilling and underground exploration should be carried out by the same company.

Major mining companies are reluctant to invest in the exploration of the Uranium/Germanium bearing shales unless Zulu holds the necessary coal licences and provision for the development of a producing coal mine.

When all the underground exploration is completed, and the decision has been made to develop a producing coal mine, very little underground work can be carried out until the surface Cleaning Plant and storage facilities are completed. This underground work would consist of preparing storage and loading facilities for coal being transferred to the main belt conveyor.

When the surface Cleaning Plant, Storage Silos and other surface installations are completed, the underground development can be started and from the outset will produce between 4,000 and 5,000 tons each day.

From information provided by the diamond drilling to date, and other work, we can safely assume that the Longwall Method of mining would be employed for the large scale production of low cost coal.

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## UNDERGROUND (DEEP) MINING

A modern fully mechanised coal mine, employing high capacity machines, the Longwall system of mining, and belt conveyor transportation of the coal, is capable of producing Low Cost Coal.

Such a mine can produce a large annual tonnage with a high output per manshift.

All other factors being equal, the annual production and output per manshift will be higher, and the cost per ton lower, where the seam being extracted is ten feet in thickness, rather than from a five foot seam of coal.

Where continuous miners are used to drive roadways in the coal seam to develop panels to be extracted by the longwall system, the output per manshift can be expected to be at least 20 tons.

The method of mining also has an important bearing on the cost per ton of coal.

#### LONGWALL SYSTEM

The Longwall System usually produces the lowest cost coal, whereas, the cost per ton for the Room & Pillar system in the same seam, may be 50 per cent higher.

The Longwall System is highly successful where the coal deposit has no faults, and the attitude of the seam is comparatively flat, that is, the pitch of the seam is not more than 10 degrees.

In North America, panels are usually developed to provide longwall faces of from 500 to 600 feet in length.

A Shearer with a revolving drum, or drums, cuts and loads a slice, or lift of coal as it traverses the face. Advancing hydraulic supports provides protection for the face area.

At the Lingam Mine in Sydney, Nova Scotia, a 500 foot longwall face in a seven foot seam of coal has exceeded 5,000 tons of saleable coal per day, with weekly outputs in excess of 25,000 tons. The face is equipped with a Ranging Drum Shearer and powered roof supports. At several large mines in the U.S.A., production from a 500 foot longwall face in a seven foot coal seam has exceeded 7,500 tons per day.

At the Solsgirth Mine in Scotland, from a Longwall Retreat Face of 650 feet in length and extracting six feet of coal, the miners produced 25,260 tons of coal in a five day week of 15 shifts. Each shift had a crew of 30 men and produced an average of 1,684 tons, i.e., over <u>56 tons per face manshift</u>. Therefore, the three crews, or a total of 90 men produced an average of 5,052 tons each day.

# SHORTWALL RETREAT SYSTEM

A new mining technique, developed from the Longwall System, has had spectacular success in Australia and the U.S.A. In this new system, the Shortwall Retreat System continuous miners are used to drive roadways in the coal seam to develop panels for extraction, with retreat faces of from 100 to 200 feet in length. The same continuous mining machines are then used to retreat the panels by replacing the Shearer in taking slices, or lifts off the face. Special advancing hydraulic supports are used to protect the face and the continuous miner.

With this Shortwall Retreat System, using continuous miners for both development, and for actual production, a larger number of roadways must be driven in the coal seam, than with the Longwall System where the face is over 500 feet in length.

# CONTINUOUS MINERS

Continuous Miners are high production cutting and loading machines. A large continuous miner weighs approximately 35 tons, and in a 10 foot seam is capable of driving a roadway 10 feet high and 15 feet 6 inches wide a distance of 250 feet, and producing 1,500 tons of coal in one shift. Continuous Miners are usually worked on a two shift basis, the third shift being required to advance the belt conveyors, power, water and ventilation.

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Usually two parallel roadways are driven simultaneously, with the necessary cross-cuts to provide adequate ventilation. The roof is supported by means of roof bolts.

Two continuous miners, one in each roadway, are capable of producing in excess of <u>one million tons</u> of coal annually.

Therefore, with only two continuous miners driving roadways in the coal seam, and one Longwall Face for production, in excess of <u>Two</u> Million tons of coal can be produced annually.

Production of one million tons of coal annually would provide employment for some 300 to 400 men, whilst the production of two million tons annually would require between 550 and 750 men.

Four or five years are usually required to develop a coal mine into full production.

In the case of Zulu's Bowron River property, it is possible that a coal mine could be developed to produce one million tons of coal annually in less than two years.

We have estimated that the development drilling on the east side of the river, sinking the two slopes, and completing the underground exploration, would require less than one year. The mine would then be ready for the production of one million tons of coal annually, immediately the surface plant and other installations are completed.

For the first few years this production of one million tons annually should come from development work only, with no production from Longwall faces until the mine is required to produce two million tons of coal each year.

The production of one million tons of coal each year could be mined for the export market. When it is economically feasible to construct a Gasification Plant for the production of 250 million cubic feet of pipe line gas per day, the mine would be capable of producing two million tons of coal each year for at least 35 to 40 years.

Reports prepared by Dr. J.E. Hughes and H.S. Haslam dated January and April 1975, respectively, were distributed to all of the shareholders of the Company. The management and shareholders of Zulu are all well aware of the somewhat unique position of the Company with respect to its 150 mineral claims insofar as it has been necessary to first pass through coal seams in order to explore the underlying minerals. Although the Company is the registered owner of all of its mineral claims, it does not hold any coal licences and to date has not been able to obtain such licences. The Company is continuing its efforts to obtain coal licences covering that portion of its mineral claims which it feels are also prospective for coal and the Company is optimistic that it will be able to obtain coal licences in that if production of coal and metals is uttainable it would appear that any mining to exclude one or other as a consequence of the division of coal and mineral titles would lead to considerable difficulties in mining practice, increased costs and other factors which would not make separate production feasible.

When the three drill holes planned for 1975 are completed they will provide valuable information regarding the Uranium/Germanium shales, and the coal seams, for the complete geological survey and comprehensive study and report to be prepared by Dr. J.E. Hughes and Mr. H.S. Haslam.

The management of Zulu intends to keep in close contact with the Government in the hope that it will be successful in obtaining the necessary coal licences which would enable it to proceed with development of coal in that regard.

Project Hunger

# ZULU EXPLORATIONS LTD (NPL)

## DIRECTORS REPORT TO SHAREHOLDERS

April 9th, 1975

During the past two months the shareholders have received several reports from myself as President and Project Manager, and the Report prepared by Dr. J. Hughes and Mr. Haslam of January 1975.

I strongly suggest that each shareholder re-examine all these reports in order to more fully understand the potential of your property.

At July 31st, 1974, we were attempting to organize, and have the Securities Commission approve, a Rights Offering to the shareholders in order to provide funds to complete the drilling and work recommended by Dr. Hughes and Mr. Haslam.

Assessment work and rental on 110 claims had to be recorded and paid between August 14th and November 14th, 1974, or the Company would have been in danger of having to fortfeit these claims and would have lost control of this important property. The work was recorded and the rental paid in time.

On July 31st, 1974, the Z10 drill hole was at a depth of 525 feet. This hole was completed to a depth of 818 feet, and the important Z9 drill hole completed to a depth of 815 feet by September 12th, 1974. We expect the Z9 drill hole will provide sufficient assessment on 40 claims for two years, and must be recorded and \$800.00 rental paid by April 24th, 1975.

This drilling was made possible by the assistance of Mr. Keyes, the owner of the drill who volunteered to accept 60,000 shares for \$15,000.00 as part payment of rental on the drill.

On November 14th, 1974, the sum of \$6,500.00 was provided in order to once again apply for the Coal Licences covering the area of the mineral claims. Although the Government again refused to grant the Coal Licences, in my opinion, the coal

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# in this area cannot be explored, or developed except by, or through, Zulu Explorations Ltd (NPL).

Lack of funds prevented any drilling being carried out after September 1974. Your Company now holds 150 mineral claims in good standing.

In their Report, Dr. Hughes and Mr. Haslam, recommended the drilling of two holes to be put down <u>below</u> the base of the coal measures, this is, into the lower radioactive zone as indicated in the Z7 and Z9 drill holes.

We expect the drill hole in the <u>Southeast</u> area will confirm the findings of the other drill holes in this area, and provide additional information on the lower radioactive zone.

The drill hole in the <u>Northwest</u> area is required to prove the radioactive shale seams found in the Z5 and Z6 drill holes extends to this area. Also, to prove that the lower radioactive zone found in the Z7 and Z9 drill holes extends to this area.

We also anticipate that this drill hole will confirm the "bearing of the line of strike" where the altitude of the shale and coal seams flatten to 15 degrees, and therefore indicate that these seams under the greater part of the valley are comparatively flat.

#### ASSESSMENT

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These two drill holes should provide sufficient assessment work to maintain 70 mineral claims in good standing for <u>at least</u> two years. This assessment work must be completed and recorded on August 14th and November 14th, 1975.

### DEVELOPMENT DRILLING

Should the two proposed drill holes prove successful, then it is possible that this large area could be proved by the drilling of 5 or 6 holes along the inferred northeast limit of the coalfield (Figure 2). This drilling is estimated to cost in

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excess of \$200,000.00 and would require major financing. This drilling would be carried out by a reputable drilling company, and under the direct supervision of Dr. Hughes and Mr. Haslam. Should these drill holes prove successful, they would not only indicate a large potential tonnage of radioactive shales, but a correspondingly large tonnage of coal.

## UNDERGROUND EXPLORATION

Drilling alone cannot prove conclusively the true value of either the shale seams, or the coal seams. This can only be determined by obtaining large bulk samples from underground, and taken from the area where it is expected the seams will be developed into production. The economic feasibility of mining either the shale seams, or the coal seams, without production from one preventing the extraction of the other, can only be determined by underground exploration. Also, it may be possible to mine both the shale seams, and the coal seams, at the same time.

For these reasons we are convinced that the underground exploration development, and production of either, or both, the shale seams, and the coal seams, should be carried out by Zulu.

In their capacity as Consultant, Dr. Hughes, Consulting Geologist, and Mr. Haslam, Consulting Coal Mining Engineer, Zulu has the most experienced and qualified expertise, not only to supervise the development drilling and underground exploration, but to develop a mine into production, from either the shale seams, or the coal seams, or both.

## URANIUM

From the results of previous work, it appears that the uranium is found in "blobs" or "balls" of thucolite, scattered throughout the carbonaceous shale seams situated below the basel coal seam.

It is obvious that it is only remotely possible that a drill hole would intercept one of these high-grade "blobs" of thucolite.

Only large bulk samples obtained from a drift advanced a pre-determined distance in the radioactive shale seam would provide an average of the uranium content of the seam. These bulk samples would contian all the "blobs" of thucolite contained in the length of the drift.

A Group of 40 claims will be maintained in good standing by recording the Z9 drill hole, and paying \$800.00 rental for two years. It is possible that 110 claims could be protected for <u>one year</u> by the payment of \$200.00 per claim, or \$22,000.00 in lieu of work. In our opinion, the payment of such a large sum of money in lieu of work is foolish and wasteful, provides no information, and does not increase the value of the property. This was the opinion at the Extra Ordinary General Meeting held on March 12th, 1975, where the shareholders unanimously agreed to a Rights Offering in order to drill the two holes.

We are convinced that when careful consideration is given to the foregoing, my reports to the shareholders and the Reports of the Consultant, the shareholders will agree that the logical course of action, is for the Company to make every effort to maintain the property in good standing by drilling the two holes, and carrying out the work recommended by Dr. J. Hughes and Mr. Haslam.

In the meantime we can hope that the Government will soon establish a coal policy whereby Zulu may be granted the necessary coal licences.

When funds are available to carry out the drilling, hopefully from a Ri~hts Offering, we have agreed to have Dr. J. Hughes carry out a complete geological survey, and comprehensive study and Report, on the Bowron properties.

A. J. GARRAWAY, President on Behalf of the Directors

# ZULU EXPLORATIONS LTD. (N.P.L.)

# Victoria, B.C.

# INFORMATION ON APPLICATION

# TO THE

# BRITISH COLUMBIA SECURITIES COMMISSION

FOR

A RIGHTS OFFERING

April 1975

J. E. Hughes, P.Eng.

H. S. Haslam, P.Eng.

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## INTRODUCTION

A previous Report entitled "Zulu Explorations Ltd. (N.P.L.) Victoria B.C. - Information on Application to the British Columbia Securities Commission for a Rights Offering -January 1975" - describes the Bowron prospect and proposed a drilling and exploration programme. It summarised information for the Company and its shareholders to consider the commitment of funds for further work, and as a statement and reference for the British Columbia Securities Commission.

The Report applied to conditions and events within the knowledge of the Consultants at the time of issue of the Report, January 10th 1975, namely Zulu Emplorations Ltd.'s tenure of the Bowron mineral claims and Zulu's applications for Coal Licences on the Bowron property.

The Government's restraint on the issue of coal licences by policy, or lack of policy at the present time affects Zulu and obscures the Company's future.

Therefore, it is thus worthwhile to examine and interpret the Company's position at this time.

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At present, Zulu has no rights to explore, develop or mine coal.

The mineral claims held by Zulu allow the Company to explore for metals, and to obtain production according to terms and conditions approved under the Mineral Act. The Bowron prospect contains occurrences and showings of the metals germanium and uranium.

The writers have consistently maintained that the importance of the Bowron prospect lies in the combined value of coal, coal with resins, germanium and uranium. The Consultants' foregoing recommendations were based on this view, and on the aim to carry exploration and development to such a stage as required to determine the feasibility of mining and production.

It is less certain that the occurrences of germanium and uranium, singly or combined, can support production. Data on their concentration and distribution is scanty. The work by Zulu in 1973 and 1974 represents the first attempt to examine their occurrences in a systematic manner, and this work is incomplete.

There are uncertainties of a technical nature. Germanium is concentrated in coals; in terms of monetary value it is questionable whether germanium or coal represents the primary product or the by-product of this association. Uranium is known from radioactive survey on beds below the coal measures, but various factors of its distribution and concentration remain to be determined. In brief, the Bowron property can be regarded as a raw and untried prospect in terms of germanium, and of uranium.

If production of coals and metals is attainable, it seems likely that mining to exclude one or other as a consequence of the division of coal and mineral titles, can lead to difficulties in mining practice, increased costs, and can alter the balance of grades and factors which determine what may be workable as coal, or ore, and what may be left in the ground as unworkable and uneconomic.

At present, the nature of the Bowron prospect is divided and halved by the lack of the Coal Licences. The economic risks of the Company in terms of exploration and investment are much increased by dependence upon metals, either germanium and uranium together, or uranium alone.

## RECOMMENDATIONS

It is difficult to recommend future action for the Company, - any recommendations now relate to views and interpretations of the future policy of the Government regarding coal, and in particular to their policy regarding the issue of Coal Licences to Zulu in the Bowron area. The Company and the shareholders are equally competent to view and interpret such policies, as are the Consultants.

There are two courses of action open to Zulu: to abandon the Bowron prospect: or to maintain the mineral claims. To hold the mineral claims in good standing, the Company may elect to pay rentals, or to perform work on the ground: we regard the latter to be preferred. The drilling proposed by the Consultants in their Report, "Information on Application to the British Columbia Securities Commission for a Rights Offering - January 1975" can contribute usefully to the exploration of germanium and uranium. The speculative nature of this exploration has been noted.

To abandon the Bowron prospect at this time appears to be hasty and precipitate: it would be better to wait and see the Government's policy.

We encourage Zulu Explorations Ltd. (N.P.L.) and its management to keep contact with the Government on matters affecting coal and coal policy in regard to the Bowron area. It is recommended that the Company apply for Coal Licences, when applications are receivable.

# CERTIFICATION

The foregoing Report is submitted by us as a summary of our pertinent knowledge of the Bowron property, gained as a result of observation, original work and study, also by reference to the reports and findings of previous workers on the property.



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April 2nd. 1975



April 2nd. 1975

Signed

J. E. Hugher

J.E. Hughes

Signed

H.S. Haslam

## DECLARATION

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I, <u>HUBERT S. HASLAM</u>, of 2144 Nelson Avenue, West Vancouver, British Columbia, being a co-author of the foregoing Report concerning Zulu Explorations Ltd., (N.P.L.) of Victoria B.C., <u>hereby</u> declare that:

- (a) I hold the degree of Bachelor of Engineering in Mining (First Class), also the degree of Master of Engineering, in the University of Sheffield,
- (b) I hold, through examinations, Fellowships in

The Institution of Mining Engineers The Institution of Mechanical Engineers The Institution of Civil Engineers

- (c) I am a Registered Member of the Association of Professional Engineers of British Columbia, also of the Consulting Engineers Division of that body, in addition to similar registration in the Provinces of A lberta, Ontario and Quebec,
- (d) I am a Member of

The Canadian Institute of Mining and Metallurgy The Engineering Institute of Canada The American Institute of Mining and Metallurgical Engineers,

(e) I am a Certified Colliery Manager under the relevant laws of the Provinces of British Columbia and Nova Scotia and of the united Kingdom of Great Britain,

and I furthermore declare that I have no direct or indirect interest whatsoever in Zulu Explorations Ltd. (N.P.L.), nor in the mineral claims or coal licences mentioned in this Report, nor do I expect to receive any interest, direct or indirect, in the properties of Zulu Explorations Ltd. (N.P.L.) or any affiliate or any security of the company or affiliate.

Dated at West Vancouver this 2nd. day of April 1975



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H.S. Haslam, P.Eng.

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4155 Long View Drive, Victoria, British Columbia.

# DECLARATION: J.E. HUGHES, P.Eng.

As co-author of the foregoing report concerning Zulu Explorations Ltd. (N.P.L.), of Victoria, British Columbia - I declare that:

- I hold degrees of: Bachelor of Arts, and Master of Arts, of the University of Cambridge, Natural Sciences Tripos I, II, Geology, Mineralogy and Petrology): Doctor of Philosophy, of McGill University (Geological Sciences),
- 2) I am a registered member of the Association of Professional Engineers of British Columbia,
- 3) I am a member of: The Canadian Institute of Mining and Metallurgy: The American Association of Petroleum Geologists,
- 4) I have been in continuous and active practice in geological sciences for 24 years.

I also declare that I have no direct or indirect interest whatsoever in Zulu Explorations Ltd. (N.P.L.) nor in the mineral claims and coal licences mentioned in this report, nor do I expect to receive any interest, direct or indirect in the properties, shares or securities of the company, or in those of its affiliates.

Dated at Victoria, this 2nd. day of April, 1975



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J.E. Hughes Consulting Geologist

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# ZULU EXPLORATIONS LTD. (N.P.L.)

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# Victoria, B.C.

# INFORMATION ON APPLICATION TO THE BRITISH COLUMBIA SECURITIES COMMISSION FOR A RIGHTS OFFERING

January 1975

J.E. Hughes, P. Eng. H.S. Haslam. P. Eng.

# FOREWORD

This report is set out on the basis of an initial draft by the two authors.

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An assignment to overseas work by H.S. Haslam delayed the report, and prevented him from seeing it to completion.

A certification of authorship, and a declaration of Mr. Haslam's standing, prepared in advance, is included herein according to his instruction.

The undersigned thereby accepts responsibility for the final form of this report.

J. E. Hughes

J.E. Hughes Consulting Geologist

January 10/75

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- 3. Access
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(iii)

# 1. INTRODUCTION

Zulu Explorations Ltd. propose to raise funds in the form of a rights offering to their shareholders, to continue exploration and drilling on their Bowron property.

The property occupies a major part of the Bowron coalfield, and is of interest for its coals, deposits of resins, and concentrations of germanium in the coals; uranium is present in the coal measures.

# 2. LOCATION OF THE BOWRON PROPERTY

The geographic location of the property is -Latitude 53<sup>0</sup> 50' North, Longitude 121<sup>0</sup> 55' West, about 35 miles southeast of Prince George (Figure 1).

# 3. ACCESS

A gravel road, improved and part relaid in 1974, and suitable for all-weather traffic, provides access to Highway 16 at the bridge on the Willow River, and its junction with Highway 97, at Buckhorn, 10 miles south of Prince George.
## 4. RAIL CONNECTIONS

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The Canadian National Railway main line, Edmonton to Prince Rupert, approaches within 20 miles of the property at Hansard; the distance from Hansard to Prince Rupert is 513 miles; and to Vancouver 649 miles.

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The British Columbia Railway, Prince George to Squamish line, can be reached by a longer and more difficult connection, and by bridging the Willow River, - a direct distance of 33 miles.

## 5. MINERAL CLAIMS

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Zulu Explorations hold the following mineral claims:

Group	Record	Number of Claims
UG. Group UG. 1 to 6 UG. 7 to 12 UG. 13 to 18 UG. 19 to 30	67516 - 67521 70144 - 70149 70938 - 70943 71177 - 71188	30
Lad One Group Lad 1 to 22 Lad 27 to 44	66516 - 66537 66542 - 66559	40.
Lad Five Group Lad 80 to 110 Lad 137 to 154	67522 - 67543 67570 - 67587	40
Lad Six Group Lad 177 - 198 Lad 199 - 216	71209 - 71230 71536 - 71553	4 0
	Total	Claims 150

(<u>See</u>: Figure 3).

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## 6. COAL LICENCES UNDER APPLICATION

Zulu Explorations applied for 10 coal licences on the Bowron coalfield, November 14/74. Coal licenses under current application, are indicated by the lots --

Numbers, 4844, 4845, 4869, 4868, 9594, 4869,

9595, 9590,

and

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lot adjoining and south of Lot 9590, lot adjoining and south of Lot 4845.

(See: Figure 4).

## 7. EXPLORATION TO 1972

Coal was found along the Bowron River in 1871 (Dawson 1878). There followed two periods of exploration, 1910 to 1917, and 1946 to 1952.

A third period of exploration starting about 1962, was continued by Northern Coal Mines Ltd. to 1971. They drilled about 12,000 feet in 42 holes; and drove two underground workings, - the first was abandoned, - the second (the Main and Coal Slopes), length about 1,100 and 180 feet underground was maintained to 1971. The company's work showed deposits of resins in coals, concentrations of germanium in coals, and presence of uranium in the

coal measures. Reserves of coal along part of the southwest margin of the coalfield were estimated at 22 million tons, indicated and probable (Black 1967).

By agreement and option, in 1971, Bethlehem Copper Corporation Ltd. drilled about 7,500 feet in 5 holes, and later withdrew their interest.

North ern Coal Mines abandoned the underground working, the Main and Coal Slopes, and surrendered all mineral claims, and all coal licenses except Numbers 148, 162, and 163.

## 8. WORK BY ZULU EXPLORATIONS LTD., 1973, 1974

Zulu Explorations received mineral claims covering the Bowron coalfield in 1972. In the same year, a radioactive survey by N.D. McKechnie led to his recommendations for drilling and underground exploration.

The company carried out drilling in 1973, and 1974, a total of 5,900 feet in 9 holes. The results of drilling and sampling are under examination, and await a complete study.

## 9. GEOLOGY

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The Bowron coalfield underlies the valley plain of the Bowron River, and is mostly concealed. Its structure trends northwest-southeast, and its width is about 1.5 miles (Figure 2). Along the southwest margin, the coal measures dip about 45 degrees northwestwards, then decrease to 10 degrees under the valley plain, where the base of the coal measures, are recorded at depths of 1,000 to 2,000 feet in drilling. There is some evidence for one fault of north trend, and with downthrow on the east side, in subcrop in the property.

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Exposures are few: along the southwest crop they are covered by silts and benches of gravel: sands and gravels cover the valley plain and extend over Missippian rocks on the northwest side of the coal field.

## 10. COAL SEAMS

The coal measures amount to about 250 feet, in the lower and basal sections of the Tertiary strata in the Bowron coalfield. They contain two coal seams of apparent continuity, the lower seam of 8 feet, and the upper seam of 11 feet, thickness -which seams have been proven underground in the Main Slope. (Bonar 1970).

## 11. COAL QUALITY

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The Bowron coals are classified as High Volatile Bituminous, Classes B and C (ASTM).

The coals are of good qulaity, dense, hard, bright, and resistant to weathering. Calorific values range from 11,700 to 13,800 B.Th.U's/lb.; ash is commonly in the range 4 to 16%; sulphur, is low to moderate, mostly the range 0.8 to 1.5%. The coals show coking characteristics, with free swelling indices 1 to 3.

The following analyses, from bulk samples taken underground in the Coal Slope (Bonar, 1970), are representative of the Bowron coals.

		1	2	3
Inherent Moisture Ash Volatile Matter Fixed Carbon	ato ato ato	5.5 2.8 39.7 52.0	4.92 2.77 36.5 55.81	14.1 2.6 28.6 54.7
Sulphur	00	1.2	0.85	1.5
B.Th.U./1b.			12,550	12,470
Free Swelling Index		1	2.5	2.5

1. Middle seam - top of Coal Slope.

2. Middle seam - 400 feet down Coal Slope.

3. Lower seam.

The coals are amenable to cleaning. A washability test showed recoveries of 85%, with ash 4.6% and reduced sulphur in float at specific gravity 1.4 (See Black, 1969).

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The Bowron coals allow several uses: for thermal electric generation, gasification petrochemical feedstock, and blending in metallurgic .stock.

## 12. RESINS

The Bowron coals contain considerable amounts of resins. These are of two types: Dark Resin - Soluble in common organic solvents, and softening about  $200^{\circ}$  C Amber Resin - Insoluble in common organic solvents, and volatilizing about  $450^{\circ}$  C.

The resins occur together in the coal seams, in amounts to 4% of each type. Both dark and amber resins are released by crushing at 1/2 inch, and screening at 1/4 inch, with concentrations in the fines.

The Battelle Memorial Institute have described the composition of the resins. They made introductory study of the dark resin and its industrial applications, indicating suitability as filler and extender in rubber compounds, and properties

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comparable to standard resins for varnish. The amber resin has not been investigated.

## 13. GERMANIUM

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Germanium in the coals are reported in concentrations, 0.001% to 0.03% (Ge0<sub>2</sub>), in six assays '(Northern Coal Mines). Most of the foregoing assays are on coal, a few on shale, and the majority seemingly from drill cores. The available records do not specify sampling methods, locations and horizons.

Results from drilling by Zulu Explorations, showed assays, less than 0.003% to 0.037% (Ge). The higher values are obtained from the upper seam at drill hole Z 5: interval 909 to 913 feet, 0.037% (Ge) from 3.3 feet coal, vertical intersection: interval 920 to 928 feet, 0.006% (Ge) from 7.5 feet coal, vertical intersection.

## 14. URANIUM

A zone of radioactive shale underlies the lower coal seam by about 80 feet, in Lots 9591, and 9592. On the exposure P. Hacquebard showed a radioactive count X10 background. (Cameron et al, 1969). A

sample here was reported to assay 0.032%  $(U_3O_8)$ .

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In a working in the Coal Slope, sampling and assays showed 0.0027 to 0.0182% ( $U_3O_8$ ). (Wilson, 1970).

A record of assay, 0.02%  $(U_3^0_8)$  lacks stratigraphic reference.

In the absence of detailed records of sampling, it seems likely that the assays were made on selected and characteristic samples from beds of interest.

The survey by N.D. McKechnie (1974) outlined a trend of radioactivity X2 background over a cover of alluvium about 80 feet thick, in the Lad 2, 4, 6, and 8 claims.

## 15. WORK AND MANAGEMENT

The writers have been pleased to comment most favourably on the initiative, skills, and standards of work and drilling by Mr. A. Garraway and staff of Zulu Explorations, and to express confidence in their ability to take on surface and underground exploration.

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## 16. COMMENTARY

At present view the Bowron property merits active exploration and full investigation. The property offers a substantial or useful prospect for coal and the combined values of resins and germanium, together with other prospects for uranium. It seems likely that distributions of germanium and uranium are extensive, but their concentrations may be variable, - these are factors which remain to be determined.

Earlier exploration of the coalfield was incomplete, the drilling mostly limited to the edge of the subcrop, germanium and uranium receiving little attention. For the present, there is need to determine their potentials, in stratigraphic terms, and at appropriate levels of economy and commitments, which may be best realized by following the southwest subcrop.

Consequent exploration will require drilling, underground work and sampling on the main subcrop to its northeast edge, with the aim of establishing reserves and economic feasibility.

## 17. RECOMMENDATIONS AND PROPOSALS

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Recommendations are -

 To drill 2 holes: the proposed locations are shown in Figure 6.

(2) The drilling to be carried down below the base of the coal measures - at depth about 1,300 feet.
(3) To detail the distributions of germanium and uranium by sampling and assaying drill cores.
(4) To use the proposed drill holes as reference sections, - to clear uncertainties of correlations and stratigraphy in the coal measures, and to integrate the records of former exploration with work done by Zulu Explorations, 1973 and 1974.

Cores should be logged - and downhole geophysical surveys would be advantageous or advisable.

In summary, the aim of the drilling is to provide reference sections for evaluating the coal measures, and thereby provide a basis for a progress study. There is need for a comprehensive study and report of the Bowron property in order to assess its full potential and to set grounds for major financing in support of development drilling and underground exploration.

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Estimates for the proposed drilling are as follows:

Diamond drilling	\$48,000
Assays	5,000
Logging, evaluation and Report	15,000
Total	\$68,000

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## CERTIFICATION

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The foregoing Report is submitted by us as a summary of our pertinent knowledge of the Bowron property, gained as a result of observation, original work and study, also by reference to the reports and findings of previous workers on the property.



Signed

J. E. Hughes

January 10, 1975.

J.E. Hughes



Signed

H.S. Haslam

Dated this 20th. day of December, 1974.

## **J. E. HUGHES** CONSULTING GEOLOGIST

DECLARATION: J.E. HUGHES, P. Eng.

As co-author of the foregoing report concerning Zulu Explorations Ltd. (N.P.L.), of Victoria, British Columbia - I declare that:

> 1) I hold degrees of: Bachelor of Arts, and Master of Arts, of the University of Cambridge, (Natural Sciences Tripos I, II, Geology, Mineralogy and Petrology): Doctor of Philosophy, of McGill University (Geological Sciences),

2) I am a registered member of the Association of Professional Engineers of British Columbia,

3) I am a member of: The Canadian Institute of Mining and Metallurgy: The American Association of Petroleum Geologists,

4) I have been in continuous and active practice in geological sciences for 24 years.

I also declare that I have no direct or indirect interest whatsoever in Zulu Explorations Ltd. (N.P.L.), nor in the mineral claims and coal licences mentioned in this report, nor do I expect to receive any interest, direct or indirect in the properties, shares or securities of the company, or in those of its affiliates.

Dated at Victoria, this 10th day of January, 1975.



J.E. Hughes

J.E. Hughes Consulting Geologist 4155 Long View Drive Victoria, B.C.

DECLARATION

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1. <u>HUBERT S. HASLAM</u>, of 2144 Nelson Avenue, West Vancouver, British Columbia, being a co-author of the foregoing Report concerning Zulu Explorations Ltd., (N.P.L.) of Victoria B.C. hereby declare that:

- (a) I hold the degree of Bachelor of Engineering in Mining (First Class), also the degree of Master of Engineering, in the University of Sheffield.
- (b) I hold, through examinations, Fellowships in

The Institution of Mining Engineers The Institution of Mechanical Engineers The Institution of Civil Engineers

- (c) I am a Registered Member of the Association of Professional Engineers of British Columbia, also of the Consulting Engineers Division of that body, in addition to similar registration in the Provinces of Alberta, Ontario and Quebec.
- (d) I am a Member of

The Canadian Institute of Mining and Metallurgy The Engineering Institute of Canada The American Institute of Mining and Metallurgical Engineers

(e) I am a Certified Colliery Manager under the relevant laws of the Provinces of British Columbia and Nova Scotia and of the United Kingdom of Great Britain and Northern Ireland,

and I furthermore declare that I have no direct or indirect interest whatsoever in Zulu Explorations Ltd. (N.P.L.) nor in the mineral claims or coal licences mentioned in this Report, nor do I expect to receive any interest, direct or indirect, in the properties of Zulu Explorations Ltd. (N.P.L.) or any affiliate or any security of the company or affiliate.

Dated at West Vancouver this 20th. day of December 1974



Anton

H.S. Haslam, P.Eng.

#### (i) Sources of Data

In compiling this report of information on the Bowron property, the writers have used data from the records of Northern Coal Mines, and Zulu Explorations, and from reports of the Department of Mines and Petroleum Resources, British Columbia, the Geological Survey of Canada, and the Battelle Memorial Institute.

The writers' views are based on available data and their experiences of the property: in January 1971, a combined visit and preliminary appraisal (- the writers went underground to the coal face in the Coal Slope): in May and June 1974, visit to observe progress by Zulu Explorations: in June 1974, J.E. Hughes examined results of Zulu's drilling, and logged and sampled cores of holes Z1, Z5, Z6, and Z7.

## (ii) Note: The Main & Coal Slopes

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These workings abandoned in 1971 are not available for underground exploration except at much expense, labour, and time.

Coal workings underground deteriorate rapidly when not maintained and left to flood. Reworking is a difficult and specialized task, not without danger. In general it is far better to drive new roadways. Such observations apply to the Main and Coal Slopes (See Haslam and Hughes, 1971).

For the present it is advisable not to commit exploration to rehabilitating the old underground workings.

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Wilson, K. (1970): Corresp. - Assay Results.



Burnet Division Burnet Date of Lands of France Victoria BC











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## ZULU EXPLORATIONS LTD (NPL)

## DIAMOND DRILLING IN 1973 and 1974

(2)		<u>1973</u>	
DRILL HOLE	OVER- BURDEN	DEPTH OF HOLE	CLAIM DRILLED
Z 1	280'	727'	LAD 2
Z 2	183'	255'	LAD 1
Z 4	350'	431'	LAD 9
Z 5	35'	<u>1,017'</u>	U.G. 11
		2,430'	•

1	9	7	4

Z 6	25'	949'	U.G. 7
Z 7	110'	620'	LAD 177
<b>Z 8</b>	117*	117'	LAD 2
Z 9 (first site)	232'	232'	LAD 2
z 9	232'	815'	LAD 2
Z 10	120'	818'	LAD 90
		3,551'	

Complete detailed Reports covering assessment work and drilling costs were provided the Department of Mines at the appropriate times. The <u>Z8 drill hole</u> encountered a bed of broken lava at a depth of 115 feet. At 117 feet we found it impossible to push the casing down any further and this hole was abandoned, and the drill moved to the First Site of the 29 drill hole.

#### Z9 (FIRST SITE)

Whilst drilling the casing into the solid at a depth of 232 feet, the casing broke some 80 feet down from the top of the drill hole and we lost some 150 feet of casing. The hole had to be abandoned.

Drilling was commenced in June 1973, and suspended in September 1974.

Considerable time was lost waiting for a "bulldozer" each time the drill had to be moved to a new drill site.

Drilling down through thick overburden containing beds of boulders was both time consuming and costly.

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The drill cores are stored, and may be inspected, at our camp on Mineral Claim U.G. 6.

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This camp was abandoned by Northern Coal Mines Limited in the Fall of 1971.

#### ZULU EXPLORATIONS LTD (NPL)

#### ASSAYS

(4)

The enclosed assays were obtained from samples of <u>coal</u> from the Z5 drill hole, and from samples of <u>radioactive shales</u> in the Z6 drill hole.

#### GERMANIUM

The value of the Germanium was based on the market price at that time of \$0.29 per gram. At 100 per cent recovery, sample 77384 with 0.006% or 54 grams, indicated a value of \$15.66 per ton of coal. Sample 77386 with 0.037% or 333 grams, indicated a value of \$96.57 per ton of coal.

#### URANIUM

The uranium is found in "blobs" or "balls" of Thucolite scattered profusely throughout the carbonaceous shale seams. Small veinlets radiate from these "blobs" and usually carry values in Germanium. Although we had hoped that one of our drill holes would have intercepted one of these "blobs", under the circumstances it is obvious that such a possibility is extremely remote. The true value of the Uranium and Germanium, either in the <u>shale</u> or <u>coal</u> seams can only be ascertained by obtaining very large bulk samples from underground.

Keith Wilson, P.Eng., then of Denison Mines Ltd., spent four days on the property and as in the case of R.B. Bonar, P.Eng., obtained high scintillometer readings underground from the shale seam immediately below the basal coal seam. (See Vertical Section)

Mr. Wilson cut samples off this shale seam and obtained values of 0.016% or 0.32 lbs. per ton, but it is doubtful that one of the "blobs" was contained in his samples.

Page 2

A sample obtained by drilling into this shale seam with a jack hammer returned values of 0.032% or 0.64 lbs per ton.

Before Northen Coal Mines Ltd abandoned the mine and allowed the Slope and underground workings to become flooded, Keith Wilson, P.Eng., R.B. Bonar, P.Eng., Dr. James Black, Geologist, Dr. J.E. Hughes, Geologist and H.S. Haslam, P.Eng., all agreed that the cross-cut at the bottom of the Main Slope should be extended to intercept the lower radioactive shale seam. (See Vertical Section) Drifting would then be carried out in order to obtain the large bulk samples required to conclusively evaluate these shale seams.

It was also agreed that should there be any additional drilling, that the drill holes should be put down to intercept these radioactive shale seams situated below the basal coal seam.

## COAL CORE Z5 DRILL HOLE

The analyses of drill core samples of coal are generally misleading. They may include impurities such as bone, slate or shale, iron pyrites, and dirt partings, all of which are removed in the coal preparation plant. It is obvious that the analyses of such samples would indicate to high a percentage of Ash and Sulphur.

When <u>channel samples</u> are cut across the coal face every effort is made to exclude these impurities and the resulting analyses will be more representative of the coal going to the preparation plant for final cleaning.

In the Bowron Coalfield, a number of channel samples cut across the coal face (11 feet) have returned Ash contents of from 2.8% to 4% and Sulphur of 0.8%. Usually analyses of channel samples indicated 9 to 12% Ash and 1.0% Sulphur.

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Page 3

<u>Washability Tests</u> on large bulk samples showed recoveries of 85% with Ash from 5 - 7 per cent.

The Bowron coals are coking, low ash, and with free swelling indices of 1 to 3. Numperous coke buttons of 4 to 6 have been produced from coal samples containing no resin.

The Middle (11 feet) Seam has an average of 13,500 B.T.U.'s and 0.8% Sulphur.

COAST ELDRIDGE WARNOCK HERBEY **PROFESSIONAL SERVICES DIVISION** INTERNATIONAL LIMITED 10, B.C. Phone 878-4111 125 East 4th Vancou **Chemical Analysis** FILE NO. 465 - 19332 REPORT OF: DATE July 10, 1974 Vancouver Laboratory A T REPORT NO. Shale and Coal Samples PROJECT: REPORTED TO: H.S. Haslam & Associates Ltd., ORDER NO. 2144 Nelson Avenue Per pro Zulu Explorations Limited, West Vancouver, B.C. care of Mr. A. J. Garraway, 725, Suffolk Street, VICTORIA, B.C.

We have tested the samples of shale and coal submitted to us on June 12, 1974 and report as hereunder:

## TEST RESULTS

Sample No	Inherent Moisture	Ash	Volatile Matter	Fixed Carbon	Resin	Germainium	Uranium
77376	······································	-	-		-	<0.003 %	0.38 ppm
77377	-	-	-	-	-	<0.003 %	0.31 ppm
77378	· 🗕	-	-	-	· _	<b>&lt;0.003</b> %	0.14 ppm
77379	-		-	-	<b>-</b>	<0.003 %	0.60 ppm
77380	-	-		-	-	<b>&lt;0.003</b> %	16.9 ppm
77381	-	-	-	-		<0.003 %	21.0 ppm
77382	-	-	-	-	-	<0.003 %	0.64 ppm
77383	-	-	-	-	-	<b>&lt;0.003</b> %	0.84 ppm
77384	3.2%	14.2 %	38.3 %	44.3 %	2.24 %	0.006 %	5.1 ppm
77385	_	-	-	_	<b>—</b> *	<0.003 %	4.3 ppm
77386	3.4 %	7.2%	42.6 %	46.8 %	2.32 %	0.037 %	18.5 ppm
77387	3.3%	14.7 %	39.5 %	42.5 %	2.25 %	<0.003 %	> 25.0 ppm
77388	2.7%	23.7 %	36.7 %	36.9 %	2.92 %	<0.003 %	>25.0 ppm
77389	2.0 %	44.3 %	25.9%	27.8 %	1.73 %	<0.003 %	9.0 ppm
77390	3.0 %	21.0 %	35.7 %	40.3 %	1.89 %	<0.003 %	16.1 ppm

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WARNOCK HERBEY INTERNATIONAL LIMITED

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## COAST ELDRIDGE PROFESSIONAL SERVICES DIVISION

125 East 4th Ave., Vancouver 10, B.C. Phone 876-4111

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REPORT OF:	Chemical Analysis	FILE NO. 465 - 19332
• T A	Vancouver Laboratory	DATE JULY 10, 1974
PROJECT	Shale and Coal Samples	REPORT NO.
REPORTED TO	H.S. Haslam & Associates Ltd., 2144 Nelson Avenue West Vancouver, B.C.	ORDER NO. Per pro Zulu Explorations Limited, care of Mr. A. J. Garraway, 725, Suffolk Street, VICTORIA, B.C.

We have tested the samples of shale and coal submitted to us on June 12, 1974 and report as hereunder:

## TEST RESULTS

Sample No	Inherent Moisture	Ash	Volatile Matter	Fixed Carbon	Resin	Germainium	Uranium
77376	<b>14</b>				-	<0.003 %	0.38 ppm
77377	-	13	_	-	-	<0.003 %	0.31 ppm
77378 From			ra			<b>&lt;0.</b> 003 %	0.14 ppm
77379 Shah			. <b>H</b>	-	-	<0.003.%	0.60 ppm
77380	_	<b></b>	-	<b>-</b>	-	<b>&lt;0.</b> 003 %	16.9 ppm
77381 (ZC	, 0 -	· Bra	. <b></b>	-	-	<0.003 %	21.0 ppm
77382	_	<u>i i</u>	-			<0.003 %	0.64 ppm
77333		and .	- -		-	<b>&lt;0.0</b> 03 %	0.84 ppm
77334	3.2 %	14.2 %	38.3 %	44.3 %	2.24 %	0.005 %	5.1 ppm
77385 From		-	-	77	-	<0.003 %	4.3 ppm
	0 3.4%	7.2 %	42.6 %	46.8 %	2.32 %	0.037 %	18.5 ppm
	3.3 %	14.7 %	39.5 %	42.5 %	2.25 %	<0.003 %	> 25.0 ppm
		23.7 %	36.7 %	36.9 %	2.92 %	<0.003 %	>25.0 ppm
77388 Z5	2.0%	44.3 %	25.9 %	27.8 %	1.73 %	<0.003 %	mag 0.8
77390	3.0 %	421.0 %	35.7 %	40.3 %	1.89 %	۲0.003 %	16.1 ppm

....2

ALL REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS, FUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR RECARGING OUR REPORTS IS NOT FERMITIED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. ILU EXPLORATIONS LTD (NPL)

COAL FROM Z5

July 10th, 1974

(

Sample <u>Number</u>	Coal Seam	Germanium % Grams	Value at 29¢	U <sub>3</sub> 80 ppm	Resin %
77386	909-913 4'	.037 333	\$96.57	18.5	2.32
387	913-920 7'	.003 27	\$ 7.83	25.0	2.25
77384	920-928 8'	.006 54	\$15.66	5.1	2.24
385	Shale in Seam	.003 27	\$ 7.83	4.3	
77388	928-932 4'	.003 27	\$ 7.83	25.0	2.92
389	932-935 3'	.003 27 .	\$ 7.83	9.0	1.73
77390	940-944 4'	.003 27	\$ 7.83	16.1	1.89

## DENISON MINES LIMITED



FILLD OFFICE ROOM 307 402 WEST PENDER STREET VANCOUVER 3, B.C., CANADA (APEA CODE 604) 685-4136

> DEPT. OF MINES AND PETROLEUM RESOURCES OPERATIONS BRANCH Rec'd NOV 6 1975 768

April 30, 1970.

Mr. A.J. Garraway, Northern Coal Mines Ltd., 3-1330 Third Avenue, Prince George, R.C.

4 KING STRLET WEST

TORONTO I. CANADA

Dear Mr. Garraway,

HEAD OFFICE

Enclosed is a cory of the assay results from the samples we cut in your mine. They are somewhat lower in value than T expected, too low I believe to warrant furthur investigation at this time.

I am also enclosing a map indicating where the samples were taker from inside the mine. Sample 0019AWBP and a channel sample 0020AWBR were cut from the outcrop along the river.

If furthur diamond drilling is carried out and you happen to intersect a particularly radioactive area I would be interested in seeing some of the core. Till then I hope everything goes as planned with the Japanese.

Vours truly, 1.100

KW/rb

Keith Wilson.

	-		1	500 PEMBER	Phone S	NUE, NOR 988-5315	In VANCO				12
Dentson	Hines, 1		ERTIFIC			Report	Number	ived:	A20 Apr Apr	-136	1970
TO	2 H D -	NOM ST	A. in the line			Result	s Comp	leted:	Apr	11 2/9	1370
Vancouva	r, B.C.								udge +	ore	sampl <b>es</b> .
I hereby certify that the	e following	are the r	esults of as	says made	by us up	on the her	rein descri	bed			TOTAL VALUE
MARKED	GO		SILVER	U302					Percent	Percent	PER TON (2000 LBS.)
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	Percent	Percent	Percent	Percent			
Ores 0019 AHBP 0020 0022 0023 0024 0025 AWBR Hole 23 371'-376' ludge Hole 24 372'-377' Ore Hole 25 396'-401'				.0077 .0027 .0123 .0071 .0102 .0102 .0153 .0020 .0020 .0011							
	and the second										

Rejects retained two weeks Pulps retained three months unless otherwise arranged.

Gold calculated at \$ ..... per ounce

Registered Assayer, Province of British Columbia



Mr. A. J. Garraway

725 Suffolk Street

Victoria, B. C.

TO



Certificate of Assourt

WARNOCK HERSEY INTERNATIONAL LIMITED

COAST ELORIDGE PROFESSIONAL SERVICES DIVISION

120 EAST 4TH AVE VANCOUVER IC BL CANALA



JACK HAMMER CUTTINGS

PAULE 1904 0 5 FELFT 145.31 JAC 6 AULAES ELGA CU

FILE NO 461 - 16509

DATE September 11, 10

11

We Haring Deriking that the

.

	12.2	SILVEY	Germanium	Uranium		1	[	
MANALT	ALLE DER ON	C.NCES PER TON	PER (Ge)	CF (U308)	FER	PEN	PEP CENT	1 2
	1				nali ina, paki dili wa paga 🔹 wakaza.	1		
Sample No. I			Less than 0.01	0.032				
ample No. 2			Less than 0.01	0.028				
χı. C	1					-		
* New recent followers Polo-retering to many person 2 lis and recent may be store of one year my openal magnet				lated at \$				
to the section of the	d other -is, paid these likets have die hier husses and		B	a. Pappa	·	······	Provi	ncial Assaya

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# CLAST ELDRIDG

ENGINEERS & CHEMISTS LTD.

125 EAST 4TH AVE, VANCOUVER 10, B.C.

REPORT OF: Coal Sample # 7

5

AT Vancouver Laboratory

PROJECT. Chemical Analysis

REPORTED TO: Mr. A. D. Mc Isaac 716 Hall Bui'ding 789 West Pender St. Vancouver, B. C.

TELEPHONE: TRINITY 6.4111 CABLE ADDRESS "ELDRICO"

ORDER NO

DATE January 15, 1963 FILE

A.3-M-0-63 4391

We have tested the coal sample marked # 7 and report as hereunder;

SAMPLE IDENTIFICATION: Coal Sample # 7

Uranium as U308

Trace ......

Germanium as GeO2

----- 0.03 %

854 et 299

COAST ELDRIDGE

J. G. Smith

CHIEF CHEMIST

\*DS



Certificate of Assay

COAST ELDRIDGE

ENGINEERS & CHEMISTS LTD.

125 EAST 4TH AVE. VANCOUVER 10. CANADA

Me Hereby Certify that the following are the results of assays made by us up a submitted

MARKED	GOLD JUNCES ALUE PLATUN PERTON	SILVER DUNCES - VALUE PLATON PERTON	PER CLNS OFF TON	Venedium (V.0.)	Cornentian (Coo2) TOTAL VALUE VALUE PER TON PER TON 2000 LBS 1
	5 -	s	5	5	based on 29 c per gram of Germanium
Sample # 1			150		••
Sample # 3			K3		
Sample # 3A-A			ND	0.94	0.003 5.45
Sample # 3A-B			ND	0.06	0.002 3.60
Sample # 8					0.005 9.10
					· · · · · ·
		1			
-					

5 84

10.

Mr. A. D. Mac Isaat

4 716 Hall Building

Vancouver, B. C.

Gold calculated at \$

per ounce

Silver calculated at S per ounce.

Calculated at Calculated at

cents per lh.

ACCTLC

ORE

cents per 1b.

Note Rejects retained one week. Pulps retained three months.

Pulps and rejects may be stored for a maximum of one year by special arrangement.

Provincial Assayer

PHONE TRINITY 6.4111

mary 7, 1963

samples.

CABLE ADDRESS "ELDRICO

FILE NO

Vissho (Canada) L

SUITE 1112. UNITED KINGDOM BUILDING 409 GRANVILLE STREET VANCOUVER 2. B.C., CANADA CABLES: NISSHOCONY VANCOUVER

TELEPHONE: 684-8351

TELEX: 04-5491

April 17, 1968.

MM-364

200 ft down Coal Slant

Mr. A. J. Garraway, President, Northern Coal Mines Ltd., 725 Suffolk Street, VICTORIA, B.C.

Dear Sir:

## Re: Assay Results of Coal Samples

Upon receipt of a coal sample from your Bowron River property, we forwarded same to Tokyo to get the assay, low ash grade being of special interest to us.

Now we have received the result of assay by telex this morning as follows:

Moisture: 5.2% Ash: 4.8% Volatile Matter: 39.3% Fixed Carbon: 50.7% Sulphur: 0.73% Coke Button Index: 1

We trust that the above information will be of some help to you.

We would like to remind you that we seriously desire a sample representative of your coal at Boron River.

We look forward to hearing from you with respect to the above matter at your earliest convenience.

Yours very truly,

NISSHO (CANADA) LTD.

simoto

MM/sb

M. Morimoto.

c.c. Mr. A. David Ross, 1282 Chartwell Cresc., West Vancouver

Tokyo Coal I

8 Vissho (Canada)

SUITE 1112. UNITED KINGDOM BUILDING 409 GRANVILLE STREET VANCOUVER 2, B.C., CANADA CABLES: NISSHOCONY VANCOUVER

TELEPHONE: 684-8351

TELEX: 04-5491

May 27, 1968.

#### MM-394

260 ft down Coal Slant

Mr. A. J. Garraway, President, Northern Coal Mines Ltd., 725 Suffolk Street, Victoria, British Columbia.

Dear Sir:

#### Re: Assay Results of Bottled Coal Sample

We forwarded a bottled coal sample to Tokyo as soon as it was presented by you for assay.

Now we have received the results of assay, as

follows:

Moisture	4.6%	
Ash	13.2%	
Volatile Matter	36.9%	
Fixed Carbon	45.3%	
Sulphur	1.84%	
Coke Button Index	1.5%	
Fixed Carbon Sulphur	45.3% 1.84%	

Our Tokyo branch is doing further assay on the material, after they wash same. We will advise you of the assay results of washed sample upon receipt of information from Tokyo.

Yours very truly,

NISSHO (CANADA) LTD.

Morinato

M. Morimoto.

MM/sb

A

c.c. Mr. A. David Ross 1282 Chartwell Cresc., West Vancouver

> Nissho, Tokyo, Coal-1 Nissho, New York - K. Miura, Gen. Comm. Sect.

## NISSHO-IWAI CANADA LTD.

SUITE 1112, UNITED KINGDOM BUILDING 409 GRANVILLE STREET VANCOUVER 2, B.C., CANADA CABLES: NISSHOIWAI VANCOUVER

TELEPHONE: 684-8351

TELEX: 04-5491

June 2, 1969.

## MM-675

Mr. A. J. Garraway, President, Northern Coal Mines Ltd., c/o Abbotsford Hotel, 921 W. Pender Street, Vancouver, B.C.

Dear Sir:

#### Re: Test Result of Sample

This is to inform you of a test result on your coal sample of about 1,000 lbs, taken from your property near Prince George in January, 1969, and shipped to Japan in the early part of February, 1969.

The following were the results of the test on the washed coal, which tests were conducted by one of the biggest still mills in Japan.

Moisture		5.1%
Ash		4.9%
Volatile	Matter	39.5%
Sulphur		1.18%
CBI		0

You may be contacted by your company's director, who wishes to know the test results.

Yours very truly,

NISSHO-IWAI CANADA LTD.

Morimoto

MM/sb

M. Morimoto.

UPPER SHALE SEAM LOWER SHALE SEAM N SO'E 8 4 R/Lr. 1 40 UR/LT. 1 READING of 107 BACK COOPER AT Exposure EL. 2430' BOWRON RIVER 580 Least Steam GARRAWAY MINE c°. 1. NORTHERN COAL MINES LTD. VERTICAL CROSS SECTION THROUGH LANDING AT BOTTOM OF COAL SLOPS SCALE 1"= 40' OXIDATION. LOWER LIMIT READINGS BY R.B. BONAR, P. ENG. KEITH WILSON P. ENG. RADIO ACTIVE SHALE A GARRAWAY BACKGROUND 4 KR/LT. Ross - CUT MDI/NG A.T. GARRAWAY , MINE MANAGER MAY 1970 inches centimetres