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

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.

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FOREWORD

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

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*

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J.E. Hughes  
Consulting Geologist

January 10/75

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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  $53^{\circ} 50'$  North, Longitude  $121^{\circ} 55'$  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

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.

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

Zulu Explorations hold the following mineral claims:

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

(See: Figure 3).



## 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

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

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.

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

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

The coals are of good quality, 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   | % | 5.5  | 4.92   | 14.1   |
| Ash                 | % | 2.8  | 2.77   | 2.6    |
| Volatile Matter     | % | 39.7 | 36.5   | 28.6   |
| Fixed Carbon        | % | 52.0 | 55.81  | 54.7   |
| Sulphur             | % | 1.2  | 0.85   | 1.5    |
| B.Th.U./lb.         |   | ---  | 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).

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° C

Amber Resin - Insoluble in common organic solvents, and volatilizing about 450° 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

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

13. GERMANIUM

Germanium in the coals are reported in concentrations, 0.001% to 0.03% ( $\text{GeO}_2$ ), 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% ( $U_3O_8$ ).

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% ( $U_3O_8$ ) 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.

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

Recommendations are -

- (1) 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.

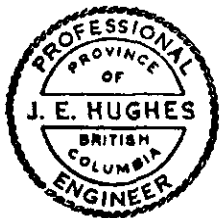
18. ESTIMATES

Estimates for the proposed drilling are as follows:

|                                   |                 |
|-----------------------------------|-----------------|
| Diamond drilling                  | \$48,000        |
| Assays                            | 5,000           |
| Logging, evaluation<br>and Report | 15,000          |
| Total                             | <u>\$68,000</u> |

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.

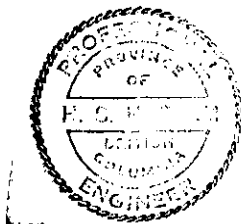


Signed

*J. E. Hughes*

J.E. Hughes

January 10, 1975.



Signed

*H. S. Haslam*

H.S. Haslam

Dated this 20th. day of December, 1974.

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

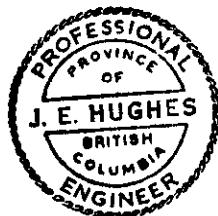
DECLARATION: J.E. HUGHES, P. Eng.

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.

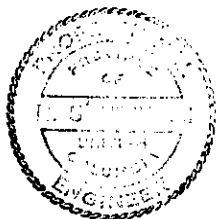
DECLARATION

1. HUBERT S. HASLAM, 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



*H.S. Haslam*

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

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.

## REFERENCES: SELECTED

- Black, J.M. (1967): Report, Northern Coal Mines.
- Black, J.M. (1969): Report on Cleaning Tests, Northern Coal Mines.
- Bonar, R.B. (1970): Report of Sampling, Northern Coal Mines.
- Cameron, A.R. et al (1969): Radioactivity of Tertiary Lignite in Saskatchewan, Alberta, and British Columbia; G.S.C., Paper 69-1A.
- Dawson, G.M. (1878): Report of Exploration in British Columbia: G.S.C., Sum. Rept. of Progress, 1876-7.
- Donaldson, J.R. (1972): Petrography of the coal from the Garraway Mine in the Bowron River Coal Area, British Columbia: G.S.C., Tech. Rept., 93-H-13W-1.
- Haslam, H.S. and Hughes, J.E. (1971): Corresp. - The Main and Coal Slopes.
- Holland, S.S. (1949): Bowron River, Bowron Coal Co. Ltd.; B.C. Dept. Mines, Ann. Rept. 1948.
- MacKay, B.R. (1946): Coal Reserves of Canada; Rept. of the Royal Commission on Coal.
- MacKechnie, N.D. (1974): Geophysical Report on Lad 1-88 Mineral Claims, Zulu Explorations Ltd.
- Neher, M.B. (1966): Composition of 'Northern Coal Mines' Resin from Coal, Northern Coal Mines; Battelle Mem. Inst.
- Neher, M.B. et al (1907): Study of Refined Canadian Resins in Coating and Rubber Compositions, Northern Coal Mines; Battelle Mem. Inst.
- Sutherland Brown, A. (1968): Bowron River, Northern Coal Mines Limited; B.C. Dept. Mines & Pet. R., Ann. Rept. (1967).
- Wilson, K. (1970): Corresp. - Assay Results.



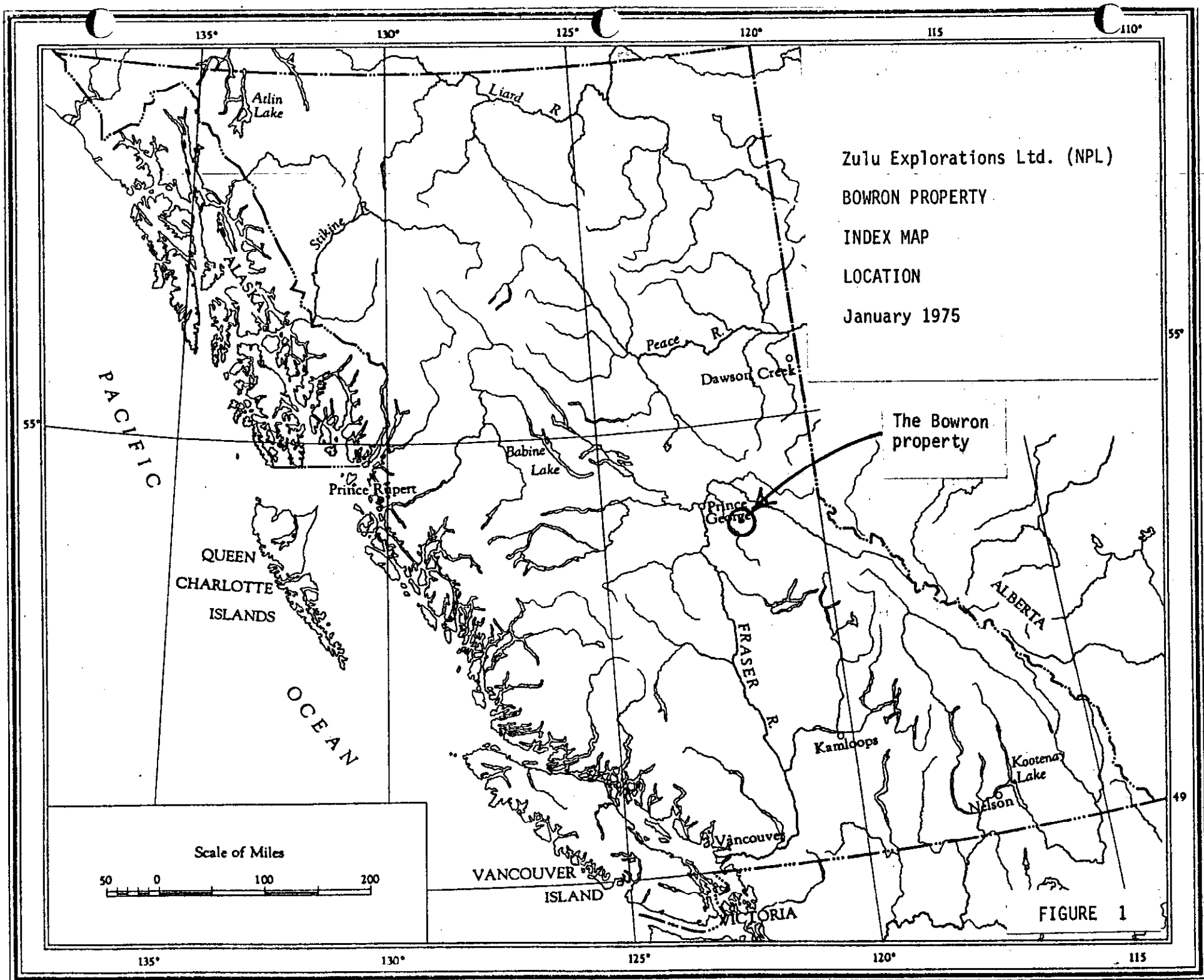
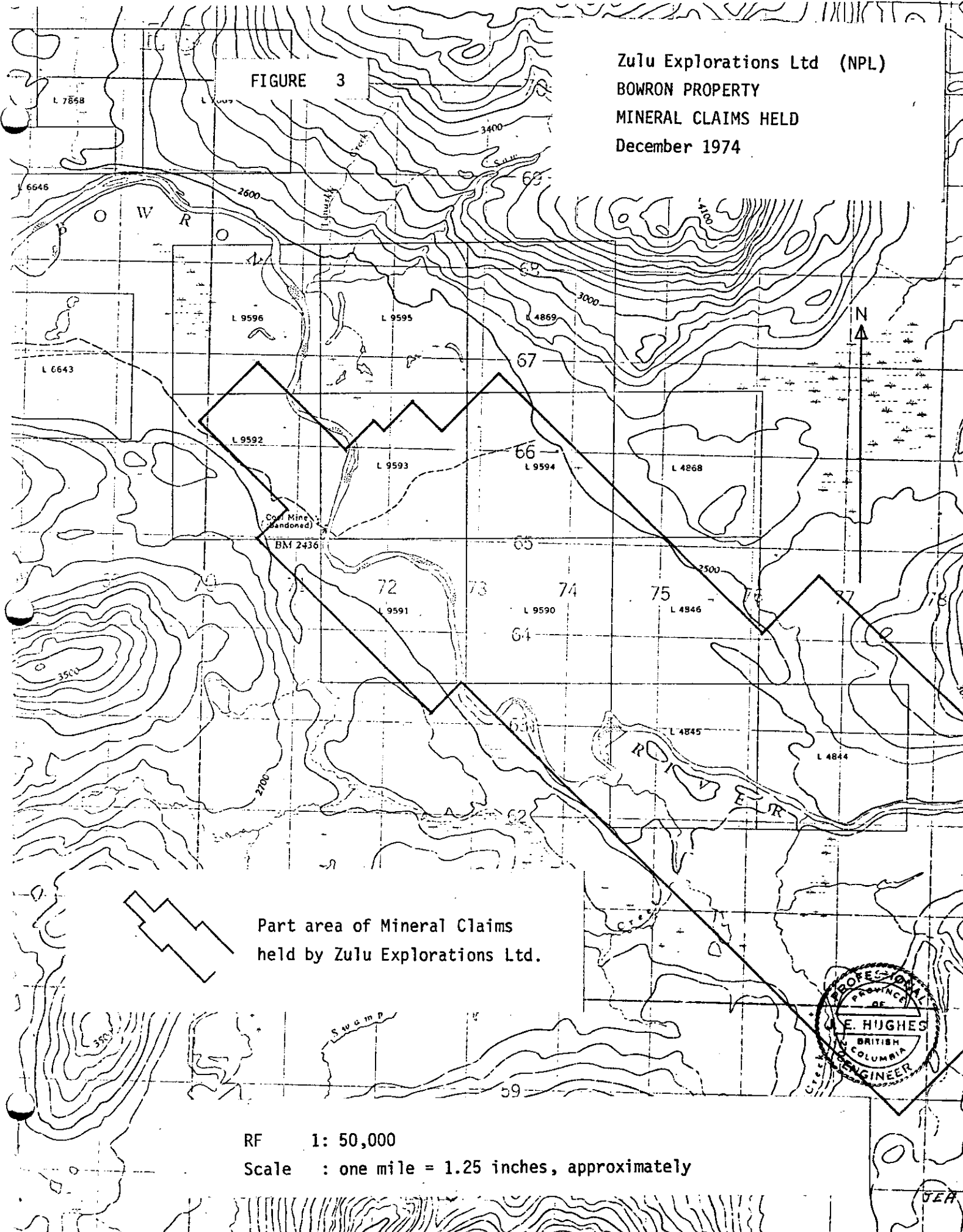




FIGURE 3

Zulu Explorations Ltd (NPL)  
BOWRON PROPERTY  
MINERAL CLAIMS HELD  
December 1974



Part area of Mineral Claims  
held by Zulu Explorations Ltd.

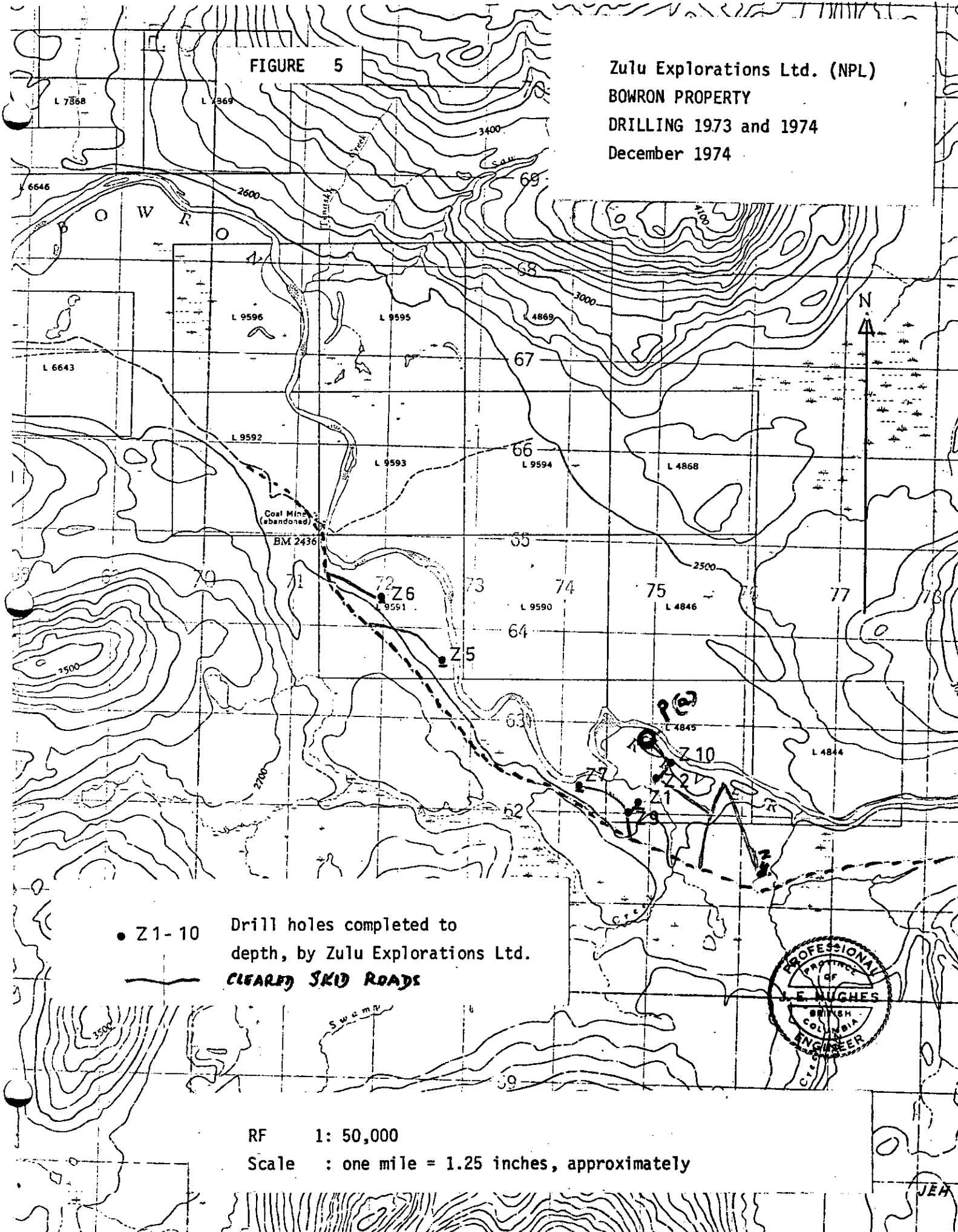


RF 1: 50,000  
Scale : one mile = 1.25 inches, approximately



FIGURE 5

Zulu Explorations Ltd. (NPL)  
BOWRON PROPERTY  
DRILLING 1973 and 1974  
December 1974



• Z1-10

Drill holes completed to depth, by Zulu Explorations Ltd.

— CLEARED SKID ROAD

RF 1: 50,000

Scale : one mile = 1.25 inches, approximately



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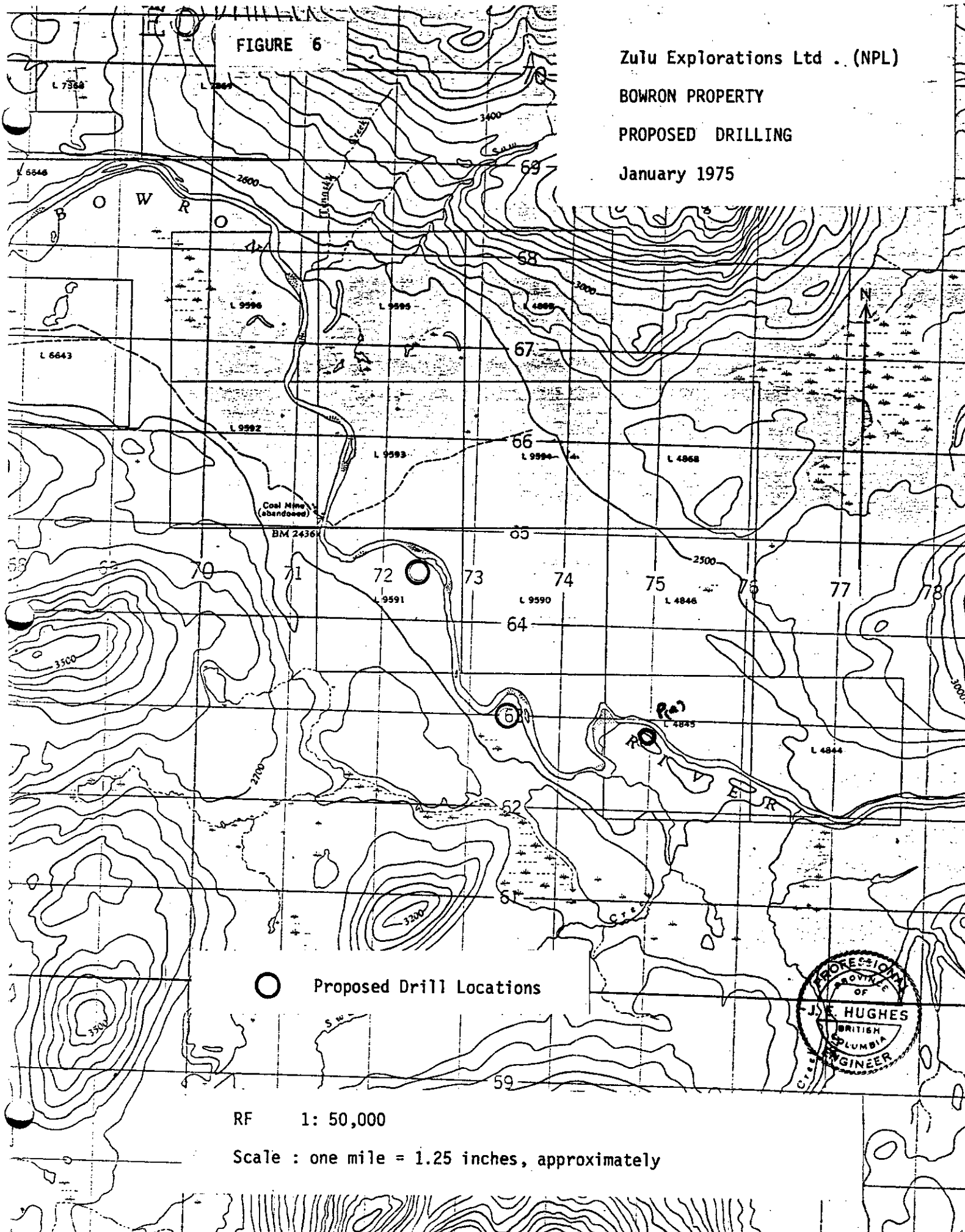
FIGURE 6

Zulu Explorations Ltd. (NPL)

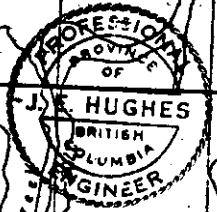
BOWRON PROPERTY

PROPOSED DRILLING

January 1975



○ Proposed Drill Locations



RF 1: 50,000

Scale : one mile = 1.25 inches, approximately

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.

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 Explorations 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.



THE BOWRON PROSPECT IN RESPECT OF COAL AND MINERAL TITLES

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.

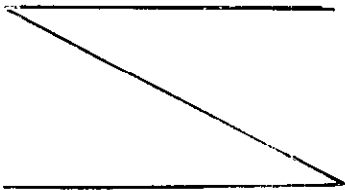
RECOMMENDATIONS

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.

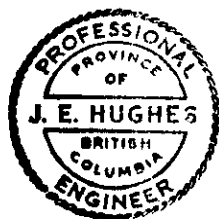
To abandon the Bowron prospect at this time appears to be hasty and precipitate: it would be better to wait and see the Government's policy.

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.



April 2nd. 1975

Signed

*J. E. Hughes*J.E. Hughes

April 2nd. 1975

Signed

*H. S. Haslam*H.S. Haslam

DECLARATION

I, HUBERT S. HASLAM, 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 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



*H. S. Haslam*

H. S. Haslam, P. Eng.

4155 Long View Drive,  
Victoria,  
British Columbia.

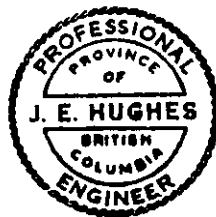
DECLARATION: J.E. HUGHES, P.Eng.

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

- 1) I hold degrees of: Bachelor of Arts, and  
Master of Arts, of the University of Cambridge,  
Natural Sciences Tripos I, II, Geology, Mineral-  
ogy 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



J.E. Hughes  
J.E. Hughes  
Consulting Geologist