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ZULU EXPLORATIONS LTD (NPL)

BOWRON RIVER COALFIELD

September, 1975

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 S45°E for a distance of 3½ 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 from 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 one 10 foot coal seam. It may be possible to mine more than one coal seam.

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 each 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 tibble. 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 each 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.

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. Numerous coke buttons of 4 to 6 have been produced from coal samples containing no visible resin.

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 developing 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.

### 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 56 tons per face manshift. 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.

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 one million tons of coal annually.

Therefore, with only two continuous miners driving roadways in the coal seam, and one Longwall Face for production, in excess of Two 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 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.

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.

*H. J. Jarman*  

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*Project Manager*  

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ZULU EXPLORATIONS LTD (NPL)

December 1975

The following information and findings were prepared by Alfred J. Garraway, Certified Colliery Manager under the Coal Act of British Columbia. He was President and Mine Manager from Incorporation of Northern Coal Mines Ltd. in 1962 until 1970, and responsible for all planning, drilling and underground exploration.

Zulu Explorations Ltd (NPL) was Incorporated on December 12th, 1972, and A.J. Garraway is President and Project Manager.

Consulting Engineers for Zulu Explorations Ltd (NPL) are Dr. J.E. Hughes, Consulting Geologist.

H.S. Haslam, P.Eng., Consulting Coal Mining Engineer.

## DRILLING

### Northern Coal Mines Ltd.

The Company purchased a second-hand old type conventional diamond drill which was limited in drilling depth to between 350 and 400 feet.

Thirty-four drill holes were drilled along the indicated line of strike of the seams, on a bearing of N 45° W from the area of the Ventilation Slope. This was to prove continuity of the seams. There was practically no difference in the elevation of these drill holes and all intercepted the eleven foot coal seam at approximately 300 feet. The basal eight foot coal seam was situated some ten to twenty feet below the first coal seam. All drill holes indicated that the coal seams pitched at 45 degrees to the Northeast.

The Ventilation Slope was put down to a point approximately 120 feet vertically from surface and a suitable landing was cut. This Slope crossed a fault zone. A cross-cut was driven S.W. from the landing and intercepted the coal seams after crossing the fault. This fault, almost vertical, had a bearing of approximately due North from the cross-cut.

Several drill holes were put down on the east side of this fault but the depth limitations of the drill made it impossible to intercept the coal seams as indicated by Drill Hole No. 4.

The thirty-four drill holes had proved the continuity of the coal seams for a distance of 6,000 feet northwest from the Ventilation Slope. Also that there were two coal seams on the margin of the coal basin which were steeply pitching, up to 45 degrees, to the northeast. A Wire Line drill was purchased capable of drilling to at least 3,000 feet and providing a core of 1 7/16" in

diameter. Four drill holes, W.L. 1A, 2, 3 and 4 were put down on a line of strike with a bearing of N 45°W and parallel to the line of strike through D.H. No.'s 29 to 32 and approximately 1,600 feet to the northeast. The Report by Dr. James Black, Consulting Geologist, states that these drill holes cut three coal seams, the Upper ten foot, Middle eleven foot, and the basal eight foot seam. The seams were cut at 900, 1,000 and 1,100 feet respectively from surface, and the pitch of the seams had flattened to between ten and fifteen degrees.

Three holes, W.L. 6, 5 and 9 were drilled in an area approximately 2,500 feet southeast of the Ventilation Slope. The W.L. 6 drill hole was located on a S45°E line from the coal seams in the Slope. W.L. 5 and 9 drill holes were drilled on a line approximately 200 feet southwest of this line. The elevation of these three drill holes is approximately 50 feet higher than the Ventilation Slope.

Coal was cut in the W.L. 6, 5 and 9 drill holes at 780 feet, 520 feet, and 540 feet respectively. It was obvious that the coal seams in these holes was considerably deeper than in the Ventilation Slope or in the drill holes 19 to 32 northwest of the Slope.

#### BETHLEHEM COPPER

This company drilled a hole, 71-2, on a line of strike some 1,120 feet northeast of the W.L. 1A drill hole. Coal was cut at 1,240 feet indicating the coal seams were in place and had flattened to a pitch of 15 degrees and that this drill hole was on the West side of the fault.

The 71-1 drill hole was put down on the line of strike some 2,550 feet Southeast and 200 feet Southwest of the W.L. 1A drill hole. Coal was cut at 1,380 feet, or 480 feet deeper than in the W.L. 1A drill hole. Therefore, this 71-1 drill hole was put down on the East side of the fault.

Projection of the fault from the cross-cut in the Ventilation Slope, in a northerly direction, indicates that this fault is situated between the 71-1 and 71-2 drill holes. Also, the depth to the coal seams on the East side is 450 to 500 feet greater than on the West side of this fault.

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In 1973 Zulu commenced a drilling programme in an area 8,500 feet southeast of Northern Coals W.L. 9 drill hole, or some 12,000 feet southeast of the Ventilation Slope.

When Zulu acquired ownership of the U.G. Group of mineral claims, the Z5 and Z6 drill holes were put down.

The Z6 drill hole was located 400 feet southeast and some 140 feet northeast (down-dip) of the coal seams in the cross-cut of the Ventilation Slope. This location is some 80 feet southeast of Northern Coals D.H. No. 4. The coal seams were intercepted at a depth of 740 feet. Coal seams in the cross-cut are 120 feet below the surface. At a pitch of 45 degrees this would indicate that the seams in the Z6 drill hole are some 480 feet below the seams in the cross-cut and in the East side of the fault.

The Z5 drill hole was located 4,200 feet southeast and 430 feet northeast of the coal seams in the cross-cut. The coal seams were cut at a depth of 902 feet. The drill core from the coal seams and strata in this hole indicated a pitch of 30 degrees.

FINDINGS

- 1) The majority of holes were drilled on the sub-crop, or southwest margin of the coal basin. The drilling covered a distance of some 20,000 feet (3.8 miles), and with the exception of the Major Fault, no other faulting was indicated.
- 2) The pitch of the coal seams on the West side of the Major Fault flattened to approximately ten degrees along a N45°W line of strike starting at a point 2,800 feet north of the seams in the Ventilation Slope, to the area of Northern Coals W.L. 4 drill hole, a distance of 5,000 feet.
- 3) The pitch of the coal seams on the East side of the Major Fault flattens to approximately ten degrees from a point 2,000 feet north of the seams in the Ventilations Slope, and along a line of strike bearing S45°E for a distance of 15,000 feet.
- 4) The Bowron River meanders, with large bends, in a northwesterly direction across Northern Coal's three coal licences on Lots 9591, 9592 and 9593. In order to prevent subsidence an extremely large Pillar must remain below the River.



All the drilling along the distance of 20,000 feet (1) indicates that the coal seams on the West side of the Pillar are steeply pitching and would be difficult and costly to recover.

In regard to the coal licences on Lots 9591, 9592 and 9593, and taking the Major Fault and the Pillar into consideration, only the coal seams in the area under the east half of Lot 9593 are expected to be comparatively flat. This area is on the East side of the Major Fault and could only contain between five and six million tons of recoverable coal from a ten foot coal seam.

5) Drilling indicates that there are two coal seams under the margin of the coal basin, on the west side of the River. Although only ten to twenty feet of shales separate these two seams on the margin, the separation between the seams increases towards the northeast, down-dip, and a third or upper coal seam appears where the pitch has flattened to about fifteen degrees (see sections).

6) The foregoing indicates that there are three coal seams, the upper ten foot, the middle eleven foot and the basal eight foot, under the greater part of the valley plain on the east side of the River. Also, that the attitude of these seams is comparatively flat or less than ten degrees. This large area is bounded by the Major Fault in the northwest, and by the River on the southwest. This area of ten square miles is covered by Lots 4844, 4845, 4846, 4868, 4869, 9594, 9595, 9590 the Lot adjoining and south of Lot 9590, and the Lot adjoining and north of Lot 4844.

This area could contain some 100 million tons of coal from one ten foot seam.

At this time it appears that the nature and thickness of the strata between the coal seams is most suitable, and it is logical to assume that more than one seam could be mined simultaneously.

The radio-active shale beds, or seams, are situated below the basal coal seam and may contain Uranium and/or Germanium of commercial value. If so, it may be possible to mine the shale seams without interfering with the mining of the coal seams.

7) Drilling has indicated that the horizon of the coal seams on the East side of the Major Fault is approximately 450 feet deeper than on the West side of the fault. This suggests that the average depth to the coal seams under the valley plain should be approximately 1,500 feet. 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 coal seams are extracted.

All coal core carried considerable High Temperature Hydrocarbon Fossil Resin.

Two phases remain in order to prove the economic feasibility of developing a large modern, fully mechanised producing mine. Development Drilling on the east side of the river, and the Underground Exploration of the coal and shale seams.

Both phases will require major financing.

DEVELOPMENT DRILLING

It is possible that the potential of this large area, eight to ten square miles could be indicated by the drilling of seven to nine drill holes on the east side of the river. These holes should be drilled to intercept the radioactive shale seams below the basal coal seam, and would indicate a total drilling footage of approximately 13,000 feet. Should these drill holes prove successful, they would not only indicate a large potential tonnage of radioactive shales, but would indicate a potential of some 100 million tons of recoverable coal from one ten foot seam. (Page 2 - Sept. Report)

At least one drill hole should be put down to intercept the coal seams in the area where it is expected the Shafts, or Slopes, will cut these seams.

UNDERGROUND EXPLORATION

Drilling alone cannot prove 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 seams, without production from one preventing the extraction of the other, can only be determined by

underground exploration. Only underground exploration can prove that it may be possible to mine the shale seams, and the coal seams, at the same time.

(Page 3 - Sept. Report)

Drilling has indicated that where the coal seams are comparatively flat they are at a depth of some 1,500 feet. Therefore, underground exploration will first necessitate the sinking of either vertical shafts, or slopes, to the flat area.

When all factors are considered, and large production of coal is anticipated, a Production Slope of 10,000 feet or longer, is generally preferable to a 2,000 foot vertical shaft.

Belt conveyor transportation of coal from the production area by means of a Slope to the tibble, is preferable to skip-hoisting in a vertical shaft. Any large increase in production is easily taken care of in the Slope simply by increasing the belt conveyor capacity, whereas, skip-hoisting may become a serious bottle-neck in the vertical shaft.

At this time we anticipate the driving down of two Slopes to the base of the Uranium bearing shales in the area where the strata is comparatively flat. A Roadway Cutter Loader is to be used in each Slope to eliminate drilling and blasting. (Page 3 - Sept. Report)

Finally, in having Dr. J.E. Hughes, Consulting Geologist and H.S. Haslam, P. Eng., Consulting Coal Mining Engineer, as the Engineering Consultants, Zulu has the expertise, not only to supervise the Development Drilling and Underground Exploration, but to develop a mine into production from either the shale seams, or coal seams, or both.

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JANUARY 1976

Drilling to date has proved the continuity of the coal and shale seams for a total distance of some 20,000 feet (3.8 miles), or for a distance of approximately 15,000 feet south-east from the Major Fault. Drilling has also given a strong indication of a S45°E "line of strike" where the coal seams have flattened to ten degrees or less.

Drilling has indicated that the large valley plain on the east side of the river is underlain with three coal seams--ten foot, eleven foot and eight foot--and the seams separated by at least 100 feet of shales (see Section). This would indicate that more than one seam could be mined, but only testing of large bulk samples taken underground from each seam could determine if more than one seam could be mined simultaneously by the echelon system. The extent of the coal seams could be proved by a Development Drilling programme consisting of seven to nine drill holes on the east side of the river, and on the east side of the Fault (see Map).

If successful these drill holes would indicate a potential tonnage of 100 million tons of coal from each ten foot coal seam.

PROPOSALS

The economic feasibility of developing a producing mine will depend upon the success of Two Stages, Development Drilling and Underground Exploration.

Zulu wishes to present the following proposals as a basis for discussions in order to obtain an Agreement to provide the financing necessary to complete the Two Stages designated as Development Drilling and Underground Exploration.

Zulu expects that any Agreement would be on an Option basis providing for the development of a producing mine from either the coal seams, the Uranium/Germanium bearing shale seams, or both. This would cover the production of coal, resins, Uranium and Germanium.

The Agreement to contain a provision, that if after completion of the Underground Exploration, a Study indicates the economic feasibility of developing a producing mine, then the mining company is to have the right to purchase the property at an agreed price.

The purchase price to be set out under the Agreement, and determined by an agreed price per ton of coal in the ground, and on the tonnage indicated by the Development Drilling and Underground Exploration.

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OPTIONS

The First Option to provide financing of the First Stage consisting of drilling seven to nine drill holes to complete the Development Drilling.

The average depth of these drill holes is expected to be approximately 1,500 feet for a total drilling footage of some 12,000 to 15,000 feet.

The drilling is to be carried out by a reputable drilling company using at least two Wire Line Diamond Drills, and providing at least a 2½ inch core.

The drilling programme, location of drill holes, geological or electric logging of drill holes, logging of drill core, sampling and assaying to be under the direct supervision of Dr. J.E. Hughes and H.S. Haslam, P.Eng., the Consulting Engineers for Zulu.

The Second Option is to provide Zulu with funds for the Second Stage, or Underground Exploration of the coal seams, and the Uranium/Germanium bearing shale seams.

This Stage will involve the driving of two Slopes, at a gradient of 12 degrees, down to the area where the coal seams are comparatively flat.

PAGE FOUR

The first three drill holes of the drilling programme will confirm the location of this area, and determine the gradient and length of the Slopes. Drilling to date indicates these Slopes will be approximately 5,000 feet in length. Tentative plans are for the use of a Roadway Cutter Loader in each Slope, and the main Slope to be equipped with a belt conveyor from the working face to the tiple. When the Slopes intercept the coal seams, a roadway will be turned off the Slope and driven in each coal seam to obtain large bulk samples and to investigate the condition of the roof and floor of the seams. Roadways will also be driven in the radioactive shale seams in order to prove their true value in Uranium and Germanium.

The Underground Exploration will be under the direct supervision of Dr. J.E. Hughes, Consulting Geologist, and H.S. Haslam, P.Eng., Consulting Coal Mining Engineer.

At the completion of the Underground Exploration a Comprehensive Study and Report will be prepared by Dr. J.E. Hughes and H.S. Haslam, P.Eng.

*A. J. Garraway*



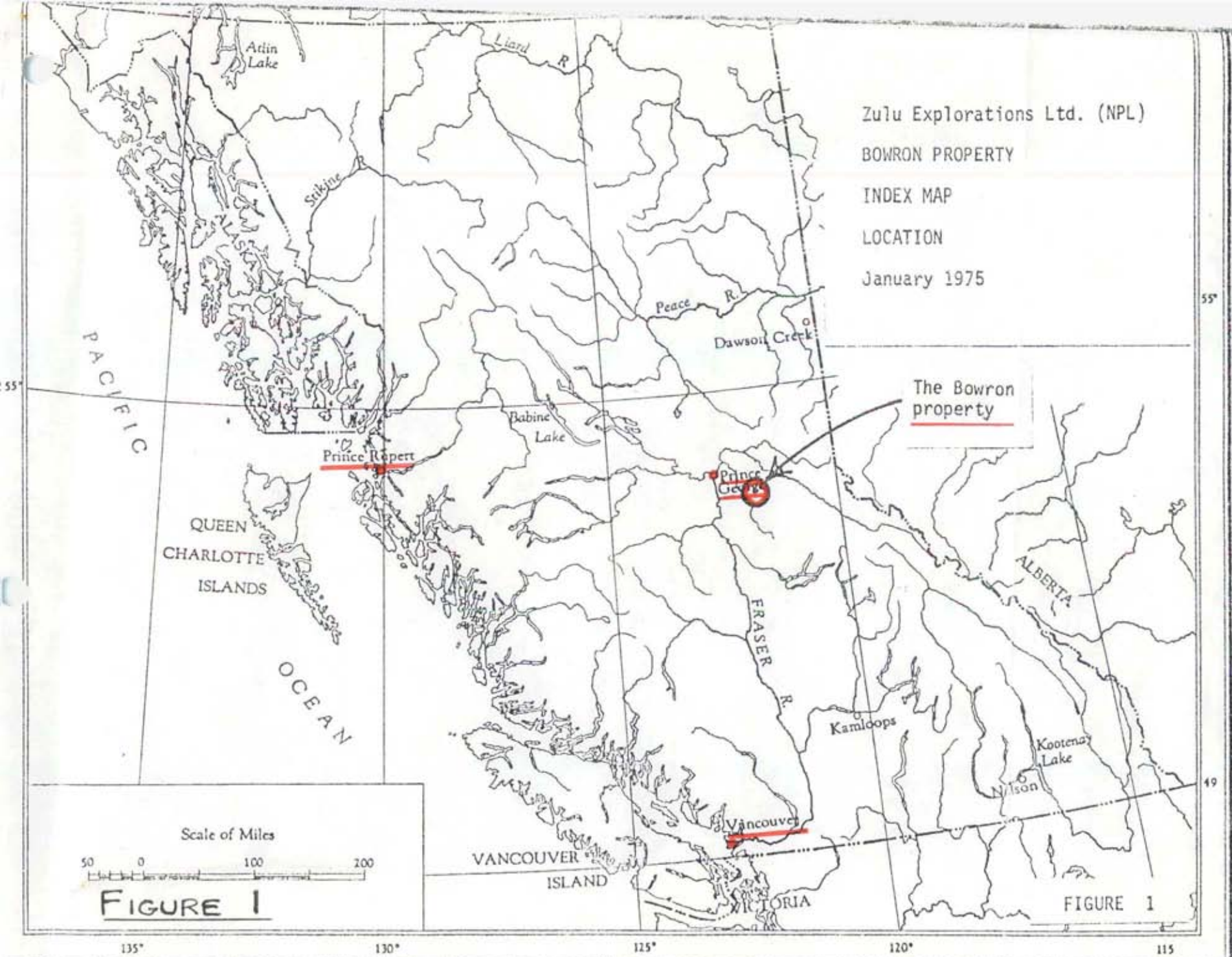
Zulu Explorations Ltd. (NPL)

BOWRON PROPERTY

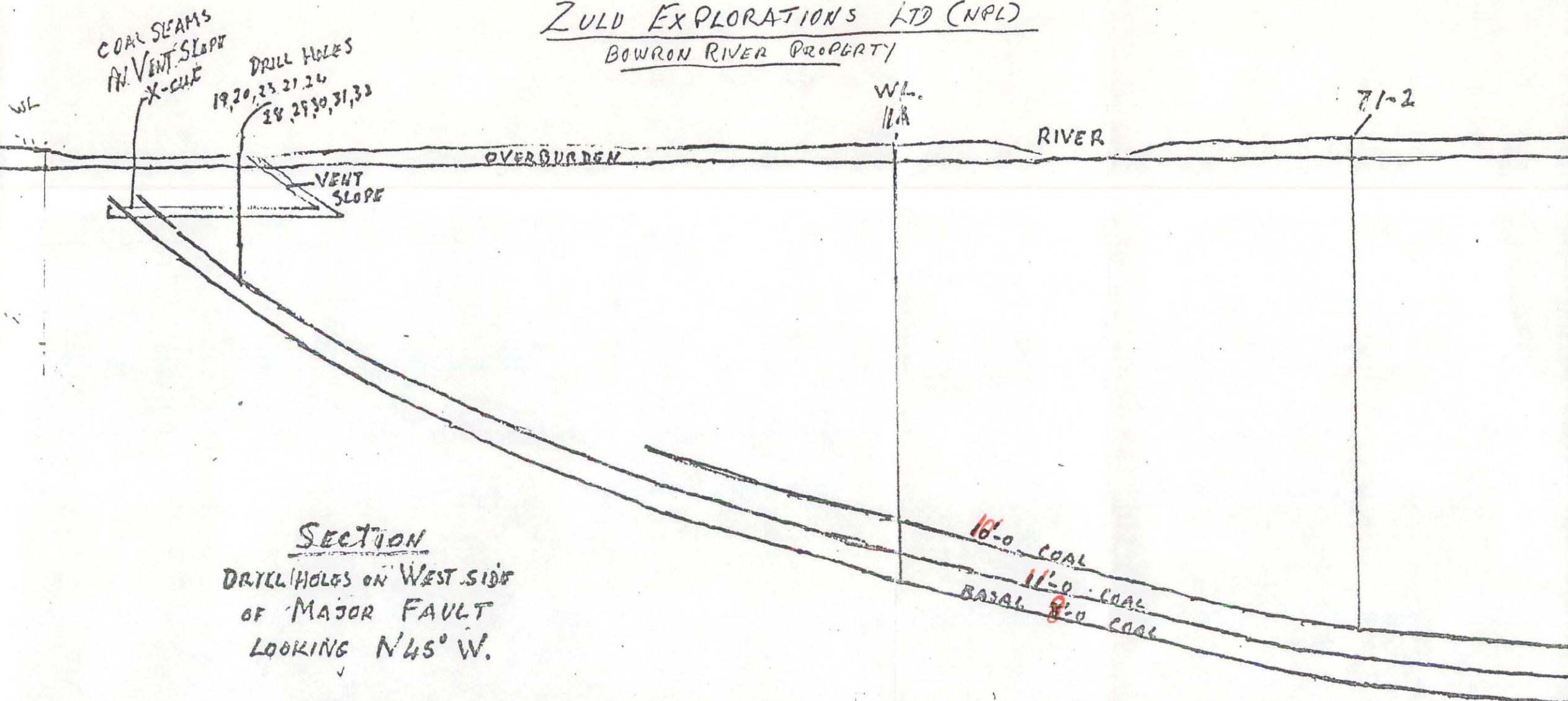
INDEX MAP

LOCATION

January 1975



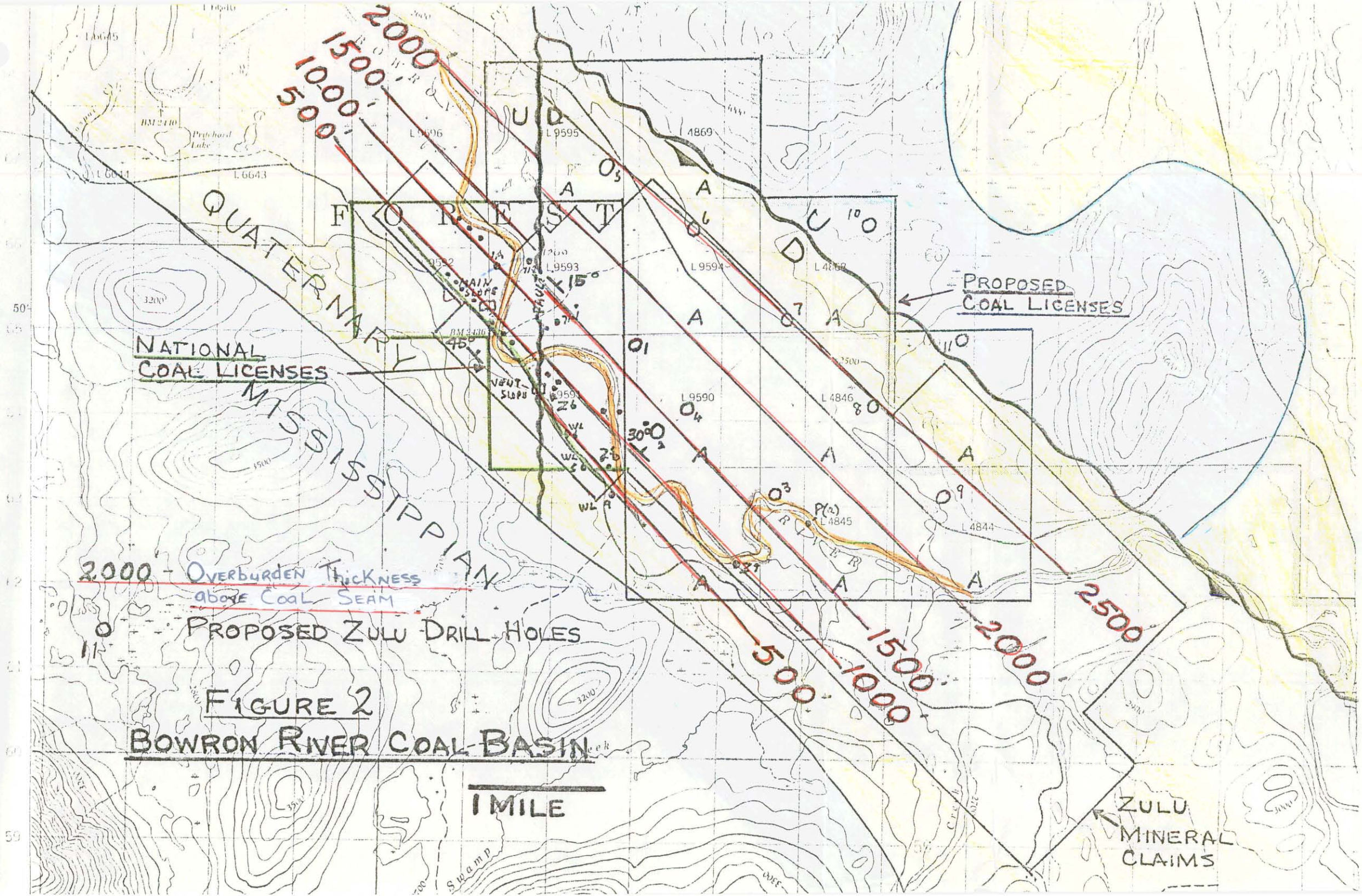
ZULD EXPLORATIONS LTD (NPL)  
BOWRON RIVER PROPERTY



SECTION  
DRILL HOLES ON WEST SIDE  
OF MAJOR FAULT  
LOOKING N45° W.

SCALE  
1" = 300'

*[Handwritten signature]*



**FIGURE 2**  
**BOWRON RIVER COAL BASIN**

1 MILE

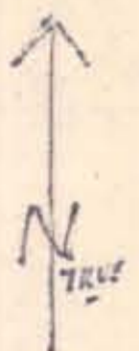
(M)

LOT 9594

LOT 9593

LOT 9590

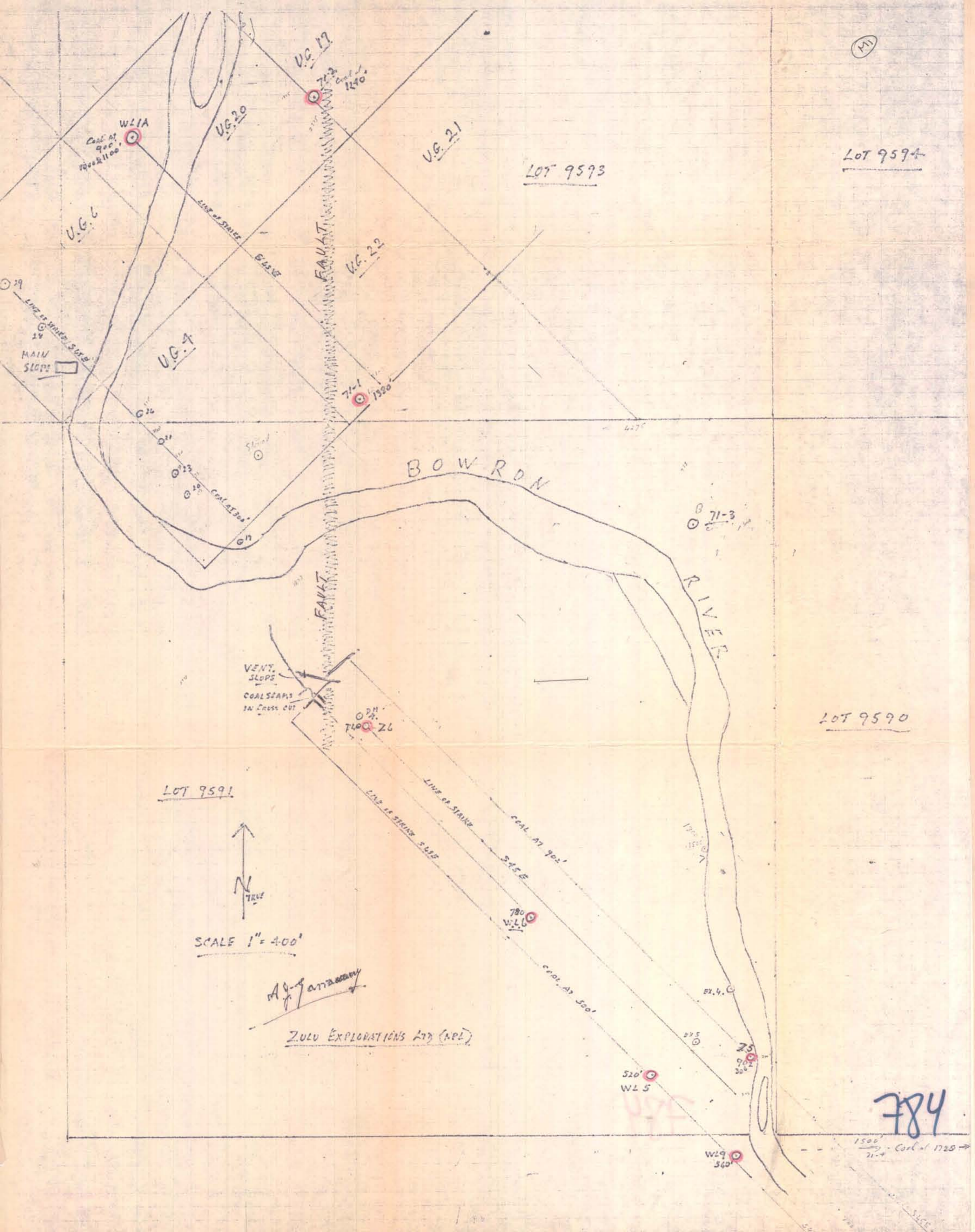
LOT 9591



SCALE 1" = 400'

*A. J. J. J. J.*

ZULU EXPLORATIONS LTD (NPL)



784

1500' - Coal at 1725' - 21-4