

ALLEN RESOURCE CONSULTANTS LTD.

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MINERALS

COAL

OIL & GAS

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YUKON COAL EXPLORATION LICENCE NO. 35

PROSPECTING REPORT

061356

Guy B. Allen, P. Eng.
Allen Resource Consultants Ltd.
October, 1975

This report has been examined; de-
clared acceptable as Representation
Work under Section 32 and Schedule
B of the Canada Mining Regulations
and valued in the amount of ~~\$5,245.73~~

for Chief,

C. D. Oliver

Date: Dec. 9, 1975.

900 Jan 5/76
\$ 4649

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General

Coal Exploration Licence No. 35 is registered with the Department of Indian and Northern Affairs in the name of Resoursex Ltd., c/o Allen Resource Consultants Ltd., 414 - 630 Eighth Ave. S.W., Calgary, Alberta, and was granted on January 8, 1975.

The Licence comprises approximately 45,806 acres and can be geographically described as comprising the northwest quarter of NTS block 105E/5. It is bounded by Longitudes $135^{\circ}45'W$ and $136^{\circ}00'W$, and by Latitudes $61^{\circ}22'30"N$ and $61^{\circ}30'00"N$.

Access to the Licence area is by the Klondyke Highway which cuts the northeast corner of the area. A secondary road, leaving the highway at the Braeburn roadhouse (Mile 55) transects the valley north of Braeburn Lake, and then follows Kluska Creek south and west into the area of interest.

The land is well forested with second growth as the result of a fire about ten years ago. Deadfall and thick bush makes cross country travel difficult. With the exception of the Kluska Creek valley, which is low and partially muskeg covered, the relief is of moderately rounded hills separated by lake- and muskeg-filled depressions. Maximum elevation on the block is about 3,900 feet ASL, with valley bottoms at 3,000 feet ASL. Altitude differential from ridges to valleys is generally less than 600 feet.

The climate is continental in nature, typical of most of the Yukon interior. Summers are warm and short. Winters are cold and long with moderate snowfall. Annual precipitation is in the order of 10" to 12" per year.

There are no settlements within the Licence block. Limited services may be obtained at Braeburn Lodge at Mile 55 on the Klondyke Highway.

Geology

Geological relationships are gleaned from Geological Survey of Canada Map 372A (Bostock and Lees, 1938). The area comprised in Coal Exploration Licence No. 35, with the exception of the extreme southwest portion, is primarily subcropped by rocks of the Leberge Series. These consist of conglomerates, greywackes, sandstones, and argillites with reported coal seams. In the southwest corner Tantalus formation clastic sediments are mapped. All strata strike in a general north-northwest direction and have been folded into a series of anticlines and synclines.

History of Exploration

The history of coal exploration in the Licence area is sketchy.

C. E. Cairnes mapped a portion of the area in 1906 for the Geological Survey of Canada. He reported coal particles around gopher holes on the southeast flank of Cub Mountain.

In the 1930's the area was again mapped for the G.S.C. by W.E. Cockfield and E.J. Lees. They make no report of coal within the interest area.

A coal exploration licence was taken out by Norman H. Ursel Associates Ltd. covering the northwest quarter of NTS block 105E/5 in 1970. Exploration of the area failed to give significant results and the licence was allowed to expire.

Purpose of Present Program

The purpose of the present prospecting program was two-fold.

Firstly, it is known that significant deposits of coal occur in the Laberge Series to the southwest, on Division Mountain. The same relative strata have been mapped by Bostock and Lees (1938) as occupying an area north of Klusha Creek in the southeast corner of the Licence (see Fig. 1). A proposal was to investigate the area, try and locate coal shows as described by Cairnes (1906), and assess the potential for locating seams of significant thicknesses.

Secondly, an area in the south-central portion of the block (see Fig. 1) is topographically high and separated from the previous area by a low marshy zone. Interpretation of the results presented by Bostock and Lees (1938), and Cairnes (1910) suggest a series of northwest trending anticlines and synclines transecting the general area with progressively gentler dips as you go east. Laberge strata is mapped as subcropping the second portion of the block. It was hoped that the Laberge coal measures might not have been eroded, and evidence of their presence found.

Procedures

A two-man team of prospectors, Mr. Clifford Runham of Mara, B.C. and Mr. Eugene Connon of Olds, Alberta were contracted to investigate the interest areas within the boundaries of Coal Exploration Licence No. 35 during the period August 7 to August 18, 1975. Travel was by foot and horseback. Efforts were concentrated on locating occurrences of coal and conglomerate. The author spent two days, August 17th and 18th, on the property. All work was done from a field camp set up on the bank of Klusha Creek at Longitude $135^{\circ}50'W$ and Latitude $61^{\circ}24'N$.

Progress was slowed considerably by the difficulties encountered in penetrating bush-covered areas off the beaten track due to the profusion of deadfall and dense second-growth. Traverses are plotted on Figure 1. Due to the limitations of time the area flanking Contact Mountain was not covered

Conclusions

Indications of coal were found at only three very closely spaced locations (see Fig. 1) 500 yards south of the Licence boundary at the 3,000 foot ASL elevation. The coaly fragments were discovered in gopher diggings in the same general vicinity as a similar reported finding by Cairnes in 1906. Conglomerate was found outcropping immediately to the north within the Licence. Relative positions of these locations referred to the published geology of the area would suggest that the conglomerate is of the Tantalus formation, and the coal is derived from a subcropping of the same formation.

A number of traverses were extended into the south-central portion of the Licence in order to determine if coal-bearing Laberge strata could be located. No indications of coal were found.

The indications of coal in the Tantalus formation in this general area makes the acreage subcropped by those strata prospective. This would include ground immediately to the west and southwest of of Coal Exploration Licence No. 35.

Recommendations

The following are recommended.

1. Resoursex Ltd. should reduce acreage on Coal Exploration Licence No. 35 so as to include only an area bounded by Longitudes $136^{\circ}00'W$ and $135^{\circ}56'15''W$, and by Latitudes $61^{\circ}22'30''$ and $61^{\circ}26'15''$. This would comprise approximately 5,725 acres.

2. Resoursex Ltd. should make further application for a Coal Exploration Licence to cover the northeast quarter of NTS block 115 H/8, and conduct field exploration activities to assess the coal-bearing potential of the Tantalus formation in that general area.

References

- Bostock, H.S. and Lees, E.J.
1938: Laberge Map-area, Yukon; Geol. Surv. Can. Mem. 217
- Cairnes, C.E.
1906: Personal Field Notes
- 1910: Preliminary Memoir on the Lewes and Nordenskiöld Rivers Coal District, Yukon Territory; Geol. Surv. Can. Mem. 5



Guy B. Allen

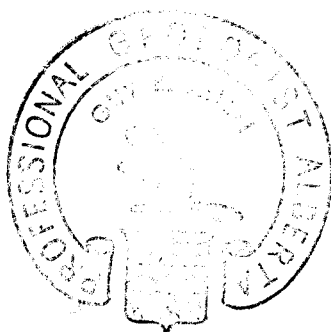
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TOTAL OF FIELD AND OFFICE EXPENDITURES

- The total cost is proportionately allotted as follows.
- | | | | |
|----------------------------------|-----|----|------------|
| Coal Exploration Licence No. 35: | 40% | or | \$5,245.73 |
| Coal Exploration Licence No. 36: | 60% | or | \$7,868.59 |



Guy E. Allen, P. Eng
October 10, 1975

Expiry Date: April 22, 1976

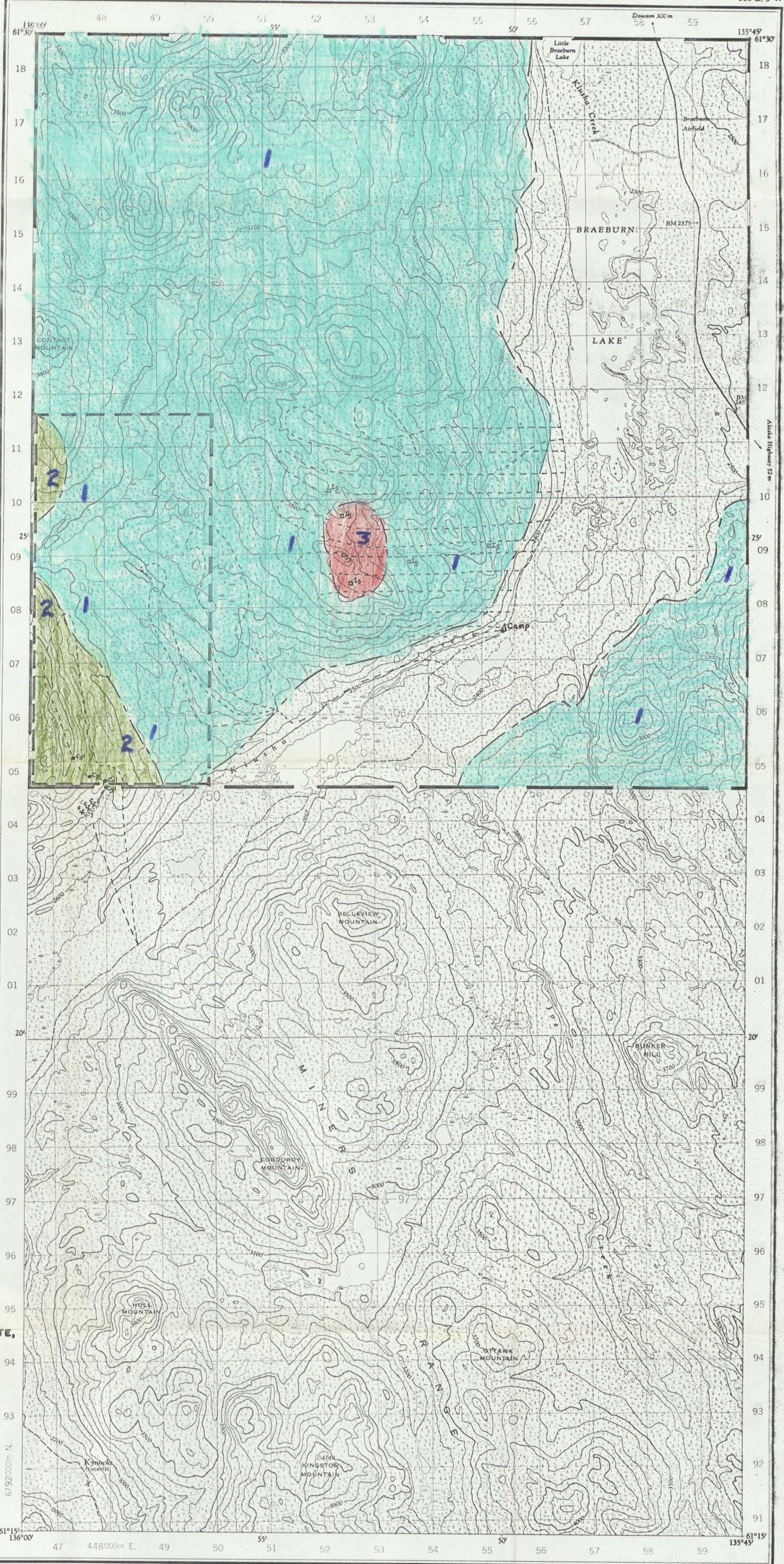


FIGURE NO. 1

RESOURCEX LTD.

COAL EXPLORATION LICENCE NO. 35

PROSPECTING MAP

LEGEND

- LICENCE BOUNDARY
- PROPOSED LICENCED AREA TO BE RETAINED
- GEOLOGICAL BOUNDARY (after Bostock & Lees, 1938)
- TRAVERSE ROUTE
- COAL FLOAT
- CONGLOMERATE OUTCROP
- IGNEOUS ROCK OUTCROP

GEOLOGY (AFTER BOSTOCK & LEES, 1938)

- RECENT ALLUVIUM, GLACIAL DEPOSITS, VOLCANIC ASH
- 3 GRANODIORITE PORPHYRY, MONZONITE PORPHYRY, APLITE, QUARTZ PORPHYRY, DACITE PORPHYRY, CERATOPHYRE
- 2 TANTALUS FORMATION: CONGLOMERATE, SANDSTONE, SHALE, COAL
- 1 LABERGE SERIES: CONGLOMERATE, GREYWACKE, SANDSTONE, COAL

Produced and printed by the SURVEYS AND MAPPING BRANCH, DEPARTMENT OF MINES AND TECHNICAL SURVEYS, 1961, from air photographs taken in 1948.

BRAEBURN LAKE
YUKON TERRITORY

Établie et imprimée par la DIRECTION DES LEVÉS ET DE LA CARTOGRAPHIE, MINISTÈRE DES MINES ET DES RELEVÉS TECHNIQUES en 1961, d'après les photographies aériennes prises en 1948.

Roads: all weather, dry weather, cart track, trail or portage, Railway, normal gauge, single track, Power transmission line, Mine or Open cut, Horizontal control point, with elevation, Bench mark, with elevation

Routes: toute saison, période sèche, de terre, Chemin de fer à voie unique (écartement normal), Ligne de transport d'énergie, Mine ou fosse à ciel ouvert, Point géodésique avec cote, Repère de nivellement avec cote

SCALE 1:50,000 ÉCHELLE

Miles 1 2 3
Metres 1000 500 0 1000 2000 3000 4000
Yards 1000 500 0 1000 2000 3000 4000

CONTOUR INTERVAL 100 FEET
Elevations in Feet above Mean Sea Level
North American Datum 1927
Transverse Mercator Projection

ÉQUIDISTANCE DES COURBES: 100 PIEDS
Élévations en pieds au-dessus du niveau moyen de la mer
Réseau géodésique nord-américain unifié (1927)
Projection transverse de Mercator

The nomenclature on this map has not been submitted to the Canadian Board on Geographical Names and may be subject to revision. Information on names is invited by the Surveys and Mapping Branch.

La nomenclature de la présente carte n'a pas été soumise à la Commission canadienne des noms géographiques et, par conséquent, elle pourrait faire l'objet d'une révision. Tous renseignements sur les noms seront bien accueillis par la Direction des levés et de la cartographie.

Building, School, Church, Lighthouse, River with bridge, Stream, intermittent or dry, Lake intermittent, indefinite, Marsh or Swamp, Depression contours

Bâtiment, École, Église, Phare, Rivière avec pont, Cours d'eau intermittent, ou à sec, Lac intermittent, rive imprécise, Marais ou marécage, Courbes de cuvette